APPENDIX E

Historical heritage assessment and statement of heritage impact

New England Solar Farm

Historical heritage assessment and statement of heritage impact

Prepared for UPC Renewables Australia Pty Ltd | 16 November 2018

New England Solar Farm

Historical heritage assessment and statement of heritage impact

Prepared for UPC Renewables Australia Pty Ltd | 16 November 2018

Ground Floor, Suite 01, 20 Chandos Street
St Leonards, NSW, 2065

T +61 2 9493 9500
F +61 2 9493 9599
E info@emmconsulting.com.au

www.emmconsulting.com.au

New England Solar Farm

Final

Report J17300RP1 | Prepared for UPC Renewables Australia Pty Ltd | 16 November 2018

Prepared by	**Pamela Kottaras**	Approved by	**Claire Burnes**
Position	National Technical Lead – Heritage	Position	Associate
Signature		Signature	
Date	16 November 2018	Date	16 November 2018

Document Control

Version	Date	Prepared by	Reviewed by
1	12/10/2018	Pamela Kottaras	Nathan Garvey David Richards Claire Burnes
2	14/11/2018	Pamela Kottaras	David Richards Claire Burnes
3	16/11/2018	Pamela Kottaras	David Richards Claire Burnes

T +61 (0)2 9493 9500 | F +61 (0)2 9493 9599

Ground Floor | Suite 01 | 20 Chandos Street | St Leonards | New South Wales | 2065 | Australia

www.emmconsulting.com.au

Executive Summary

ES1 Overview

UPC Renewables Australia Pty Ltd (UPC) proposes to develop the New England Solar Farm; a significant grid-connected solar farm and battery energy storage system (BESS), along with associated infrastructure, approximately 6 kilometres (km) east of the township of Uralla, which lies approximately 19 km south of Armidale in the Uralla Shire local government area (LGA) (the project). The project is a State Significant Development (SSD) under the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). Therefore, a development application (DA) for the project is required to be submitted under Part 4, Division 4.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The NSW Minister for Planning (Minister), or the Minister's delegate, is the consent authority.

ES2 Site description

The development footprint is in a region that has a rich Aboriginal past and historically was claimed by squatters who raised Merino sheep for the domestic and international market. The region remains largely pastoral serviced by towns such as Uralla, Armidale and Kentucky.

Early settlers established runs in the area when they moved beyond the limits of location in the late 1820s. The early historic sizes of the squatting runs have been significantly reduced in some cases, but the economic use remains the same for many. Pastoral technology has been upgraded and older structures have either been updated, fallen into ruin or have been demolished. Later twentieth century cold-climate plantings have added another element that has become characteristic of the New England Tablelands. The result is a palimpsest of pre-colonial and post-colonial uses that are visible in the landscape and exist as archaeological sites and ruins.

ES3 Impact assessment

The development footprint encompasses a small part of a much larger area that has cultural significance for its historical use as squatting and then pastoral runs. Field assessment confirmed that relics and significant structures exist within the broader project boundary and surrounds; however, refinements of the development footprint in response to stakeholder engagement and environmental constraints identification, including historical heritage, will avoid the majority of known sites and items identified during field surveys.

Specifically, impacts to three archaeological sites have been avoided through refinement to the development footprint: HNE17, a shepherd's hut site originally in the central array; HNE19, a house site; and HNE36, a hut site with additional building, both originally in the northern array. Redesign has also removed potential impacts to the dismantled dry-stone wall, HNE12, where an exclusion zone will be set around the wall to define it as a significant item and to protect it from inadvertent impacts. Similarly, HNE11, another dismantled dry-stone wall, will be protected from harm with the application of physical and procedural barriers.

Impacts will occur to the following:

- partial impacts to HNE20, the old alignment of Old Gostwyck Road;
- removal of HNE21 and HNE43, two former fence lines within the development footprint for the northern array area;

- removal of HNE34, a former stockyard within the development footprint for the northern array area;

- impacts to a small portion of HNE37, the cultural landscape in the region (including views and vistas experienced at HNE15 and HNE16) and features in the landscape, including HNE34 and some wind-breaks) that contribute to the cultural landscape, but which don't possess significance outside of this context; and

- removal, if it exists, of HNE26, the potential archaeological resources of a former stockyard (southern array area).

Overall, it is anticipated that the project will have a low-to-moderate negative effect on the historical heritage significance of the rural character of the region and a moderate affect within the development footprint, predominantly by obscuring the significant cultural landscape rather than destroying it. It is noted that the majority of sites and views within the development footprint are not accessible by the general public.

The positive aspects of the project will be that the activities that commenced in the early historical period of the colony, namely wool production, will continue on the land surrounding the development footprint. Further, this project has provided opportunity to assess these early squatting runs in the field, which will provide a substantial amount of information that can be put to use to open up areas of investigation that were not available previously.

ES4 Management and mitigation measures

Measures have been developed to manage known and potential impacts to sites identified within the development footprint, project boundary and surrounds.

A historic heritage management plan (HHMP) will be prepared to guide the conservation of heritage items, including site specific management measures, along with general measures, including an unexpected finds protocol. The relevant measures in the HHMP will be incorporated into the project construction environmental management plan (CEMP) to avoid accidental impacts during the construction and operational phase of the project.

Management and mitigation measures will include but not be limited to:

- active and passive protection zones;

- relocation of moveable heritage (where practicable);

- digital photographic archival recording in accordance with the Heritage Manual guidelines *Photographic Recording Of Heritage Items Using Film or Digital Capture* (Heritage Office 2006); and

- implementation of an unanticipated finds protocol.

Site specific management measures are proposed for the following sites within the development footprint with potential to be impacted by the project:

- HNE11 Remnant of basalt wall 1;

- HNE12 Remnant of basalt wall 2;

- HNE15 View through Gostwyck Station;
- HNE 16 View from granite tors;
- HNE20 Old Gostwyck Road alignment;
- HNE21 Former fence line;
- HNE26 Former stockyard;
- HNE34 Former stockyard;
- HNE37 Cultural landscape; and
- HNE43 Former fence line.

Table of contents

Table of contents *(Cont'd)*

Table of contents

Table of contents

Tables

Figures

1 Introduction

1.1 Overview

UPC Renewables Australia Pty Ltd (UPC) proposes to develop the New England Solar Farm; a significant grid-connected solar farm and battery energy storage system (BESS), along with associated infrastructure, approximately 6 kilometres (km) east of the township of Uralla, which lies approximately 19 km south of Armidale in the Uralla Shire local government area (LGA) (Figure 1.1) (the project).

The project is a State Significant Development (SSD) under the State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP). Therefore, a development application (DA) for the project is required to be submitted under Part 4, Division 4.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The NSW Minister for Planning (Minister), or the Minister's delegate, is the consent authority.

An environmental impact statement (EIS) is a requirement of the approval process. This historical heritage assessment and Statement of Heritage Impact (SoHI) report forms part of the EIS. It documents the historical heritage assessment methods and results, the initiatives built into the project design to avoid and minimise historical heritage associated impacts, and the additional mitigation and management measures proposed to address any residual impacts not able to be avoided.

1.2 Site description

The project will be developed within the Uralla Shire LGA. At its closest point, the project boundary is approximately 6 km east of the township of Uralla, and the northern array area starts approximately 8.6 km south of Armidale (refer to Figure 1.1).

The development footprint is the area within the project boundary on which infrastructure will be located. The development footprint encompasses a total area of 2,787 ha, which includes 1,418 ha within the northern array area, 625 ha within the central array area and 653 ha within the southern array area. Within the development footprint, approximately 1,000 ha will be required for the rows of PV modules. The remaining area is associated with power conversion units (PCUs), space between the rows, internal access tracks and associated infrastructure (including substations and BESSs). The development footprint also includes land required for connection infrastructure between the three array areas as well as land required for new internal roads to enable access to the three array areas from the surrounding road network. Subject to detailed design and consultation with the project landholders, security fencing and creek crossings may be required on land outside of the development footprint, but within the project boundary.

The land within the project boundary is zoned RU1 Primary Production under the Uralla Local Environmental Plan 2012 (Uralla LEP). The properties within the project boundary are currently primarily used for sheep grazing for production of wool and lambs, with some cattle grazing for beef production.

The project is located close to TransGrid's 330 kilovolt (kV) transmission line, which passes through the northern and central array areas (Figure 1.2). It also has access to the regional road network; including the New England Highway and Thunderbolts Way (Figure 1.2).

A number of local roads traverse the array areas and their surrounds, including Gostwyck Road, Salisbury Plains Road, The Gap Road, Carlon Menzies Road, Munsies Road, Saumarez War Service Road, Hillview Road, Elliots Road and Big Ridge Road, and will provide access to the three array areas from the regional road network throughout the construction and operation of the project (Figure 1.2).

The primary site access points will be from The Gap Road, Salisbury Plains Road, Hillview Road, Munsies Road and Big Ridge Road (Figure 1.2).

1.3 Project boundary terms and definitions

The **project boundary** referred to in this report encompasses the 61 Lot/DPs that make up the development footprint. It is shown in Figure 1.2 and includes the involved lots beneath each of the three array areas as well as potential connection infrastructure and access corridors.

The **development footprint** referred to in this report is shown in Figure 1.2 and represents the potential disturbance footprint of the three solar array areas and associated infrastructure. As noted in Section 1.2, the development footprint also includes land required for connection infrastructure between the three array areas (ie electricity transmission line (ETL) easements and underground or overhead cabling), as well as land required for new internal roads to enable access to the three array areas from the surrounding road network (ie site access corridors). Ground disturbance will occur in these areas; however, only discrete areas of disturbance are anticipated, particularly along ETL easements to facilitate power pole placement.

The **study area** referenced in this report encompasses the **development footprint,** the **project boundary** and the surrounding local area. It includes the area presented in the preliminary environment assessment (PEA) that supported the request for the Secretary's Environmental Assessment Requirements (SEARs). It has been used to put discussions about early land acquisition into historical context and has not been defined on the figures presented as part of this report.

The **field assessment area (or survey area)** is the geographic extent of survey completed for this report. A survey area boundary is not defined in this report; however it evolved throughout the fieldwork period to accommodate various refinements to the project's development footprint, which occurred to avoid environmental constraints including identified historical heritage sites (including relics). As a result, the survey area generally represents an area slightly larger than the development footprint.

Source: EMM (2018); DFSI (2017); GA (2015)

0 10 20 km

GDA 1994 MGA Zone 56

N

\\EMMSVR1\emm\Jobs\2017\\17300 - UPC NSW Solar Farm\GIS\02_Maps_Heritage_HH\HH001_Regional_20181012_02.mxd 14/11/2018

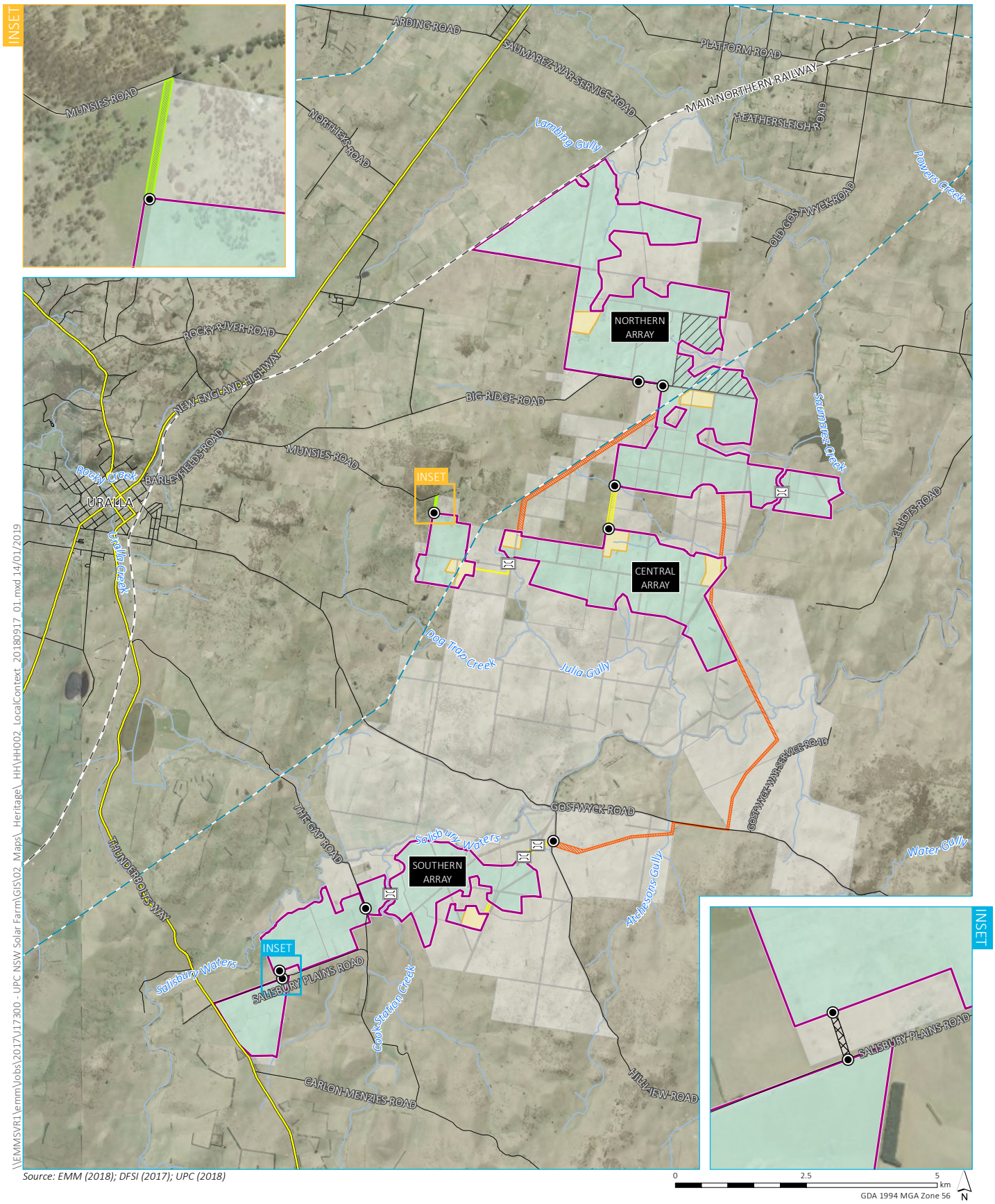
KEY

- Development footprint
- Project boundary
- Other SSD solar development
- Airport
- Rail line
- Main road
- Local road
- Watercourse/drainage line
- Waterbody
- Local government area
- NPWS reserve
- State forest

Regional setting

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 1.1

EMM
creating opportunities



\\EMMSVR1\emm\Jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02_Maps_Heritage_HH\HH002_LocalContext_20180917_01.mxd 14/01/2019

Source: EMM (2018); DFSI (2017); UPC (2018)

0 2.5 5 km

GDA 1994 MGA Zone 56

N

KEY

- 330 kV transmission line
- Main road
- Local road
- Rail line
- Watercourse/drainage line
- Project boundary

Development footprint

- Solar array
- Potential ETL easement
- Potential site access corridor
- Potential site access/ETL easement
- Potential substation/BESS footprint
- Potential electrical cabling/site access corridor
- Potential creek crossing
- Primary site access point
- Potential site for construction accommodation village

Local context

New England Solar Farm
Historic heritage assessment and statement of heritage impact
Figure 1.2

EMM
creating opportunities

1.4 Assessment guidelines and requirements

This historical heritage assessment and SoHI has been prepared in accordance with the relevant government assessment requirements, guidelines and policies. The report and field survey were undertaken using the principles of *The Australian International Council on Monuments and Sites, Charter for Places of Cultural Significance* (also known as the *Burra Charter,* Australia ICOMOS 2013) and the New South Wales (NSW) *Heritage Manual* (Heritage Office 1996 with regular additions). Use of these documents satisfies the requirements of the SEARs.

The *Burra Charter* defines the concept of cultural significance as 'aesthetic, historic, scientific, social or spiritual value for past, present or future generations' (Australia ICOMOS 2013, Article 1.2). It identifies that conservation of an item of cultural significance should be guided by the item's level of significance.

The *Heritage Manual* comprises the following guidance documents:

- *Statements of Heritage Impact Guidelines* (Heritage Office 2006);
- *Investigating Heritage Significance* (Heritage Office 2004);
- *Assessing Heritage* Significance (Heritage Office 2001); and
- *Assessing Significance for Historical Archaeological Sites and 'Relics'* (Heritage Branch Department of Planning 2009).

These documents have been used to guide this historical heritage assessment and SoHI.

The historical heritage assessment and SoHI was prepared in accordance with the requirements of the NSW Department of Planning and Environment (DPE) and relevant agencies, which are set out in the Secretary's Environmental Assessment Requirements (SEARs) for the project, issued on 8 May 2018. The SEARs identify matters which must be addressed in the EIS. To inform preparation of the SEARs, DPE invited other government agencies, including the NSW Office of Environment and Heritage's (OEH's) Heritage Division (hereafter referred to as the Heritage Division), to recommend matters to be addressed in the EIS. These matters were taken into account by the Secretary for DPE when preparing the SEARs. A copy of the SEARs is attached to the EIS as Appendix A, while Table 1.1 lists the individual requirements relevant to this historical heritage assessment and SoHI and where they are addressed in this report.

Table 1.1 Historical heritage - relevant SEARs issued by DPE

Requirement	Section addressed
Heritage – including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, including adequate consultation with the local Aboriginal community.	This report addresses the historical heritage values and impacts to those values as a result of the project.

Comments on the SEARs by the Heritage Council, and their location in the report are presented in Table 1.2.

Table 1.2 Heritage Council comments on SEARs

Requirement		Section addressed
9. The EIS must provide a heritage assessment including but not limited to an assessment of impacts to *State* and *local heritage* including conservation areas, natural heritage areas, place of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be assessed. Where impacts to state or locally significant heritage items are identified, the assessment shall:		
a.	outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996);	Chapter 7 and Chapter 8
b.	be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria);	The lead author of this report is a qualified heritage consultant (and archaeologist) with 18 years' experience who can fulfil the Heritage Council's Excavation Director criteria
c.	include a statement of heritage impact for all heritage items (including significance assessment);	Section 7.9
d.	consider impacts including, but not limited to, vibration, demolitions, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant), and	Chapter 7
e.	where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.	Chapter 7 and Chapter 8

1.5 Structure of the report

This report is structured as follows:

- project description: Section 1;
- statutory framework: Section 2;
- historical and cultural context: Sections 3–5;
- assessment of significance: Section 6;
- impact assessment of individual sites as well as cumulative and residual impacts: Section 7; and
- measures to avoid, minimise and mitigate impacts: Sections 7–8.

1.6 Project description

1.6.1 Overview

The project involves the development, construction and operation of a solar PV electricity generation facility, which consists of PV modules, inverters and associated infrastructure.

The development footprint provided on Figure 1.2 incorporates the land required for:

- the three solar array areas;
- up to three internal solar array substations and a single grid substation;
- associated BESS(s);
- operations and maintenance (O&M) infrastructure including:
    - O&M buildings (namely meeting facilities, a temperature-controlled spare parts storage facility, supervisory control and data acquisition (SCADA) facilities, a workshop and associated infrastructure); and
    - car parking facilities.
- connection infrastructure between the three array areas (including ETLs and underground or overhead cabling); and
- a new internal road network to enable access from surrounding local roads to the three array areas during construction and operations.

In addition, security fencing and creek crossings (should they be required) will be placed within the project boundary.

The project will have a targeted 'sent out' electricity generating capacity of up to 800 MW (AC) and up to 200 MW (AC) two-hour energy storage. The final number of PV modules within the three array areas will be dependent on detailed design, availability and commercial considerations at the time of construction.

Electricity generated by the project will be injected into the grid via a new cut-in to TransGrid's 330 kV transmission line that traverses the northern and central array areas (refer Figure 1.2).

The infrastructure associated with the project will cover an area within the development footprint (refer Figure 1.2).During the preparation of the EIS, the development footprint within the project boundary has been refined on the basis of environmental constraints identification, stakeholder engagement, community consultation and design of project infrastructure with the objective of developing an efficient project that avoids and minimises environmental impacts (refer Sections 7.2 and 7.9).

1.7 Project infrastructure

1.7.1 Solar arrays, PV modules, medium voltage cable network and power conversion units

The project will involve the development of three separate arrays of PV modules and PCUs. The number of PV modules and PCUs required will be dependent on the final detailed design of the project.

PV modules will be installed in a series of rows to maximise the energy yield that is achievable given the solar resource and the ground area available within the three array areas. The modules will be fixed to, and supported by, a ground-mounted framing structure, aligned in rows. Assuming single axis tracking technology is used, the rows of PV modules will be aligned in a north-south direction and spaced out approximately 5-8 m apart. The use of single axis tracking technology would enable the PV modules to rotate from east to west during the day tracking the sun's movement.

An alternative configuration for the PV modules may be considered for the project, namely a fixed tilt system, with the rows aligned east-west and the PV modules facing north. However, it is noted that single axis tracking is considered more likely due to the recent fall in technology costs and the superior energy yield associated with this technology.

The PV modules will be supported on mounting frames consisting of vertical posts ('piles') and horizontal rails ('tracking tubes'). Rows of piles will be driven or screwed into the ground, depending on the geotechnical conditions, and the supporting racking framework will be mounted on top. Pre-drilling and/or cementing of foundations will be avoided if allowed by the geotechnical conditions.

The height of the PV modules at their maximum tilt angle (typically up to 60 degrees) will be up to 4 m. Additional site-specific clearance of up to around 300 mm may be required to avoid flooding risk or to allow sheep to graze underneath the PV modules.

DC cables will connect the PV modules to the PCUs.

The PCUs consist of three key components, namely inverter(s), transformer(s) and a ring main unit. The purpose of each PCU is to convert the direct current (DC) electricity generated by the PV modules into alternating current (AC), compatible with the electricity network. PCUs also increase the voltage of the electricity to 11-33 kV. The exact dimensions of the PCUs will be determined during detailed design; however, it is anticipated that each PCU will be approximately 8 m in length by 2.6 m wide by 2.7 m high.

A medium voltage (MV) cable reticulation network will be required to transport the electricity around each of the three arrays. If underground, cables of either 11 kV, 22 kV or 33 kV will be installed at a depth of at least 600 millimetres (mm) and will be designed and fitted in accordance with relevant Australian industry standards. Electricity from the MV cable network will be stepped up to high voltage (HV) at each of the internal solar array substations (up to three in total).

A small corridor for MV cabling may be required between two land parcels in the southern array area. The indicative alignment of this cabling is presented in Figure 1.2. The exact alignment will be determined during detailed design.

1.7.2 Solar array substations

Up to three substations will be required (potentially one within each of the three solar arrays) to step the MV up to HV. Based on preliminary designs, each substation will require transformers to step up from 33 kV to 132 kV. Each substation will likely consist of an indoor switch room, to house MV circuit breakers, and an outdoor switch yard to house the transformer(s), gantries and associated infrastructure. The total pad area for each solar array substation is likely to be in the order of approximately 3-4 ha. Indicative locations for the solar array substations are provided in Figure 1.2.

The indicative locations for the solar array substations are provided in Figure 1.2. A larger footprint than what will likely be required has been provided at each location to allow for flexibility for placement of this infrastructure during the detailed design stage of the project.

1.7.3 Collector network and grid substation

Up to three new overhead transmission lines will transport electricity from each of the internal solar array substations to the grid substation. Based on preliminary designs, the anticipated voltage is 132 kV.

The alignment of the overhead transmission lines and design, height and style of the structures required to support them will be determined during the detailed design stage of the project; however, it is unlikely that the height of the structures will exceed 45 m. Based on preliminary designs, single concrete, wood, or steel poles are anticipated rather than steel lattice towers. The easement required for the overhead transmission lines will be dependent on the type of structure selected but is likely to be approximately 45 m in width. The distance between each structure will also be dependent on the type of structure selected. Where possible, structures will avoid identified constraints on the land parcels between the three array areas. Complete clearance of vegetation within each of the proposed easements may be required.

Indicative alignments for each of the overhead transmission lines are presented in Figure 1.2. As illustrated in Figure 1.2, three options are being considered for the transmission line between the northern and central array areas.

The indicative alignment to connect the southern array area to the central array area extends over approximately 9.5 km and covers land owned by two of the project landholders, as well as the southern road easement of a 1 km section of Gostwyck Road.

The grid substation will be adjacent to TransGrid's 330 kV transmission line, which traverses the northern and central array areas (Figure 1.2). At the grid substation, the electricity generated by the three solar arrays will be stepped up to 330 kV and injected into the electricity grid via TransGrid's 330 kV transmission line. The grid substation will require a pad area of up to 10 ha. An envelope providing adequate flexibility for design and siting of the grid substation is provided on Figure 1.2. The exact dimensions will be refined during the detailed design stage of the project.

Three separate areas, one in the northern array and two in the central array, are currently being considered as options for the grid substation. Footprints providing adequate flexibility for design and siting of the grid substation at these three locations are provided on Figure 1.2. The exact dimensions will be refined during the detailed design stage of the project and in consultation with TransGrid.

1.7.4 Battery and energy storage system

The purpose of the BESS will be to support the network, introduce a dispatchable capability to the project's energy generation profile and allow for revenue diversification.

The BESS will be adjacent to one or more substations within the development footprint and will be housed within either a number of small enclosures/cabinets or larger battery buildings. The specific design details for the BESS and their respective enclosure types have not been confirmed; however, it is anticipated that the BESS for the project will consist of either one BESS facility at the grid substation or three BESS facilities (one at the grid substation and two at the internal solar array substations).

1.7.5 Construction accommodation village

A construction accommodation village for non-local construction employees (where skills cannot be sourced locally) may be established as part of the early stages of the project's construction.

The construction accommodation village will be on part of Lot 2 of DP 174053 in the northern array area (refer Figure 1.2).

To build the construction accommodation village, topsoil will be stripped where necessary, hardstand constructed and walkways and car parks constructed.

1.7.6 Supporting infrastructure

In addition to the infrastructure described above, the project will also require:

- one or more O&M buildings (namely meeting facilities, a temperature-controlled spare parts storage facility, SCADA facilities, a workshop and associated infrastructure);
- a number of new internal roads to enable access to the three array areas from the surrounding road network including The Gap Road, Salisbury Plains Road, Hillview Road, Munsies Road and Big Ridge Road (refer Figure 1.2);
- emergency access points to enable access to the three array areas from the surrounding road network in the case of an emergency (eg fire or flood);
- parking and internal access roads/tracks within the three areas to allow for construction and ongoing maintenance; and
- fencing and landscaping around the solar arrays, substations and BESSs.

Temporary infrastructure during the construction stage of the project including laydown and storage areas and a site compound are also likely to be required in each of the three solar array areas. Laydown areas will likely be in close proximity to the primary site access points and will be placed away from environmentally sensitive areas, where possible.

Chain mesh security fencing will be installed within the project boundary to a height of up to 2.4 m high. The location of the security fencing will be determined in consultation with the project landholders. Fencing will restrict public access to the development footprint. Where possible, fencing will be positioned to minimise disruption to ongoing agricultural operations on land adjacent to the development footprint.

1.8 Assessment objectives

In accordance with the SEARs, the objectives of this historical heritage assessment and SoHI are:

- to investigate the potential for items of historic heritage value, including relics, to exist within the development footprint;
- to assess the significance of historic heritage items in the project boundary, which encompasses the development footprint and its surrounds;
- to assess the potential impacts of the project on items of historic heritage in the project boundary; and
- to formulate management measures for the protection of historic heritage items in the development footprint.

1.9 Report assessment methods

1.9.1 Research sources

The facilities used in research for this historic heritage assessment and SoHI were as follows:

- New England Regional Archives (University of New England);
- Land and Property Information (LPI);
- National Library of Australia Trove Online;
- National Trust NSW; and
- State Library (Mitchell Wing).

In addition to the archival research that was conducted for this report, local knowledge from neighbouring residents and project landholders was also sought through face to face interviews and telephone conversations. The purpose of these interviews and discussions were to ascertain if unrecorded structures or potential relics were present on properties that residents knew of, or if long-term residents remembered the existence of now-demolished structures.

1.10 Field assessment methods

1.10.1 Introduction

Field survey was undertaken as part of the preparation of this assessment. In total, three days were spent on targeted historical survey and an additional 10 days were spent as part of field assessments based on landform units during which Aboriginal archaeological sites were recorded.

An initial field assessment was undertaken on 6 and 7 February 2018 by Kerryn Armstrong (Archaeologist at EMM), Pamela Kottaras (National Technical Leader – Historical Heritage at EMM) and Graham Knuckey (Remnant Archaeology) during a site familiarisation exercise. Inspections were undertaken of two properties, Gostwyck and Deeargee, with the consultants accompanied by landholders. The purpose of the site familiarisation exercise was to view the landscape, attempt to re-locate (find) two Aboriginal Heritage Information Management System (AHIMS) sites thought to be located inside the study area and to be escorted to areas within these properties which have the potential to possess heritage significance.

A second field assessment was undertaken by Ryan Desic (Senior Archaeologist at EMM) and Pamela Kottaras from 21-25 May 2018. Survey continued from 28 May-1 June 2018 by Ryan Desic and Graham Knuckey. This assessment was undertaken with the participation of registered Aboriginal parties (RAPs) and recorded Aboriginal and historical sites.

A third field assessment was undertaken by Ryan Desic over eight days from 31 July-8 August 2018. This phase included survey for Aboriginal and historical heritage values.

A fourth field investigation was undertaken by Pamela Kottaras over two days from 21-22 August 2018. This field trip was based around additional archaeological site information provided by the landholders to determine their locations in relation to the development footprint.

1.10.2 Data collection methods

Prior to commencing field survey, areas of interest were mapped electronically on 'Collector', and sites and potential sites were recorded using 'Survey 123'. Each archaeologist also tracked the survey and recorded waypoints using a hand-held GPS and took notes on paper as a backup. Some photographs were taken using Survey123 and many were taken using a digital single-lens reflex (DSLR) camera.

1.10.3 Survey plan

The survey plan was as follows:

1. Include the locations of structures obtained from early maps in the Collector data to target areas that will be impacted physically as a priority. Other potential sites within proximity of areas of proposed impacts to be inspected when time permits.

2. Engage in additional consultation with project landholders and informants who have been identified as having suitable information about the landscape within the development footprint.

3. Visit the sites identified by the project landholders and informants and those identified through mapping and review of existing documentation.

The results of the field assessments were used to further inform the development footprint presented in Figure 1.2 and are presented below. Note that item identifiers are not consecutive because the development footprint was modified to avoid some items. Other identifiers were allocated during documentary searches, some of which were subsequently excluded as they are not relevant to this study (ie are not material features).

1.11 Authorship

This report was prepared by Pamela Kottaras (National technical Leader – Historical Heritage at EMM) with assistance from Kerryn Armstrong (Archaeologist at EMM) and Pamela Chauvel (Archaeologist at EMM). Bernadette McCall assisted significantly with the historical analysis.

1.12 Acknowledgments

This report was prepared with the assistance of many people from the New England Tablelands. In addition to the people in the list below, who assisted with the collation of historical information, EMM would like to express gratitude to the landholders who are also knowledge holders of the historical landscape in the project boundary. Their generosity with time, knowledge and access is very much appreciated; particularly as the project was being assessed during severe drought.

EMM would like to thank the following people for their assistance in the preparation of this report:

Mick McIlveen & Philip Ward	University of New England Regional Archives
Pam Watson	University of New England
Noel Porter	McCrossin's Mill Museum
Annie and Kent Mayo	Uralla Local History Library
Tony and Frances Stiller	Knowledgeable local residents

John Pickard	Consultant
Amy Ramirez	Intern, Macquarie University.

1.13 Limitations of the study

Any limitations or qualifications about the findings and conclusions given in this report are noted.

The project boundary encompasses significant historical heritage values, comprising the early settlement of the New England Tablelands. Whilst extensive research was undertaken to try and assess the context and history of the land within the project boundary in this early settlement period, it is possible that additional sources or research exist.

2 Statutory framework

2.1 Legislation

2.1.1 Introduction

In NSW heritage items and relics, that is archaeological sites assessed to be of local or State significance, are protected by two main pieces of legislation: the EP&A Act and the NSW *Heritage Act 1977*. An additional layer of protection is added, in certain circumstances, by the *Environmental Protection and Biodiversity Conservation Act 1999.*

2.1.2 Environment Protection and Biodiversity Conservation Act 1999

The EPBC Act provides a legal framework to protect and manage nationally and internationally important heritage places, as well as flora, fauna, ecological communities and water resources which are defined as Matters of National Environmental Significance (MNES) under the EPBC Act. The EPBC Act identifies nine MNES, including world heritage properties and places listed on the National Heritage Register.

The EPBC Act establishes the National Heritage List (NHL), Commonwealth Heritage List (CHL) and the Register of the National Estate. The Register of the National Estate (RNE) is a non-statutory register.

Under the EPBC Act, an action that may have a significant impact on a MNES is deemed to be a 'controlled action' and can only proceed with the approval of the Commonwealth Minister for the Environment. An action that may potentially have a significant impact on a MNES is to be referred to DoEE for determination as to whether or not it is a controlled action. If deemed a controlled action the project is assessed under the EPBC Act for approval.

The project is unlikely to have a significant impact on any world heritage properties or places listed on the National Heritage Register, and the EPBC Act is not discussed further.

2.1.3 Environmental Planning and Assessment Act 1979

The EP&A Act establishes the framework for cultural heritage values to be formally assessed in the planning and development consent process. The EP&A Act requires that environmental impacts are considered before land development; this includes impacts on cultural heritage items and places as well as archaeological sites and deposits.

The EP&A Act requires that local governments prepare planning instruments, such as LEPs and Development Control Plans (DCPs) in accordance with the EP&A Act, to provide guidance on the level of environmental assessment. This includes identification of heritage items, as listed on the heritage schedules of an LEP. The project falls within the Uralla Shire LGA. Where a project is being assessed as SSD, approval by the relevant council is not required but the items require assessment and management if they are affected by a proposal. Heritage items listed on the Uralla LEP have been considered in this assessment.

2.1.4 Heritage Act 1977

The Heritage Act is the primary piece of State legislation affording protection to items of environmental heritage (predominantly cultural) in NSW. Under the Heritage Act, 'items of environmental heritage' include places, buildings, works, relics, moveable objects and precincts identified as significant based on historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic values.

State significant items are listed on the State Heritage Register (SHR), established under Part 3A of the Heritage Act. Items listed on the SHR are given automatic protection under the Heritage Act against any activities that may damage an item or affect its heritage significance. Under Section 170 of the Heritage Act, government agencies must establish and keep a register that includes all items of environmental heritage that have been identified by the agency, or that are listed on the SHR, an environmental planning instrument, or which may be subject to an interim heritage order that are owned, occupied or managed by that government body. These registers provide a list of known heritage items to be considered during this assessment.

Part 6 of the Heritage Act provides protection for 'relics', regardless of their listing status. It applies to all land in NSW that is not included in the SHR. Section 4(1) of the Heritage Act (as amended 2009) defines a 'relic' as follows:

A "relic" means any deposit, artefact, object or material evidence that:

(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and

(b) is of State or local heritage significance.

Section 139(1) of the Heritage Act states that:

> A person must not disturb or excavate any land knowingly or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

Approval under the Heritage Act is not applicable for projects assessed as SSD under the SRD SEPP, in accordance with Division 4.7, section 4.41(1)(c) of the EP&A Act.

However, where unanticipated relics are discovered, notification to the Heritage Council is regulated under Section 146 of the Heritage Act.

Section 146 Notification of discovery of relic:

> A person who is aware or believes that he or she has discovered or located a relic (in any circumstances, and whether or not the person has been issued with a permit) must:
>
> (a) within a reasonable time after he or she first becomes aware or believes that he or she has discovered or located that relic, notify the Heritage Council of the location of the relic, unless he or she believes on reasonable grounds that the Heritage Council is aware of the location of the relic, and
>
> (b) within the period required by the Heritage Council, furnish the Heritage Council with such information concerning the relic as the Heritage Council may reasonably require.

The Heritage Act identifies the category of 'works', which refers to historical infrastructure, and is viewed as separate to that of archaeological 'relics' under the Heritage Act. 'Works' may be buried, and are therefore archaeological in nature, but exposing a 'work' does not trigger reporting obligations under the Heritage Act unless it is of demonstrable significance.

2.2 Identifying listed heritage items

Statutory and non-statutory registers were reviewed. Listing on statutory registers provides a basis under which the item or place is protected and change is managed through project approval. Statutory listings provide legal protection for heritage items under the legislation outlined above.

Statutory registers reviewed as a part of this assessment include:

- NHL - the register is made under the EPBC Act.
- Commonwealth Heritage List (CHL) - the register is made under the EPBC Act.
- SHR - this register is made under Part 3A of the Heritage Act. Items on the SHR undergo a rigorous assessment process and must reach a high significance threshold to be included. Inclusion on the SHR is directed by the Minister for Heritage.
- s170 register - this register is made under Section 170 of the Heritage Act. It is a register of heritage items that are owned or managed by state government authorities. Items on the s170 register may also be listed on other registers. Demolition, change to fabric and change of ownership require notification to the Heritage Council of NSW.
- Schedule 5 of the Uralla LEP. The EP&A Act sets the provisions for the making of LEPs. Most LEPs are prepared to a standard template, which includes environmental heritage in Schedule 5 (the heritage schedule). Where an item is included in the heritage schedule, development applications must include an assessment of impacts to the item. Where a project is being assessed as SSD, approval by the relevant council is not required but the items require assessment and management if they are affected by a proposal.
- State Heritage Inventory (SHI), which was cross-checked with Schedule 5 of the Uralla LEP and the s170 register. The SHI is not a single statutory register, but a central collection of state listed statutory heritage items maintained by the Heritage Division.

Non-statutory listing is an acknowledgment of a site's or place's importance to sections of the community. Listings on such registers do not place legal requirements on development but nevertheless influence the future of such listed items. Non-statutory registers reviewed as a part of this assessment include:

- National Trust of Australia, NSW (NT) - the NT is made up of autonomous state chapters. Each chapter is a community-based and non-government organisation, with a mandate to conserve and promote Australia's natural and cultural heritage. Classification by NT is a strong acknowledgment of heritage significance and while statutory constraints are not applicable, classification offers protection through visibility and community action.
- Register of the National Estate (RNE) - the RNE is an archived list of heritage items that were protected under the now repealed Commonwealth *Heritage Commission Act 1975*, which was replaced by the EPBC Act. While many items were transferred from the RNE to the NHL or CHL, those that were not remain on the RNE as an indication of their heritage value.

3 Existing environment

3.1 Introduction

The environmental characteristics of any area influenced the way people used the landscape. In the past, the availability of resources such as water, flora, fauna, stone material and topography played a substantial role in the choice of camping, transitory movement and ceremonial areas used by Aboriginal people.

Migrants from the early colony looked for the same landscape characteristics but manipulated their environment in ways that left more obvious marks. Water, level or gently sloping ground, and suitable soils to grow crops and animals was sought after. Therefore, understanding environmental factors assists with predicting where sites are likely to occur. Additionally, natural and cultural (human-made) site formation processes that occur after the deposition of archaeological material influence the way archaeological material is distributed and preserved across a landscape.

3.2 Landscape overview

The study area is part of the New England Tablelands Bioregion, which covers an area of more than 3,000,000 ha. Over 95% of the bioregion is within NSW, extending north into Queensland. In NSW, the boundary extends from north of Tenterfield to south of Walcha and includes towns such as Armidale and Guyra. The bioregion is a stepped plateau of hills and plains with elevations between 600 and 1500 m on Permian sedimentary rocks, intrusive granites and extensive Tertiary basalts (OEH 2016b).

Most of the study area is within the Armidale Plateau subregion, which is characterised by an undulating to hilly plateau at an elevation of approximately 1,100 m. It has a stepped landscape across basalt flows with broad valleys which steepen to the east at the head of the Great Escarpment Gorges. Specific landform patterns and landform elements across the study area are described in soil landscapes information presented in Section 3.5 of the Aboriginal cultural heritage assessment report (ACHAR) (refer to Appendix D of the EIS).

Freshwater flows through the project boundary and its surrounds in the form of Salisbury Waters, Julia Gully and its tributary Dog Trap Creek and Saumarez Creek. Three primary upland wetlands occur near the township of Uralla, namely Dangars Lagoon, Racecourse Lagoon and Barleyfields Lagoon.

When Europeans first settled in the region, they would have seen open sclerophyll forest of Eucalypt and Angophora with a grassy forb-rich understorey accompanied by freshwater wetlands with fertile soils. Such a landscape would be conducive to settlement, providing fertile land for livestock grazing and pastoral activity. Open grassland was also a feature of the pre-European landscape and therefore prized for its potential grazing capacity.

3.3 Heritage listings

No heritage items listed on the National Heritage List (NHL) or Commonwealth Heritage List (CHL) occur adjacent to or within the project boundary.

Several items identified on the State Heritage Register (SHR) and Section 170 Registers occur to the west of the project boundary. No state listed heritage items occur within the project boundary.

Uralla Shire Council recognises its rich historical heritage by listing a number of items on Schedule 5 (environmental heritage) of the Uralla LEP. Many of the Uralla Shire LGA's heritage items are centred on the township of Uralla. Three LEP listed heritage items occur within or immediately adjacent to the project boundary, including:

- Gostwyck Memorial Chapel and Precinct (within);
- Deeargee Woolshed (within); and
- Salisbury Court (adjacent).

In addition, there are a number of heritage items within the Armidale Regional LGA north-east of the northern array area (refer Table 3.1 and Figure 3.1). These items are listed on Schedule 5 (environmental heritage) of the Armidale Dumaresq Local Environmental Plan 2012.

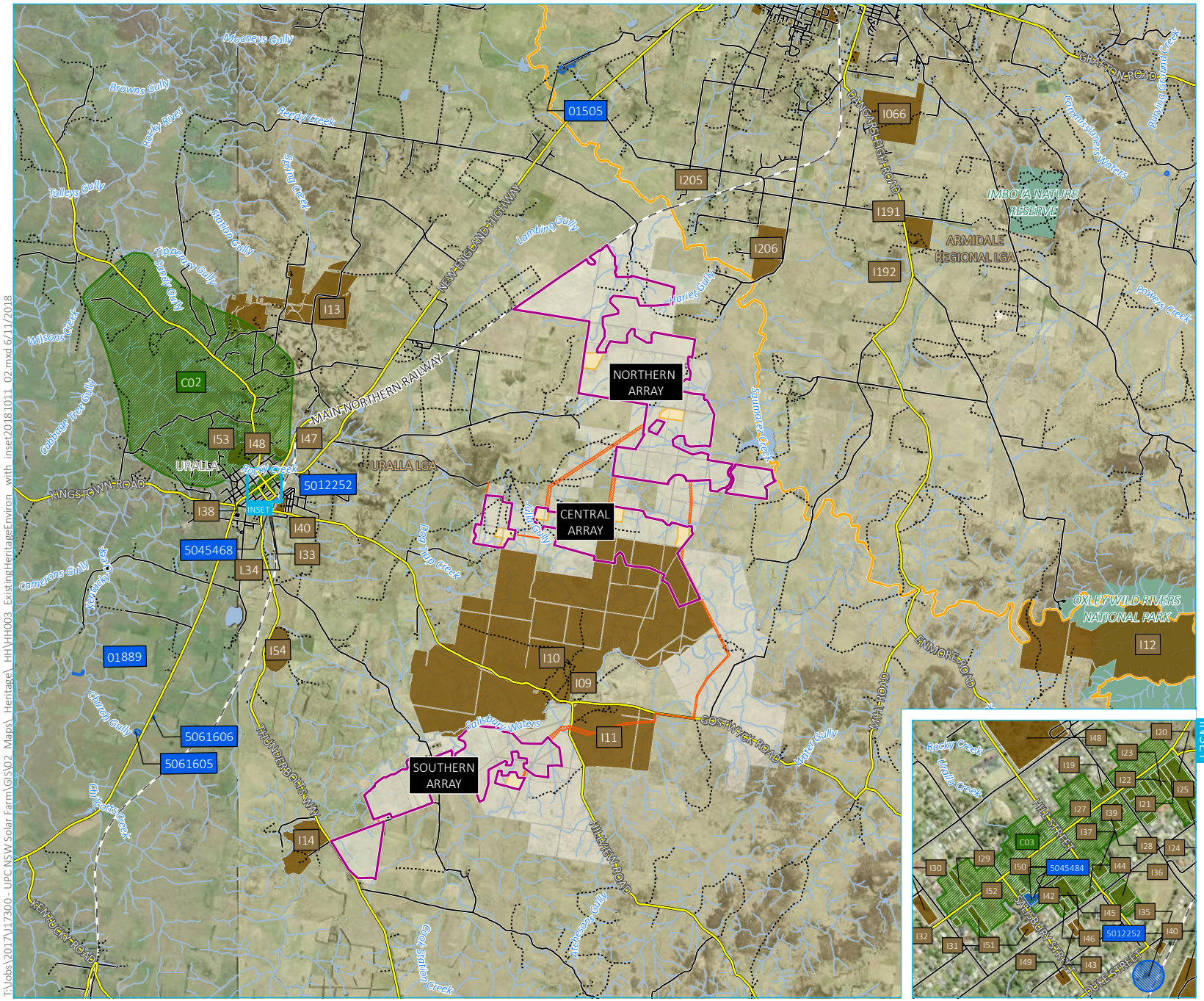
Listed heritage items that have been identified as part of searches of the heritage registers outlined above are listed in Table 3.1 and locations for statutory listings identified in Figure 3.1.

Table 3.1 Register search for the project boundary

Register	Register listing	Item number	Distance to closest project boundary
National Heritage List (NHL)	No register listings	-	-
Commonwealth Heritage List (CHL)	No register listings	-	-
State Heritage Register (SHR)	Captain Thunderbolt sites – Thunderbolt's Rock	5061606	6 km west
	Captain Thunderbolt sites – Blanch's Inn (formerly)	5061605	6.3km west
	Captain Thunderbolt sites – Thunderbolt's Death Site	50616078	8.3km west
Section 170 Registers	Uralla Police Station and official residence 2		5.5 km west
	Uralla Railway Station		5.5 km west
	Uralla, Barleyfields Road Gatekeepers Residence		5.5 km west
Uralla LEP (Schedule 5)	Suspension bridge across Salisbury waters	I09	Adjacent to the project boundary
	Gostwyck Memorial Chapel and Precinct (total property)	I10	Within project boundary but outside development footprint
	Deeargee Woolshed	I11	Within project boundary but outside development footprint
	Youngs Water Race	I13	4.5 km west
	Dangar's Lagoon	I54	4 km west
	Salisbury Court	I14	100 m west
	Showground	I40	5.3 km west
	Mount Beef	I47	5.7 Km west
	Alma Park	I48	6.9 Km west
	Mount Mutton	I53	6.3 km west
	Literary Institute Building	I51	5.8 km west
	Conservation area	C03	5.5 km west

Table 3.1 Register search for the project boundary

Register	Register listing	Item number	Distance to closest project boundary
	House	I19	Within C03 – 5.9 km west
	Roman Catholic Church Convent	I20	Within C03 – 5.9 km west
	Roman Catholic Church Group – School building A	I21	Within C03 – 5.9 km west
	Roman Catholic Church Group – School Building B	I22	Within C03 – 5.9 km west
	Roman Catholic Church Group – St Joseph's Church	I23	Within C03 – 5.9 km west
	Roman Catholic Church Group - Presbytery	I24	Within C03 – 5.9 km west
	House	I25	Within C03 – 5.9 km west
	House former Commercial hotel and ship and star	I26	Within C03 – 5.9 km west
	St David's Presbyterian Church	I27	Within C03 – 5.9 km west
	Presbyterian Manse	I28	Within C03 – 5.9 km west
	Oddfellows Hall	I29	Within C03 – 5.9 km west
	House (Former Courthouse hotel)	I31	Within C03 – 5.9 km west
	Veterinary Clinic	I32	Within C03 – 5.9 km west
	Court House	I36	Within C03 – 5.9 km west
	Post Office	I37	Within C03 – 5.9 km west
	House	I39	Within C03 – 5.9 km west
	Uniting Church	I44	Within C03 – 5.9 km west
	House	I45	Within C03 – 5.9 km west
	House	I46	Within C03 – 5.9 km west
	McCrossin's Mill	I50	Within C03 – 5.9 km west
	Old Stable Building	I52	Within C03 – 5.9 km west
	St John's Anglican Church and Vicarage	I30	6.3 km west
	Railway Gatekeeper's Cottage (former)	I33	5.4 km west
	New England Brass and Iron Lace Foundry	I34	5.3 km west
	House	I43	5.6 km west
	House	I49	5.7 km west
	Conservation area	C02	5.5 km west
	House and Garden	I38	6.8 km west
	St John's Church of England	I205	3.6 km north-east
Armidale Dumaresq Local Environmental Plan 2012 (Schedule 5)	Machinery Shed 'Stoneleigh'	I206	1.2 km east
	House 'Chevy Chase'	I191	6.4 km north-east-east
	War Memorial	I192	6.5 km east
	House 'Palmerston'	I066	6.8 km north-west
Uralla DCP 2011	No register listings	-	-
Register of the National Estate (RNE) (non-statutory)	Deeargee Woolshed	357	0.97 km east
	Gostwyck Elm Avenues	367	1.1 km north
	Gostwyck Homestead & Outbuildings	15627	1.7 km north
	Gostwyck Homestead Gardens	103535	1.7 km north



Main road
Local road
Vehicular track
Rail line
Watercourse/drainage line
Waterbody
NPWS reserve
Local government area
Project boundary

Development footprint
Solar array
Potential site access/ETL easement/underground cabling
Potential substation/BESS footprint

Historic heritage
State Heritage listing
LEP listing - item
Uralla LEP 2012 listing - conservation area

Source: EMM (2018); DFSI (2017); DPE (2017); UPC (2018)

0 1.5 3 km
GDA 1994 MGA Zone 56
N

T:\Jobs\2017\JJ7300 - UPC NSW Solar Farm\GIS\02_Maps_Heritage_HH\HH003_ExistingHeritageEnviron_with_inset20181011_02.mxd 6/11/2018

Existing heritage environment

New England Solar Farm
Historic heritage assessment and statement of heritage impact
Figure 3.1

EMM
creating opportunities

4 Historical summary

4.1 Historic themes

The Australian and NSW heritage systems employ a series of historic themes to guide the understanding of history and historical investigation in the nation and state. As part of any historic heritage assessment, it is important to review the historic themes when undertaking research on an area or place to provide proper context. The state and national themes are complementary to enable the historian to present a unified understanding of how an area fits into Australian history. The historic themes are also an important guide when assessing an item's heritage significance. They provide information on how an item may be historically significant at the local, state or national level.

Finally, historic themes help to develop interpretation and management strategies for items of heritage significance. A full list of these themes can be found on the Heritage Division website. Historic themes in the study area were identified based on the historical background (as described below) and the results of the historical survey (Section 5). The Australian and NSW historic themes relevant to the project boundary that have been used in this report are listed in Table 4.1.

Table 4.1 Historic themes

Australian historic themes	NSW historic themes
2. Peopling Australia	2. Aboriginal cultures and interactions with other cultures; convict; and migration
3. Developing local, regional and national economies	3. Agriculture; commerce; environment; cultural landscape; exploration; and pastoralism.
4. Building settlements, towns and cities	4. Land tenure
5. Working	5. Labour
8. Developing Australia's cultural life	6. Domestic life

4.2 Historical context

4.2.1 Pre-historical period environment and early contact

The history of the Aboriginal population of the high-country tablelands in the present area around Armidale is incomplete and relies on limited sources that survive from the early 19th century contact period (Ferry 1999, p.3). The tablelands from Glen Innes to Uralla and to Tingha in the west were occupied by the Anaiwan (Bowdler and Coleman nd, p.12). Stories attributed to the local Aboriginal people describe the region generally as a land in three parts based on topography and the water resources within them: a high country where the waters come from; the lowlands where water remained; and, a region in between where water flowed in various ways (Ferry 1999, pp.2–3).

The pre-pastoral landscape has been described as a plateau dominated by woodland and grasses. Various Eucalypt species clustered in stands of different species based on the distribution of the underlying geology, either slate, basalt or granite formations. A large variety of native grasses covered the area offering potential for extensive pasture which, although abundant in summer, was poor in the winter months and would have been unlikely to support year-round grazing by introduced species and native animals (Campbell 1922, p.252). Many of the earliest historical records in the region reflect on the often hostile interactions between the Aboriginal populations and the station owners who recorded them.

The prevailing views were of the colonial right to take control of the land and to improve it for settlement and pastoral activity. This was done by clearing existing vegetation and erecting permanent structures which introduced increasing pressure on existing ways of life and the pre-conditions for continued hostility.

Prior to the alienation of much of the runs in the Gostwyck area, the Aboriginal population had already been devastated by disease, particularly by a smallpox outbreak in 1829–1831. The disease is thought to have wiped out nearly half of the population, mainly women and children, making it impossible to estimate the full nature of the pre-European population (Ferry 1999, p.18).

4.2.2 Exploration and displacement of Aboriginal people

The earliest official exploration of the New England Tablelands was carried out in 1818 by the Surveyor-General John Oxley who identified much of the land he observed as suitable for settlement. Although unofficial forays into this northern area beyond the official nineteen proclaimed counties followed, it was colonial demand to open up new land for exploitation that was the driving force to push into new territory (Stuart 1999, p.55; Ferry 1999, p.15-ff.).

Oxley undertook further exploration in the region in company with the Government botanist Allan Cunningham in 1820, but neither he nor Oxley found viable direct passes beyond the Liverpool Ranges into the New England highlands (Stuart 1999, pp.54-55). By 1832, Hamilton Collins (H.C.) Sempill crossed the Liverpool Ranges through the Nundle Spur where he established the 'Walcha' run and in the same year, a small party led by Edward Gostwyck Cory reached the higher tablelands. This was the region near present-day Uralla and Armidale and opened the way for others looking to extend their pastoral holdings to the north. The area that was to become known as the New England Tablelands were mainly grassland with granite boulder outcrops and light timbering, considered by the early settlers as too open for cattle but ideal for sheep (Norton 1971 in Stuart 1999, p.55).

Table 4.2 identifies the main historical squatting runs in the vicinity of the project boundary.

Table 4.2 Main historical squatting runs in the vicinity of the project boundary

Year	Name	Details
1833	Edward Gostwyck Cory	Salisbury Waters: including Gostwyck, Terrible Vale, Salisbury Plains
1834	Henry Dumaresq	Saumarez: between Uralla and Armidale and west to Rocky River
1834	J. Chilcott (to 1937, then sold to Arthur Joseph Maister)	Kentucky: valley of Kentucky Ponds to First Falls
1834	William Dangar (from E.G. Cory)	Gostwyck: the lower half of the Salisbury Waters and from Kentucky Ponds
1834	Henry Dangar (from William Dangar)	Gostwyck and associated runs
1835	Frederick Cruickshank	Mihi Creek and Enmore
1836	Peter McIntyre	Guyra
1837	Henry Dumaresq	Tilbuster, which included the area of Armidale
c1839	Robert Ramsay Mackenzie (from E. G. Cory)	Salisbury, including Terrible Vale
1839	Maurice C. O'Connell	Gara (or Old Hillgrove)

Table 4.2 is not exhaustive for this region or period and refers only to the main runs that were set up in the region around Edward Gostwyck Cory's initial claim on the Salisbury Waters.

The coverage extends north to include the run of Tilbuster, north of where Armidale is located and the runs bordering Gostwyck. The list of early squatters here includes many settlers who held positions of high rank within the colony and many of them did not reside on their properties, leaving their care to managers and shepherds (Ferry 1999, pp.15–16).

During the 1830s, a period of intense hostility characterised the spread of pastoral concerns within the colony. There were frequent conflicts between shepherds and Aborigines. Aboriginal people stole sheep and attacked shepherds, probably to defend territory but also triggered by the taking of women. Shepherds raped Aboriginal women and killed Aboriginal people in retaliation for real or imagined offences (Pickard 2008, p.78). Some squatters employed Aboriginal people as shepherds (such as Edward Ogilvie in northern NSW) and it was often women who did much of the shepherding. Yet, if they were paid wages at all, they were much lower than white employees and more often they were given rations and cast-off clothes (Pickard 2008, p.71).

Most notable among the violent events that marked this relationship was the Myall Creek massacre in 1838. Located in the north-west of the New England region, Myall Creek station was owned by Henry Dangar. The repercussions of the murders and subsequent convictions did little to reduce the ongoing violence between settlers and Aboriginal groups and did more to suppress the reporting of ongoing violence that accompanied the removal of people from their lands (Ferry 1999, pp.19–20). Formal reports in 1845 by George Macdonald, the Commissioner of Crown Lands, of the treatment of the Anaiwan downplayed the ongoing violence and projected a benevolent relationship between settlers and Aboriginal people (Ferry 1999, p.130).

The upheaval and violence of colonial occupation was also accompanied in many areas by the renaming of the landscape evident in the new runs set up at Gostwyck, Saumarez and Salisbury. If not immediately resulting in the physical removal of Aboriginal people and their right to tenure, the appropriation of land was cemented by the new settlers' names which were often more enduring than the early settlers, Cory amongst them (Ferry 1999, p.16). By the early 1850s, this expansion and the interactions between the Aboriginal population and the colonial squatters had devastating effects. The local Anaiwan people were effectively displaced from their land and other traces of former custodianship of the land were eroded by the renaming of much of the topography and local watercourses (Ferry 1999, p.3, 15-16; Map 4.1). The Anaiwan continued to inhabit the region maintaining traditional practices, where possible, with reports of encampments and corroborees into the 1860s (Ferry 1999, p.47).

On the New England Tablelands, two areas were eventually set aside for Aboriginal reserves in the period before World War I, one at Walcha and one near Uralla. Between the wars there was increasing government control over Aboriginal people in rural areas. By the 1930s, nearly all Aboriginal pastoral workers were either fringe dwellers or 'clients' of the Aborigines Protection Board (Atkinson & Atchison 2006, p.114). It was made compulsory to pay Aboriginal workers the same wage as white workers and this led to large numbers of Aboriginal people being put out of work. Smaller allotments were added to the reserves after World War II (Atkinson & Atchison 2006, p.112).

4.2.3 Squatting

The rights of squatters were tenuous in theory but, in reality, their occupation of land paid off. "Squatting" was a method of pastoral landholding that occurred from the 1820s, whereby sheep and cattle farming was established on Crown land outside the limits of location. The limits of location in NSW were defined by Governor Darling in 1826 and were restricted to nineteen counties within which settlers were permitted to take up land. They were contained within a semicircular line roughly 400 km from the centre of Sydney (SLM 2017). Stuart (1999) argues that while the main driving force of squatting was the economics of the wool industry, it was the Colonial Government's land policy that produced the phenomenon of illegal occupation of Crown land.

Governor Thomas Brisbane (from 1821-1825) instituted the "ticket of occupancy" to give graziers already occupying land some security (Starr and Nicholas 1978, pp.9-10). This new system of pastoral 'licences' allowed squatters to occupy lands outside the settled districts provided they did so for pastoral purposes. The squatters paid an annual fee to the Crown.

Off the back of the depression of the 1830s, Governor Gipps tried, unsuccessfully, to control government lands more effectively. Squatters who had weathered the storm of the broken economy were demanding secure title to their vast runs. By 1847, the squatters had succeeded in their campaign to obtain leases with rights to pre-emptive purchase and compensation for their improvement of the land (Stuart 1999, p.2). An Order in Council provided for 'pastoralists' (squatters) to hold land on eight- or fourteen-year leases for an annual rent. The Crown continued to hold a right of resumption. This new form of Australian tenure, the pastoral lease, had not existed in England and was a result of the 1847 Order in Council rather than common law (Esmaeili and Grigg 2016, p.184).

In 1861, land ownership in New South Wales was transformed. John Robertson, Premier of NSW, in order to break the long-established monopoly of the squatter-pastoralists, forced two Acts through Parliament to open up free selection of Crown Land; the *Crown Lands Alienation Act 1861* and the *Crown Lands Occupation Act 1861* colloquially known as the 'Robertson Land Acts'. The Acts permitted any person (free selectors) to select up to 320 acres on the condition of payment of a deposit of one quarter of the purchase price after survey and living on the land for three years. As a result, conflict between squatters and selectors increased, corruption and scheming in acquiring land became rife, and the close settlement of pastoral lands still available for use by Aboriginal people, further restricted their access to land (MoAD n.d.).

This process of creating squatting landscapes had been driven by the settlers' desires to claim their land, the Lands Acts and regulations around improvement, and the environment itself. Settlers built huts, erected fencing, ringbarked trees and cleared the land.

Huts were improved or abandoned, and larger, more modern, dwellings and farm infrastructure was built, trees were planted and grew tall, fences were replaced, and dry-stone walls were built and dismantled. The resulting landscapes were shaped by both broader economic and political processes and by the responses of the individuals (Stuart 1999, p. v). The very process of clearing and developing the land was seen as virtuous, productive and contributing to the progress of the colony. Moreover, the Robertson Lands Acts (1861) required settlers to improve the landscape. This was largely done by ring-barking to open up the land, promote grass coverage and fulfil their obligation to improve (Stuart 1999, p.320).

4.2.4 Shepherds not fences

While the ownership was not completely secured, the effort of fencing, building substantial infrastructure and beautifying the property was not an option. Energy and money would be outlaid, and the government could take it all away. Only the bare necessities were built: homesteads and huts, sheep folds and stables and, the most important building, the shearing shed. In the early days, the fence was the shepherd.

In the care of a shepherd, sheep were distributed throughout a run. Accommodation for squatters was often bark gunyahs, tents or nothing, until a more permanent slab or bark hut could be built at the outstation located near water. Shearing initially took place in the open but shearing sheds were soon built. Wool would be washed while it was still on the sheep's backs, often by driving the sheep through running water.

Shepherds looked after a flock of sheep during the day and penned them at night in a fold (often a moveable yard) made of hurdles (Pickard 2008, p.55), but in some cases such as in New England where stone raw material was abundant, in stone.

This system was efficient because labour was cheap and perimeter fencing was not introduced until the late 1860s. The introduction of perimeter fencing meant that rather than being tended continuously, stock would be mustered at regular intervals (Roberts 2006, p.112).

The number of sheep managed by a single shepherd ranged from 200 to up to 3,000 in NSW (by the early 1840s) (Pickard 2008, p.60).

4.2.5 Early tenure in the study area

The area that would become known as Gostwyck Station, part of which includes the project boundary, was occupied by the pastoralist Edward Gostwyck Cory in 1832. Cory arrived in Australia as a free settler in 1823 along with his wife, Francis, and his father, John Cory. His brother, Lieutenant J. J. Cory, arrived soon after, and both brothers received land grants along the Paterson River in the lower Hunter Valley (Campbell 1922, p.254). Edward Gostwyck Cory named his property 'Gostwyck' and both set about expanding their holdings over the following years. By 1830, the growing scarcity of prime land within the limits of settlement prompted Cory to move north from his grant in the Hunter and look to squatting. In partnership with W. H. Warland and William Dangar, Cory squatted on 1300 acres of Crown land on the Peel River area around present-day Tamworth (Guilford 1966).

William Dangar was the brother of surveyor Henry Dangar, who was employed by the Australian Agricultural Company. It was Henry who had first-hand knowledge of the potential settlement regions north of the Hunter River. Henry had been appointed by Governor Brisbane to survey the Hunter River district, and then went on to prepare the survey of King's Town (Newcastle). This work was followed by survey of other civic lands such as church grounds, village reserves and settler allocations in the surrounding region. In a short period of time, Henry Dangar had marked the road from Newcastle to Wallis Plains (Maitland), explored the land northward of Newcastle and eventually acquired land in the Hunter (Australian Dictionary of Biography "Henry Dangar").

After some issues surrounding land ownership and unbecoming conduct, which saw him travel to England, Dangar's skills were noticed by the directors of the Australian Agricultural Company. He was employed as a surveyor and settled with Grace and his son in Port Stephens for this phase of his life. It was the resumption of lands in the Hunter region for the Australian Agricultural Company that was a key factor in pushing settlers further north beyond the limits of Government-sanctioned occupation (Stuart 1999, p.55-6).

Cory continued to push north and, around 1831, had left the Peel River to explore the northern tablelands around Armidale, establishing the route that would eventually form the basis of the Great Northern Road, and cementing his reputation as an excellent bushman (Campbell 1922, p.255). The land that Cory chose was south or Armidale and east of Uralla. He set up two camps on Salisbury Waters; a headstation also named 'Gostwyck', followed by an outstation at 'Terrible Vale' in the south-west of his run encompassing Salisbury Plains (Campbell 1922, p.235). Cory sold his interest in 'Gostwyck' to his partner William Dangar in 1834, who soon after sold it to his brother Henry. By 1836, Dangar was running sheep on the property (AWA *et al,* 2000, p.15). In an area that was still characterised by less permanent improvements and ephemeral structures due to the uncertainty of tenure throughout much of the 1830s and 1840s, these buildings would have been unusual (Campbell 1922, p.238).

Cory remained in the area until 1837, residing at his 'Terrible Vale' outstation before returning to the Paterson River property. He sold his occupancy rights to Salisbury Plains, his stock and the 'Terrible Vale' outstation to Robert Ramsay McKenzie, but his ownership was also short-lived. Mackenzie hired managers to look after the property, but the difficult drought conditions and low stock values led Mackenzie to sell to Mathew Henry Marsh around 1840. Marsh built a house at the headstation named 'Salisbury Court' (Campbell 1922, p.262; Ferry 1999, p.3).

Other squatters from the Hunter region followed Cory and, like Mackenzie, were not always resident, leaving the management of their interests to caretakers. Henry Dumaresq occupied the land to the north-west that became known as 'Saumarez'; his brother William Dumaresq set up his holding 'Tilbuster' to the north of Gostwyck, including the area where Armidale is located.

The squatting runs in New England remained unfenced throughout the 1850s and 1860s and management of the flocks was undertaken by shepherds who were part of an elaborate employment structure. Station managers, overseers, stockmen, gardeners, tenant farmers and servants were part of the larger runs (Ferry 1999, p.53). Itinerant labour such as shearers, sheep washers, woolpressers, shearers' cooks, horse-breakers and other casual labour was hired as required (Ferry 1999, p.53). Located a significant distance from towns, pastoral stations had to be self-sufficient. The store at Gostwyck competed with sellers in Armidale selling flour, sugar, tea and tobacco. The surrounding property stocked the store with fresh meat, eggs, vegetables and fruit grown on the tenant farms. Material for clothing was sold, as was footwear and working gear. Tinned and bottled food was brought up from the Hunter region where the Dangars held property (Ferry 1999, p.54).

On a larger scale, pastoral stations, which the squatting runs became, were sensitive to global markets and technological change. The proprietors that could afford it introduced new technology to streamline the lucrative business of wool, which supplied Great Britain and Europe. Gostwyck installed a hot water sheep bath in 1868, an apparatus that took sheep in one end, washed them in hot water, rinsed them in cold water, then pressure-washed them before they were let out to dry (Ferry 1999, p.55; *Armidale Express* 7 May, p2). So unusual was it that people from the surrounding area would come to see it in operation. The wool washer was in use until the late 1870s. Rail transportation, which reached Armidale in 1883, rendered on-site sheep washing unnecessary (Ferry 1999, p.55).

The discovery of gold nearby in 1856, at Rocky River, provided further demand for local products, and farming in the area expanded to produce wheat and horticultural products on a larger scale with the most fertile region to the west of Saumarez. Wheat production provided an alternative source of income for the region in the latter half of the nineteenth century, particularly bolstered with the arrival of the railway in 1883 but it was always on a smaller scale than wool production (Ferry 1999: 60).

4.2.6 Land release

After agitation by the squatters, an Order-in-Council made in 1847 provided squatters with the right to claim extensive pre-emptive rights to select blocks of land on runs. Following on from the pastoral lease system from 1847, a supplement to the *New South Wales Government Gazette* of Friday, 11 August 1848, named 122 new leases that had been taken up in New England (Colonial Secretary's Office, No.87). Henry Dangar was given leasehold over three runs: Gostwyck, Paradise Creek and Bald Hill. Gostwyck, at this stage, covered an estimated 48,000 acres, but he probably held twice as much as that.

Leases were also held by Matthew Henry Marsh for Salisbury, 35,000 acres Elizabeth Dumaresq at Saumarez covering 100,000 acres with all three (including Gostwyck) running large numbers of sheep (Campbell 1922, p.239). Still, few leases were distributed despite the number of pastoral holdings. Boundaries were generally agreed between neighbours and by the time the leaseholds had taken effect, the New England District was comprised entirely by pastoral holdings, as they became known (Ferry 1999, p.52).

The important legislative changes in 1861 underlined another phase in the occupation and alienation of lands in NSW, with the impacts felt by the pastoral occupants of New England (Ferry 1995, p.151). Enactment of the Robertson Land Acts threatened the impending dissolution of large squatter holdings that characterised the earlier colonial phase.

Anticipating the dissolution of large pastoral landholdings, Henry Dangar took advantage of the pre-emptive rights granted to squatters in the 1846-47 Order of Council to formally acquire land on their runs and under those rights purchased land at £1 per acre (Ferry 1999, p.99). He purchased the block containing the headstation and house in 1852, adding up to 4,300 acres by his death in 1861. Henry Dumaresq's widow on Saumarez sold her property in 1857 to Henry Arding Thomas, but she too had purchased some of the blocks before this. Given the conditions opposed on retaining land along creeks, both Gostwyck and Saumarez created strong interest for local farmers to acquire good farming lands (Ferry 1999, p.151).

The Robertson Acts of 1861 were not without loopholes that squatters used to retain their properties (Stuart 1999, pp.106-108). Not all existing landholders in the project boundary exploited these provisions and the pattern of freehold selection differed between stations (Ferry 1999, p.152-ff). However, by 1869 Saumarez had been reduced by 9,000 acres and along with much of Tilbuster, was acquired for smaller farming ventures. Grace Dangar continued the process started by her husband, acquiring freehold title to 28,000 acres of Gostwyck by 1867 and Henry Arding Thomas acquired title to 14,000 acres of Saumarez (Ferry 1999, p.158).

4.2.7 Consolidation of the pastoral holdings

i Gostwyck

After Henry Dangar acquired Gostwyck, he added workers' cottages, woolsheds and other buildings, creating a village pattern. The original dwelling was a slab house, which was replaced in 1859 and again in 1871 by something 'even grander' (Ferry 1999, p.52; data from the Small Debts Court, *AE,* 9 February 1867, pp.2-4) and its location gave Dangar a commanding position of the surrounding area (Walker 2006). The first known woolshed was built in 1852, in the location of the current woolshed. It was destroyed in 1872 in an arson attack by servants and shepherds protesting their work conditions (Ferry 1999, p.79).

Seasonal employment swelled the population to around 120 individuals when Gostwyck became the main shearing and processing centre for the Dangar's other properties (Ferry 1999, pp.52-53). Such an operation required self-sufficiency and the property maintained a central store where the household and workforce could obtain food plus a variety of goods that met most of their needs without the need to leave the property (Ferry 1999, p.53).

A series of outstations were spread across the landscape (Ferry 1999, p.52). These outstations consisted of bark-roofed huts, stock pens, a garden and possibly a wheat field (Ferry 1999, p.52). The stations were close to water, in good grazing land where the shepherd could keep an eye on the large flocks under his care. This was before the time of fences and the flocks were divided into manageable numbers of up to 1,000 sheep per flock (Ferry 1999, p.52). It would also be safe to say that the huts were placed on relatively level ground, since, while the landscape rolls in hills and swales, there were plenty of flat crests or gently sloping ground on which to build.

These practices created a footprint of small outstations in addition to the main homestead and associated station management buildings. The outstations consisted of smaller residential quarters that housed a permanent workforce, namely the shepherds who lived and worked on the stock runs. These shepherds' huts and surrounding cultivated areas made up a network of dwellings, stock facilities and outbuildings spread over the property which would have housed many of the shepherds employed on the property.

Gostwyck Station was the first property to be fenced in 1868 (Ferry 1991, p.55) and by 1876 most of the New England runs had also been fenced. Fencing, and the newly constructed railway changed the employment pattern in the area and shepherding became a nearly obsolete occupation (Ferry 1999, p.55). Further, less and less itinerant work was required.

The railway also saw the end of the Dangars' hot water sheep washer. In 1887, the workforce on Gostwyck included 7 boundary riders, 5 stockmen, 4 general hands, 4 house servants, 3 stable hands, a manager, an overseer and a gardener (Ferry 1999, p.55).

By about 1850 Henry Dangar controlled over 200,000 acres and 20,000 sheep in New England. When he began consolidating freehold blocks of land on Gostwyck the first block was purchased by the manager of the Dangar Pastoral Estates, Arthur Hunter Palmer. Palmer lived at the headstation between 1840 and 1862, leaving (almost) two years after Henry's death in 1861.

The 1841 census recorded a total of 48 people on Gostwyck including Henry Dangar and his family. The census record does not differentiate between the Dangar family members and the remainder of the workforce. Out of that total, three were female and the remainder were male; as Grace did not spend the early years at Gostwyck, it is likely that the women/girls were employees. Eleven of the men living at Gostwyck were convicts ('in private assignment', 1841 Census). Twenty-one years later, the workforce (only) on Gostwyck numbered 38, which accounts for only one member of the Dangar family. Presumably the women were not counted as 'workforce' but may have resided there nonetheless.

When Palmer left Dangar's employ in 1862, the Gostwyck workforce consisted of:

> 23 full-time shepherds, each minding one but more typically two flocks, as well as 4 stockmen, 3 house servants, an engine driver cum carpenter, a miller, one general hand, a gardeners, a manager, a superintendent, an overseer, and Albert Augustus Dangar, the twenty two year old son of Henry and Grace, who was learning the ropes under the exalted title of proprietor's representative.
>
> (Ferry 1999, p.53)

After his death in 1861, Dangar's widow Grace took over Gostwyck Station. When she died in 1869, she left over 30,000 acres of grassland and water frontages secured under freehold title. Albert Augustus (A A) Dangar took possession the property (SHI listing for Gostwyck Memorial Chapel and Precinct - Uralla LEP item) and amongst other activities, planted the avenue of elms that stand today. The landscaped gardens probably also date to around this time. The steep slope to Salisbury Waters was terraced with extensive dry-stone walls terminating in three broad sets of steps along the bottom of the slope. The river was originally crossed by stepping stones until a suspension bridge was erected in the early 1900s. A stone pergola was built, providing a link between the top gardens and the elaborate garden beds on the banks of Salisbury Waters. Other plantings included oaks and elms and by the turn of the century, photographs show an established showcase garden. No records of the designer have been found (Walker 2006).

Other squatting runs and headstations surrounding Gostwyck Station were established including Saumarez, Salisbury, Tilbuster, Guyra or Gara and Enmore on the surrounding runs to the north and east of the Gostwyck run (refer Figure 4.1 - 1847, Figure 4.2 – 1849 and Figure 4.3 - 1886).

ii Saumarez Station

Colonel Henry Dumaresq took up the land in 1834, but later transferred it into the name of his wife Elizabeth. In 1839, occupants of the property were listed as eight free males over 12 years of age and 12 male convicts. The Government Gazette, 1848, records the property as about 100,000 acres with 16,000 sheep and 16,000 cattle. The property was sold to Henry Arding Thomas in 1857. Thomas continued to buy land in the area and the *Squatting Directory* (1865) showed him as having 230,400 acres; however, archaeological survey notes say the area named must be regarded as rather dubious and were more likely 90-100,000 acres.

In 1874, Saumarez (14,666 acres of freehold land) was sold to F. White and has remained in the White family until 10 ha were gifted to the National Trust of Australia (NSW) in 1984. The remainder of the property was subdivided and sold (National Trust).

The northern array area covers a small portion of land that was historically part of the Saumarez squatting run (refer to Figure 4.2).

iii Salisbury Court

Mathew Henry Marsh purchased the squatting run from Robert Ramsay Mackenzie in 1840. He retained the name of Salisbury and built a house (hut) at the headstation between 1845 and 1847 which he named Salisbury Court (Ferry 1999, p.3).

After 1855, the property was managed by Matthew's brother Charles. Matthew, who returned to England, was a member of the House of Commons and, as the agent of northern pastoralists, was instrumental in the separation of Queensland from NSW in 1859.

According to the 1841 census, at that time there were 25 men and 26 shepherds and others in the care of sheep (Census 1841), indicating that one of the seven married women may have been employed as a shepherd, and 11 children less than 14 years of age living on the Salisbury property (Oppenheimer nd, p.45). Marsh did not have any convicts in his care in 1841.

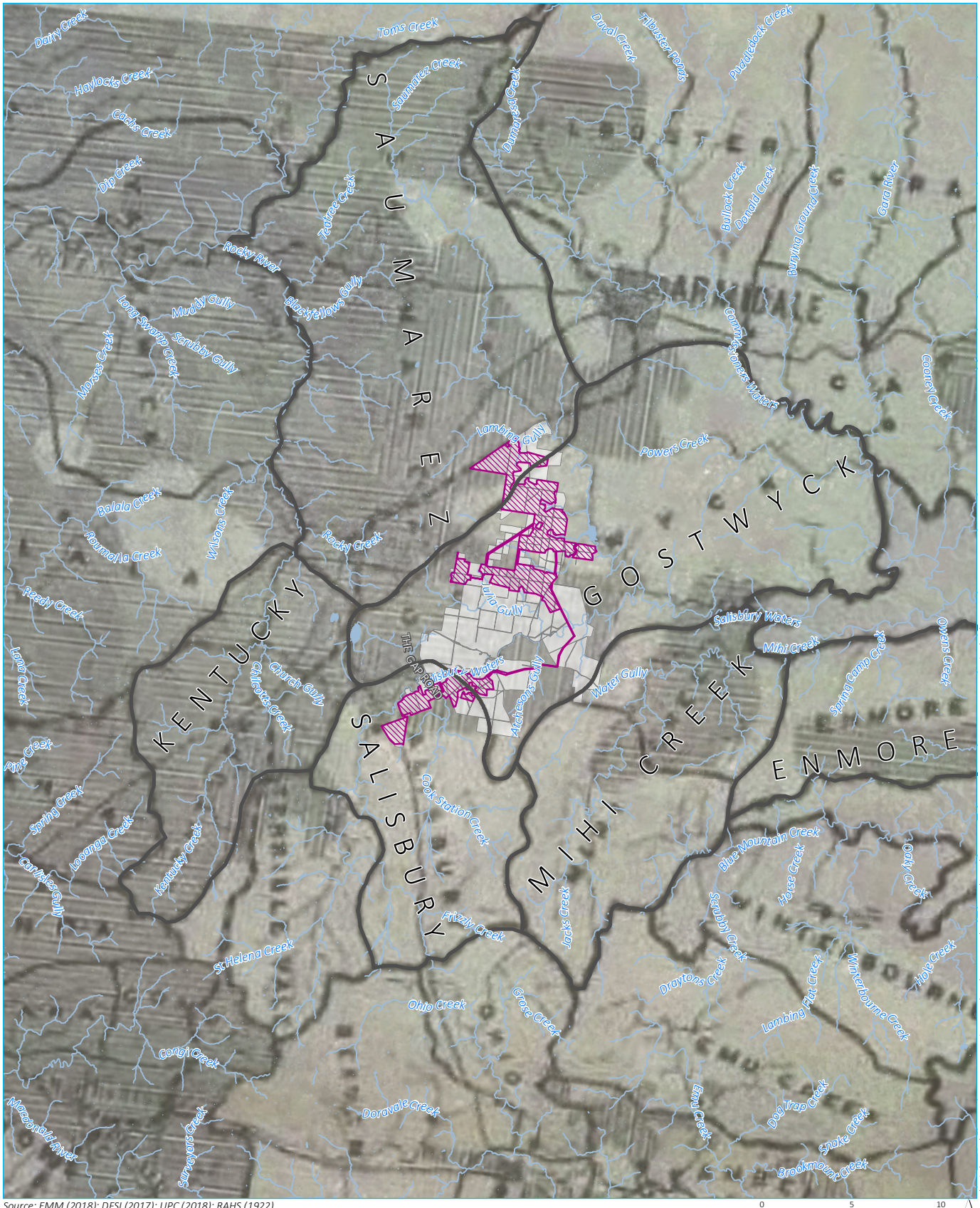
The first homestead at Salisbury Court was called Old Sarum. It was a shingle roofed, slab house with four rooms, a passage down the middle, and a front verandah with two small rooms opening off either end. Canvas was used to line the inner walls and, in the bedroom and ceiling.

Eliza Marsh, described her home at Salisbury Court in 1845 as a 'hut', having:

> a small passage about four feet wide with a door at each end, one door leading onto the verandah, the other being the main entrance and way from the kitchen which is another hut about five yards distant. On the other side of the passage is a skillion leading out of it used as Matt's dressing room and at each end two small rooms seven feet long and six feet wide. (Croft 1990, cited in Oppenheimer 2006, p.165)

Eliza's journal from 1851 refers to a stone house at the headstation and the existence of a chapel close to Salisbury Court (Ferry 1999, p. 238, n.10). Surface stone for the homestead was collected between Salisbury and Terrible Vale (Armidale Express 13 March 1981). The new single storey homestead had thick stone walls and cedar joinery. In the paddock to the east of the house there was a mud brick dairy, a woolshed with yards and outbuildings and a windmill for grinding wheat.

The southern array area covers part of the historical squatting run of Salisbury, which was the name of the property that Salisbury Court (the homestead) belonged to (refer to Figure 4.2).



Source: EMM (2018); DFSI (2017); UPC (2018); RAHS (1922)

0 5 10 km

GDA 1994 MGA Zone 56

N

T:\jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02_Maps_Heritage_HH\HH006_1847_RunMaps_20180925_01.mxd 6/11/2018

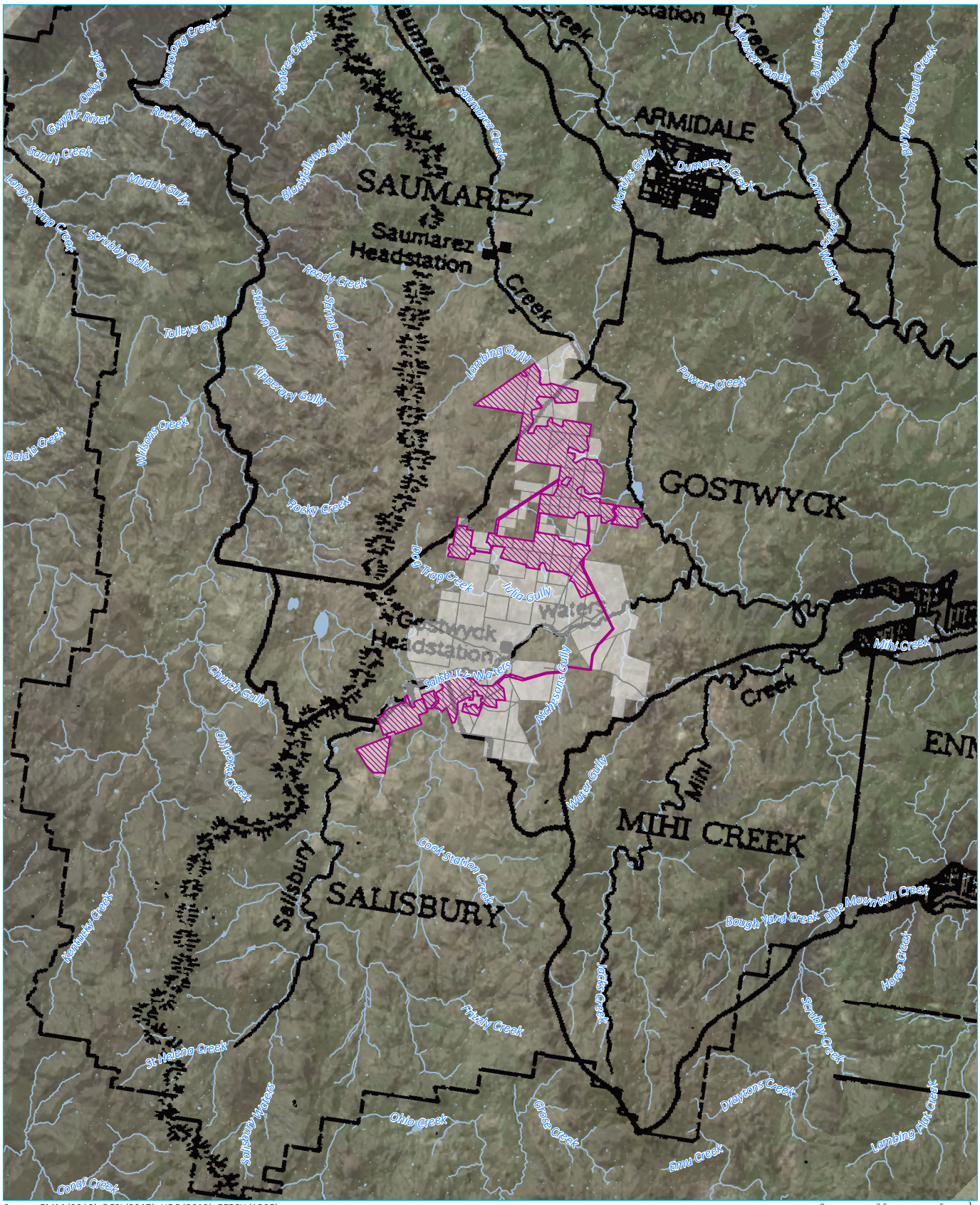
KEY

- Development footprint
- Project boundary
- Waterbody
- Watercourse/drainage line
- 1849 squatting run boundaries (RAHS 1922)

1847 squatting runs

New England Solar Farm
Historical heritage assessment and statement of heritage impact
Figure 4.1

EMM
creating opportunities



Source: EMM (2018); DFSI (2017); UPC (2018); FERRY (1995)

0 2.5 5 km

GDA 1994 MGA Zone 56

N

\\EMMSVR1\emm\Jobs\2017\17300 - UPC NSW Solar Farm\GIS\02_Maps_Heritage_HH\HH007_1849_RunMaps_20180925_01.mxd 14/11/2018

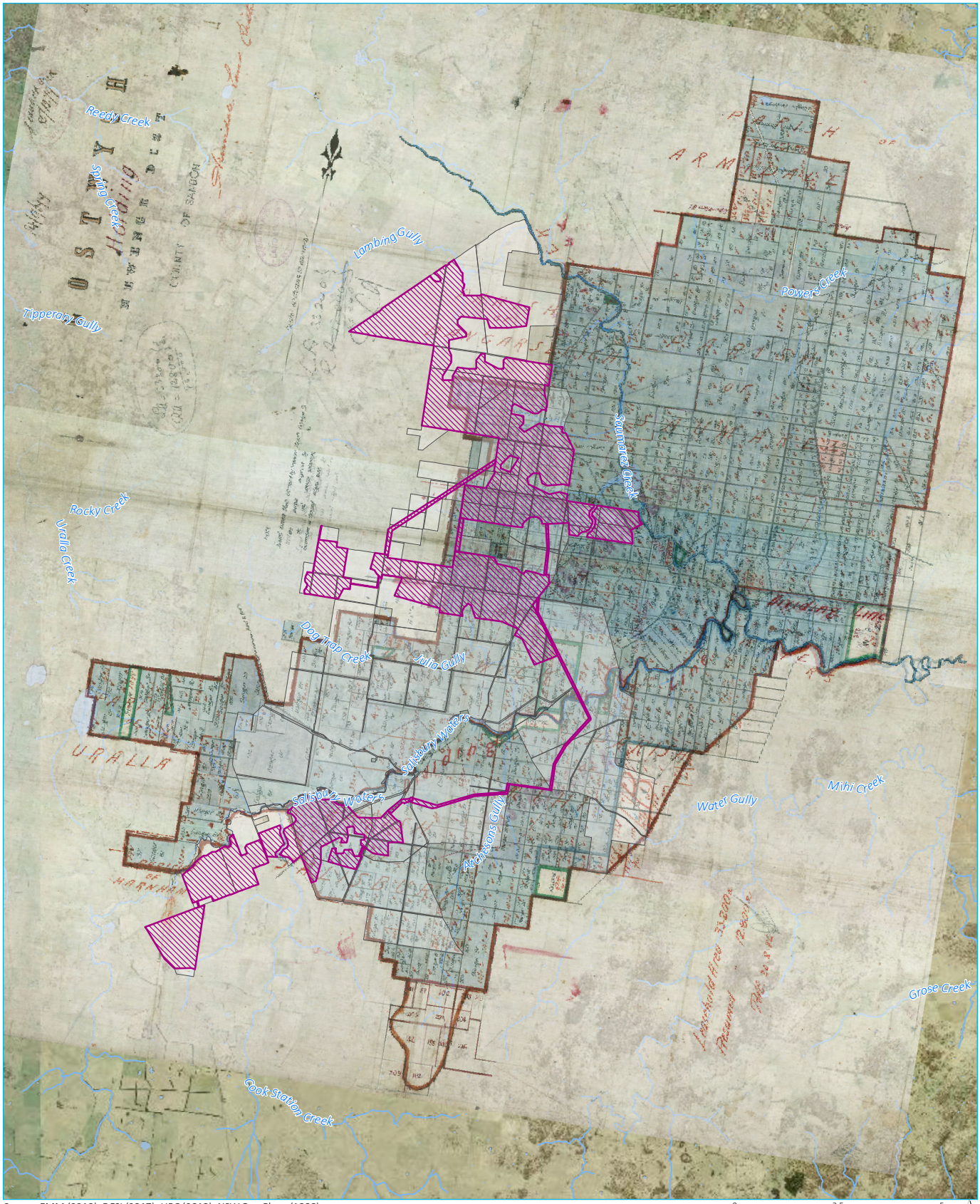
KEY

- Development footprint
- Project boundary
- Waterbody
- Watercourse/drainage line
- 1849 squatting run boundaries (Ferry 1995)

1849 squatting runs

New England Solar Farm
Historical heritage assessment and statement of heritage impact
Figure 4.2

EMM creating opportunities



Source: EMM (2018); DFSI (2017); UPC (2018); NSW Run Plans (1886)

0 2.5 5 km

GDA 1994 MGA Zone 56

N

\\EMMSVR1\emm\Jobs\2017\\17300 - UPC NSW Solar Farm\GIS\02_Maps_Heritage_HH\HH008_1886_RunMaps_20180925_01.mxd 14/11/2018

KEY

- Development footprint
- Project boundary
- Waterbody
- Watercourse/drainage line

1886 Gostwyck
(NSW Run Plans)

New England Solar Farm
Historical heritage assessment and statement of heritage impact
Figure 4.3

EMM
creating opportunities

4.3 Comparative analysis

4.3.1 Introduction

A comparative analysis is prepared to provide an understanding of what structures and relics can be expected to exist within a similar area. This comparative analysis was undertaken through a review of documents relating to the squatting landscape discussed in the historical analysis (refer to Section 3.2) as well as in the predictive model (refer to Section 5.3). Individual items identified during field assessment and documentary research for this project provide context with which to assess significance of the items identified within the development footprint (refer to Section 5.5.1) and the project boundary (Section 5.5.2).

4.3.2 Homesteads and changes to the landscape

"Homestead", in the Australian context, refers to the main house or headstation and its associated outbuildings on a large agricultural holding, (Oppenheimer 2006, p.160). From the earliest days of squatting (c.1830s) homesteads have reflected the financial position of the property owner (Oppenheimer 2006, p.160). During good economic times, the homestead was improved and extended. For example, droughts in the 1830s and 1840s halted pastoral investment but by the 1850s, gold had been discovered, demand for wool was high and the economic mood was optimistic, resulting in expansion of many homesteads.

Since the colonial government refused ownership of land by free grants or purchase beyond the limits of location until the area had been properly surveyed, squatters did not build permanent homes until they had secured ownership (Oppenheimer 2006, p.163) and large-scale modifications of the property were not undertaken. The initial layout of a squatting run was usually a simple hut and stock yard with an area of cultivation around it (Stuart 1999, p.77). These early homesteads were slab buildings of hard wood timber that were erected quickly and cheaply. The earliest structures were usually a collection of separate huts, one room deep, entered by separate doors from a verandah that connected them. As well as the main hut for the owner or manager, other buildings could include a kitchen, store, dairy, meat-house, stable, milking shed and accommodation for workmen. Nearby would be a woolshed, horse-yard, cow-yard and a larger enclosure for sheep or cattle (Oppenheimer 2006, p.163). The initial buildings at Gostwyck would have reflected these temporary structures.

The homestead was located in a central place within the run. Run boundaries were marked by watercourses, ridge lines, or in the absence of natural landmarks, by a line of blazed trees or plough lines (Stuart 1999, p.77).

Very few of these early headstations have survived. Those still standing include ones at Wongwibinda, Balala and Ollera. Balala, near Uralla, was built between 1841-1865 by George Morse and Thomas Tourle. It had a long slab schoolroom and bedroom on one side and a bedroom of basalt and granite on the other. The weatherboard kitchen was replaced in the 1890s. Other original slab buildings included a granary, barn and woolshed.

Homesteads were renewed, extended and rebuilt as the owners prospered and their family grew. Local timber hardwood was plentiful and has survived well. Corrugated iron roofing replaced split shingles or bark following the arrival in the 1880s of the railway.

From the 1860s, bricks made of local clay were more commonly used for homesteads (Oppenheimer 2006, p.167). Homesteads were often built on a hill, for example, Moonby House, which was built in a conspicuous location and designed to be visible.

Verandahs, although they were often not part of the original plan, were often added later.

In 1975, an archaeological survey of Saumarez was undertaken by Dr G. Connah. Findings showed that the present homestead and related buildings occupied much the same site as the earliest buildings. They were located on high ground, near the creek, which was used for sheep dipping, wool washing as well as domestic purposes. The survey identified a considerable number of timber and stone houses scattered across the property. Evidence of agricultural activities showed the changes in the wool industry brought about by changes in technology and transportation.

Sites associated with wool production are located along the western side of Saumarez Creek, adjacent to the homestead. A depression by the creek marks the site of the sheep wash tank, part of the old wash pool, along with the remains of a steam driven pump and ditches leading to and from the dam (Connah nd p.119). Approximately 800 m downstream from the washpool are the remains of a sheep dip and yards and in between the wash tank and sheep dip is a flat area of ground where the wool shed once stood. For crossing the creek there was a nearby ford and the remains of a 'flying fox'.

Other sites near the homestead include the sites of houses once occupied by station workers, including a blacksmith's house and shop near the woolshed. Indicators of housing remains are items such as old wells and exotic plantings such as an elm tree or hawthorn bush, fruit trees and sometimes the footings of the building.

Several other timber dwellings are scattered across the Saumarez property. These are marked by pine plantings, rubbish scatters, brick remains, and a fig tree. Investigations of one of the huts (site 39 of Connah's study) showed that it was a two roomed slab hut with a verandah. Walls had been lined with newspaper. There was no evidence left of a chimney.

Section 4.2.7 includes a description of some of the structures on Gostwyck and Salisbury Court. These structures are repeated on many sheep stations, be they squatting or pastoral runs.

In settled districts, pastoralism was a means for some to live lives of comfort and wealth and to emulate the social systems of the English aristocracy (Lawrence and Davies 2011). In the 1870s, the focus of capital investment on pastoral stations changed from fencing to water conservation (dams and tanks), as the pastoral industry expanded into increasingly arid lands (Stuart 1999, p.124). Wire net fencing was introduced as a measure to control rabbits.

Stuart (1999, p. 318) discusses the transition from squatter to squattocracy as part of a process driven by a desire for respectability. Materially, this was expressed through the rapid construction of comfortable houses and landscaped gardens that clearly demarcated their living quarters from the workers and work places (eg Shearing sheds and shearers' quarters). Squatting runs became pastoral after land was legally acquired by the squatters, bringing them one step closer to their aspirational objective.

Woodhouse (1993) reconstructs a cultural landscape of a sheep grazing property in the Flinders Ranges c.1888, known as Holowiliena. In the home paddock near Holowiliena Creek, structures were sited on high ground, including the main house and the smithy. A little further away were a woolshed and shearers' quarters, and a number of wells. Woodhouse emphasises the importance of the woolshed as an industrial building reflecting the requirements and practices of a primary industry (Woodhouse 1993, p.93).

Water was an important consideration at Holowiliena and considerable effort was invested in ensuring satisfactory watering points (Woodhouse 1993, p.95). In addition, hand drawn wells were located near the main home and throughout the property along with associated structures such as stone tanks and a whim.

Butlin (cited in Stuart 1999, pp.123-4; see also Ferry 1999, p. 59) listed the structures that would be present in a typical 1890s sheep station:

1. Buildings:

    - headstation residence;

    - outbuildings of kitchen, store, blacksmith's shop, shearing and wool sheds, shearers hut (extras: dairy, granary, stables and mills for wheat processing);

    - outstations scattered over the run; and

    - washing plant (mainly obsolete except in the more remote interior areas).

2. Fences and stockyards:boundary fences in post and wire or posts, rails and wire;

3. Conservation:

    - Dams, tanks, wells and/or bore.

These descriptions are considered when forming the predictive model in Section 5.3.

5 Site evaluation

5.1 Background

The historical heritage landscape was assessed in the field on four occasions (refer Section 1.10), with the predictive model boosted by the staged field programs described below, during which a number of archaeological features were recorded.

5.2 Land use summary

The project boundary and the surrounding land have been used as for grazing, predominantly of merino sheep for the wool trade. This occupation was the sole purpose of occupying land beyond the limits of location since 1832. A small percentage of the grazing animals are cattle for meat and some crops are grown, predominantly for animal feed.

While modernisation is a part of the region's history, it relates to the wool industry and aside from property subdivision, visually and practically, the land use summary in the project boundary is of a single phase.

5.3 Predictive model

Development of a predictive model for the survey has been ongoing and is based on background research, which includes documentary sources, maps and plans, as well as landholder discussion and field observations recorded during the field assessments. Further, the data used to inform predictive models for Aboriginal sites are useful for planning historical survey. Access to water, soil landscapes, geomorphology and land disturbance are characteristics that would have been valuable to Aboriginal people and squatters alike. Ground that is conducive to short- and long-term habitation and availability, some protection from the elements, as well as access within the property and connection to places external to each property, would also have been valued by the squatters.

A large portion of the project boundary was once part of Gostwyck Station (refer to Figure 4.3 for the place's largest extent). As the earliest sheep station in the project boundary, and one of the earliest in New England, the land that historical Gostwyck occupied has the potential for structures related to unfenced pastoral uses. Documentary sources point to various structures having been established on the landscape, some of which may survive in remnant or archaeological form. Evidence of plantings, water management, stock management and landscape modifications are also likely to survive.

The description of Gostwyck's workforce in 1862 (Ferry 1999, p.53) and Butlin's description of a typical 1890s sheep station indicates that there would have been the following structures on the station, although not all are expected to be in the development footprint:

- the main homestead, potentially from each phase;
- cottage to house the manager and another for the superintendent;
- cottage to house overseer;
- approximately 23 shepherd's huts and possibly nightwatchman huts;
- gardens;

- a blacksmith's workshop;
- stores;
- stone walls;
- wells or access to drinking water for each dwelling or group of dwellings;
- a mill;
- a brick kiln or clamp;
- stables; and
- stockyards scattered across the station.

The first dwelling at the headstation housed the run manager and was of slab construction. It was replaced in the late 1850s and then again by 1871 (Ferry 1999, p.53). The headstation was in the vicinity of the existing main house and is therefore outside the development footprint.

Tenant farmers worked the land on the small peninsula created by the meeting of Salisbury Waters and Saumarez Creek, and it is possible that relics from their lives and occupation exist; however this area is outside of the project boundary and development footprint and is not discussed further.

Other buildings surrounding the main residential complex were built earlier; however, these too are outside the development footprint. Survey of the residential part of Gostwyck is unnecessary and intrusive so it did not form part of the survey plan for the project.

Three features were recorded on Deeargee (originally part of Gostwyck) that may be included in the list above. These findings helped to refine the predictive model. Two ground-level platforms comprising basalt or granite blocks and measuring 2.5 m by 3 m (HNE05 and HNE06), believed to be the remnants of shepherd's huts, were recorded during the refinement stage of the project completed in February 2018. An additional 'house' site was recorded further to the south, as were a group of apple trees. The house site has since been reconciled with 'Toongabbie Station' shown on a c1867 plan. A brick clamp (or brick-making area) was also recorded on Deeargee on the southern side of Salisbury Waters. All these features are outside of the development footprint, but they indicate the potential for more of their type to occur across the landscape.

Discussions with project landholders have identified additional features, which were investigated in the field as part of the additional survey effort. These include:

- HNE35, a hut site on Big Ridge Road identified by Richard Munsie (on Kelvin Grove) outside of the development footprint for the northern array area;
- two other hut sites identified by Richard and Gregory Munsie that are not within the development footprint and were not inspected due to time constraints;
- HNE09, the location of the first (or second) Gostwyck Woolshed identified by Hugh Sutherland (Deeargee) outside of the development footprint for the southern array area; and
- HNE36, a hut complex on Quambaloo (formerly on Saumarez Station) outside of the development footprint for the northern array area.

Again, these features were used to refine the predictive model.

A review of historical mapping has identified a number of potential items within or adjacent to the project's development footprint. After georeferencing early maps and plans with the current development footprint, many of the potential items were found to be outside of the development footprint and, more generally, the project boundary.

All sites were initially given identifying numbers, which were retained for the purposes of this report despite many of them being beyond any part of the project. The rationale for retaining them is because their consideration would be likely to assist with the analysis of the cultural landscape.

The only site that was identified through mapping alone is approximately 830 m of the Old Gostwyck Road alignment within the development footprint for the northern and central array areas (HNE 20). This site has left only minor evidence on the surface meaning this site had to be georeferenced using historical map sources.

As with Gostwyck, Saumarez was a property that was historically of significant size, and related infrastructure would have been spread far and wide. A section of the early run has been incorporated into the project boundary where it abutted Gostwyck (refer to Figures 3.2 and 3.3). Saumarez Station is now diminished in size, but the homestead is listed on the SHR and at its closest point, 'Saumarez Homestead' (SHR 01505) is approximately 4.8 km to the north-west of the development footprint for the northern array area (refer to Figure 3.1).

5.4 Significant cultural landscapes

Cultural landscapes come in different forms, from having the appearance of wilderness to countryside to urban areas. The common factor that all cultural landscapes possess is they are a moment in time in a continuum of change created by human action (Meinig 1979).

Cultural landscapes can be broadly defined as designed, evolved or associative (Australia ICOMOS nd), with designed landscapes being largely represented by gardens; evolved landscapes by development; and associative landscapes being more indebted to the intangible, the religious or sacred. Cultural landscapes are also dynamic (Stuart 1997, p.28), regardless of the pace of change.

The significance of a landscape is dependent on how it reflects values of the heritage standards in Australia and the Burra Charter, which was developed to reflect the values of the community. Interpretability is an important factor, ie the ability of a landscape to tell a story is a socially and scientifically valuable attribute. So while all human interactions with nature result in the formation of cultural landscapes, significance varies depending on what values can be identified and interpreted.

The cultural landscape within and around the broader project boundary is an evolved landscape with elements of design. It is interpretable and demonstrates Aboriginal and settler use in the prehistoric, historic and current period. The project boundary displays evidence of squatting followed by pastoralism, historic and current, that combines wind breaks of cold-climate trees with native trees, former house sites associated with cold-climate and fruit trees, stone walls and cleared land, with stockyards and dams. Discrete areas of the project boundary have been planted to create landmark features, such as the avenue of elms lining the Gostwyck driveway (1860s), and the poplars lining a portion of Gostwyck Road, but other elements have changed gradually reflecting improvement over time.

In Australia, one of the many layers that went into creating the landscapes that survive in their historical form was the aim (or the unconscious urge) to tame the new land and recreate the landscape of home.

As a result, the landscapes of rural areas in Australia are a creation from the modifications made initially by Aboriginal people and then by the subsequent waves of migrants and their descendants on the underlying wild and geological landscape.

This report considers the cultural landscape within the region as a singular item (HNE37), which is comprised of the features, sites and items discovered through research and field assessment. The project boundary and development footprint are a small component of the overall cultural landscape, which, based on research, mapping and visual assessment from public spaces, extends north of Armidale, west of Uralla, and east to the gorge and mountain country of the Great Dividing Range.

5.5 The model

Analysis of the above listed features resulted in the following predictions related to presence and location of historical heritage items within the development footprint:

- Dwellings (huts and cottages), stockyards and gardens are likely to be found close to water sources; huts may also be watered by wells, but stockyards would, by necessity, be close to creeks, that animals could access or where damming was possible. Dwellings may be located on the crests or sides of hills provided water is easily accessible. Hills with a gradient of over 5% are unlikely to have had structures built on them as there is an abundance of level ground across the development footprint for the three array areas.

- Brick making facilities, such as brick kilns or brick clamps (in addition to the feature on Deeargee), may exist in other locations within the development footprint.

- Stone walls may occur in all areas across the landscape and their locations cannot be predicted as they are not shown on any of the plans discovered during the investigation for this report.

- Areas of trap (geological formations that were recorded on historical mapping) may also occur across the landscape and can be predicted in areas of basalt geology.

- An earlier alignment of Old Gostwyck Road is located inside the development footprint for the northern and central array areas (HNE 20); however, it is no longer used as a thoroughfare for public traffic.

- The existing landscape is the result of modifications, by humans, on the natural environment. They have the ability to demonstrate the evolution of changes brought about by use of resources and settlement generally over a long period of time. In Australia, the cultural landscape is one that has been created by Aboriginal and non-Aboriginal people alike.

5.6 Results of field assessment

5.6.1 Items in the development footprint

i HNE11 Remnant basalt wall 1

A remnant wall or fence-base comprised of basalt blocks (Plate 5.1), which traverses the landscape within proximity of the potential site access corridor for the southern array area off Hillview Road and the potential ETL alignment to connect the southern and central array areas (Figure 5.3). The blocks do not show obvious signs of dressing and are therefore likely to have been naturally split during the cooling process when they were formed.

The wall is built on the side of a relatively steep slope (approximately 40%–50% slope) and overlooks the landscape to the south, which was at the time, part of the Gostwyck run.

The western end of this feature is defined by an arc and the westernmost extent shows form that defines it as a wall or fence-base (Plate 5.3). A number of breaks through the structure occur along its length and some curious circles appear at the eastern end (Plate 5.2), the purpose or provenance of which has not been ascertained. These features may be naturally occurring or may have been stock enclosures but there is nothing in the field that supports either theory.

The blocks along the majority of the wall, approximately 850 m of it, have been scattered and do not demonstrate any vertical structure resulting in single-course basalt blocks forming an alignment approximately 6 m across.

The results of the field survey indicate that this feature is a dog-leg composite wall as the base is dry-stone wall with two timber posts at an opening that represents a gate. No other fence posts occur along the wall, or any evidence of fence posts. In fact, very little timber was noted along the base of the wall, except one post (Plate 5.4) of slender proportions that may indicate a 'dog-leg' fence; that is, a dry-stone wall base with timber posts leaning against the stones to form a criss-cross effect (Plate 5.5). Alternatively, the wall may be a simple dry-stone wall.

The reason for the wall's dismantled state may have its cause in the *Rabbit Nuisance Act of 1883*, which compelled landholders to do all "such acts, deeds, matters and things as are necessary to destroy the rabbits on such land" (*Rabbit Nuisance Act* of 1883, clause 39) or incur financial penalties. This feature, HNE11 and remnant rabbit fences enclosing granite boulders are evidence of the rabbit problem that historically beset the area.

HNE11 was brought to the attention of the project team by the landholder who said that the family oral history is that they were convict-built. The no-go zone around this item was developed in the field and is shown in Figure 5.3. This site is not accessible by the general public.

Plate 5.1 HNE11 Remnant basalt wall alignment on the eastern side of Hillview Road - View east

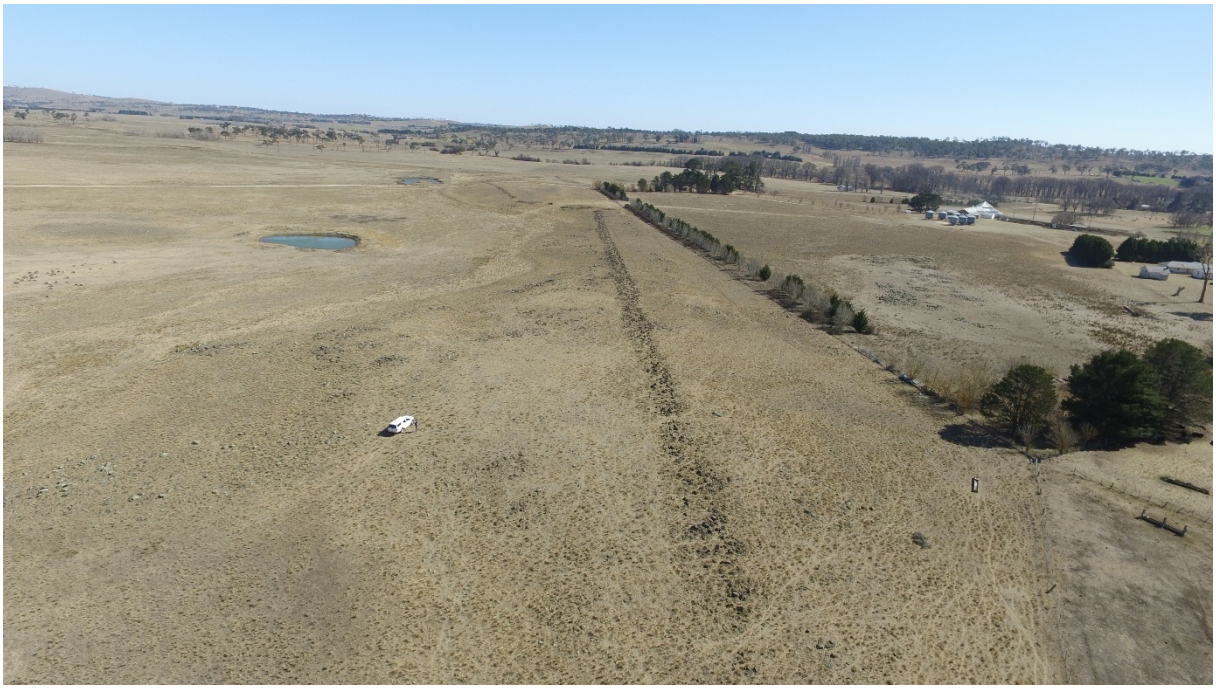


Plate 5.2 HNE11 Remnant basal wall aerial view of the eastern extent - View west. Deeargee Woolshed is visible on the right (IMG_3159)

Plate 5.3 HNE11 Remnant basalt - View north

Plate 5.4 HNE11 and the only piece of timber that resembled part of the dog-leg - View north-east

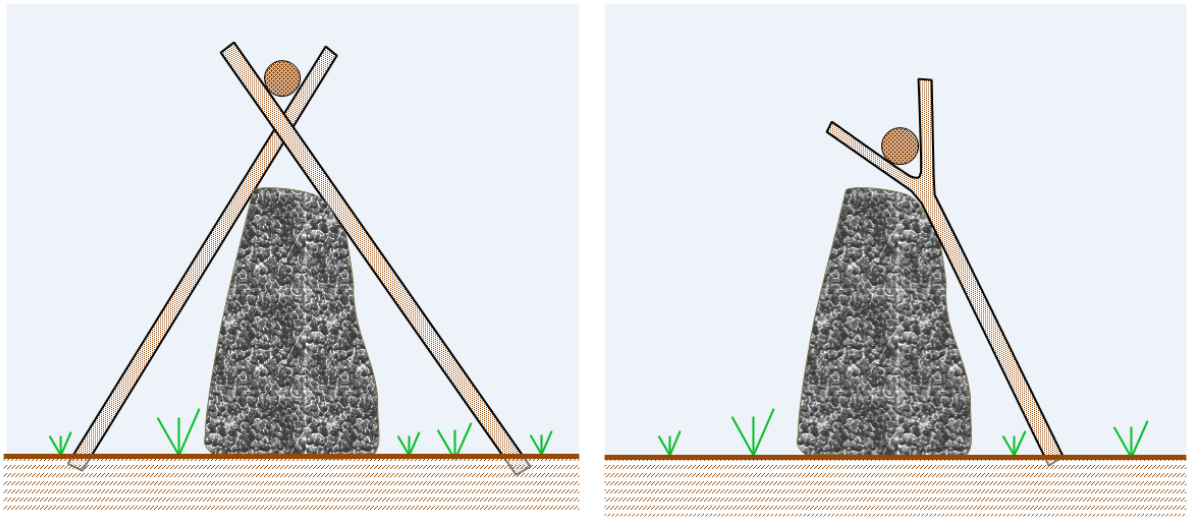


Plate 5.5 Diagram of a dog-leg fence on a stone wall (Pickard 2013, Figure 5, p. 37)

Plate 5.6 Remnants of a dog-leg fence on a stone base from Mill Creek (Pickard 2013, Figure. 5, p. 37)

ii HNE12 Remnant basalt wall 2

Another feature, very similar to the first (HNE11) is situated to the south-west; approximately 1,000 m away, within the development footprint for the southern array area (refer Figure 5.3). This feature is approximately 310 m in length and aligned roughly north-south. The southernmost extent is aligned slightly north-west for 87 m after which it dog-legs north-south for 120 m and finally dog-legs again to the north-east for 103 m. There is no vertical form visible at HNE12 but its similarity to HNE11 indicates that this too was a wall or fence-base. Circular features were also recorded at this site. A no-go zone was developed in the field when this feature was being recorded (Figure 5.3). This site is not accessible by the general public.

Plate 5.7 HNE12 Remnant basalt wall - View south-west

Plate 5.8 HNE12 Remnant basalt wall – View west

iii HNE14 Granite tors

This site, which is within the development footprint for the central array area (refer Figure 5.2) is one of many granite outcrops across the landscape but is set apart from other outcrops by the size of the boulders and the remnants of worked timber lying across some of the outcropping. It was recorded because the timber suggested an archaeological site nearby, but subsequent field and documentary investigation has not been able to identify any sites that they may have come from. It is likely that they are dumped fence posts.

HNE14 is a high point from which the surrounding countryside can be viewed, and the ridge is marked as "Dividing Range Saumarez and Salisbury" on a post-1867 plan. While internal to Gostwyck and therefore not accessible to the general public, the view experienced at this site provides visual access to the plantings and rolling hills to the south and would have been seen from Old Gostwyck Road (HNE20), which extended from Armidale into Gostwyck. This site is not accessible by the general public.

Plate 5.9 HNE14 Granite tors - View south-east

iv HNE15 View through Gostwyck Station

The view from HNE15, within the development footprint for the central array area (refer Figure 5.3 and Plate 5.10), takes in views from a hillcrest to the south-west through Gostwyck. This view is not accessible by the general public. The scene is of rolling hills, conifer wind breaks, with scattered granite outcropping throughout. Except for the dry grass during the survey period, this scene and others like it are reminiscent of the Scottish and English countryside that many of the squatters originated from.

Comparison of current aerial photography with the aerial photographs from 1956 makes it clear that today's views and vistas are a construct of a trend that is dated to the 1960s in the Southern Highlands and is likely to be of a similar date in the development footprint. While it is tempting to picture the early historical landscape as it is now, the reality is that it made more sense to 'Europeanise' the curtilage of the homestead and the shepherd's hut. No explanation is needed for fruit trees near dwellings, but elm trees and pine or spruce trees nearby was a visual signal of 'home' in a vast open landscape of grass and strange trees.

Nevertheless, the wind breaks of mature pines and spruce trees are a continuation of the idea of improving the land for practical reasons (protection from high winds and shade) and because it conforms to a rural aesthetic. The troubling aspect of the thick and robust tree lines is that they appear to be more established than their 60 years.

This view is not accessible by the general public.

Plate 5.10 HNE15 View through Gostwyck - View south-west

v HNE16 View from granite tors

The view from HNE16, within the development footprint for the central array area (refer Figure 5.2 and Plate 5.11 for the view), takes in views south from the granite tors (HNE14). This view is not accessible by the general public. It is considered to be of some note as it captures a tableau of a romantic landscape to the south. This view is also very close to one of the historical access tracks between the Gostwyck homestead and Armidale (ie HNE20 – Old Gostwyck Road) and would have been a focal point of arrival to Gostwyck. At least three cold-climate species have been incorporated into this view, with tightly packed conifers guiding the eye to the poplars, which may be 60 years old at most (as demonstrated by the 1956 aerial photograph – refer Plate 5.12). Behind these trees, the landform rises gently behind creating a multi-layered picture of another pasture, defined by cold climate trees and dotted with another large granite outcrop. Behind this view (to the south) is another that extends to the view beyond, with trees marking boundaries and wind breaks. This view is a quintessential representation of the English/Scottish recreations that were being constructed close to homesteads in the mid-nineteenth century (note the elm-lined avenue to Gostwyck planted by AA Dangar in the 1860s). It should be noted that the aerial photograph taken in 1956 shows this area, and much of Gostwyck, devoid of introduced species but with areas of native trees scattered across the property. The landscape as it appears now is a product of the mid-to-later twentieth century. The appearance of Gostwyck after it became a legally owned freehold has not been found in any historical renderings and so an understanding of what the generations of owners of the property saw the place as representing aesthetically is difficult to tell away from the immediate surrounds of the main homestead and the shepherds' huts.

This view is not accessible by the general public.

Plate 5.11 HNE16 twentieth-first century view from granite tors (HNE14) – View south

Plate 5.12 1956 aerial photograph of HNE14 (circled) showing the lack of European trees

vi HNE21 Remnant fence line

This site, which is within the development footprint for the central array area, is a row of collapsed timber fence posts (Plate 5.13) along a paddock boundary visible in the 1956 aerial photograph. These posts are in a poor state but appear to have been hand-sawn and, like other early fence-lines, contribute to the existing cultural landscape.

This site is not accessible by the general public.

Plate 5.13 HNE21 Remnant fence line - View north

vii HNE20 Old Gostwyck Road alignment

A small section of the Old Gostwyck Road (approximately 800 m in length) runs through the development footprint for northern and central array areas (refer Figure 5.2 and Plate 5.14). This road is known locally as the Gostwyck - Armidale Road despite the fact that it is no longer used. It is visible in some locations as a farm track and is clear in the 1956 aerial photograph and is delineated in modern cadastral mapping. This road continued from the southern extent of the current Old Gostwyck Road and terminated at Gostwyck Road to the south.

This site is not accessible by the general public.

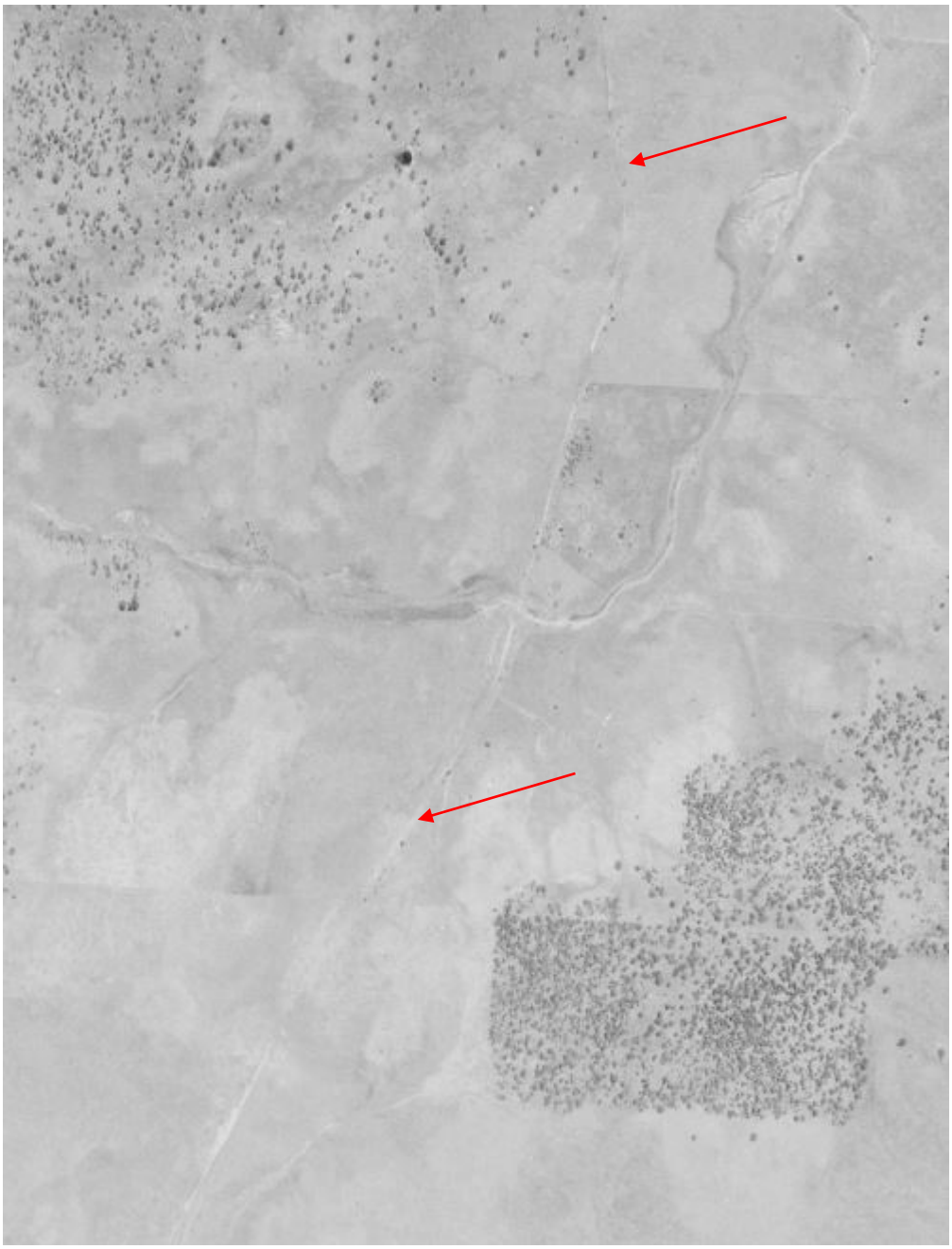


Plate 5.14 1956 aerial photograph of Old Gostwyck Road indicated by arrows

viii HNE26 Former stockyard

The location of this site, which is within the development footprint for the southern array area (refer Figure 5.3), may be shown on the c1867 plan (Plate 5.15), but has left no trace above ground today. No trace was seen during field assessment at this location and it would require archaeological excavation to confirm its presence. The stockyard would have been on the original Salisbury Waters run owned by M H Marsh, but is now on Lochiel.

This site is not accessible by the general public.

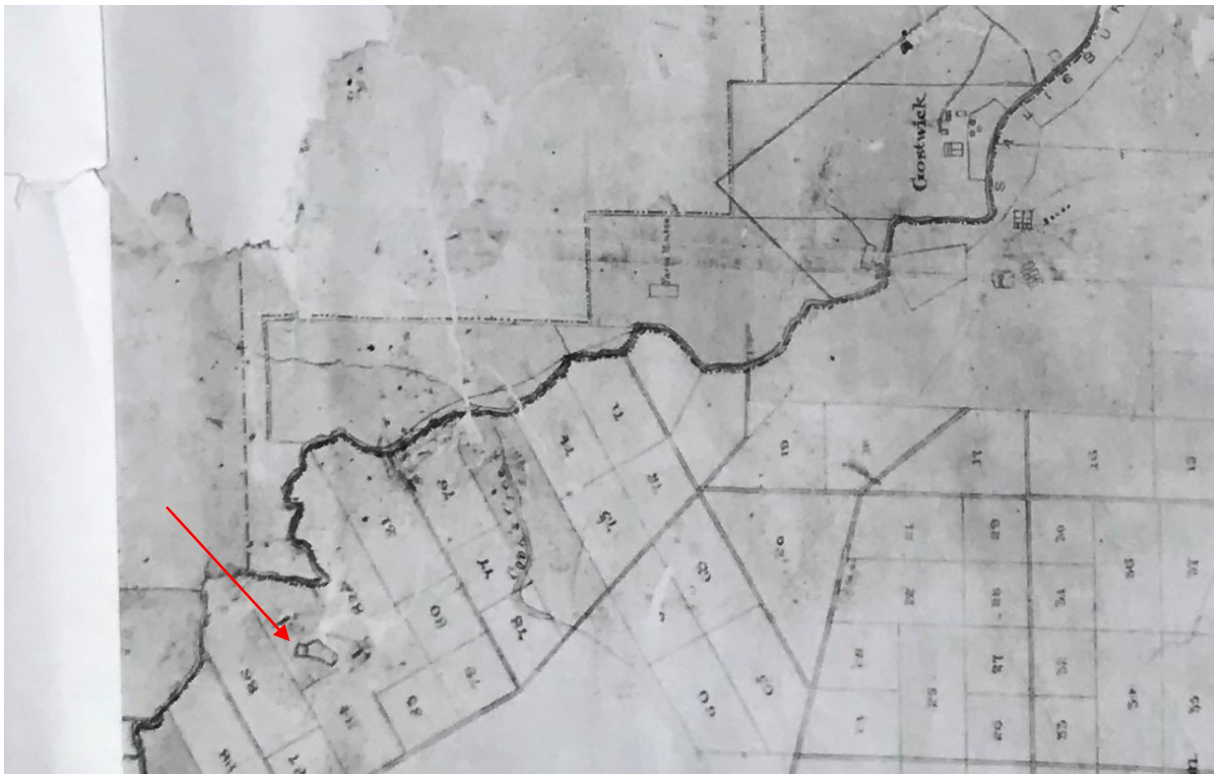


Plate 5.15 Sketch of HNE26 on a c1867 plan of the former Gostwyck Run

ix HNE34 Former stockyard

The site, HNE34, which is in the development footprint for the northern array area (refer Figure 5.1 and Plate 5.16), is at the start of a low spur that extends to the south. It comprises a timber central section with gate-post and gate that corrals the sheep into one of six pens. The pens are fenced with timber posts and iron star-picket droppers. Some wire remains threaded through the posts and droppers. HNE34 is not visible in the 1956 aerial photograph (refer Plate 5.17), although this may be due to resolution, which although is good, may not be good enough to pick up the slender lines of a stockyard; shadows however, would be expected to be visible.

This site is not accessible by the general public.

Plate 5.16 HNE34 Stockyard - View east

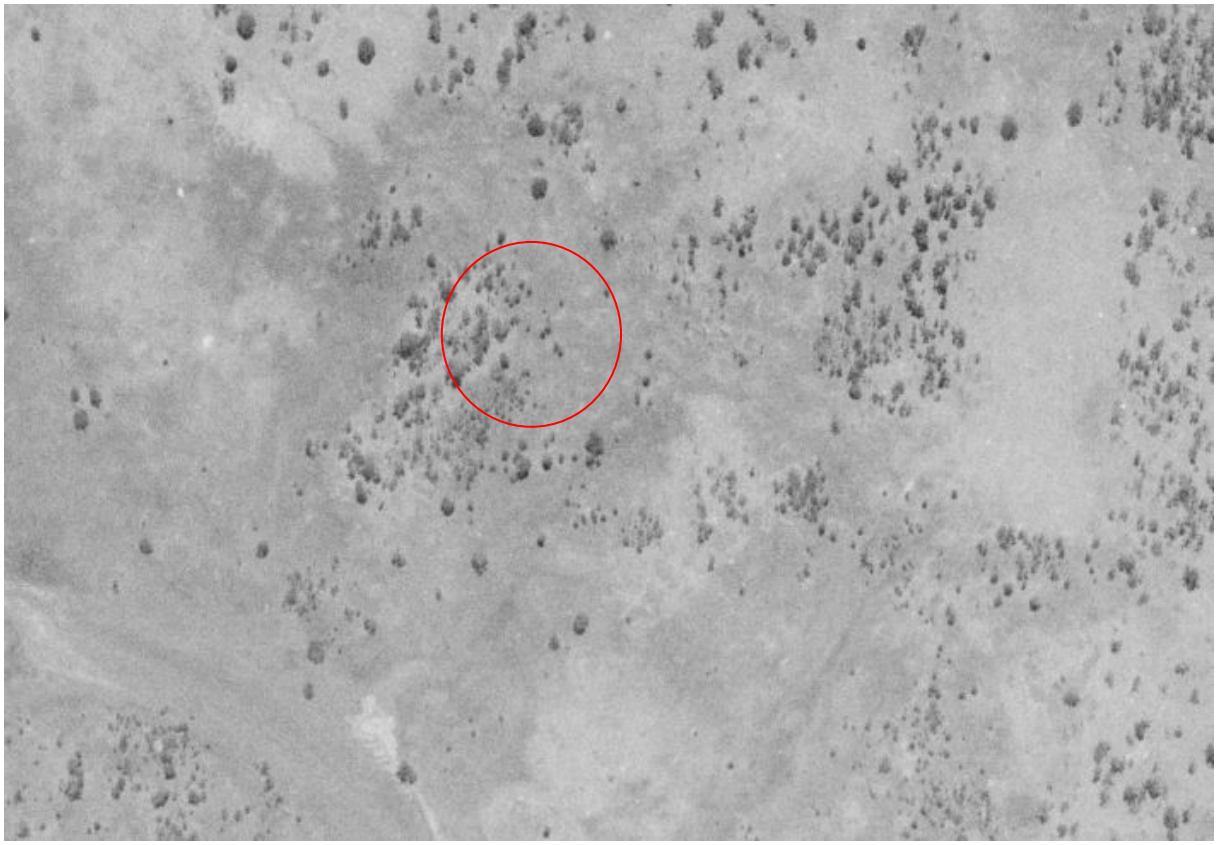


Plate 5.17 Location of stockyard in 1956 aerial photograph (circled).

x HNE37 Cultural landscape

The cultural landscape within the project boundary and, more specifically, the development footprint, extends beyond the immediate area of the project and so was assessed in the field and from documentary sources including maps. A high level review of the Armidale and Uralla Shire LGAs on Google Earth shows a region that is not highly developed but is dotted with towns of varying sizes, which are surrounded by farmland and deep gorges. Because the boundary around the cultural landscape can be drawn using different criteria, for the purposes of this assessment, the cultural landscape is defined as the rural area that is roughly the size of the most prominent squatting runs in and around the project: Gostwyck, Saumarez, Tilbuster, Gara or Guyra, Enmore, Mihi and Salisbury. Despite the field assessment not extending to the areas of these former runs, it is clear from aerial imagery that the landscape is continuous and comparable.

In some cases, it was possible to connect a site named on early plans with the remnants of sites recorded in the field (eg HNE07 Toongabbie Station). In other cases, definite cultural sites exist in the field but not on paper (discovered so far).

The cultural landscape of the project boundary is comprised of almost all elements that characterise these types of landscapes and from all phases of the site's past. It is a combination of designed and evolved landscape.

Firstly, the landscape demonstrates use and modification by the original inhabitants, the Anaiwan, who left their material mark in grinding grooves and lithic quarries, scar trees and stone artefacts.

The squattocracies that took the land in the 1830s announced their ownership in agreements with each other at first, but with the headstations, stables, shepherds' huts, sheep folds, dams and stockyards placed strategically for the best use of their claim, these structures also proclaimed ownership. It is during this time that trees were planted around huts and headstations to familiarise the land immediately around the most recent arrivals. Fruit trees and other food stock were planted near dwellings.

Pasturage was created by modifying natural landscape on a greater scale than the changes made by Aboriginal people; 'improvements' by removing the dry sclerophyll open woodland dominated by Eucalypts and Angophoras to maximise the grassy forb-rich ground cover for grazing. This is the reason that New England was as highly prized as it was: an environment that lent itself to grazing as well as being there for the taking by those bold enough to do so.

Thirty years later, when land ownership was secured, fences went up and another phase of building began, often leaving earlier buildings to dereliction. The avenue of elms (*Ulmus procera*) that AA Dangar had planted on either side of the drive leading to the headstation in 1856 avenue survives today. Cold-climate European trees such as spruce and elm mark the sites of former huts spread across the runs, but the landscape of the early historic period was largely devoid of cold climate trees along boundaries and in groups. It is clear from the aerial photograph from 1956 that native woodland had regrown but the wind-breaks of cold-climate trees were not planted until after that date. Plate 5.18 is a photograph of a mature wind-break of trees that was recorded during the first field inspection to cross-check with documents for the site of a former dwelling such as a house or hut. No evidence of a structure was found; no timber of brick fragments, artefacts or depressions in the ground that could indicate a well. This feature was planted after 1956 as it is not visible in the historical aerial photograph (refer Plate 5.19); neither is the stockyard situated adjacent to this wind break today. This wind-break is representative of all the wind-breaks planted after 1956 (as supported by the 1956 aerial photograph). Whilst wind-breaks have not been given a unique identifier in this report, they all contribute to the current cultural landscape and provide an understanding of how that landscape is used and managed.

Poplar trees were introduced into the colony in the mid-1800s but were not used consistently until after 1947 when greater efforts were made to import them (Palmberg 1977, pp.20-27). This is when it appears they were introduced to the local area and the surrounding region. Yet later, towards the mid-twentieth century, willows were planted on riverbanks, wind breaks of pine trees were planted along property and paddock boundaries, old stockyards were removed or left derelict and newer structures were constructed. Other buildings were responses to events rather than representing change in legislation or trends. Deeargee Woolshed is one such building that replaced an earlier woolshed destroyed by fire.

Today many of the stands of native trees visible in 1956 survive with new growth as well as further felling visible. Dieback is also widespread across the landscape of New England and a large number of trees stand dead or lie in the paddocks.

Many of these elements survive in some form and have combined with the geology, topography and remnant native ecology to leave a layered cultural landscape that is a direct result of its history.

Plate 5.18 A conifer wind break on Gostwyck - View north-west

Plate 5.19 Historical aerial with the approximate location of the wind-break shown in Plate 5.18

xi HNE41 Rows of poplar trees

HNE41 is a group of white poplars (*Populus alba*) just visible in the 1956 aerial photograph probably as young trees (Plate 5.20). No evidence of a building appears nearby so it is assumed that this group of trees was planted to act as a wind break and for shade.

This site is not accessible by the general public.

Plate 5.20 HNE41 Row of poplars. View south

xii HNE43 Remnant fence line

Evidence of a former fence line was recorded in the northern array towards the middle and to the west (Plate 5.21). As with HNE21, this feature is in poor condition having fallen over. It has the appearance of being comprised of split timber posts and timber gate (Plate 5.22). Surviving wire and droppers were noted but could not be dated although it appears that the fence was repaired with more modern material as demonstrated by the presence of star pickets, the design of which was patented in 1926 (Pickard 2009, p.124). The date of the star pickets in this feature has not been ascertained and may be later. The fence line was erected to a north-south alignment.

Plate 5.21 HNE43 Remnant fence line, view north (note the transmission line in the distance).

Plate 5.22 HNE43 Remnant fence line – evidence of gate and posts. View south.

5.6.2 Items within the project boundary, study area and surrounds

The items listed in this section were recorded within the project boundary and in proximity to the project, but are not within the development footprint defined on Figure 1.2 and will not be impacted as a result of the project. They are included in this report to describe and support the assessment of significance of the cultural landscape.

As part of the project refinement process, the development footprint has been modified specifically to avoid HNE17, HNE19 and HNE36. Views of project infrastructure to and from HNE02 have also been avoided as part of project refinement. The locations of the items discussed in this section are shown in Figure 5.1, Figure 5.2 and Figure 5.3.

i HNE01 Demolition rubble

Redeposited bricks from the structures, probably dwellings, visible in the 1956 aerial photograph (Plate 5.23 and Plate 5.24) were recorded approximately 175 m to the west of their original location. Detailed information about these structures has not been found, but the bricks in the demolition rubble are sandstock and the one frog that is visible in the photographs is the same frog found on the other side of Salisbury Waters at the brick-making site (HNE10 - refer to Plate 5.37).

HNE01 is approximately 1,050 m north of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.23 View of the demolition site - View east

Plate 5.24 Detail of the bricks

ii HNE02 View to Dangars Lagoon

The view is of a hill slope in the foreground down to a plain that includes the lagoon (Plate 5.25), which is listed on the Uralla LEP as item I54 Dangars Lagoon (refer Figure 3.1). The view is divided by a row of cold climate trees, many of which appear to have been planted in the last decade, although some of the trees may have been established earlier.

Dangar's Lagoon was on the edge of the historical boundary of historical Gostwyck and, in the historical period, was used for watering stock, recreation and hunting. Prior to the land being claimed by squatters, the lagoon was an important resource to Aboriginal people in the area (SHI listing). This conflict in use made Dangar's Lagoon, as much as any of the resources, a contentious place in the landscape. The view from the crest of the hill is considered to be significant because this is one of the places that this important resource could be viewed, with the hills and the plains of the property stretched out before the viewer. Paintings, drawings and photographs, as well as descriptions of the place in text, have not been found to confirm this assumption.

This view is not accessible by the general public. The development footprint has been refined to exclude project infrastructure in this area.

HNE02 is approximately 4,400 m north-west of the boundary for the southern array area.

Plate 5.25 Dangar's Lagoon from a crest on Gostwyck - View west

iii HNE04 Deeargee Woolshed

The existing woolshed on Deeargee (Plate 5.26) was built in 1872 to replace the Old Gostwyck Woolshed (HNE09) that burnt down in the same year. The woolshed, and part of the property of Deeargee, is listed on Schedule 5 of the Uralla LEP 2012 (I11).

Located approximately 400 m from Salisbury Waters and south-east of the Gostwyck homestead, the Deeargee Woolshed was surrounded by workers' infrastructure at a greater distance to the shearers' quarters today. Stock pens are on the east of the building and an open paddock is to the west; this is where the brick floor of the 1852 woolshed is located (refer to HNE09 for details).

The present woolshed on Deeargee is most definitely the second, but may be the third (AWA *et al* 2000, p.18) as it is possible that a makeshift one was hastily put up before the more substantial one, that burnt down, was erected in 1852 (AWA *et al* 2000, p.19).

Deeargee Woolshed is an octagonal woolshed with centre catching-pens (Plate 5.27), holding pens and a lean-to with miscellaneous equipment. The majority of the building is timber slab with a corrugated iron roof replacing the hail-damaged one in 1998 (AWA *et al* 2000, p.29). In 1903, brick additions to the south, to accommodate Wolseley Shearing Machines and storage for wool bales gave the building its current form (AWA *et al* 2000, p.20, pp. 28–29).

The architectural design and engineering of the Deeargee Woolshed is unique in NSW (AWA *et al* 2000, p.21) despite modifications. The famous washing pens of Gostwyck are described as being one mile (1,609 m) to the north (AWA *et al* 2000, p.29) on land in different ownership.

HNE04 is approximately 990 m north-east of the boundary for the southern array area.

Plate 5.26 The earliest section of the Deeargee Woolshed - View south

Plate 5.27 Centre catching-pens inside the Deeargee Woolshed

iv HNE05 Old Gostwyck platform 1

Located on Deeargee, 3,455 m south of the woolshed, this feature comprises basalt and sandstone blocks of consistent size but amorphous shape (Plate 5.28). The feature measures approximately 3.9 m by 3.5 m and is surrounded by a shallow drain, which may have been dug or may be the result of water erosion. The feature is on flat ground.

This feature is in an open field with a small number of native trees dotting the landscape. No artefacts were noted. This feature has been described as a 'shepherd's hut' or a 'salt lick'. A small square of sheet iron lay nearby. There was no form to the iron as it appeared to be randomly placed. It may however be related to the feature but no other evidence to suggest this was found.

The naming of this feature as a 'hut base' is somewhat problematic; as the early homesteads and shepherd outstation homes were also referred to as huts (for Eliza Marsh's description of her home and the results of field survey of 'shepherd huts' refer to Section 3.2.7). Whatever the origins of this feature, it represents an investment in time and energy, and for this reason it is likely to be an item of consequence.

HNE05 Old Gostwyck platform 1 was located through landholder knowledge.

HNE05 is approximately 2 km south-east of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.28 HNE05 Old Gostwyck platform 1 - View west

v HNE06 Old Gostwyck platform 2

Located on Deeargee approximately 1,547 m south-east of the woolshed, this feature comprises granite and conglomerate blocks of consistent size but amorphous shape (Plate 5.29). The feature measures 3.9 m by 3.4 m and is on flat ground. As with HNE05 platform 1, this feature is also surrounded by a shallow drain, but again, it is difficult to tell just by looking at it, if the drain is a result of natural erosion of if it has been dug. This feature has been described as a 'shepherd's hut' or a 'salt lick'. (WP28).

As with HNE05, the naming of this feature as a 'hut base' is somewhat problematic. Nevertheless, this feature represents an investment in time and energy, and for this reason it is likely to be an item of consequence.

HNE06 Old Gostwyck platform 2 was located through landholder knowledge.

HNE06 is approximately 1,350 m east of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.29 HNE06 Old Gostwyck platform 2 - View west

vi HNE07 Toongabbie Station site

The site of Toongabbie Station is 3,700 m south of the Deeargee Woolshed, on Deeargee. The feature is on a spur that drops away to the east and south to Atchesons Gully. The site comprises a mature elm tree, a small scatter of sandstock bricks laying under the tree and a circular depression 9 m north of the elm tree and another approximately 25 m north of the elm tree (Plate 5.29 and Plate 5.30). The review of ac 1867 plan suggests that it is the location of Toongabbie Station, which would have belonged to the Gostwyck run in the early squatting years. It is approximately 120 m west of Hillview Road (the southern approach to Gostwyck). For the purposes of this record, the site is defined by the elm tree.

A small group of apple trees (Plate 5.32) and other fruit trees are approximately 125 m to the south on the banks of Athesons Gully.

The site has been known as a house site by the landholder since his childhood. The landholder's attention was drawn to the area because he remembered a metal saw sticking up out of the ground nearby. The saw was not relocated during this field inspection.

HNE07 is approximately 2.5 km south-east of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.30 Views of HNE07 Toongabbie Station

Plate 5.31 A sample of the bricks at HNE07 Toongabbie Station

Plate 5.32 View south: apple trees on Toongabbie Station

vii HNE08 Remnant stockyard

The remnants of a stockyard were recorded approximately 499 m from HNE06 Old Gostwyck platform 2. The stockyard is on a gentle rise that has good views to the surrounding landscape and is visible from the distance by five mature elms trees, one of which has overgrown in the yards. Standing and fallen posts and one stock medicine bottle identify this feature as a stockyard but it is clearly not in use today. The timber posts have the appearance of having been hand-sawn and one is topped with a concrete cap. Sandstock brick and fragments of glass bottles lie on the ground (Plate 5.33 and Plate 5.34).

Part of the site also contains granite blocks within 3 m of the fence posts. Iron barrels with cement infill also lie in this area.

HNE08 is approximately 900 m east of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.33 HNE08 Remnant stockyard – View north (timber posts adjacent to elm trees)

Plate 5.34 Granite blocks and iron barrels at HNE08 – View north-east

viii HNE09 Old Gostwyck Woolshed archaeological site

Sandstock bricks form a surface 15 m west of the Deeargee Woolshed octagon (Plate 5.26). When viewed from the gate to the south (Plate 5.35), a levelled bench is clearly visible where the Old Gostwyck Woolshed would have once stood. Approximately 70 bricks were counted but more are likely to exist beneath a shallow layer of topsoil and grass (Plate 5.36).

The bricks represent a large timber slab and shingle building erected in 1852 and comprised the shearing section and a skillion and was covered by corrugated iron. The date of this building is the reason that the Deeargee Woolshed may be the third woolshed on the original Gostwyck holding. Dangar introduced sheep to the run in the 1830s, so the property must have had an earlier woolshed. The location of the earliest building is not known but it is logical to think that it is in proximity to the other two.

The Old Gostwyck Woolshed was destroyed by fire in 1872, suspected to be a result of arson and which Ferry puts down to class antagonism (Ferry 1999, p.79):

> The Armidale Express regrets to learn that the large woolshed on Gostwyck was burnt down on Tuesday night, with a new wool press and three bales of wool. It is understood that the building was partially insured. As the fire is believed to be an incendiary one, a reward of £100 is offered for conviction. ('Weekly register', Evening News, Mon 26 Feb, 1872, p.4)

This area was identified through landholder knowledge.

HNE09 is approximately 950 m north-east of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.35 HNE09 Old Gostwyck Woolshed archaeological site - View north-west (the levelled bench signifying the location of the Old Gostwyck Woolshed)

Plate 5.36 North to top: detail of the surviving brick floor of the Old Gostwyck Woolshed

ix HNE10 Brick-making site

This site is comprised of a large number of piled bricks, some of which are lying on flat ground adjacent to Salisbury Waters, and others, which are in the river bank (Plate 5.37). The site extends approximately 15 m from the River bank. Other than the bricks, and the remnants of an enclosure, no structure was noted in this area. Closer inspection may reveal if this site represents a brick clamp or a more structured kiln or a pile of bricks. The length of the grass obscured a clear view of the ground.

The bricks are stamped with frogs and are lichen covered, suggesting they have lain here for a long time (Plate 5.38). The number of bricks in this location and their ordered placement suggests that this is where they were stored and it is possible that they were made here. The bricks for Toongabbie Station may have come from here, but no bricks from that site were found with the same frog. It is possible that a brick clamp or kiln for the bricks at Toongabbie Station was closer to the station as it is at least 4 km from HNE10. The site is approximately 850 m from the site of the Old Gostwyck Woolshed, but those bricks are laid on their side and embedded in the ground so their frogs were not visible. It makes sense that the bricks for the woolshed floor were made by available water and carted to the site. A brick with this type of frog was also photographed in a pile of demolition on the north side of Salisbury Waters.

This site was found with the landholder's knowledge and was referred to as a 'brick kiln'.

HNE10 is approximately 710 m north of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.37 HNE10 Brick-making site along Salisbury Waters - View south

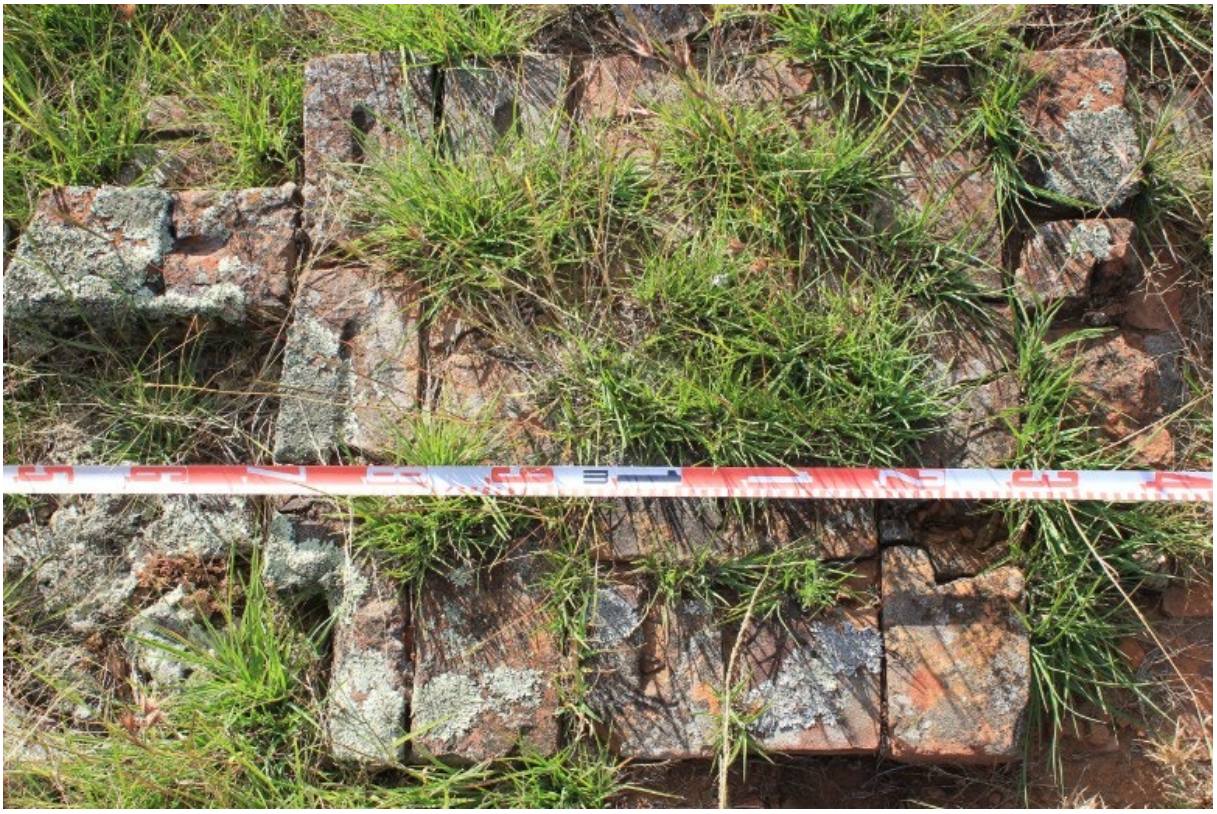


Plate 5.38 HNE10 detail of bricks (note the frog)

x HNE17 Remnant shepherd's hut archaeological site

HNE17 is an archaeological site representing what the landholder knows to be a shepherd's hut (Plate 5.39). This site is situated on a rise overlooking an unnamed creek and is approximately 5 km from the site of the Gostwyck homestead. This site is no longer within the Gostwyck boundary but was originally within Henry Dangar's squatting run.

HNE17 is identifiable from a distance by a row of mature elm trees aligned north to south (Plate 5.39). Three of the elm trees are alive, one is dead but upstanding and another is dead and lying on the ground. Two rows of quince trees, also aligned north to south, have been planted approximately 45 m to the west (Plate 5.40).

The shepherd's hut is situated between these two rows of trees in a slight depression. It is recognisable by a chimney base of brick and local stone (Plate 5.41), a row of granite boulders with a short return, timber fence posts and iron scraps. To the east about 80 m and scattered amongst the granite boulders is a small artefact scatter, presumably from the hut and comprised of a possible iron bed-head, an iron saw in two pieces and other iron fragments, glass (oxidised), ceramic (blue flow and whiteware) and tin.

The reason for the lack of timber and the low occurrence of brick is likely to be because what would have been rapidly built and considered a temporary structure in use during the squatting period of Gostwyck during the insecure tenure of the property. When the property was legally consolidated into the Dangar holdings and fences went up, buildings were more robustly constructed, with fewer needed this close to the main homestead. Timber from the huts may have been re-used elsewhere or has rotted away.

Based on the survey observations across the project boundary, bricks would have been made and used to supplement the local stone in the construction of chimneys for the huts. The bricks have frogs, but their manufacture has not been identified (Plate 5.42). It is likely that they were made on-site or nearby. This building measures 9 m from the chimney base to a row of granite, probably building footings, to the south and 8 m across. A depression approximately 7 m^2 is located south of the row of granite, which at this stage has been interpreted as a garden bed but may be the site of an additional room or lean-to. Two timber fence posts on the western side of the hut lead to the quince grove, suggesting that the hut was enclosed by a fence.

Information about this site was originally provided by the landholder and was identified during survey.

HNE17 is adjacent to the northern boundary of the central array area and the visible relics are approximately 80 m north of the same boundary. This site is not accessible by the general public.

Plate 5.39 HNE17 Shepherd's Hut identified by the row of elms - View south-west

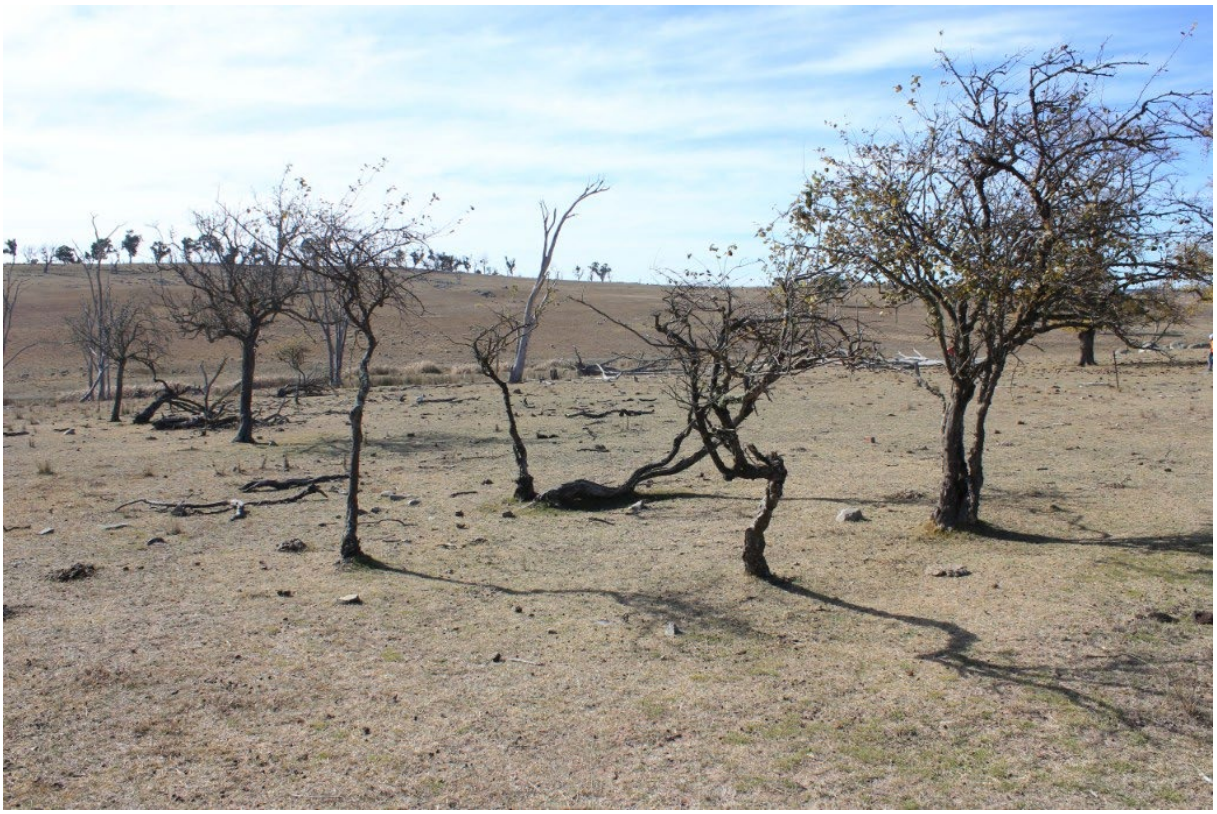


Plate 5.40 HNE17 Shepherd's hut quince trees - View north

Plate 5.41 HNE14 Shepherd's hut chimney base; the quince trees are directly behind the fence.

Plate 5.42 Example of a brick with frog on HNE17

xi HNE18 Stockyard

A disused and dilapidated stockyard was recorded approximately 440 m to the north-west of HNE17 (Remnant Shepherd's hut) and on the north side of the unnamed creek (Plate 5.43). Four large elm trees are growing through the stockyard and another has collapsed across the timber fences.

Consultation with the landholder ascribes a construction date to the 1970s when he, his father, and his son built it. It may be the location of an earlier stockyard given its proximity to the shepherd's hut (HNE17) but no evidence of an earlier structure was found during field survey.

HNE18 is approximately 160 m north of the boundary for the central array area. This site is not accessible by the general public.

Plate 5.43 HNE18 Stockyard from the 1970s - View north-west

xii HNE19 Remnant house site

HNE19 is an archaeological site on a lot that was on the former Saumarez Station held by Elizabeth Dumaresq and later purchased by Henry Arding Thomas (1857) and then by the current landholder. The site is visible from a distance by a row of 15 cypress pines aligned north-south (two are dead and fallen over) and another two pine trees forming a right angle at the south (Plate 5.44). The site comprises a small water tank sitting directly on the ground, a terracotta pipe visible in the ground and possibly in situ. A small number of extruded bricks occur across the site. A horse-drawn plough sits on the outside of the house boundary.

A pair of gate posts is situated at the southern end of the eastern boundary, and three timber fence posts mark the southern boundary of the site. A row of fence posts is aligned roughly east-west to the east that appear to define an early drive (Plate 5.45). The site is adjacent to a driveway to an operating stockyard.

HNE19 is approximately 250 m east of the boundary for the northern array area. This site is not accessible by the general public.

Plate 5.44 HNE19 Remnant house site – View south-west

Plate 5.45 HNE19 fence posts across the road - View east

xiii HNE36 Saumarez hut and outbuildings

The site labelled HNE36 Saumarez hut for the purposes of this report displays the best preservation of what is believed to be a shepherd's hut. The feature is a dry-stone wall with two short returns, at its highest, 2 m in height and comprised of random rubble blocks sourced from the local area. Represented in the wall are basalt, granite, sandstone, greywacke and trap (Plate 5.46).

Inspection of this feature indicated that it may be a double-sided fireplace with what appears to be niche for threading a timber pole for holding pots over fire. A circular pit 20 m to the south-east is believed to be a waterhole or well of some sort. Local oral history claims that this site was a thoroughfare and a place for travellers to stop. Not quite an inn but a house that travellers knew they could rest and be fed.

The curtilage of this item also contains another collection of stones (Plate 5.47) which local knowledge claims as a sheep fold and which is approximately 65 m west of the hut remains. Another rectilinear alignment of stones, with return (Plate 5.48) was recorded close to the banks of Harriet Gully to the west of Corey Road, Kellys Plains.

HNE36 is approximately 475 m east of the boundary for the northern array area. This site is not accessible by the general public.

Plate 5.46 HNE36 Saumarez hut and outbuildings – View east (the surviving masonry is thought to be a remnant double-sided fireplace)

Plate 5.47 HNE36 remnants of what is believed to be a sheep fold – view south-west

Plate 5.48 HNE36 Saumarez hut site with the separate building foundations - view south

xiv HNE28 Spring Camp house site

The remains of a house with a sandstock brick chimney were recorded in a location that is marked as ‘spring camp’ on the c1867 plan (Plate 5.49 and Plate 5.50). A small cast iron stove/oven remains in the fireplace.

HNE28 is approximately 620 m west of the boundary for the northern array area. This site is not accessible by the general public.

Plate 5.49 HNE28 Spring Camp house site - view north

Plate 5.50 HNE28 Spring Camp house site

xv HNE31 Farm house (site of)

This feature was identified in the c1867 mapping but was not visited as it is not in the development footprint (Plate 5.51).

HNE31 is approximately 390 m north of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.51 A detail from the c1867 plan showing the location of a farm house on Gostwyck. This site is not part of the main residential area, which can be seen to the east (right)

xvi HNE35 Old Gostwyck platform 3

Located on Kelvin Grove, this feature (Plate 5.52) was originally on the Gostwyck squatting run but may have been part of a lot that was not acquired for Gostwyck after the Robertson Land Acts were enacted. It is not within the project boundary but directly adjacent on Lot 82 of DP 755814. This site was inspected because it was brought to the attention of the survey team by the landholder and its location in relation to the development footprint for the project needed to be confirmed.

What is particularly interesting about this site is that it is comprised of what appear to be dressed basalt blocks laid in a rectilinear pattern. The platform has been disturbed by a European fig tree growing through the middle of it and it is adjacent to another basalt feature that has form but with purpose unknown. A wide but shallow pit, 4 m in diameter and 1 m deep in the centre is approximately 12 m to the north-west and another, smaller pit is located to 30 m to the south-east. Erosion on the northern side of the main platform feature has uncovered artefacts that include fragments of blue annular ceramic, stoneware, green bottle glass, an oxidised glass fragment and sandstock bricks.

The equivalent features HNE05 and HNE06 were not associated with any visible artefacts.

HNE35 is approximately 110 m south of the boundary for the northern array area. This site is not accessible by the general public.

Plate 5.52 HNE35 platform or hut site with fig tree - view east

xvii HNE38 Gostwyck Hall

HNE40 Gostwyck Hall was viewed from a distance as it lies outside of the development footprint for the southern array area, which was the focus on the field assessment (structure on the left in Plate 5.53).

Gostwyck Hall was originally situated on the northern side of Salisbury Waters in what is now the legal boundary of Gostwyck. The hall was moved onto Deeargee in 1969 when the last 4,978 ha of Gostwyck were subdivided by Henry Dangar's great granddaughters, Mrs B Wright and Mrs G Giblin (AWA *et al* 2000, p.16).

HNE38 is approximately 460 m north of the boundary for the southern array area. This site is not accessible by the general public.

Plate 5.53 HNE38 Gostwyck Hall (to the left) and Deeargee Woolshed (HNE04 - to the right) - view east

xviii HNE39 Two graves

Two graves have been recorded within the project boundary, on the south side of Gostwyck Road approximately 65 m south of Gostwyck Chapel. The graves are marked by headstones lying flat and the inscription is so weathered to be indecipherable. It is believed that they mark the graves of workers from Gostwyck but no information has been found on who may be buried there (refer blue arrow in Plate 5.54).

The site was not surveyed as it lies outside of the development footprint, which was the focus on the field assessment. HNE39 will not be affected in any way by the project.

xix HNE40 Two house sites

Structures, probably dwellings, visible in the 1956 aerial photograph (refer red arrow in Plate 5.54) were recorded approximately 175 m to the west of their original location. Detailed information about these structures has not been found but the bricks in the demolition rubble are sandstock and the one frog that is visible in the photographs is the same frog found on the other side of Salisbury Waters at the brick-making site (refer HNE10 - Plate 5.37). This site is not accessible by the general public.

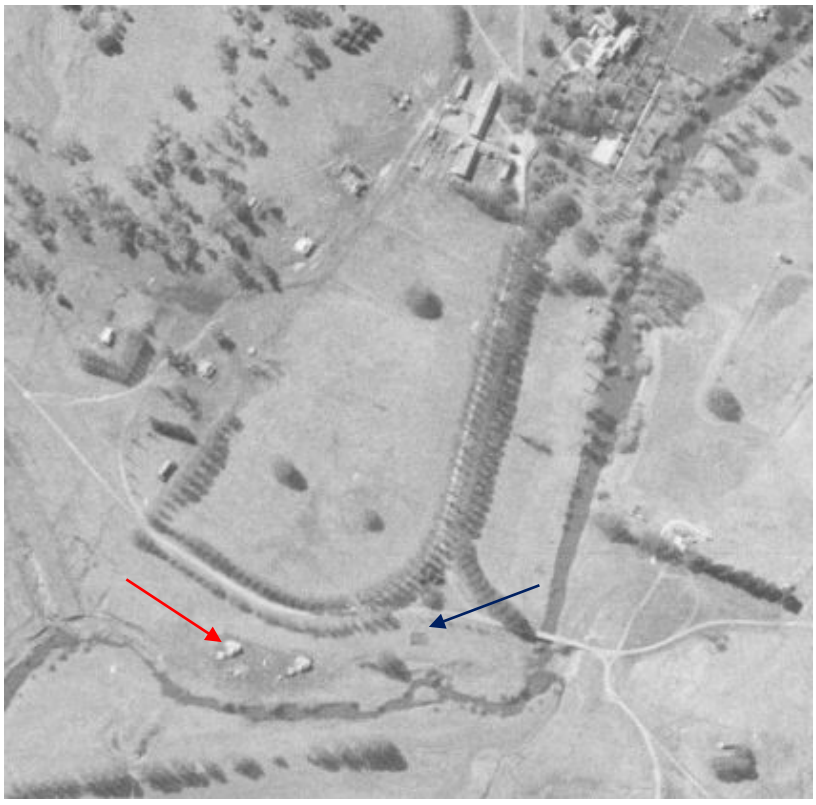


Plate 5.54 HNE39 (two graves) and HNE40 (two house sites) shown on the 1956 aerial photograph.

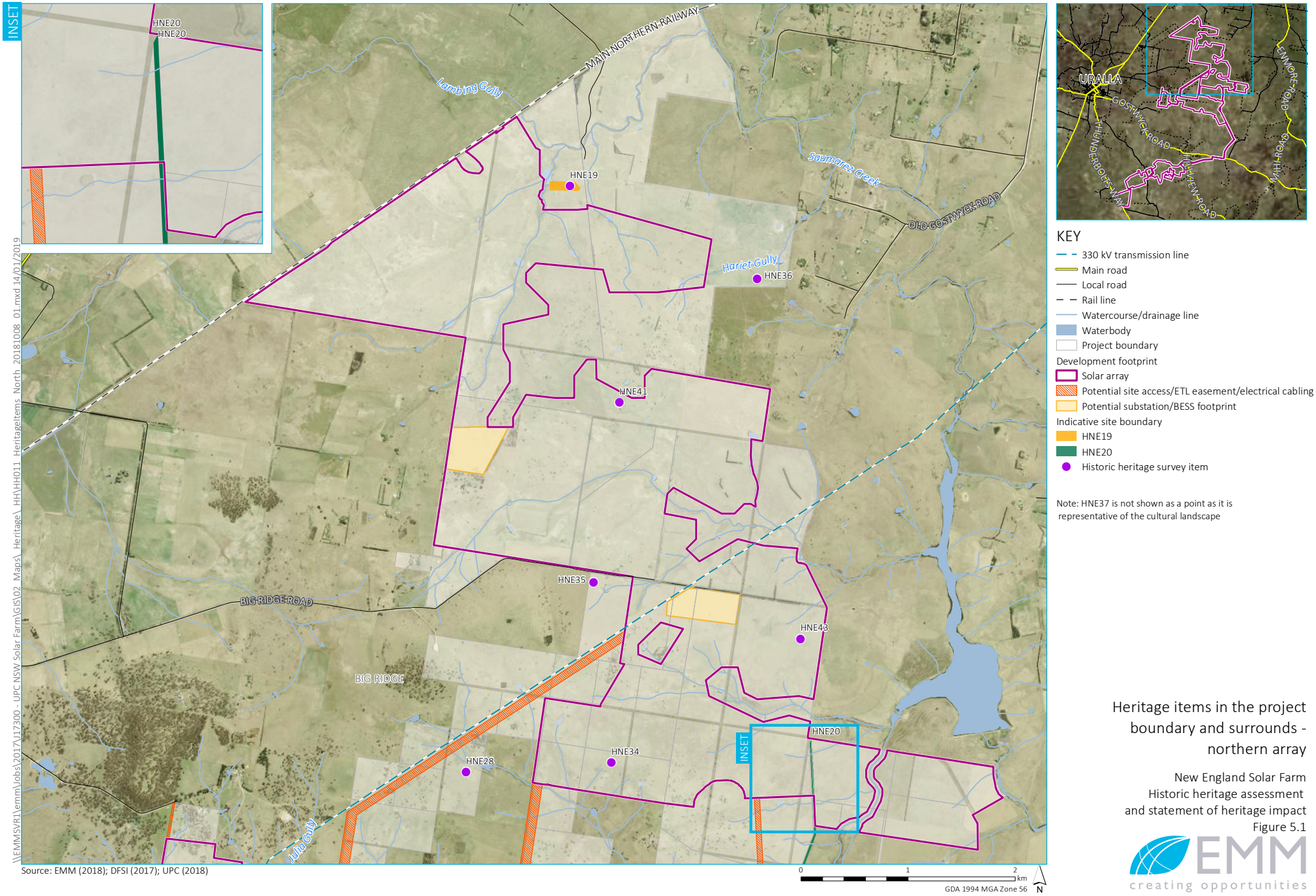
5.6.3 Heritage items in the vicinity of the project boundary

One registered heritage item occurs in the vicinity of the project. Salisbury Court is listed on Schedule 5 of the Uralla LEP (I14).

i Salisbury Court

Salisbury Court homestead (Lot 1 of DP 1030870) is the earliest extant stone homestead in New England and was built by 1851. The homestead is in its original form and has been well-maintained over the years. A significant amount of vegetation surrounds the Salisbury Court homestead, which will screen views of project infrastructure within the development footprint for the southern array area.

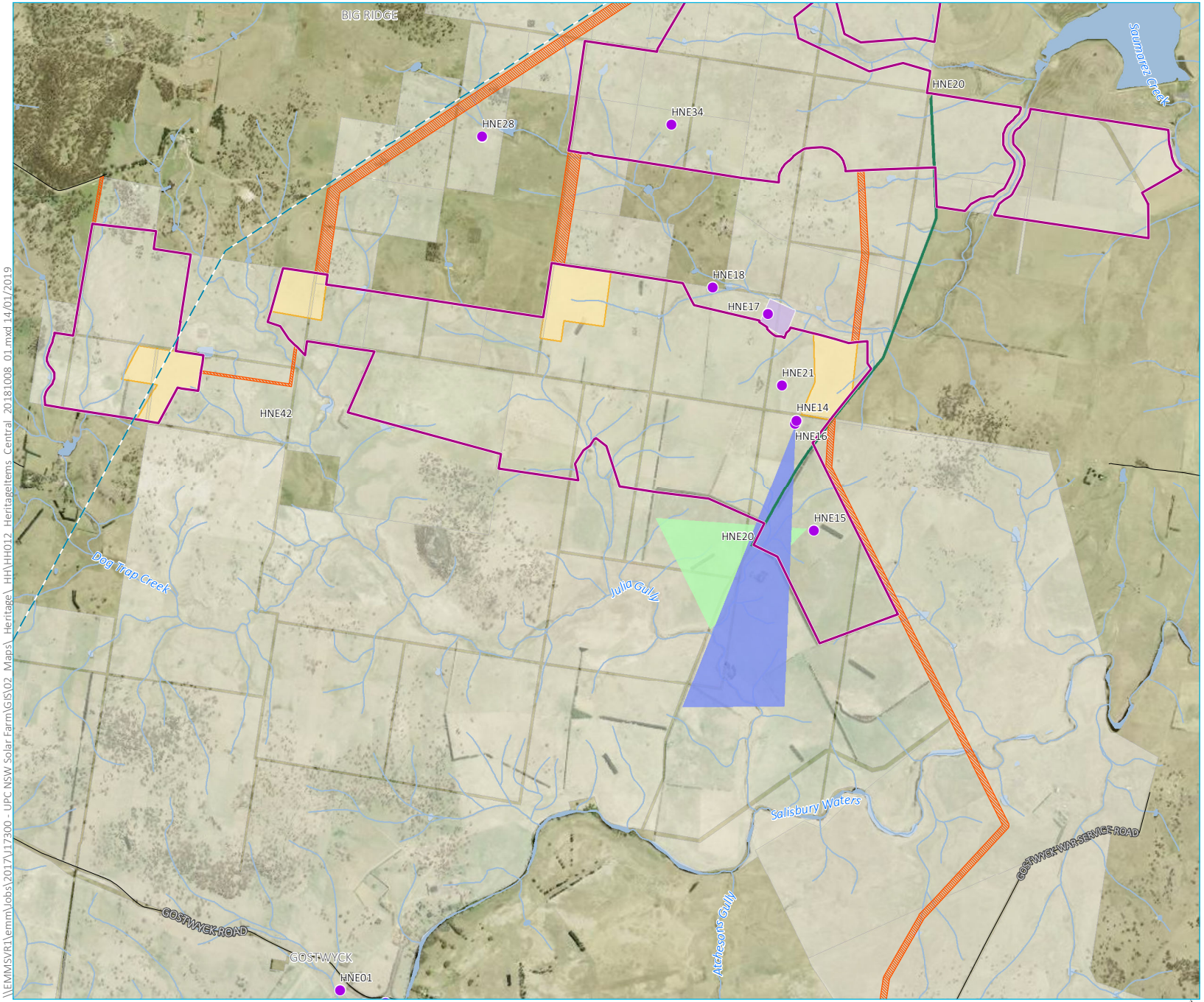
Salisbury Court was not accessed for field assessment as physical impacts from the project will not occur and visual impacts have been assessed in the visual impact assessment (refer to Appendix I of the EIS). The distance from Salisbury Court homestead to the southern array area is approximately 900 m.

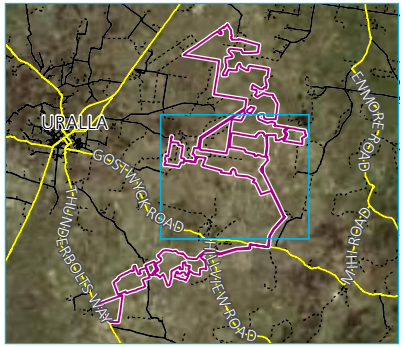


Heritage items in the project boundary and surrounds - northern array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 5.1

EMM
creating opportunities





KEY

- 330 kV transmission line
- Local road
- Watercourse/drainage line
- Waterbody
- Project boundary

Development footprint

- Solar array
- Potential site access/ETL easement/electrical cabling
- Potential substation/BESS footprint

Indicative site boundary

- HNE15
- HNE16
- HNE17
- HNE20
- Historic heritage survey item

Note: HNE37 is not shown as a point as it is representative of the cultural landscape

Source: EMM (2018); DFSI (2017); UPC (2018)

0 1 2 km

GDA 1994 MGA Zone 56

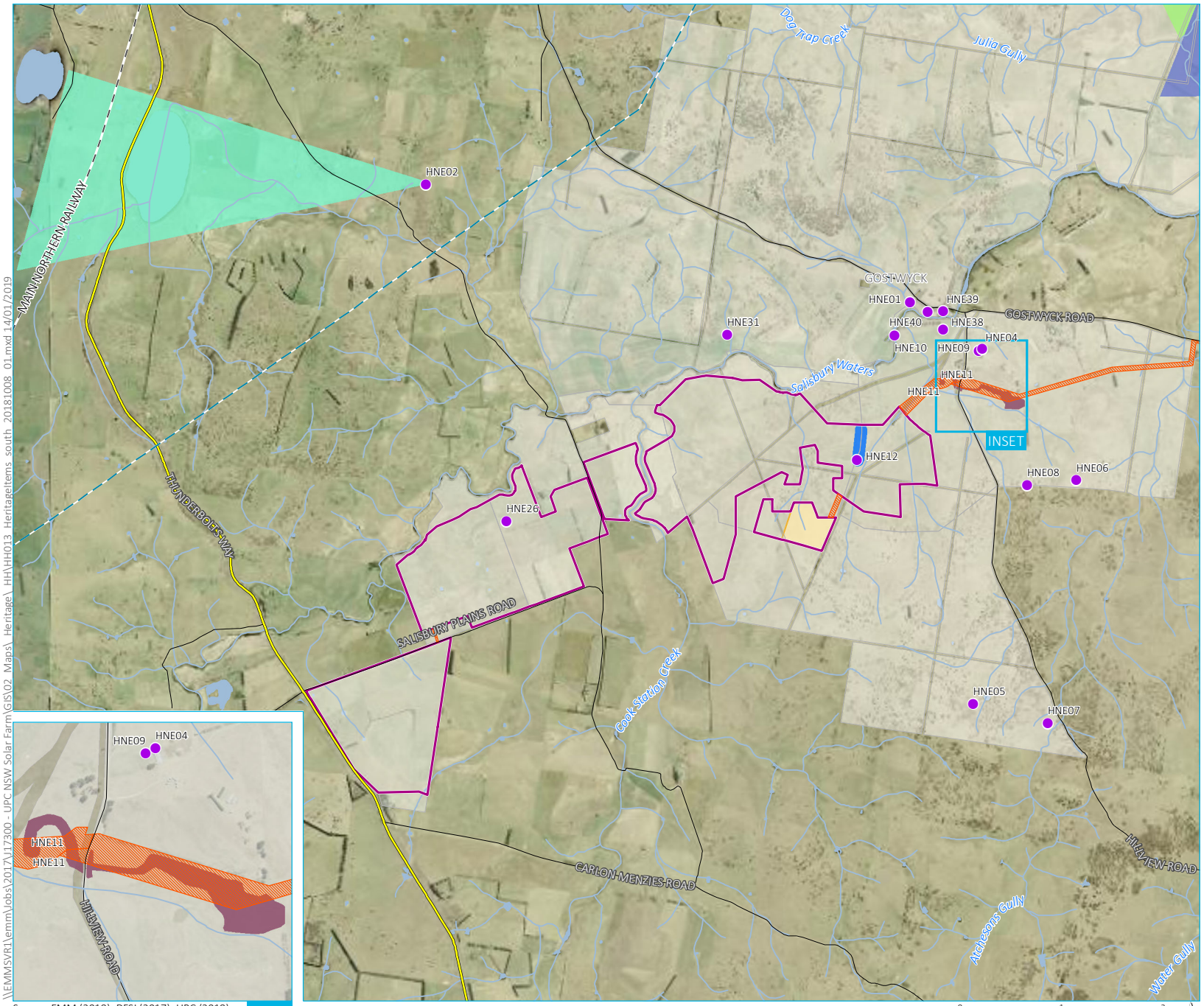
N

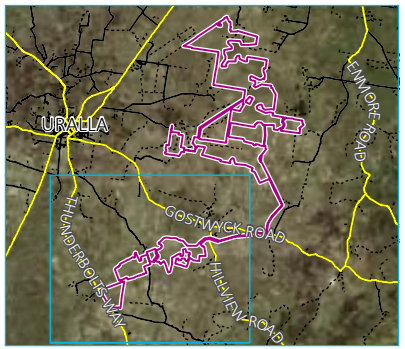
\\EMMSVR1\emm\Jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HHLHH012 HeritageItems Central 20181008 01.mxd 14/01/2019

Heritage items in the project boundary and surrounds - central array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 5.2

EMM
creating opportunities





KEY

- 330 kV transmission line
- Main road
- Local road
- Rail line
- Watercourse / drainage line
- Waterbody
- Project boundary

Development footprint

- Solar array
- Potential site access/ETL easement/electrical cabling
- Potential substation/BESS footprint

Indicative site boundaries

- HNE02
- HNE11
- HNE12
- HNE15
- HNE16
- Historic heritage survey item

Note: HNE37 is not shown as a point as it is representative of the cultural landscape

Source: EMM (2018); DFSI (2017); UPC (2018)

\\EMMSVR1\emm\Jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HH\HH013 HeritageItems south 20181008 01.mxd 14/01/2019

Heritage items in the project boundary and surrounds - southern array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 5.3

EMM
creating opportunities

5.7 Archaeological potential and sensitivity

5.7.1 Introduction

Documentary research, field data and anecdotal evidence indicates a high potential for historical heritage values to be present within the development footprint for the project and the greater New England region. Except for Sempell's run, some of the earliest squatting runs in the region occur in and around the development footprint for the project. The earliest incarnation of Gostwyck and part of Saumarez covered the landscape of the broader project boundary.

The 1862 tally of pastoral infrastructure on Gostwyck describes the makings of a rich historical cultural landscape, but not all of these predicted sites will be within the development footprint as Gostwyck Station extended well beyond its current boundary. It is likely that those items that occur within the development footprint have been accounted for in the field assessment.

Logically, the early settlement of the area and the activities that took place here after the squatters moved in would have left an archaeological fingerprint. Documentary and physical evidence, confirms the archaeological potential of the development footprint and the project boundary, more generally, and the assessments and gradings of significance for each feature indicate that many of the recorded sites are relics, as defined under the Heritage Act.

5.7.2 Historical impacts

The properties that make up the development footprint for the project have undergone low levels of impact since the squatting runs became pastoral runs (or stations). The earliest buildings, which would have been slab and stone or brick (for the chimneys) and included residences, barns, woolsheds and other farm structures were progressively improved. Materials from the defunct structures may have been re-used in the new ones or they may have rotted on the fields.

Trees were cut down rapidly after the land was acquired and dams were excavated. As time progressed, fences were erected and in the latter half of the twentieth century, many of the cold climate trees that line paddocks and frame hillsides, were planted.

The original homestead on Gostwyck is in the location of the existing homestead and will not be impacted by the project. The same applies to the buildings that existed around the original homestead and those that were built later in that same area.

The nature of land-use in the development footprint, project boundary and the surrounding region has not changed. Old structures have been torn down or left to ruin and with the passing of time have blended into the land. Methods have been updated and new technology has been adopted but substantial physical impacts have not occurred. As a consequence, it is considered that the development footprint and, more generally, the project boundary, have varying degrees of archaeological potential.

5.7.3 Implications of the field assessment

Sections of the development footprint have been surveyed on four separate occasions by qualified archaeologists who were guided by documentary sources, experience and local knowledge from landholders and others who know the area well. In the situations where three former residential sites (HNE17, HNE19 and HNE36) were originally within the development footprint, a curtilage determined by an archaeologist was excised from the development footprint to avoid impacts. Other relics occur outside the development footprint but within the project boundary and will not be impacted by the project.

In addition, as part of the refinements to the southern and central array areas, the extent of the development footprint within the current extent of Gostwyck Station that will be impacted has reduced by approximately 191 ha (southern array) and 43 ha (central array).While it is predicted that archaeological sites will occur across the broader landscape, the survey effort by EMM is sufficient to identify and record relics in the areas that are proposed for impact (within the development footprint). Additional larger residential house sites are unlikely to exist within the development footprint because of the spacing that was given to shepherds' huts. These huts, such as Toongabbie Station (HNE07), Plains Station (outside and 2.9 km east of the project boundary) and Old Gostwyck Station (outside and 1 km north of the project boundary) that were Gostwyck outstations are either are outside the development footprint. Remnant house site (HNE19) and Saumarez Hut (HNE36) on the former Saumarez run have also been excised from the development footprint. An understanding of spatial patterns on squatting runs suggest that another substantial outstation would not be so close to those that have been discovered and therefore within the development footprint. It is considered that by reviewing historical documents and consulting with landholders, archaeological sites in and adjacent to the development footprint would have been discovered through survey.

Based on the outcomes of the field assessment and documentary research, it is considered that the archaeological potential of the region is high - a conclusion which is based on what was recorded in and around the development footprint. It is logical to assume that the other surrounding runs would have supported comparable infrastructure, and this is the reason the description of the cultural landscape can be extended beyond the project boundary.

However, the potential for undiscovered relics within the development footprint is low for the reasons discussed above. The spacing of shepherds and their flocks means that it is unlikely that huts, folds and stockyards were built close to each other. Any additional sites that may be uncovered during the site preparation and construction phases will fall into the category of unanticipated. There is little that can be done to predict the existence and location of structures that were not mapped and do not leave a visible archaeological fingerprint and/or are not known to the project landholders.

6 Assessment of significance

6.1 The significance framework

In NSW, historical value is ascribed to buildings, places, archaeological sites and landscapes modified in the Australian historical period for purposes other than traditional Aboriginal use. The assessment of heritage significance is based on the Burra Charter (Australia ICOMOS 2013) and further expanded upon in *Assessing Heritage Significance* (NSW Heritage Manual Heritage Office 2001). The heritage manual lists seven criteria to identify and assess heritage values that apply when considering if an item is of state or local heritage significance, which are set out in Table 6.1. It also identifies the heritage gradings for which items (or features or components) that were recorded on site have been assessed against, which are set out in Table 6.2, and which provide context for each individual item's contribution to the cultural landscape. The result of the assessments of significance may determine that an individual component does not meet the threshold for local or State significance as an individual item, but that it does contribute to the significance of the cultural landscape.

The focus of the research remained on the items in, or close to, the development footprint and the assessment of significance is primarily concerned with items that were in the site boundary presented as part of the PEA. Gradings and significance levels (where relevant) for sites identified within the project boundary, study area and surrounds are identified on Figure 6.1 (northern), Figure 6.2 (central) and Figure 6.3 (southern).

The criteria against which heritage significance have been assessed are reproduced in Table 6.1. Gradings of significance are reproduced in Table 6.2. The assessment of relics is hypothetical as their existence as intact and substantial sites is predicted.

Table 6.1 NSW heritage assessment criteria

Criterion	Explanation
a)	An item is important in the course or pattern of NSW's (or the local area's) cultural or natural history (Historical Significance).
b)	An item has strong or special association with the life or works of a person, or group of persons of importance in NSW's (or the local area's) cultural or natural history (Associative Significance).
c)	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area) (Aesthetic Significance).
d)	An item has a strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons (Social Significance).
e)	An item has the potential to yield information that will contribute to an understanding of NSW's (or the local area's) cultural or natural history (Research Significance).
f)	An item possesses uncommon, rare or endangered aspects of NSW's (or the local area's) cultural or natural history (Rarity).
g)	An item is important in demonstrating the principle characteristics of a class of NSW's (or the local area's) cultural or natural places or environments (Representativeness).

Source: *Assessing heritage significance* (NSW Heritage Office 2001, p.9).

Table 6.2 NSW heritage assessment gradings

Grading	Justification	Status
Exceptional	Rare or outstanding element directly contributing to an item's local or state significance.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the item's significance. Alterations to not detract from significance.	Fulfils criteria for local or State listing.
Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret.	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the item's heritage significance.	Does not fulfil criteria for local or State listing.

Source: *Assessing heritage significance* (NSW Heritage Office 2001, p.11).

6.2 Assessment of sites in the development footprint

6.2.1 HNE11 Remnant of basalt wall 1

i Assessment against the criteria

Table 6.3 HNE11 Remnant of basalt wall 1

Criterion	Assessment
a) Historical	Family oral history places the responsibility of the construction of this wall in the hands of convicts. Supporting evidence for this assumption has not been found but the form of the wall, which is dismantled dry-stone with some timber elements, suggests that it was built before 1883. Census results from 1841 show that Gostwyck had eleven convicts on the property and four holding tickets of leave. The possibility that the wall is convict-made exists but has not been confirmed. If this wall is associated with the early period of Gostwyck, it is of State significance.
b) Associative	Significance against this criterion cannot be assessed although landholder knowledge suggests it was convict-built, which would place it in the time-frame of Henry Dangar's ownership.
c) Aesthetic	HNE11 is of aesthetic significance as it embodies, within its form, the practice of dry-stone wall construction and then the dismantling, probably to remove rabbit havens after the gazetting of the *Rabbit Nuisance Act of 1883.* It is a massive undertaking running 850 m from west to east, which includes a large semi-circle at the western end. Where dismantled, the wall has been spread across approximately 6 m but at its very western end, the gateway survives, with two timber posts, apparently hand-sawn, as well as a clear wall base of two footing stones that would have been the framework for smaller infill stones. HNE11 is of high significance for its ability to represent two aspects of aesthetic values; the first being what is believed to be an early dry-stone wall in a remote rural setting; and the second being its ability to demonstrate a law introduced by the colonial government in response to what was already transforming into an environmental disaster.
d) Social	Does not fulfil this criterion at this stage.
e) Research	HNE11 has research potential for its ability to answer questions related to the early squatting landscape in the New England Tablelands. The purpose of the wall at this location is not understood and so far, has not been determined through landscape analysis or by review of historical plans. Further research may be able to shed light on the function and form of this feature.
f) Rarity	As a dry-stone wall that may have been a dog-leg wall, this site type is not rare as it was built in rural areas across NSW where the resources required and allowed it. As one of only two such structures identified in or close to the project boundary, it is possible that it is rare at a local level.
g) Representativeness	HNE11 is representative of dry-stone walls, possibly of dog-leg walls, that were built in the nineteenth century in rural locations. The dismantling of the wall may also be representative of the introduction of the *Rabbit Nuisance Act 1883.*

ii Statement of significance

HNE11 Remnant of basalt wall 1 is potentially of State significance for its historical, aesthetic, research and rarity values. Its association with Gostwyck and now Deeargee, and therefore with the Dangar family, is also a factor in its significance. It is one of two substantial dry-stone walls, the existence of which have not been explained by primary or secondary sources.

It makes a high contribution to the significance of old Gostwyck Station and now to Deeargee Station and therefore to the cultural landscape.

6.2.2 HNE12 Remnant of basalt wall 2

i Assessment against the criteria

Table 6.4 HNE12 Remnant of basalt wall 2

Criterion	Assessment
a) Historical	Family oral history for this wall does not exist but it is almost identical to HNE11 in most respects except that it does not retain any structural wall form. The fact that it is dismantled suggests that it was built prior to the *Rabbit Nuisance Act of 1883*.
b) Associative	Significance against this criterion cannot be assessed although landholder knowledge suggests it was convict-built, which would place it in the time-frame of Henry Dangar's ownership. This criterion however, cannot be answered by the research to date.
c) Aesthetic	HNE12 is of aesthetic significance as it embodies, within its form, the practice of dry-stone wall construction and then the dismantling to remove rabbit havens after the gazetting of the *Rabbit Nuisance Act of 1883.* This wall is a massive undertaking running 310 m north-south. It has been dismantled and spread across approximately 6 m. One access point is situated 30 m north of the southern end. HNE12 makes a high contribution to significance for its ability to represent two aspects of aesthetic values; the first being what is believed to be an early dry-stone wall in a remote rural setting; and the second being its ability to demonstrate a law introduced by the colonial government in response to what was already transforming into an environmental disaster. HNE12 has local aesthetic values.
d) Social	Does not fulfil this criterion.
e) Research	HNE12 has high research potential for its ability to answer questions related to the early squatting landscape in the New England Tablelands. The purpose of the wall at this location is not understood and so far, has not been determined through landscape analysis or by review of historical plans. HNE12 has local to State research values but its primary significance is as a component of a wider cultural landscape.
f) Rarity	As a dry-stone wall that may have been a dog-leg wall, this site type is not rare as it was built in rural areas across NSW where the resources required and allowed it. Of only two such structures identified in or close to the project boundary, it is possible that it is rare at a local level.
g) Representativeness	HNE12 is representative of dry-stone walls, possibly of dog-leg walls, that were built in the nineteenth century in rural locations. The dismantling of the wall may also be representative of the introduction of the *Rabbit Nuisance Act 1883.*

ii Statement of significance

HNE12 Remnant of basalt wall 2 is potentially of State significance for its historical, aesthetic, research and rarity values. Its association with Gostwyck and now Deeargee, and therefore with the Dangar family, is also a factor in its significance. It is one of two substantial dry-stone walls, the existence of which have not been explained by primary or secondary sources.

It makes a high contribution to the significance of old Gostwyck Station and now to Deeargee Station and therefore to the cultural landscape.

6.2.3 HNE14 Granite tors

i Assessment against the criteria

Table 6.5 HNE14 Granite tors

Criterion	Assessment
a) Historical	Apart from the timber posts with notches lying across a small portion of the granite, there is no evidence to suggest HNE14 has historical significance. The notched timber has the appearance of being secondary deposition and possibly from an old fence.
b) Associative	Does not fulfil this criterion.
c) Aesthetic	The granite tors (HNE14) are a natural feature with minor human modification and a component of the cultural landscape. It provides a platform from which the surrounding landscape can be viewed and appreciated and has landmark qualities.
d) Social	Does not fulfil this criterion.
e) Research	Does not fulfil this criterion.
f) Rarity	Does not fulfil this criterion.
g) Representativeness	Does not fulfil this criterion.

ii Statement of significance

Other than the discarded timber posts, there is no evidence across this particular feature to suggest it has or contributes to the significance of Gostwyck Station, except in terms of aesthetic significance as a high point within the property now, and historically and as a landmark that would announce the arrival to Gostwyck from Armidale.

The Granite tors do not reach the threshold for State or local significance. The feature makes a high contribution to the significant cultural landscape.

6.2.4 HNE15 View through Gostwyck Station

i Assessment against the criteria

Table 6.6 HNE15 View through Gostwyck Station

Criterion	Assessment
a) Historical	Does not fulfil this criterion. The current views, while contributing to the current aesthetic of a historic property, do not have a basis in the development of that property until the second half of the twentieth century. This view, and others like it, is a result of the ongoing care and maintenance of a working sheep station.
b) Associative	The views and vistas through Gostwyck Station have been created by the descendants of Grace and Henry Dangar and therefore some associative significance but it does not reach the threshold.
c) Aesthetic	The view through Gostwyck Station is of high moderate significance that relates to the second half of the twentieth century. It is repeated elsewhere across the project boundary and contributes to the aesthetic significance of the place. It has a moderate contributory value to the current aesthetic of Gostwyck Station as it represents the continual nature of the tradition of improving the land. It is unlikely to have been a significant historical view that stood apart from other views. For that reason, HNE15 does not hold local or State significance as a singular item.
d) Social	Does not fulfil this criterion.
e) Research	Does not fulfil this criterion.
f) Rarity	Does not fulfil this criterion.
g) Representativeness	Does not fulfil this criterion.

ii Statement of significance

The view through Gostwyck Station has moderate contributory aesthetic values. It is one of a number that occur across the property. To date, no information has been found that unequivocally supports views that were important historically.

HNE15 does not meet the threshold for State or local significance but has moderate contributory value to the cultural landscape.

6.2.5 HNE16 View from granite tors

i Assessment against the criteria

Table 6.7 HNE16 View from granite tors

Criterion	Assessment
a) Historical	Does not fulfil this criterion. The current views, while contributing to the current aesthetic of a historic property, do not have a basis in the development of that property until the second half of the twentieth century. This view, and others like it, is a result of the ongoing care and maintenance of a working sheep station.
b) Associative	The views and vistas through Gostwyck Station have been created by the descendants of Grace and Henry Dangar and therefore possess some associative significance.
c) Aesthetic	The views from the granite tors (HNE16) towards the homestead have the potential to be significant as at this location, the road from Armidale to Gostwyck was on a high point and home was down the hill.
d) Social	Does not fulfil this criterion.
e) Research	Does not fulfil this criterion.
f) Rarity	Does not fulfil this criterion.
g) Representativeness	Does not fulfil this criterion.

ii Statement of significance

The view from the granite tors to the south contributes to the landscape at a moderate level because it are what the eye would have seen historically minus the exotic plantings of pines, spruces and poplars. The view south is where the old headstation homestead would have been visible when arriving from elsewhere and signals that 'home' is close by.

HNE16 does not meet the threshold for State or local significance but has moderate contributory value to the cultural landscape.

6.2.6 HNE20 Old Gostwyck Road alignment

i Assessment against the criteria

Table 6.8 HNE20 Old Gostwyck Road alignment

Criterion	Assessment
a) Historical	HNE20 reflects the alignment of Old Gostwyck Road. It is visible as a farm track in some places and not visible in others. This alignment is what the occupants of Gostwyck Station took to reach Armidale and is reflected in cadastral mapping. It is likely that it was never highly constructed and therefore survives only as an ephemeral track. The alignment is still used by farm vehicles. It does not fulfil this criterion within the development footprint.
b) Associative	The alignment of Old Gostwyck Road is associated with the Dangar family and their descendants, but this association is incidental. It does not fulfil this criterion within the development footprint.
c) Aesthetic	HNE20 does not possess aesthetic value that would differentiate it from other farm tracks. It does not fulfil this criterion within the development footprint.
d) Social	Does not fulfil this criterion at this stage.
e) Research	HNE20 possesses some research value with respect to landscape archaeology and analysing the movement corridors through Gostwyck and access to Armidale.
f) Rarity	Does not fulfil this criterion at this stage.
g) Representativeness	Does not fulfil this criterion at this stage.

ii Statement of significance

The alignment of the Old Gostwyck Road is of moderate contributory value within the development footprint as a transport route that connected Gostwyck to Armidale and for its ability to interpret this historical route.

HNE20 does not reach the threshold for local or State significance within the development footprint and makes a moderate to neutral contribution to the cultural landscape.

6.2.7 HNE21 Remnant fence line

i Assessment against the criteria

Table 6.9 HNE21 Remnant fence line

Criterion	Assessment
a) Historical	Fences on Gostwyck and the surrounding properties were not erected until they became pastoral holdings, ie, under legal colonial law. As a result, the fences are likely to represent the historical phase that started when Gostwyck ceased being a squatting run and became a pastoral run. While the date of the fence is unknown, the representation of the paddock boundary is of significance in this context.
b) Associative	Does not fulfil this criterion.
c) Aesthetic	The fallen timber fence does not display technological achievement, but it is an evocative remnant of the historical landscape. As fences were not erected during the days of the squatting runs, it is one of many layers of the visible and tangible cultural landscape.
d) Social	Does not fulfil this criterion.
e) Research	The item possesses research potential for questions relating to landscape archaeology and cultural landscapes. Questions relating to age, purpose and possibly technology can be asked.
f) Rarity	The remnant fence line is not rare at a local or a state level.
g) Representativeness	The remnant fence line is representative of historic fences and boundary markers.

ii Statement of significance

HNE21, the remnant fence line is a contributory item to the cultural landscape of the development footprint. It does not possess significance as a singular item but contributes to the overall heritage values of Gostwyck and early settlement of the area.

HNE21 does not meet the threshold for State or local significance but has moderate contributory value to the cultural landscape.

6.2.8 HNE26 Former stockyard

i Assessment against the criteria

Table 6.10 HNE26 Former stockyard

Criterion	Assessment
a) Historical	HNE26 is shown on historical mapping that can be dated to after land was opened for purchase in 1861. To date, research has not been able to shed any light on the date of this structure except that it was part of Salisbury Station.
b) Associative	Unknown
c) Aesthetic	Does not fulfil this criterion.
d) Social	Does not fulfil this criterion.
e) Research	The site of the former stockyard possesses little potential research value if it remains intact. The results of intrusive field investigation are likely to yield information that pertains only to its location, which is known from mapping.
f) Rarity	Does not fulfil this criterion.
g) Representativeness	Moderate

ii Statement of significance

The site of the former stockyard HNE26 does not reach the threshold for State or local significance, but potentially makes a moderate contribution to the significant cultural landscape as one of the many layers that has created what exists today.

6.2.9 HNE34 Former stockyard

i Assessment against the criteria

Table 6.11 HNE34 Former stockyard

Criterion	Assessment
a) Historical	The historical significance of this stockyard has not been ascertained except that it is one of a number of stockyards in the project boundary. It is on land that was once part of the larger Gostwyck squatting run but was acquired after the Robertson Land Acts came into force. Examination of aerial photography from 1956 does not show any structures in this area. HNE34 does not fulfil this criterion.
b) Associative	HNE34 does not fulfil this criterion.
c) Aesthetic	The site contributes to the overall cultural landscape of the project boundary. It is located on a spur above lower ground and close to granite outcropping. The construction materials consisting of corrugated iron, timber posts and iron star picket droppers adds to the rural and evocative view of the property.
d) Social	HNE34 does not fulfil this criterion.
e) Research	HNE34 does not fulfil this criterion.
f) Rarity	HNE34 does not fulfil this criterion.
g) Representativeness	The site is representative of other stockyards and of sheep and cattle grazing areas.

ii Statement of significance

The site of the former stockyard HNE34 does not reach the threshold for State or local significance but makes a moderate aesthetic contribution to the significant cultural landscape as one of the many layers that has created what exists today.

6.2.10 HNE37 Cultural landscape of the region

i Assessment against the criteria

Table 6.12 HNE37 Cultural landscape of the region

Criterion	Assessment
a) Historical	The cultural landscape in the project boundary is a small component of a much larger landscape that is of significant historical value as it embodies every phase that the area has undergone in its fabric, including the phases of Aboriginal occupation. The low level of development and cultural change across the landscape and its continued use for pastoral enterprise, as it was from the early historical period, to the present day, has ensured that the past can be seen in the existing environment. Also significant is that many of the properties are owned by the descendants of the earliest settlers in the region including those descended from the Wood, Munsie, Dumaresq, White and Dangar families.
b) Associative	The cultural landscape has a high level of association with notable figures in the colony's history including the Dangars, the Dumaresqs and the Whites.
c) Aesthetic	The aesthetic significance of the cultural landscape is apparent to the viewer as it retains many of the forms that existed in the earliest days of the settler occupation. Landmark features within the project boundary, such as the poplars on Gostwyck Road and the avenue of elms on the driveway up to the residences at Gostwyck starting at the chapel, and the Deeargee Woolshed contribute to the aesthetic values of the place. At a further distance and well beyond the project boundary, natural/cultural elements with landmark qualities are also components of the cultural landscape. Mount Duval is one such landmark that is visible from the study area and is north of Armidale. As noted, the cultural landscape extends well beyond the project boundary, as a large part of New England was claimed and used by squatters in the early historic period and so it is almost certain that the types of influences that shaped the Gostwyck and Saumarez landscapes also apply to the surrounding land that was historically taken up by squatters. Smaller buildings such as Gostwyck Hall, now on Deeargee, and late Victorian cottages on hillsides and visible from Gostwyck Road, also contribute to the visual and tangible values of the project boundary. The wind-breaks of mature trees contribute to the aesthetic of the cultural landscape as they provide an additional layer to the development of the project boundary and provide a legible interpretation. Stone outcropping of granite, in some areas as tors, of basalt and sandstone, adds the natural dimension to this landscape where human accommodation and management of the natural is apparent in the condition of the place today. The aesthetic significance is of State significance.
d) Social	Does not fulfil this criterion.
e) Research	The cultural landscape of the region has an exceptional level of research potential in a number of areas, including the investigation of relics, spatial arrangements on the stations, the dates and choices for the wind breaks of cold climate trees and the circulation patterns within and external to the historic properties. It has research value at a State level.
f) Rarity	Landscapes such as this one are rare, generally due to the rapid approach of development closer to urban centres and may become rarer as large pastoral holdings become uneconomical due to environmental factors such as drought as well as global economic trends. The item is rare at a State level.

Table 6.12 HNE37 Cultural landscape of the region

Criterion	Assessment
g) Representativeness	The cultural landscape of the region that is crossed by the project is representative of evolved and intact cultural landscapes. It is rare at a State level.

ii Statement of significance

The cultural landscape in the region, which extends beyond the project boundary is of State significance for its ability to demonstrate the phases of its historical development in the fabric and the management of the natural and Aboriginal cultural landscape to meet the needs of the new settlers. It is an excellent example of an evolved landscape that retains many examples of its phases of history embedded in ground or visible above.

The many components that have created this landscape make the region's research potential especially rich and may be able to answer questions related to contentious ownership, control, status, industry and the recognition that surroundings are important to lifestyle. This value extends beyond the current project boundary and into neighbouring areas.

HNE37 is of State significance.

6.2.11 HNE41 Rows of poplars

i Assessment of significance

Table 6.13 HNE41 Rows of poplars

Criterion	Assessment
a) Historical	High grading
b) Associative	Unknown
c) Aesthetic	The aesthetic value of the three rows of poplars is moderate contributory. Their existence demonstrates the use of exotic cold climate trees as wind breaks and shade for stock.
d) Social	NA
e) Research	NA
f) Rarity	NA
g) Representativeness	The group of poplars at HNE41 is representative of the 'Europeanisation' of the colonial landscape that can be seen across the project boundary and in other rural locations.

ii Statement of significance

The rows of poplars are significant as contributory items to the cultural landscape in the project boundary.

HNE41 does not meet the threshold for State or local significance but makes a moderate contribution to the cultural landscape.

6.2.12 HNE43 Remnant fence line

i Assessment of significance

Table 6.14 HNE43 Remnant fence line

Criterion	Assessment
a) Historical	Visible evidence of former fence lines is of historical value for its demonstration of the subdivision of the squatting runs after the Robertson Land Acts were gazetted. Some posts retain the original wire and a remnant gate survives. It has high interpretive value and may shed light on early run boundaries.
b) Associative	The fence is likely to be associated with the Dangar family and the operations of their squatting run.
c) Aesthetic	The location of the former fence line has aesthetic value as an element in a historical cultural landscape. It may be a visual delineation of the early pastoral boundaries.
d) Social	Does not fulfil this criterion at this stage
e) Research	HNE43 has research potential that could focus on early spatial patterns and dating techniques for early fencing. Closer inspection may provide information on the date of this and other fences and therefore add to knowledge about modifications to the property (Gostwyck).
f) Rarity	The impermanent nature of the fabric means that the preservation of timber fences in good condition is rare as they are subject to rot and termite damage. Nevertheless, where the timber fences do survive in their original alignment, they present a moderate grading of significance for their contribution to the landscape.
g) Representativeness	When upright and in working order, this fence would have been representative as boundary markers across the landscape, be it as a paddock boundary of a property differentiator. As a remnant fallen fence line, it is representative of many such features across rural landscapes.

ii Statement of significance

HNE 43 Remnant fence line has contributory value to the cultural landscape as a marker of a historical paddock boundary. It has research potential that is likely to shed light on early paddock boundaries and therefore the historical spatial patterns on the Gostwyck squatting run and is representative of rural delineations in the historical period of the state.

It does not reach the threshold of local or State significance but has moderate contributory value for the cultural landscape.

6.3 Items outside of the development footprint

The items listed in this section were recorded within the project boundary, study area and surrounds, but are not within the development footprint defined on Figure 1.2 and will not be impacted as a result of the project.

6.3.1 HNE01 Demolition rubble

HNE01 is approximately 1,050 m north of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.15 HNE01 Demolition rubble

Criterion	Assessment (refer also to HNE40)
a) Historical	The research potential of this site is low unless it can be unequivocally linked to the site of the two dwellings (HNE40). Does not fulfil this criterion.
b) Associative	Unknown.
c) Aesthetic	The site is a pile of rubble; it does not possess aesthetic significance. Does not fulfil this criterion.
d) Social	Unknown.
e) Research	The research potential of this site is low unless it can be unequivocally linked to the site of the two dwellings (HNE40). Does not fulfil this criterion.
f) Rarity	Demolition rubble is not rare. Does not fulfil this criterion.
g) Representativeness	Representative of demolition rubble. Does not fulfil this criterion.

ii Statement of significance

HNE01 comprises the demolition rubble from the two former dwellings that was originally recorded. It is redeposited demolition rubble and does not reach the threshold of State or local significance and makes a neutral contribution to the significant cultural landscape.

6.3.2 HNE02 View to Dangars Lagoon

HNE02 is approximately 4,400 m north-west of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.16 HNE02 View to Dangars Lagoon

Criterion	Assessment
a) Historical	Dangars Lagoon, historically called 'Salisbury Lagoon' has historical significance as it was on the western boundary of the Gostwyck pastoral run and would have been an important landmark to all the stations surrounding it. The high landforms of Gostwyck Station provided excellent views to the surrounding country, and this view to accessible water for the local squatters and later pastoralists. The Lagoon was named after Henry Danger in 1925 after it was proclaimed an animal sanctuary.
b) Associative	Does not fulfil this criterion.
c) Aesthetic	Dangars Lagoon is visible from a hillcrest on what is now the western side of Gostwyck Station. After the land had been cleared, the lagoon would have been highly visible from Dangar's holdings and therefore Gostwyck would have been clearly visible from the lagoon.
d) Social	Does not fulfil this criterion.
e) Research	Does not fulfil this criterion.
f) Rarity	Does not fulfil this criterion under historical value.
g) Representativeness	Does not fulfil this criterion under historical value.

ii Statement of significance

The view to Dangars Lagoon from the hillcrest on Gostwyck Station has high contributory value. While this feature does not fit neatly into a category which can be graded, the lagoon's landmark qualities make it a site of local significance and therefore, by association the views are also of significance.

It is noted that this view is not accessible by the general public and the development footprint has been refined to exclude project infrastructure in this area to reduce potential impacts to views from Dangars Lagoon.

6.3.3 HNE05 Old Gostwyck platform 1

HNE05 is approximately 2 km south-east of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.17 HNE05 Old Gostwyck platform 1

Criterion	Assessment
a) Historical	Historical data related to this feature has not been discovered during research for the project but an assumption has been made that it is the remnants of an early structure on what was originally Gostwyck Station and is now Deeargee. Family oral history suggests that this is a hut base, which would have been built during the period when Gostwyck was still a squatting run. For this reason this feature is considered to be of high historical value, both in itself and as part of the infrastructure of historical Gostwyck.
b) Associative	If it is a part of historical Gostwyck, the value of the feature is high for its association with Henry Dangar and the Dangar family, including the descendants.
c) Aesthetic	The aesthetic value of the platform is generally low as it is an unimposing, although recognisable up close, feature in a paddock. It does not demonstrate a high degree of technical creativity for the period.
d) Social	Does not fulfil this criterion at this stage.
e) Research	The platform has high research potential as an archaeological site. The surrounding context remains pastoral with little to no ploughing having occurred. The relationship of the nearby stockyard (HNE08) remnant to the hut base is not known but may be strong. The exact purpose of the platform is not known. It is ascribed this identifier by family oral history but there is little evidence surrounding it to support this label. Artefacts at another similar site (HNE35) strongly suggest that it was a site at which people, or a person, lived despite the miniscule size of the base. A number of research questions could be asked of this site.
f) Rarity	The site is one of three that were recorded during survey. If they are hut bases, they may be common in the local area as they would have housed the night watchman associated with a flock. Research however, does not support this feature as the site of a night-watchman's hut, which means that it represents something else. Either way, it is likely that this feature is rare at state level.
g) Representativeness	Three such features were recorded during field survey for the project. If they are representative, the question is, of what? What they do represent is an investment in time and energy to construct and for that reason alone their existence suggests something significant to the builder.

ii Statement of significance

HNE05 Old Gostwyck platform 1 is of high contributory value for its research potential and demonstration of historical development and association. It has research potential for understanding Gostwyck as an early squatting run, spatial patterns in the area and the development of the wool industry. The nature of the feature has been assumed to be temporary habitation as a night-watchman's hut, but this identification is based on landholder family history and inference. As a component of the Gostwyck squatting run, later the Gostwyck pastoral run, and now Deeargee, HNE05 platform 1 is a significant element in the cultural landscape.

This item is potentially of State significance for its historical and research values. It contributes to the cultural landscape and significance of the project boundary at a high level.

6.3.4 HNE06 Old Gostwyck platform 2

HNE06 is approximately 1,350 m east of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.18 HNE06 Old Gostwyck platform 2

Criterion	Assessment
a) Historical	Historical data related to this feature has not been discovered during research for the project but an assumption has been made that it is the remnants of an early structure on what was originally Gostwyck Station and is now Deeargee. Family oral history suggests that this is a hut base, which would have been built during the period when Gostwyck was still a squatting run. For this reason this feature is considered to be of high historical value, in itself and as part of the infrastructure of historical Gostwyck.
b) Associative	If it is a part of historical Gostwyck, the value of the feature is high for its association with Henry Dangar and the Dangar family, including the descendants.
c) Aesthetic	The aesthetic value of the hut base generally low as it is an unimposing, although recognisable, feature in a paddock. It does not demonstrate a high degree of technical creativity for the period.
d) Social	Does not fulfil this criterion at this stage.
e) Research	The hut base has high research potential as an archaeological site. The surrounding context remains pastoral with little to no ploughing having occurred. The relationship to the nearby stockyard (HNE08) remnant to the hut base is not known but may be strong. The exact purpose of the hut base is not known. It is ascribed this identifier by family oral history but there is little evidence surrounding it to support this label. Artefacts at another similar site (HNE35) strongly suggest that it was a site at which people, or a person, lived despite the miniscule size of the base. A number of research questions could be asked of this site.
f) Rarity	The site is one of three that were recorded during survey. If they are hut bases, they may be common in the local area as they would have housed the night watchman associated with a flock. Research however, does not support this feature as the site of a night-watchman's hut, which means that it represents something else. Either way, it is likely that this feature is rare at state level.
g) Representativeness	Three such features were recorded during field survey for the project. If they are representative of a type, the question is, of what? What they do represent is an investment in time and energy to construct and for that reason alone their existence suggests something significant to the builder.

ii Statement of significance

HNE06 Old Gostwyck platform 2 is of high value for its research potential and demonstration of historical development and association. It has research potential for understanding Gostwyck as an early squatting run, spatial patterns in the area and the development of the wool industry. The nature of the feature has been assumed to be temporary habitation as a night-watchman's hut, but this identification is based on landholder family history and inference. As a component of the Gostwyck squatting run, later the Gostwyck pastoral run, and now Deeargee, HNE06 platform 2 is a significant element in the cultural landscape.

This item is potentially of State significance for its historical and research values. It contributes to the cultural landscape and significance of the project boundary at a high level.

6.3.5 HNE07 Toongabbie Station archaeological site

HNE07 is approximately 2.5 km south-east of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.19 HNE07 Toongabbie Station archaeological site

Criterion	Assessment
a) Historical	The site of Toongabbie Station has historical value inherent in the fabric and surrounding landscape to demonstrate the historical development of the Gostwyck squatting run as part of a complex as well as its position as an individual item.
b) Associative	The site of Toongabbie Station has associative value for its association with Henry Dangar, his family and the subsequent generations of the family that continue the wool industry to this day.
c) Aesthetic	The site of Toongabbie Station is part of the wider landscape and is defined by a mature elm tree on the crest of the hill where the house is believed to have been. It is perched atop a small hill by Atchesons Gully and retains the aesthetic of the early isolated homestead.
d) Social	The site has the potential to demonstrate workers' benefits on a large sheep station.
e) Research	The site has exceptional research potential in the archaeological resources that are likely to survive in the ground. It is possible that it possesses a main homestead, a separate kitchen, a well, stables and storage facilities. Its position so close to running water may also be indicative of other features such as a river crossing (causeway or bride) and a mill. Archaeological excavation would be able to answer numerous questions about HNE07 Toongabbie Station.
f) Rarity	So far, the site is one of three possible outstations out of at least 23 that were located across the Gostwyck squatting run. The level of rarity of such a site has not been determined but it is likely that what this site represents is rare at a state level.
g) Representativeness	HNE07 Toongabbie Station is likely to be representative of pastoral outstation sites in that it would have had the basic elements of food, shelter and water with structures build in the vernacular style of the day. These types of sites would have had to have been relatively self-sufficient because of their distance to the main homestead.

ii Statement of significance

The archaeological site of HNE07 Toongabbie Station is potentially of State significance for its research value, historical development and association with the Dangar family and squatting in New England.

It has been graded to exceptional value for its contribution to the cultural landscape.

6.3.6 HNE08 Remnant Stockyard

HNE08 is approximately 900 m east of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.20 HNE08 Remnant Stockyard

Criterion	Assessment
a) Historical	The historical significance of this stockyard has not been ascertained except that it is one of a number of stockyards in the study area. Currently on Deeargee, it may be a product of that station or it may have existed before the subdivision of Gostwyck. It is unlikely that the stockyard is of great age but it has mature elms surrounding it, which is an indication that it may be on the site of an earlier stockyard or hut site. As a result, this item has been assessed to potentially possess significance that contributes to the overall significance of Deeargee Station.
b) Associative	Associated with Grace and Henry Dangar and their descendants.
c) Aesthetic	The remnant stockyard has a high degree of aesthetic significance as part of the rural landscape. It is evocative of the past situated amongst mature elms trees and on the top of a hill.
d) Social	Does not fulfil this criterion.
e) Research	The remnant stockyard has research potential that may answer question about its age, and its association with other buildings that may have been in the area.
f) Rarity	The remnant stockyard is not rare in the local area.
g) Representativeness	The remnant stockyard is representative of other such structures on rural properties.

ii Statement of significance

The remnant stockyard (HNE08) is for its contribution to the cultural landscape of Deeargee Station and possibly of Gostwyck Station. The site has research potential that may answer questions about date of construction and associated structures.

It is of local significance and makes a moderate contribution to the cultural landscape.

6.3.7 HNE09 Old Gostwyck Woolshed archaeological site

HNE09 is approximately 950 m north-east of the boundary for the southern array and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.21 HNE09 Old Gostwyck Woolshed archaeological site

Criterion	Assessment
a) Historical	The archaeological site of the old Gostwyck Woolshed has the potential to be of State significance its contribution to the landscape of the former Gostwyck squatting run for its part in the development of Henry Dangar and family's successful and significant enterprise. The site of the old Gostwyck Woolshed is now on Deeargee, beside the woolshed that replaced it. Its presence tells the story of the development of the property, from squatting run, to pastoral run and now to a successful wool production station.
b) Associative	The archaeological site of the old Gostwyck Woolshed is of State significance for its association with the Dangar family, which was important in the historical development of NSW.
c) Aesthetic	The archaeological site may possess information about new shearing technologies introduced to Gostwyck and provide a better understanding of how this particular woolshed functioned. While the hot water sheep bath was not on this site, it was part of the Gostwyck Station woolshed when this new technology was introduced.
d) Social	The archaeological site of the old Gostwyck Woolshed is of local significance for its potential to demonstrate employee disgruntlement with the working arrangements on Gostwyck and in New England generally.
e) Research	The site has exceptional research potential at a State level for the potential it possesses to answer questions related to the growth of the New England Tablelands as a successful wool production area that kept the colonial economy strong for a long period of time. It also has the potential to shed light on the construction methods and most importantly the date it was built. It may be build over or close to the site of what is believed to have been the first woolshed. The archaeological site of the old Gostwyck woolshed is of State significance for its research potential.
f) Rarity	The site is an early woolshed in an area that was taken before the colonial government opened the area for settlement. While not necessarily rare at a local level because of the surrounding sheep stations, it is likely to be rare at a state level as it has not suffered a great deal of impacts since it was burnt down. The site of the old Gostwyck woolshed is of State significance for its rarity.
g) Representativeness	A woolshed would have had to have been erected on Gostwyck before 1856 and it is likely it would have been a slab and bark building in line with other buildings on squatting runs. However, a description has not been found, nor any information to confirm how many, if any, woolsheds were constructed before the one that burnt down (this item). This criterion cannot be answered at this point.

ii Statement of significance

The archaeological site of HNE09, the old Gostwyck Woolshed, is of State significance in its own right as representing an early woolshed in a remote area, as well as being part of the early settlement of Gostwyck and the New England Tablelands. It has the potential to retain information about new technologies being introduced on to Gostwyck and may hold data relating to an even earlier woolshed on the site. It makes an exceptional contribution to the layered aspect of the cultural landscape.

6.3.8 HNE10 Brick-making site

HNE10 is approximately 710 m north of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.22 HNE10 Brick-making site

Criterion	Assessment
a) Historical	If associated with Gostwyck or Deeargee Station, which is highly likely, the site possesses historical significance at a local level at least. Its presence contributes to the overall State significance of Gostwyck and Deeargee.
b) Associative	The archaeological site of the old Gostwyck Woolshed is of State significance for its association with the Dangar family, which was important in the historical development of NSW. The bricks found at this site match bricks found in the demolition pile (HNE01) relating to the house sites (HNE40) across the creek.
c) Aesthetic	Does not fulfil this criterion currently.
d) Social	Unknown
e) Research	The brick-making site has research value that may answer a number of questions related to date, purpose, supply, association and manufacture technique.
f) Rarity	The site is unlikely to be rare at a State level and may be one of a number of brick-making sites on the pastoral properties. It may be one of only a few brick-making sites on Gostwyck and/or Deeargee stations.
g) Representativeness	HNE10 is likely to be representative of brick-making facilities in the project boundary, which includes part of the original boundary of the old Gostwyck Station.

ii Statement of significance

The brick-making facility recorded on what is now Deeargee Station, but was once Gostwyck Station, is of local significance for its association with Gostwyck and Deeargee, and for the research potential embedded in the fabric of the site. It also has high contributory value to the overall significance of historical Gostwyck Station and now Deeargee Station.

It is of local significance with high contributory value to the cultural landscape.

6.3.9 HNE17 Remnant shepherd's hut archaeological site

HNE17 is adjacent to the northern boundary of the central array area and the visible relics are approximately 80 m north of the same boundary, and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.23 HNE17 Historical Gostwyck shepherd's hut

Criterion	Assessment
a) Historical	HNE17 Historical Gostwyck shepherd's hut is significant for its ability to demonstrate the development of the New England Tablelands pastoral and settlement system. The presence of artefacts dating from the mid-1840s (in Australia) is evidence of early historical settlement in the area, which is a pattern that is repeated inside the study area and more than likely, extends beyond. The site of this shepherd's hut demonstrates the arrangement of squatting runs where shepherds tended flocks of between 1,000 and 2,000 sheep and resided in the area that their sheep grazed. The site of the shepherd's hut at HNE17 is a remnant of a period in Australia's history during which land was settled by individuals and their families who could be seen as industrious pioneers or contentious settlers.
b) Associative	The site is associated with Grace and Henry Dangar, their family and descendants. While it is certain that the Dangars did not live in this location, the shepherd and family would have and were there as a direct result of the ownership.
c) Aesthetic	HNE17 has some aesthetic value. It is situated on a rise overlooking the valleys to the east, and a small unnamed creek to the north. It is distinct as a habitation site from a distance with tall elm trees in a row on the east and the two rows of quince trees on the west. It also would have visually identified the land acquired by Dangar and along with other huts and structures, acted as a visual symbol of his land claim. This site plays an important part in the aesthetic significance of the cultural landscape.
d) Social	Does not fulfil this criterion.
e) Research	HNE17 has high research significance as an archaeological site that dates back to the early historical period on the New England Tablelands. Questions posed could include construction date, landscape modifications to make the location liveable, the economic and social level of the inhabitants, gender, families and race (some shepherds were local Aboriginal people). As this is an archaeological site with very little clearly associated fabric, conventional thinking would describe it as constructed in timber slab with masonry elements such as the chimney and the foundations. This is an archaeological site that appears to be substantial and largely intact. Different ground levels were observed, most likely from demolition to make the location safe for stock. The level of intact deposit in the main area of the hut site cannot be investigated unless it is excavated but it has been assessed to possess high potential for relics.
f) Rarity	Shepherds' huts are rare in the current Australian context where development has resulted in the removal of relics and the built environment. The survival of shepherd's huts from the period where squatting runs were expanding the colony is potentially rare at a state level.
g) Representativeness	This site may be representative of early historical residences on squatting runs. The answer to this question may be answered through archaeological excavation of a selection of shepherds' huts and extensive archival research. At this point in the investigation, the hut's representative value cannot be ascertained.

ii Statement of significance

The archaeological site of HNE17 is of potential State significance as a component of the early Gostwyck squatting run. The presence of this, and other shepherds' huts, is a symbol of the success of Gostwyck that started as a squatting run, was converted to a pastoral run and is now a successful wool producing property. If the archaeological site of HNE17 is intact, its significance is embedded in the historical, associative and research values within the surviving fabric. This item may have the ability to demonstrate how pastoral infrastructure was laid out in the early years when land tenure was uncertain and the potential to answer substantive questions related the lives of shepherds and their families.

It contributes to the significance of the cultural landscape at a high level.

6.3.10 HNE18 Stockyard

HNE18 is approximately 160 m north of the boundary for the central array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.24 HNE18 Stockyard

Criterion	Assessment
a) Historical	HNE18 Stockyard was built in the 1970s by Geoffrey Wood, his father and his son. It does not fulfil this criterion.
b) Associative	Does not fulfil this criterion.
c) Aesthetic	The stockyard has some aesthetic significance in that it conforms to the historical type. It is in a dilapidated state that contributes to the historical, rustic character of the landscape but does not fulfil this criterion.
d) Social	Does not fulfil this criterion.
e) Research	Does not fulfil this criterion.
f) Rarity	Does not fulfil this criterion.
g) Representativeness	The stockyard at HNE18 is representative of timber stockyards across the rural landscape of Australia. It is a common and relatively recent item. It does not fulfil this criterion.

ii Statement of significance

This item possesses only aesthetic significance as part of the cultural landscape that was created in the recent past but represents a continuation of the activities on the property since the early historical period in the colony.

It does not reach the threshold at a State or local level but makes a moderate contribution to the cultural landscape.

6.3.11 HNE19 Remnant house archaeological site

HNE19 is approximately 250 m east of the boundary for the northern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.25 HNE19 Remnant house archaeological site

Criterion	Assessment
a) Historical	HNE19 is a house site on the old Saumarez run; however its relationship to Saumarez has not been established. The western side of the site is defined by radiata pine trees suggesting that it was established after Saumarez was subdivided as a result of the Robertson Land Acts in 1861 came into force. The species of tree indicates a later nineteenth century date for the construction and establishment of this house as radiata pine was introduced into Australia in the early 1850s.
b) Associative	Does not fulfil this criterion.
c) Aesthetic	The site of HNE19 has a high grading of significance on aesthetic value for its ability to demonstrate the layered and historic character of the area. The cypress pines identify it as a former house site from a distance and close up define a clear boundary from the surrounding area. While much of the site is likely to survive under the ground, sufficient evidence is visible above the ground to reference the past use of the place.
d) Social	Does not fulfil this criterion.
e) Research	As an archaeological site HNE19 has exceptional research potential as part of the cultural landscape of the pastoral period of the place. As an individual site, it is likely to be of local significance for its ability to answer general questions on its purpose and connection to the landscape as well as specific questions relating to the household/s that lived there.
f) Rarity	This criterion cannot be addressed at this stage.
g) Representativeness	This criterion cannot be addressed at this stage.

ii Statement of significance

HNE19 has research value for the information about the past that may be embedded in this site. It displays the physical attributes of a later nineteenth century house site as indicated by the cypress pine trees and a fragment of painted cement recorded on the surface.

Detailed documentary research may shed light on the date of this site, but archaeological excavation is likely to answer questions that are not available from other sources.

It is of local significance with a high contribution to the cultural landscape.

6.3.12 HNE28 Spring Camp house (site of)

HNE28 is approximately 620 m west of the boundary for the northern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.26 HNE28 Spring Camp house (site of)

Criterion	Assessment
a) Historical	The site of the house at Spring Camp is likely to fulfil this criterion at a local level. It is considered to possess high contributory value to the significance of Gostwyck Station.
b) Associative	The site is likely to have significance for its association with Grace and Henry Dangar and their descendants.
c) Aesthetic	The remnants of an earlier house being a brick chimney, a dead tree and remnant fence line contribute to the visible and tangible cultural landscape that is characteristic of the project boundary.
d) Social	Unknown.
e) Research	If intact relics of this house survive it has the potential to be of high contributory value to Gostwyck Station. As the site is labelled as 'Spring Camp' on a c1867 plan, the possibility that this area was an earlier camp site invites more investigation. Questions about who lived in this camp should also be asked.
f) Rarity	This item is likely to be rare at a local level.
g) Representativeness	The item is likely to be representative of other houses of its type.

ii Statement of significance

The site of the Spring Camp house site (HNE28) is potentially of significance as a singular item for its research and aesthetic values in particular. Archaeological excavation has the potential to answer questions related to the historical development and spatial patterns of the workforce and other inhabitants of Gostwyck.

HNE28 is potentially of local significance and it makes a high contribution to the cultural landscape.

6.3.13 HNE31 Farm house (site of)

HNE31 is approximately 390 m north of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.27 HNE31 Farm house (site of)

Criterion	Assessment
a) Historical	If evidence of this building exists it is likely to possess historical value that can demonstrate the development of Gostwyck Station, provide information about the people that lived there and their relationship to the property. As part of the larger squatting run, the pastoral station, HNE31 has the potential to contribute to significance at a low to high level – this grading of significance can only be ascertained through archaeological investigation.
b) Associative	The site is likely to possess associative significance as part of Gostwyck Station and the generations descended from Grace and Henry Dangar. The grading of associative significance is unknown and requires research to confirm.
c) Aesthetic	Does not fulfil this criterion.
d) Social	Unknown
e) Research	HNE31 has research potential as an archaeological site that is likely to remain intact due to the low level of development in the immediate area. Like other archaeological sites in the project boundary, this criterion is the most valuable to understand the historical development of Gostwyck Station and the about the lives of the people that lived and worked there. HNE31 has the potential to contribute to the overall significance of Gostwyck Station at a high level.
f) Rarity	The survival of mid-nineteenth century farmhouses remote to the main centres of the colony is unknown. However, it can be surmised that, as farm houses, they would not have existed in great numbers and therefore their survival as intact archaeological sites is likely to be rare.
g) Representativeness	This criterion cannot be addressed accurately without further research and archaeological excavation, but it is likely that the farmhouse is representative of its period and type.

ii Statement of significance

If substantial and intact relics survive, the site of the farm house has the potential to be of local significance for its ability to answer questions about life in the area, the relationship of the building and its inhabitants to Gostwyck Station and the lives of the people that lived in it.

The site of the farm house would also have high contributory value to the significance of Gostwyck Station. It is potentially of local significance and makes a high contribution to the cultural landscape in the project boundary.

6.3.14 HNE35 Old Gostwyck platform 3

HNE35 is approximately 110 m south of the boundary for the northern array area and will not be impacted as a result of the project.

i Assessment against the criteria

Table 6.28 HNE35 platform 3

Criterion	Assessment
a) Historical	Historical data related to this feature has not been discovered during research for the project but an assumption has been made that it is the remnants of an early structure on what was originally Gostwyck Station. Comparison with Old Gostwyck platforms 1 and 2 resulted in a very similar form but the artefact scatter and the adjacent depressions (potentially for water storage) suggest that this was a habitation site. Further comparison with a more complete hut (HNE36) suggests that it may be the remains of a chimney base. However, it has no similarity to the chimney base at HNE17.
b) Associative	If it is a part of historical Gostwyck, the value of the feature is high for its association with Henry Dangar and the Dangar family, including the descendants.
c) Aesthetic	The site has aesthetic significance as it is identified by a little, old fig tree. The gnarled and twisted branches and trunk of the tree suggest an age of approximately 100 years and as it is growing out of the blocks laid into the ground, allows an approximate *terminus ante quem* (ie latest possible date) to be calculated for the feature. Regardless of its age, the site is a clear component of the visible and tangible cultural landscape.
d) Social	Does not fulfil this criterion.
e) Research	The site has high research value as a relic that, if excavated, could answer questions relating to its age, construction, function and if a hut, the people that lived there.
f) Rarity	Although one of three such platforms exist on the site but the extent of these features across the state cannot be assessed until their function is understood.
g) Representativeness	HNE35 may be representative but more research is required to resolve this value.

ii Statement of significance

The site of HNE35 is the third platform of its type recorded during field assessment for the project. It has all the hallmarks of being a relic and has clear research potential in the fabric embedded in the ground, the fig tree and the artefact scatter. The spatial organisation of the visible features also invites research.

The site of HNE35 is potentially of State significance for its research and historical value relating to Gostwyck as an early squatting run, spatial patterns in the area and the development of the wool industry.

It contributes to the cultural landscape and significance at a high level.

6.3.15 HNE36 Saumarez Hut archaeological site

HNE36 is approximately 475 m east of the boundary for the northern array area and will not be impacted as a result of the project.

i Assessment of significance

Table 6.29 HNE36 Saumarez Hut archaeological site

Criterion	Assessment
a) Historical	The hut ruins and its associated features are on the former Saumarez squatting run and as such are likely to be of State significance for their ability to demonstrate the changes to the landscape that resulted from the squatters claim on the land.
b) Associative	HNE36 Saumarez Hut archaeological site is of State significance for its association with the Dumaresq family at the earliest and potentially with the White family who acquired the run.
c) Aesthetic	The hut remains are visually prominent in the landscape to people who are familiar with it and close up makes a significant contribution to the character of the cultural landscape. Its dry-stone construction is a result of available resources and it has some technical merit for this.
d) Social	Unknown.
e) Research	HNE36 Saumarez Hut is of exceptional research potential as an archaeological site and one with surviving built elements. Anecdotally, the hut was a stopover point for travellers and provided food and lodgings and for this reason invites further research. The nearby sheep fold and another location with building footings adds to the questions that could be asked of this site.
f) Rarity	The survival of a stone hut from the early historical period in the New England Tablelands is not known at a State level but it is rare in the context of the project boundary and experience suggests it is rare generally.
g) Representativeness	The answer to this criterion is unknown but it may be representative of similar structures in this region that were responses to the environmental conditions of the location.

ii Statement of significance

The ruins of this hut are of potential State significance with exceptional contributory value to the surrounding landscape. The intactness of the ruin and the potential visibility in the surrounding area makes this a rare example of stone buildings that are likely to be associated with the early alienation of land through squatting practices, the spatial patterns of these types of properties and the historical development of the wool industry.

It is rare that a structure survives as intact as HNE36 in this environment and its presence and that of the associated features provide an exceptional contribution to the cultural landscape.

6.3.16 HNE38 Gostwyck Hall

HNE38 is approximately 460 m north of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment of significance

Table 6.30 HNE38 Gostwyck Hall

Criterion	Assessment
a) Historical	Gostwyck Hall has historical significance for its ability to represent one of the phases of Gostwyck Station. Dated to the late 1800s, and topped with a small crows-nest or turret, the hall is of weatherboard construction on brick footings. HNE38 Gostwyck Hall has moderate contributory value to the cultural landscape and local significance as an item.
b) Associative	Gostwyck Hall is associated with the descendants of Grace and Henry Dangar as the properties of Gostwyck and Deeargee.
c) Aesthetic	Gostwyck Hall has aesthetic significance situated on the south side of Salisbury Waters today. It was originally on the north side of the waterway but was relocated after Gostwyck was divided to create Deeargee. The unimposing building set in a paddock contributes to the aesthetics of the rural landscape.
d) Social	Does not fulfil this criterion.
e) Research	Does not fulfil this criterion.
f) Rarity	The hall is rare at a local level.
g) Representativeness	The hall is representative of other such halls of their time.

ii Statement of significance

HNE38 Gostwyck Hall is of local significance with moderate contributory value to the cultural landscape of the former Gostwyck Station. It is now on Deeargee Station on the south side of Salisbury Waters.

6.3.17 HNE39 Graves

HNE39 is approximately 1,050 m north of the boundary for the southern array area and will not be impacted as a result of the project.

i Assessment of significance

Table 6.31 HNE39 Grave(s)

Criterion	Assessment
a) Historical	Unknown.
b) Associative	Unknown
c) Aesthetic	Unknown
d) Social	Unknown
e) Research	Unknown
f) Rarity	Unknown
g) Representativeness	Unknown

ii Statement of significance

Information regarding the two graves has not been found in any primary sources and the headstones (laying flat) are too weathered to read. Therefore, an assessment of significance cannot be completed at this stage, but the site is potentially of local significance for its ability to demonstrate the self-sufficiency and community of the large pastoral stations across the country.

It contributes to the cultural landscape at a moderate level.

6.3.18 HNE40 Site of two dwellings

HNE40 is approximately 970 m outside of the development footprint and will not be impacted as a result of the project.

i Assessment of significance

Table 6.32 HNE40 Site of two dwellings

Criterion	Assessment (see also HNE01)
a) Historical	The site is historically significant for its potential to demonstrate the development of Gostwyck and the spatial patterning of a working sheep station. The date of the former buildings has not been ascertained but they are clearly visible on the 1956 aerial imagery. Bricks from the demolition pile have the same frog as those at the brick-making facility, which in addition to being sandstock, indicates that the bricks were made on site.
b) Associative	The site is associated with Gostwyck and therefore with either Henry Dangar or his descendants. This criterion cannot be answered without more research.
c) Aesthetic	Does not fulfil this criterion at this stage
d) Social	Does not fulfil this criterion at this stage
e) Research	The research value of this site is high for its archaeological potential. Nothing is known about these buildings other than that they existed in 1956; construction dates and individuals who lived here are not known.
f) Rarity	If the site of the former buildings represents an early date their value as relics would be rare, particularly as they probably represent the living arrangements of staff that were employed at Gostwyck Station. In addition, relics are becoming rarer in NSW as development progresses.
g) Representativeness	Unknown.

ii Statement of significance

If the site of the two dwellings is confirmed as an archaeological site, it has the potential to be of historical and associative value with potential in its research value. This item has the potential to be of local significance, with a high contributory value to the cultural landscape.

6.4 Statement of historical archaeological significance

Relics that exist in the project boundary vary in significance grading from little to exceptional with stand-alone significance for some that reaches the threshold for local or State. The individual assessments of significance describe the discrete sites that were recorded, along with HNE37 - the cultural landscape, which includes significant archaeological sites as components.

As a group, the individual archaeological sites are of State significance for their contribution to the archaeological landscape, which has exceptional research potential that may be able to answer broad questions about spatial patterns through each of the historical phases, to detailed questions about the purpose, history and residents and early settlement life in the New England Tablelands and NSW.

6.5 Listed heritage items in the project boundary and in the vicinity

The statements of significance below are for Gostwyck Station and Salisbury Court as assessed for the SHI. They have been included in this report because the development footprint crosses into part of the Uralla LEP listed site for Gostwyck Station, and is in close proximity to Salisbury Court (also listed on the Uralla LEP). Further, a portion of the development footprint for the southern array area is over the historical boundary of Salisbury Court.

The statements of significance below are verbatim from the respective SHI forms with additional assessment resulting from this investigation.

6.5.1 Gostwyck Memorial Chapel and precinct and Gostwyck Station

i Statement of significance

> An incredibly evocative and peaceful place with heighten aural, sensory and visual aesthetics. The Memorial Chapel, Avenues of Elms and precinct generally at 'Gostwyck Station' has landmark, historical association, aesthetic, social, research, rarity and representative significance as a State Heritage Item, and includes Munsie Bridge at the egded [sic] of one Elm Avenue. The name 'Gostwyck' commemorates the early pastoralist Edward Gostwyck Cory. 'Gostwyck Station' has a historical association with Edward Gostwyck Cory, William Dangar, Henry Dangar, and more recently with the Wright, Giblin and Sutherland families. The construction of the Memorial Chapel and precinct is a landmark in the New England Tablelands. The architecture of the magnificent rare small chapel and its elm setting is a place of beauty and is a fascinating example of attempts by early pastoral families to create an English setting in the Australian landscape. The landscape is of aesthetic significance demonstrating the central position of the chapel located in the three converging avenues of trees. The Chapel and its setting has [sic] much social significance to the Dangar family and to the wider community. The construction of this church as a war memorial provides the opportunity for a study to investigate the types of memorials constructed after the Boer War and World War dedicated to the memory of those who served and paid the supreme sacrifice. The precinct also provides the opportunity to study 'Gostwyck' as a pastoral setting including the Chapel, former school, former community hall, garden and property store. The Memorial Chapel is representative of efforts made by the Dangar family to create a memorial following the death of their son and heir, Clive Collingwood Dangar 1882-1918 in World War One. The precinct is representative of moves by early pastoral families to create an English landscape by planting an extensive grove of elm trees leading to the Gostwyck homestead and towards Uralla.
>
> (State Heritage Inventory SHI no 2540054)

The heritage investigation undertaken for the project concurs with this statement of significance but would add that the surrounding landscape plays a part in the place's overall State significance. Those elements contributing to the landscape of Gostwyck and Deeargee (part of Gostwyck Station prior to 1969) have been assessed separately in this report and as part of the cultural landscape.

6.5.2 HNE04 Deeargee Woolshed

i Statement of significance

The Deeargee Woolshed has landmark, historical association, aesthetic, social, archaeological, research, rarity and representative significance. It is an example of a late 19th century and early 20th century large timber woolshed constructed for a pioneering settlement on the New England Tablelands. The name of the woolshed, 'Deeargee' derives from the old Dangar wool stencil of DR over G, i.e. Dangar over Gostwyck. As one of the largest properties in the New England Tablelands, Gostwyck has a historical significance to the development of the sheep and wool industry in New South Wales. Associated with the Dangar family, it played a major role in the pastoral industry and was one of the first pastoral properties in the area. The history of the station, of which the woolshed is a major part, demonstrates the relationship between pastoral settlement and the self-contained communities that were established on the property.

The woolshed was built in 1872 by Henry Dangar, a Cornishman (1796-1861) who migrated to Australia in 1821 and achieved fame in the colony as a pioneer surveyor and a pastoralist with massive holdings from the Hunter Valley to northern New England. Gostwyck has strong historical associations with early pioneers including Edward Gostwyck Cory, Henry Dangar and later generations of the Dangar family.

The woolshed is significant for its aesthetic value arising from its location on the brow of a hill and its architectural and design qualities. It is significant as an example of an early timber woolshed with its unique design features related to a working building. The aesthetic qualities are high arising from the relationship between the age of the building and the surrounding buildings established for the wool classers, shearers, shed hands, pastoral workers and link with the surrounding landscape. Viewed from a distance, the complex 'presents a striking picturesque quality, a graphic image that contributes to its sense of place'. (Woolshed Conservation Management Plan, p.38).

Technical significance arises from its unique architectural design and the use of timber, galvanised iron, brick and concrete in the working building. The location of the woolshed and the many surrounding buildings and its relationship to the homestead and other related buildings including stables and a store, provide the opportunity for a research project to investigate how an early pastoral property worked.

The timber woolshed at Deeargee was probably the first shed in Australia constructed in the round design. The Chinese temple shape is unique to the design of the Australian woolshed.

The timber woolshed is representative of large woolsheds built in the pioneering pastoral history period of New South Wales. Today the property is representative of a property still occupied by members of the Dangar family. The woolshed is relatively intact from the various construction periods in 1872, 1889 and 1903. The only changes have been the removal of some shearing stands, chutes, side-yards and superseded machinery including steam driven presses.

(State Heritage Inventory SHI no 254004 – conservation management plan, p. 37)

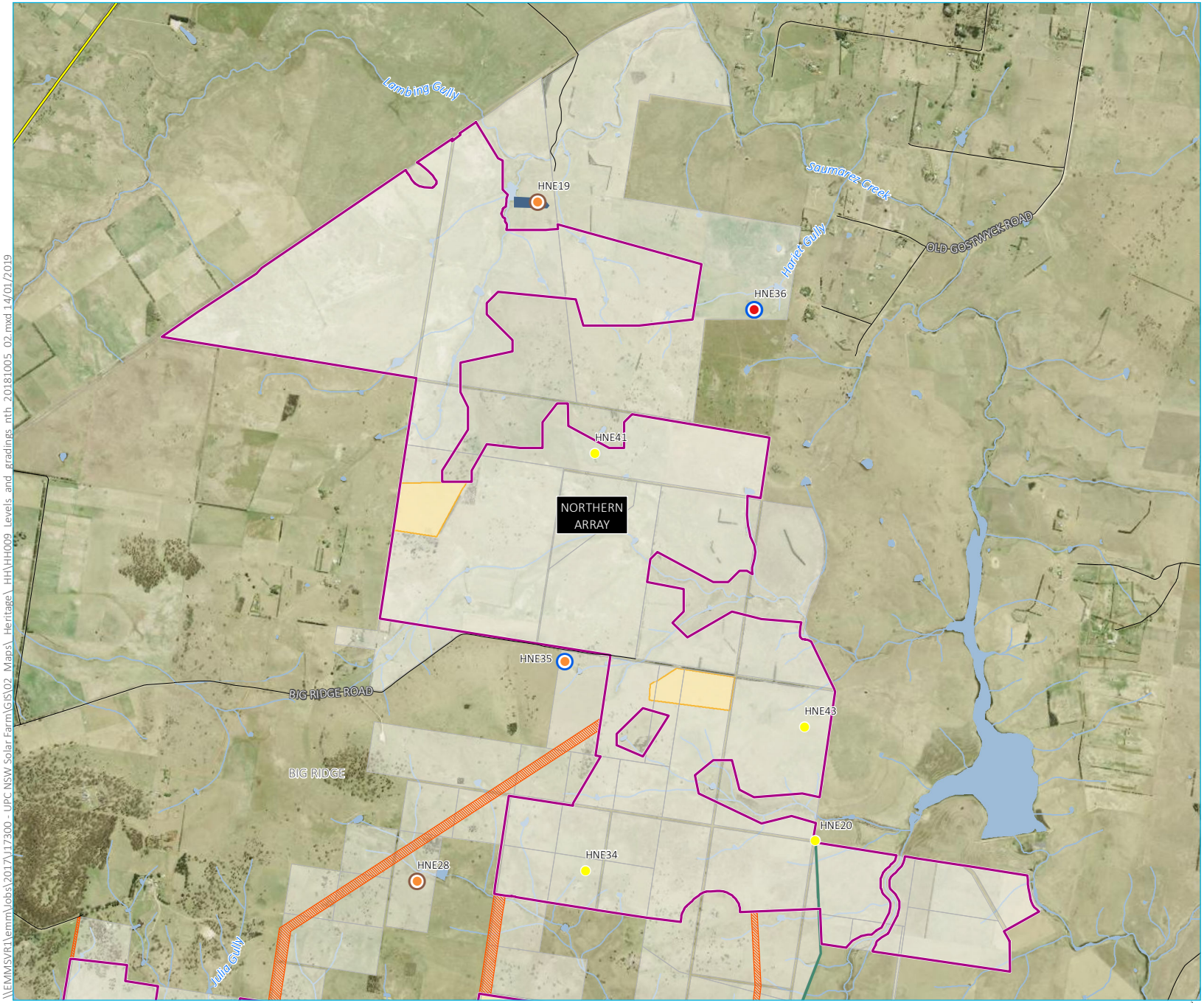
The Deeargee Woolshed is of State significance for the values described in the CMP (2000; reproduced verbatim above). The values include the woolshed's aesthetic significance inherent in the architectural design, associative significance with the Dangar family and as its original inclusion in Gostwyck Station, being one of the earliest and most significant squatting runs, then pastoral runs in New England. It contributed significantly to the international wool market and the colonial economy during the depression in the 1840s. Additional data from site assessment for the project indicates that the site of the woolshed has a high level of research value in the relics that have been identified as the 1852 woolshed, which it replaced. It makes a high contribution to the cultural landscape.

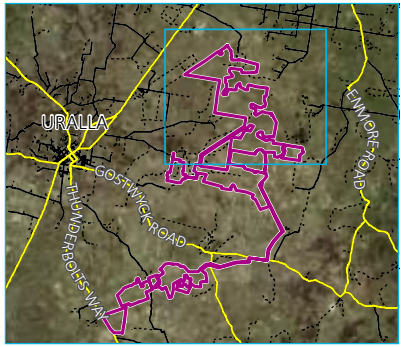
6.5.3 Salisbury Court

i Statement of significance

Salisbury Court homestead and garden has landmark, historical association, aesthetic, social, research and representative significance. It is the earliest stone homestead still standing in the New England. The homestead is linked to Matthew Henry Marsh who influenced the development of Queensland from his seat in the House of Commons in England. The homestead is also linked to the Croft family who have contributed to the development of the pastoral industry and conservation movements particularly National Parks and Landcare. Aesthetic qualities arise from the colonial architecture, the use of stone and timber in the vernacular building and the garden setting with its ha-ha (a recessed landscape design element that creates a vertical barrier while preserving views). It is a fine example of an early Australian building with its verandah, its architectural balance, French doors, gun-barrel doorway and use of stone. Social significance arises from its continued use as a domestic residence for a number of families and place of employment as a pastoral property. The homestead complex provides the opportunity to research the architectural detail as well as the Marsh and Croft families. It is representative of the English families who established a sense of English place through the names given to the property such as 'Salisbury Court' and the planting of introduced English trees to an Australian setting.

State Heritage Inventory SHI no 2540044





KEY

- Main road
- Local road
- Watercourse/drainage line
- Waterbody
- Project boundary

Development footprint

- Solar array
- Potential site access/ETL easement/electrical cabling
- Potential substation/BESS footprint

Indicative site boundaries

- HNE19
- HNE20

Grading

- Exceptional
- High
- Moderate

Significance level

- State
- Local

Note: HNE37 is not shown as a point as it is representative of the cultural landscape

Source: EMM (2018); DFSI (2017); UPC (2018)

0 1 2 km

GDA 1994 MGA Zone 56

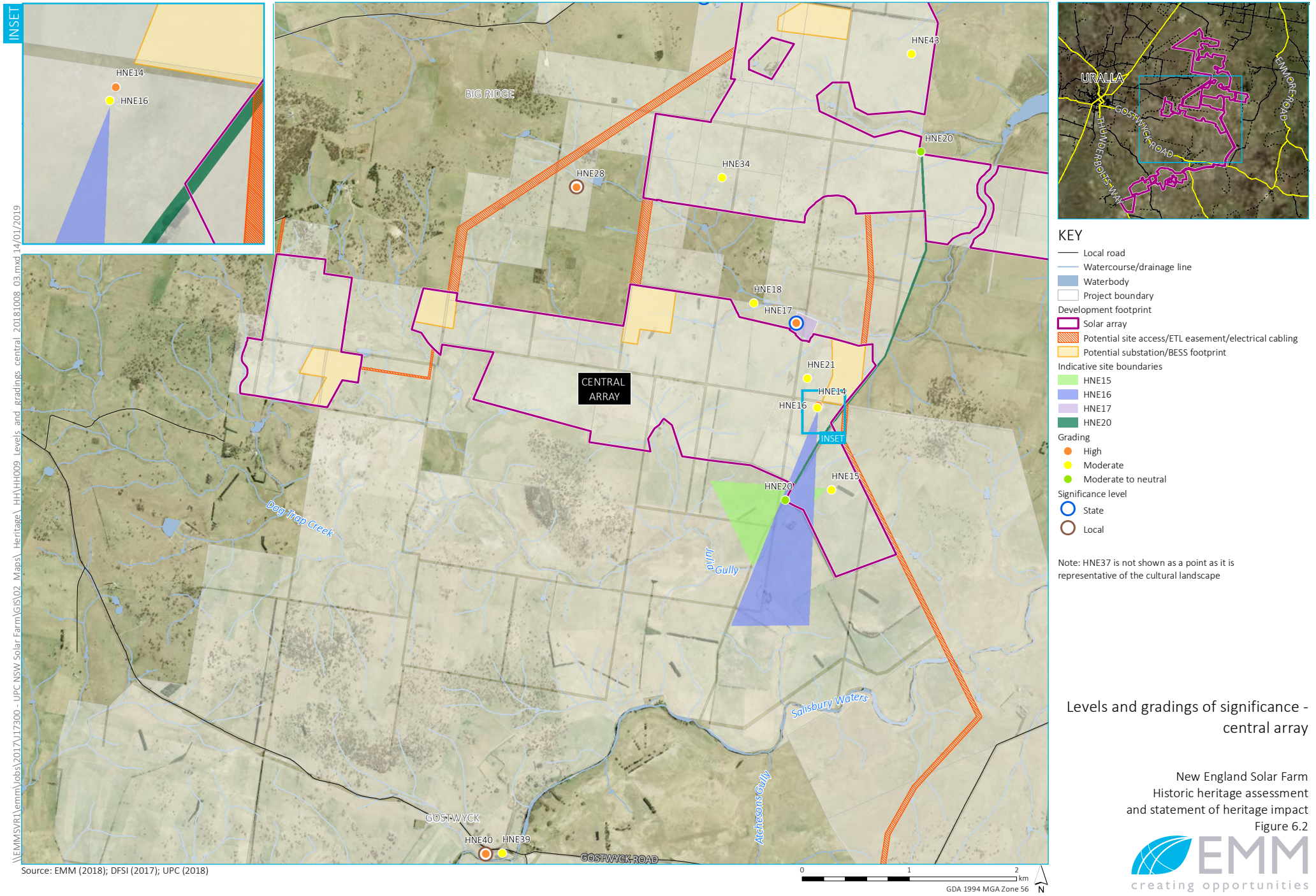
N

\\EMMSVR1\emm\Jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HH\HH009 Levels and gradings nth 20181005 02.mxd 14/01/2019

Levels and gradings of significance - northern array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 6.1

EMM
creating opportunities



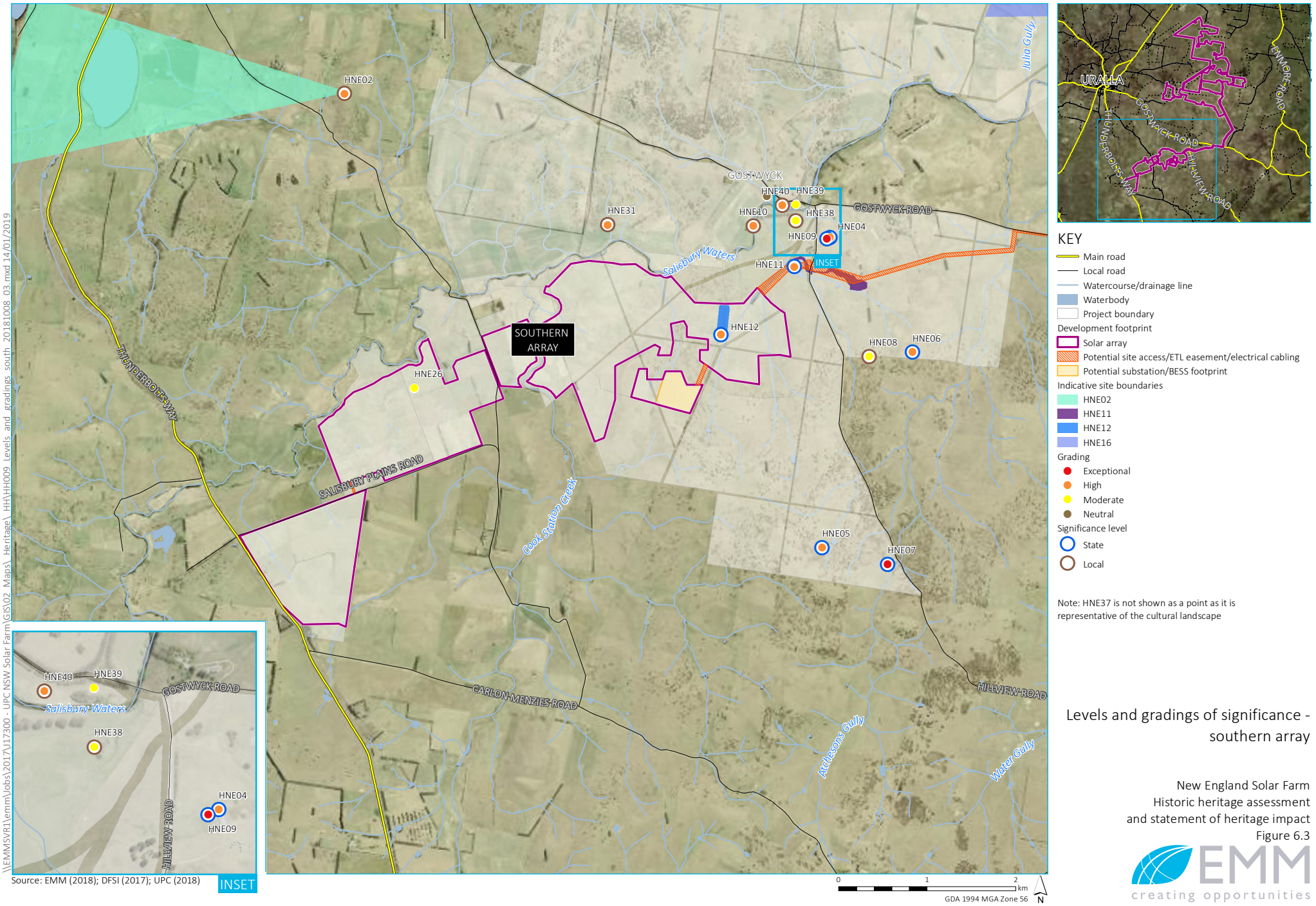
\\EMMSVR1\emmJobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HH\HH009 Levels and gradings central 20181008 03.mxd 14/01/2019

Source: EMM (2018); DFSI (2017); UPC (2018)

Levels and gradings of significance - central array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 6.2

EMM
creating opportunities



Source: EMM (2018); DFSI (2017); UPC (2018)

KEY

- Main road
- Local road
- Watercourse/drainage line
- Waterbody
- Project boundary

Development footprint

- Solar array
- Potential site access/ETL easement/electrical cabling
- Potential substation/BESS footprint

Indicative site boundaries

- HNE02
- HNE11
- HNE12
- HNE16

Grading

- Exceptional
- High
- Moderate
- Neutral

Significance level

- State
- Local

Note: HNE37 is not shown as a point as it is representative of the cultural landscape

Levels and gradings of significance - southern array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 6.3

EMM
creating opportunities

\\EMMSVR1\emmJobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HH\HH009 Levels and gradings south 20181008 03.mxd 14/01/2019

7 Heritage impact assessment

7.1 Background to assessing impacts

7.1.1 Introduction

The assessment of a project's impacts to the heritage significance of a place or an item is to understand change, if it is beneficial to the place or item, and how changes can be managed to best retain significance. The historical landscape in Australia, be it rural or urban, is by social agreement, a significant aspect of our identity (refer to Section 7.1.2). That agreement is codified in legislation, the intent of which is to encourage the conservation of cultural heritage by incorporating it into development where feasible. In many situations avoiding impacts is impossible, but the aim is to reduce those impacts by either project re-design or managing the loss of information through methods that reduce and/or record significance before it is removed.

The framework around assessing significance and therefore suitable levels of impact is to understand how the place or item came to be, how important it was (and may be still) in the development of the local area or the state (the colony at the time) and providing guidance on its management. This is what this report aims to do.

7.1.2 Inter-generational equity

Aboriginal cultural heritage management is based on the principle of inter-generational equity, the intent of which is to ensure present generations consider future generations when making management decisions about culture. This principle is possibly the most relevant part of the notion of ecologically sustainable development (ESD) when considering Aboriginal cultural heritage management.

The same philosophy is applied to historical heritage management and is covered under the ICOMOS *Burra Charter:*

> Article 1.2 Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present and future generations (Australia ICOMOS 2013, p.2).

The Burra Charter continues:

> Places of cultural significance enrich people's lives, often providing a deep and inspirational sense of connection to community and landscape, to the past and to lived experiences. They are historical records, [sic] that are important expressions of Australian identity and experience. Places of cultural significance reflect the diversity of our communities, telling us about who we are and the past that has formed us and the Australian landscape. They are irreplaceable and precious.
>
> These places of cultural significance must be conserved for present and future generations in accordance with the principle of inter-generational equity.
>
> The Burra Charter advocates a cautious approach to change: do as much as necessary to care for the place and to make it useable, but otherwise change it as little as possible so that its cultural significance is retained.
>
> (Australia ICOMOS 2013, p.1)

This assessment of historical heritage impact was prepared with the notion of intergenerational equity as a guiding principle.

Impacts to the setting and cultural landscape will occur as a result of the project. Despite the substantial modifications and refinements that have been made to the three array areas to avoid impacts to known historical archaeological sites (see Section 7.2), the nature of the development will change some views and vistas and affect the setting of the landscape in some areas. Most of those areas are not visible from public spaces.

The project will ensure the continuation of these large sheep stations by providing economic benefits that will continue during times of severe drought. In addition, agricultural production will continue on land surrounding the three array areas throughout the operational phase of the project as well as within the development footprint for the three arrays areas (subject to consultation with the project landholders). Landholders are aware of the cultural significance of their properties.

7.2 Measures to avoid and minimise impacts

The project refinement process is described in detail in Chapter 1 of the EIS. EMM and UPC have worked closely together, and have consulted with the project landholders, local residents and the registered Aboriginal parties, to refine the development footprint from the site boundary presented as part of the PEA. This has been achieved by reviewing the outcomes of the historical research and site assessment, as with other specialist technical investigations, with the objective of developing an efficient project that avoids and minimises environmental impacts wherever feasible. Avoidance of significant Aboriginal and historical cultural heritage values has been a key aspect of this refinement process.

Initial measures to avoid areas of archaeological sensitivity, potential archaeological sensitivity, built heritage and other features of known or potential heritage significance were taken as part of an initial high-level constraints analysis, which covered an area of 11,622 ha (refer to Figure 1.3 in the EIS). The results of this analysis informed the selection of the site boundary presented as part of the PEA (refer to Figure 1.3 in the EIS). Within the PEA, the text in relation to historical heritage focused on the Uralla LEP listings of Gostwyck Memorial Chapel and Precinct (I10) and Deeargee Woolshed (I11).

As part of the initial site inspection to visually assess Gostwyck and Deeargee, it was determined that both properties had significant heritage values that would provide constraints to development impacts. The initial visual inspection confirmed that the landscape in the project boundary had the potential to pose constraints associated with tangible evidence of significance.

During the preparation of this assessment, the development footprint has been refined on the basis of environmental constraints identification, stakeholder engagement and community consultation. As a result of this refinement process, the three array areas that form part of the development footprint avoid a number of higher order watercourses, including Salisbury Waters, Dog Trap Creek, Julia Gully and Lambing Gully.

Refinements to the central and northern arrays have avoided potential impacts to:

- HNE17 – Remnant shepherd's hut archaeological site (central array) (refer Figure 7.2);
- HNE36 - Saumarez Hut archaeological site (northern array) (refer Figure 7.1); and
- HNE19 – Remnant house archaeological site (northern array) (refer Figure 7.1).

In addition, as part of detailed design, HNE12 – Remnant of basalt wall 2 will be avoided within the development footprint for the southern array area.

Part of this process involved the reduction of the development footprint within the modern extent of Gostwyck Station (ie Lot 1 of DP 227322). As part of the refinement process, 43 ha of the development footprint for the central array area that overlapped with the modern extent of Gostwyck Station have been removed. In addition, 191 ha of the development footprint for the southern array that overlapped with the modern extent of Gostwyck Station have also been removed. These areas no longer form part of the development footprint.

Visual assessment has identified that the core residential and chapel area of the precinct on Gostwyck Station is unlikely to experience views of project infrastructure within the development footprint for the southern and central array areas. Views to Dangar's Lagoon and therefore from the lagoon to Gostwyck Station will be unimpeded as the development footprint for both the southern and central array areas have been refined to avoid potential impacts to these views.

Refinements to the extent of the three arrays and alignments of potential ETLs and site access corridors have also been made to reduce impacts to Aboriginal cultural heritage sites (refer Appendix D of the EIS).

7.3 Impact types

Two main types of impacts have been predicted to occur as a result of the project: physical; and visual. These types are described below.

- physical impacts are those impacts that will materially affect the features and sites that are present within the development footprint whether they were found or if they are unanticipated; and
- visual impacts are those impacts that will affect the views and the setting of the cultural landscape and nearby built items within the development footprint and surrounds.

Impact types for sites within the development footprint are identified in Figure 7.1 (northern array), Figure 7.2 (central array) and Figure 7.3 (southern array).

7.4 Sources of impact

The project design and construction elements are described in detail in Chapter 1 of this report and in Chapter 2 of the project EIS.

As noted within the EIS, the need for heavy civil works such as grading/levelling and compaction will be minimised, as the flattest land areas within the three array areas which are already mostly cleared of vegetation have been selected.

The following ground disturbance activities proposed as part of the project have the potential to disturb historical sites identified within the development footprint:

- installation of the PV modules (ie driving or screwing piles into the ground, possibly including pre-drilling but only if required);
- trenching for underground cabling;
- clearing for internal access tracks and PCU placement;

- the construction of up to three solar array substations and BESSs, the locations of which will be confirmed during the detailed design stage of the project;
- the construction of a grid substation and BESS, the location of which will be confirmed during the detailed design stage of the project;
- installation of supporting infrastructure (eg O&M buildings, parking areas and landscaping);
- the construction of a temporary construction accommodation village (if required);
- installation of overhead transmission lines (anticipated to be supported by single concrete, wood or steel pole structures) along the proposed ETL options; and
- installation of new internal roads to enable access to the three array areas from the surrounding road network.

Some heavier earth moving will likely be required for certain project infrastructure (eg substations and BESSs) in those instances where a level pad is necessary. In addition, grading around lower order streams and drainage channels within the three array areas may also be required in order to manage erosion during construction.

Outside of the development footprint, ground disturbance activities will be limited to the installation of security fencing (typically along existing property fence lines) and a number of creek crossings should they be required (refer Figure 1.2). Notwithstanding, although the crossings are outside of the development footprint, they have been captured in the survey effort. Security fencing will be restricted to land within the project boundary and will avoid identified items. The exact location of creek crossings will be determined during detailed design.

7.5 Impacts on archaeological resources

A total of two sites with archaeological significance (relics) and one site with potential for relics were identified in the study area. They include:

- HNE17 Shepherd's hut, old Gostwyck (central array), which was recorded during survey;
- HNE19 House site, old Saumarez (northern array), which was recorded during survey; and
- HNE26 Former stockyard (southern array), which identified by historic mapping only as there is no surface evidence.

The two known archaeological sites, HNE17 and HNE19 have since been avoided through revisions to the development footprint for the central and northern array areas, respectively (refer Section 7.2). The third, HNE26, will be investigated in tandem with proposed Aboriginal archaeological test excavation of a potential archaeological deposit (Site ID NE33 – refer to Appendix D of the EIS) to be completed during either public exhibition of the EIS or the preparation of the Response to Submissions (RTS) report. The details of the archaeological test excavation will be finalised in conjunction with planning for the Aboriginal archaeological test excavation as these two sites are in close proximity.

7.5.1 HNE26 Stockyard (former)

i Impacts and loss of significance

The site of this stockyard was identified through a review of historic plans dating to c1867. No evidence of this site is visible in the field.

Impacts, if they occur, will be physical. The level of physical impact will be moderate if evidence of the former stockyard survives archaeologically, as impacts will be restricted to piling rather than complete excavation. However, the significance of this item is hypothetical and contributory.

The loss of significance from project impacts to HNE26 will be minor if this archaeological site survives as it is a minor component of the cultural landscape.

ii Efforts to avoid

The stockyard cannot be avoided as it is in a central location within the southern array area where rows of PV modules could be easily constructed. Avoidance of this area sterilises a large tract of land suitable for development, and impact avoidance has been focused on areas of higher significance. Further, the significance of this item does not warrant project re-design.

iii Management and amelioration

It is likely that elements of this site, if they survive, may consist of post holes, nails, timber fragments and possibly horse shoes. Research questions for this site are not sufficient to justify a stand-alone test excavation as the site was a stockyard and surface evidence does not exist.

The proposed archaeological test excavation as part of the Aboriginal cultural heritage assessment will occur in this area and if evidence of the stockyard is found, it will be archaeologically recorded for archival purposes. The methods will be included in the research design for the Aboriginal archaeological test excavation program.

7.6 Impacts on built structures

Two built structures were identified within the development footprint: HNE11 and HNE12, both of which are dismantled dry-stone walls. Project impacts will avoid the two structures by placing HNE12 in a no-go zone and carefully managing construction around HNE11 so that impacts do not occur.

7.6.1 HNE11 Remnant of basalt wall 1

i Impacts and loss of significance

The dismantled basalt dry-stone wall, HNE11, will be visually impacted by the proposed site access road for the southern array area (via Hillview Road), as well as a series of pole structures to support the proposed ETL between the southern and central array areas. The proposed alignment for the ETL will cross HNE11 and run alongside HNE11 over a length of approximately 600 m. No major physical impacts will occur to the basalt wall as the ETL poles will be placed on either side of the fabric. Figure 7.3 shows the envelope within which the ETL will be placed rather than representing the total area of potential impacts.

The impact to HNE11 from the single pole structures and the ETL will be visual as the potential significance of the wall is known and impacts to the fabric will not occur.

A larger visual curtilage will be affected by the ETL as, while the wall is not highly visible from the south along Hillview Road, the mature tree-line planted by the landholder is, and this contributes aesthetically to the local area (refer to the assessments of the cultural landscapes HNE37).

Visual impacts to the view from the southern approach will be high. There will be no loss of significance to the item, but its curtilage will be affected. The feature is discernible at a distance when approaching on Hillview Road from the south, but it does not possess landmark qualities unless the viewer knows it is there.

A gap in the wall on the western side of Hillview Road will be used by vehicles and plant during the site preparation and construction phase of the project to provide access to a large portion of the southern array area. An existing gravel track, approximately 18 m wide, cuts through the wall and travels across basalt bedrock along this alignment. The wall blocks have been dismantled and are directly on the ground; therefore, impacts from the vibration of passing vehicles will have no effect.

If improvement of the track through HNE11 is required, it is likely to consist of excavating a shallow trench, indicatively between 50-100 mm, on either side of the existing track and the laydown of the excavated material and introduced fill to build the track up to make it suitable for all weather access. The track would then likely be finished with a stabilised sub-base and topped with unsealed pavement. The final design will only be determined during the construction stage of the southern array.

This track, once improved to a condition suitable for construction traffic, will be used to haul project infrastructure into the southern array area throughout construction. During operations, it is anticipated that this site access location will be predominantly used by light vehicles, except where routine maintenance and equipment replacement takes place. The access track that will service the project will remain on the current farm track alignment and thus no loss of significance will occur to the wall provided adequate mitigation measures are put in place.

ii Efforts to avoid

Construction of the ETL and placement of the poles will be undertaken to avoid physical impact to the wall. Relocating the poles in a less visible position is not possible as the current position has been developed in consultation with the project landholder and modifications have been made to accommodate the requirements of the working sheep station of Deeargee.

Relocating the access road is not possible. Another route to the north of the current alignment (also from Hillview Road) was considered away from the wall; however, consultation with the landholder settled on the current alignment and it is noted that the original alignment would have brought project infrastructure closer to Deeargee Woolshed. Further, the landform would require excavation and levelling to create another reliable track, which would create more visual impact and a greater impact on the landscape. The physical fabric of HNE11 will not be impacted by the current proposed site access location and existing access road alignment.

7.6.2 HNE12 Remnant of basalt wall 2

i Impacts and loss of significance

Anticipated impacts to this feature will be visual only, as a 10 m buffer will be placed around it to ensure that the fabric is not disturbed from its current position; no physical impacts will occur. There will be a loss of setting as this dismantled wall is currently in a large, dry, empty grazing paddock and is likely be surrounded by PV modules and associated infrastructure at the completion of construction.

The loss of significance to the item will be nil and the loss of significance through the change in the setting will be moderate to high. This loss, however, is ameliorated by the fact that this feature is not visible to anyone not on the property or in close proximity to it. It cannot be seen from public spaces (eg Hillview Road).

ii Efforts to avoid

HNE12 will not be physically impacted by the project as it will be provided with a 10 m buffer from all project activities. It will be actively avoided by identifying the required buffer around it with high visibility material and will be included in the project induction and daily toolbox talks.

7.6.3 HNE20 Old Gostwyck Road

i Impacts and loss of significance

The old alignment of the Old Gostwyck Road crosses briefly into the development footprint in the central array area for approximately 670 m. The road is unformed and is currently an ephemeral farm track used by farm vehicles. This section of the road will not be upgraded but may have project infrastructure installed across it resulting in construction vehicles accessing the area and could also require minor ground disturbance activities to facilitate the installation of project infrastructure (eg PV modules).

ii Efforts to avoid

This section of the alignment of HNE20 cannot be avoided. The majority of this alignment survives within private property as an unformed track but some of Old Gostwyck Road has been sealed and is a public road. The limited length of the road that will be impacted will not reduce its value as this section is ephemeral. While consideration was given to avoid impacts, none were possible. This site would pose a considerable constraint to the placement of continuous rows or blocks of PV modules at this location. Further, the significance of this item does not warrant project re-design.

7.6.4 HNE21 Former fence line

i Impacts and loss of significance

HNE21 is a row of degraded timber fence posts marking an earlier paddock boundary. A date for this row of fallen timber posts has not been ascertained and despite this, it is considered that this item contributes to the cultural landscape by demonstrating the long history of the area.

HNE21 will be removed as it sits within the development footprint for the northern array area.

ii Efforts to avoid

As noted above, HNE21 will be removed. While consideration was given to avoid impacts, none were possible. This site would pose a considerable constraint to the placement of continuous rows or blocks of PV modules at this location. Further, the significance of this item does not warrant project re-design.

7.6.5 HNE34 Former stockyard

i Impacts and loss of significance

One stockyard, HNE34 (within the development footprint for the northern array area), which is of late twentieth century construction, will be physically impacted by the project. HNE34 is comprised of timber, iron star pickets and corrugated iron sheets.

The level of impact will be high but this stockyard has been assessed to be of moderate significance for its contribution to the aesthetic values within the property and for the part it plays in the cultural landscape. There will be no loss of significance with respect to this item.

ii Efforts to avoid

The stockyard cannot be avoided as it is in a central location within the northern array area where rows of PV modules could be easily constructed. Further, the significance of this item does not warrant project re-design.

7.6.6 HNE43 Former fence line

i Impacts and loss of significance

Similar to HNE21, HNE43 is in poor condition having fallen over. It has the appearance of being comprised of split timber posts and timber gate. It is considered that this item contributes to the cultural landscape by demonstrating the long history of the area.

HNE43 will be removed as it sits within the development footprint for the northern array area.

ii Efforts to avoid

HNE43 cannot be avoided as it is in a central location within the northern array area where rows of PV modules could be easily constructed. Further, the significance of this item does not warrant project re-design.

7.7 View, vistas and the cultural landscape

7.7.1 HNE15 View through Gostwyck Station

i Impacts and loss of significance

The view through modern Gostwyck Station from a high point in the landscape has been identified as possessing moderate contributory aesthetic values. This view is from a hill crest north of the residential precinct and looks to the south-west across a number of tree-lines and small hills.

Impacts to this item (the view) will be minor overall as the vast majority of the landscape is outside the development footprint for the project. At the viewpoint, the installation of PV modules will impinge on the view to a minor degree (refer Figure 7.2). This viewpoint can be moved from its current position approximately 350 m south-west for a clear view across Gostwyck Station.

This view cannot be access by the general public.

ii Efforts to avoid

Efforts to avoid impacts are discussed further in relation to HNE37 Cultural landscape. Those changes, which include the reduction of the development footprint for the central and southern array areas apply to HNE15.

7.7.2 HNE16 View from granite tors

i Impacts and loss of significance

Impacts to this view will occur at a minor scale. Views in the foreground may be affected by project infrastructure, but the views beyond the poplars to the hills and granite outcrops and beyond will not be obscured by project infrastructure.

ii Efforts to avoid

Efforts to avoid impacts are discussed further in relation to HNE37 Cultural landscape. Those changes, which include the reduction of the development footprint for the central and southern array areas apply to HNE16.

7.7.3 HNE37 Cultural landscape of the region

i Impacts and loss of significance

The cultural landscape in the project boundary is a small component of a much larger landscape that extends across the region. Impacts to the cultural landscape will occur across the development footprint where project infrastructure will be installed, despite the excision of known archaeological sites from the development footprint. The current condition of the cultural landscape in the project boundary is a result of thousands of years of human occupation and, over the last 186 years, of pastoral activities started by the new migrants.

Included in the cultural landscape within the development footprint, are items HNE20 Old Gostwyck Road; HNE21 Former fence line; and HNE43 Former fence line. While these three items do not possess a level of significance as individual items, they do contribute to the place's heritage significance as one of many components of the group.

ii Assessment against the criteria

Table 7.1 HNE37 Cultural landscape of the region

Criterion	Assessment
a) Historical	The cultural landscape in the project boundary is a small component of a much larger landscape. Impacts associated with the project will be low when assessed against the historical development of the item. The addition of the solar arrays is another layer of the cultural landscape in the immediate vicinity, and while it will play a role in the social significance of the region by providing renewable energy, from a cultural heritage perspective it has neutral value.
b) Associative	The cultural landscape has a high level of association with notable figures in the colony's history including the Dangars, the Dumaresqs and the Whites. The project will not affect the associative value of the study area.

Table 7.1 HNE37 Cultural landscape of the region

Criterion	Assessment
c) Aesthetic	The aesthetic significance of the cultural landscape is apparent to the viewer as it retains many of the forms that existed in the earliest days of the settler occupation and is of State significance. The impacts to the aesthetic significance of the cultural landscape will be the most apparent as the proposed next phase of the cultural landscape inside the project footprint will introduce a substantial change to its appearance. Results from the visual assessment (refer Appendix I of the EIS) and constraints arising from historical heritage values, has contributed to the placement of the solar arrays to make them as unobtrusive as possible from public spaces. By far, the largest visual and aesthetic impacts will be from within the properties that will host them.
d) Social	This criterion does not apply to the cultural landscape.
e) Research	The cultural landscape of the region has an exceptional level of research potential in a number of areas, including the investigation of relics, spatial arrangements on the stations, the dates and choices for the wind breaks of cold climate trees, and the circulation patterns within and external to the historic properties. Impacts to the values described above are anticipated to be low to nil as all known and potential archaeological sites have been excised from the original development footprint. The avenue of elms planted by A A Dangar is not in or close to the development footprint. The research values of the development footprint and the region generally will be enhanced as a result of the management measures (Section 7) arising from significance and impacts.
f) Rarity	Landscapes such as this one are rare. Impacts to this landscape have been minimised by reducing the original development footprint in response to environmental constraints, which include those posed by the historical values of the study area and its surrounds. The significant cultural landscape extends far beyond the development footprint and includes land that was part of the early squatting runs; it extends well beyond the project boundary and the anticipated impacts to the aesthetic values will be restricted to a location that will be largely shielded from public spaces.
g) Representativeness	The cultural landscape of the region that is crossed by the project is representative of evolved and intact cultural landscapes. It is rare at a State level.

Impacts to the cultural landscape inside the project boundary as a result of project activities will be moderate, particularly within the development footprint for the three array areas where the project's dominant infrastructure, the PV modules, will be constructed. The type of physical impacts anticipated from piling include the installation of the pile and machinery used in the process. A standard 'I-beam' pile cross-section is 15 cm by 10 cm; however, this could vary depending on the configuration of modules and trackers (eg heavier piles are needed at the ends of rows and where the tracker motors are located). PV modules are typically installed in rows of up to 90 modules in length, with up to 15 piles per row with each pile impacting on a discrete area. The exact footprint of each pile will only be determined during detailed design.

Aside from the construction of hardstand areas for the substations, temporary laydown areas and inverter pads, large-scale removal of soil and/or surface disturbance are generally avoided. The MV cable trenches involve excavation but are back-filled with the soil that is removed prior to cable burial. Further, impacts arising from heavy machinery (eg trucks delivering project infrastructure to the three array areas) can be minimised by restricting the areas in which they move to temporary laydown areas or similar.

It is anticipated that the most significant impacts will be visual impacts to the aesthetic character of the area inside the project boundary.

The affect of these predicted impacts has been reduced through the project refinement process by reducing the visibility of the proposed infrastructure from the 19 viewpoints included in the visual impact assessment (Appendix I of the EIS). The VIA concluded that the proposed infrastructure will be visible from 17 of the viewpoints and to varying degrees; from slight (viewpoints 9, 12,14, 18 and 19); slight/moderate (viewpoints 3, 4, 10, 11, 13 (Thunderbolts Way and S17), 15, 16 and 17); moderate (viewpoints 5, 6, 7, 8 and 13 (Salisbury Court); and potentially significant (viewpoints 1 and 2 for the unmitigated scenario) (refer Appendix I of the EIS).

iii Efforts to avoid

Since the submission of the PEA, the design and location of the development footprint within the site boundary presented as part of the PEA has undergone a number of significant revisions in response to ongoing stakeholder engagement, environmental constraints identification and engineering assessment. Throughout the project refinement process, UPC has made considerable effort to avoid potential environmental and heritage impacts, where possible.

Part of this process involved the reduction of the development footprint within the modern extent of Gostwyck Station (ie Lot 1 of DP 227322). As part of the refinement process, 43 ha of the development footprint for the central array area that overlapped with the modern extent of Gostwyck Station have been removed. In addition, 191 ha of the development footprint for the southern array that overlapped with the modern extent of Gostwyck Station have also been removed. These areas no longer form part of the development footprint.

Despite this refinement process, there will be an unavoidable impact to the cultural landscape that will occur to the area inside the project boundary for the life of the project. Mitigation measures addressing visual impacts have been proposed in the VIA (Appendix I of the EIS) but will not completely remove those impacts. Mitigation measures addressing physical impacts to the affected area of the significant cultural landscape are presented in this report (Section 8).

Provided that no, or few, unanticipated relics are affected, the landscape will be returned to its pre-existing use, with another phase embedded in the fabric of the place, resulting in negligible long-term impacts to the cultural landscape. Even so, strong measures will be put in place to protect built heritage sites within proximity of the development footprint (refer to Section 8.1 and Table 8.1).

7.8 Cumulative impacts

Impacts to historic heritage from two other proposed solar developments in the vicinity of the development footprint have also been investigated as part of this assessment. The two additional SSD solar developments include:

- Metz Solar Farm (SSD 7931), which is proposed on the squatting run ‘Hillgrove’. This project was assessed to have no impact on historical significance; and
- Uralla Solar Farm (SSD 9534), which, at the time of writing, had not received SEARs. The Uralla Solar Farm is in the former squatting run of ‘Tilbuster’ claimed by Henry Dumaresq who sold the grazing rights to his brother William.

The Tilbuster Solar Farm (SSD 9619), which is proposed on a site approximately 22 km north of the project, has not been considered due to the distance to the proposed site from the project. Other substantial developments within a similar landscape have not been identified to date.

One small development was noted during field assessment, that being the replacement of Munsies Bridge over Salisbury Waters on Gostwyck Road. This work has recently been completed by Uralla Shire Council with the replacement bridge design being in keeping with the old bridge. Other smaller developments in the vicinity were not noted over the period of time that the team spent in the field.

It is therefore concluded that cumulative impacts resulting from the project will be low.

7.9 Statement of heritage impact

Impacts arising to the significance of the study area from the project will occur. These impacts are directly related to the effect that the development will have on the significant cultural landscape, which remains legible despite the contraction in size of the original squatting/pastoral stations. From the perspective of views and the elements that make up the cultural landscape, this contraction in size of the early squatting/pastoral stations is irrelevant because the land has not been developed for anything but grazing and limited cropping that is primarily grown for the purposes of feeding stock.

In total, impacts will occur to the following:

- partial impacts to HNE20, the old alignment of Old Gostwyck Road;
- removal of HNE21 and HNE43, two former fence lines within the development footprint for the northern array area;
- removal of HNE34, a former stockyard within the development footprint for the northern array area;
- partial impacts to HNE37 cultural landscape (including views and vistas experienced at HNE15 and HNE16); and
- removal, if it exists, of HNE26, the potential archaeological resources of a former stockyard (southern array area).

Potential impacts to significant items will be managed by physical barriers to protect and creation of no-go zones; this will occur with two items:

- HNE11 Dry-stone wall (southern array area); and
- HNE12 Dry-stone wall (southern array area).

Three items with substantial material evidence of their significance have been avoided and impacts to a portion of the cultural landscape and internal views that occur within the development footprint will be managed. Items avoided through project refinement include:

- HNE17 Shepherd's hut archaeological site;
- HNE19 Former house archaeological site; and
- HNE36 Saumarez Hut archaeological site.

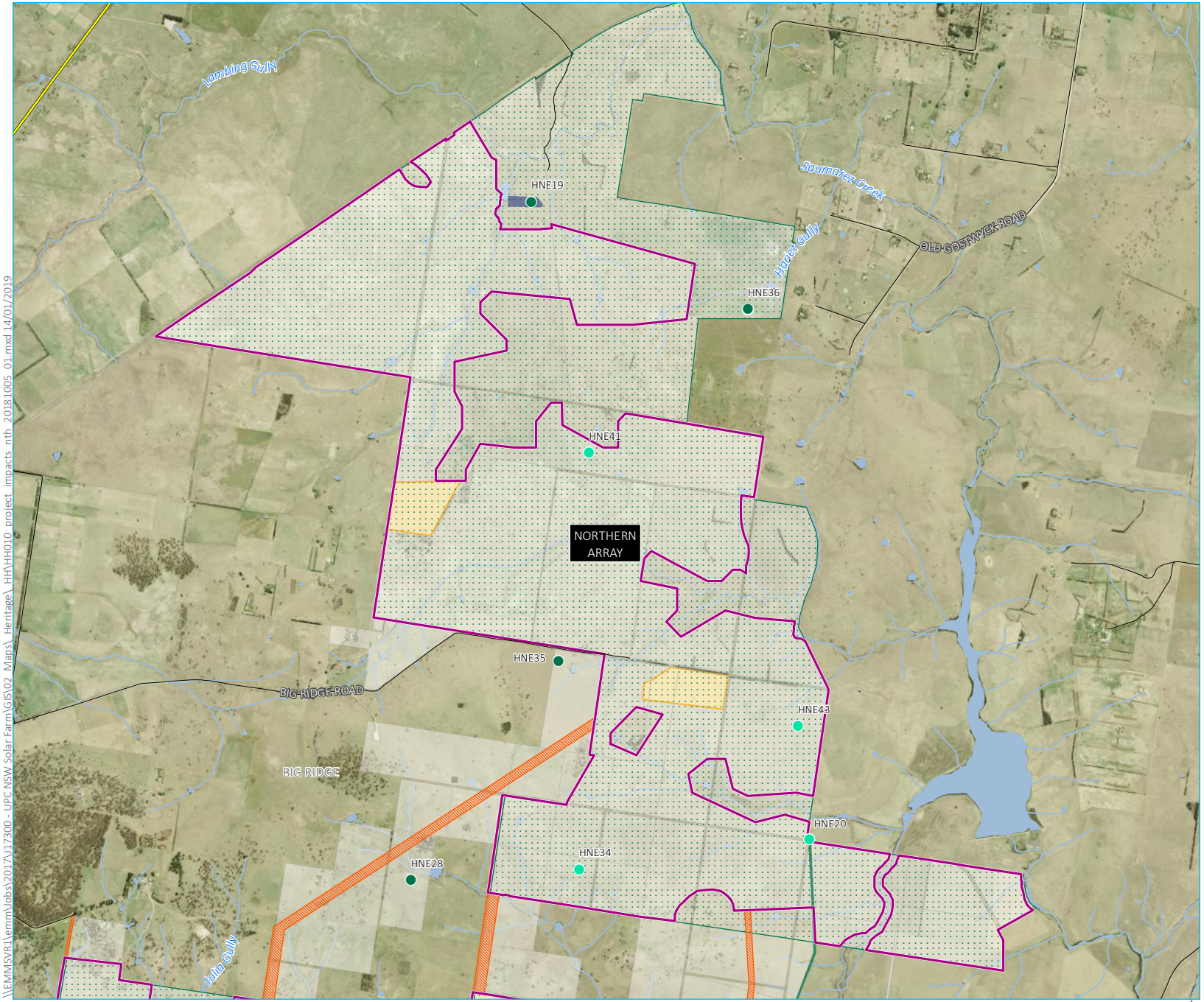
The project has carefully considered all the environmental issues and the implications of development of a solar farm on those issues and has gone through a number of iterations to arrive at the current development footprint.

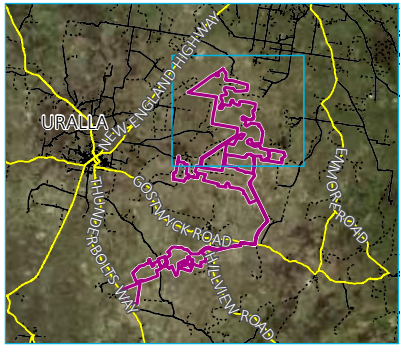
Sufficient field assessment to identify historical cultural heritage in the development footprint was undertaken. Other items that may exist were not discovered on plan or in the field and will be managed through the unanticipated finds protocol (refer Section 8).

Overall, it is anticipated that the project will have a low-to-moderate negative effect on the historical heritage significance of the rural character of the region and a moderate affect within the development footprint, predominantly by obscuring the significant cultural landscape rather than destroying it.

The positive aspects of the project will be that the activities that commenced in the early historical period of the colony, namely wool production, will continue on the land surrounding the development footprint. Further, this project has provided opportunity to assess these early squatting runs in the field, which will provide a substantial amount of information that can be put to use to open up areas of investigation that were not available previously.

The negative effects will be managed carefully to retain as much as possible, change as little as necessary, and provide certainty to the project landholders for their continued operations.





KEY

- Main road
- Local road
- Watercourse/drainage line
- Waterbody
- PEA site boundary
- Project boundary

Development footprint

- Solar array
- Potential site access/ETL easement/electrical cabling
- Potential substation/BESS footprint

Indicative site boundaries

- HNE19
- HNE20

Impact type

- None
- Physical

Note: HNE37 is not shown as a point as it is representative of the cultural landscape

Source: EMM (2018); DFSI (2017); UPC (2018)

0 1 2 km

GDA 1994 MGA Zone 56

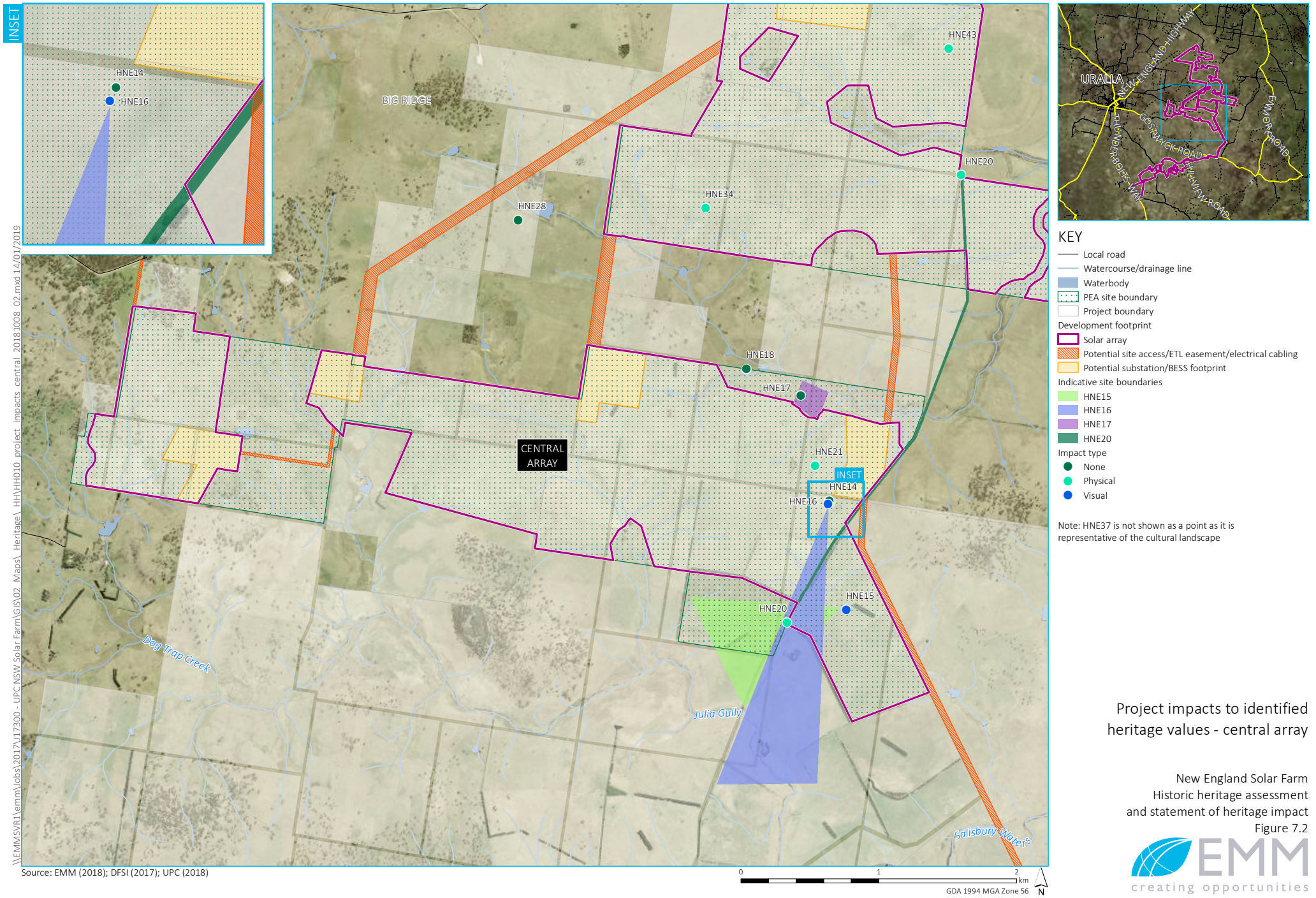
N

\\EMMSVR1\emm\Jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HHA\HH010 project impacts nth 20181005 01.mxd 14/01/2019

Project impacts to identified heritage values - northern array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 7.1

EMM
creating opportunities



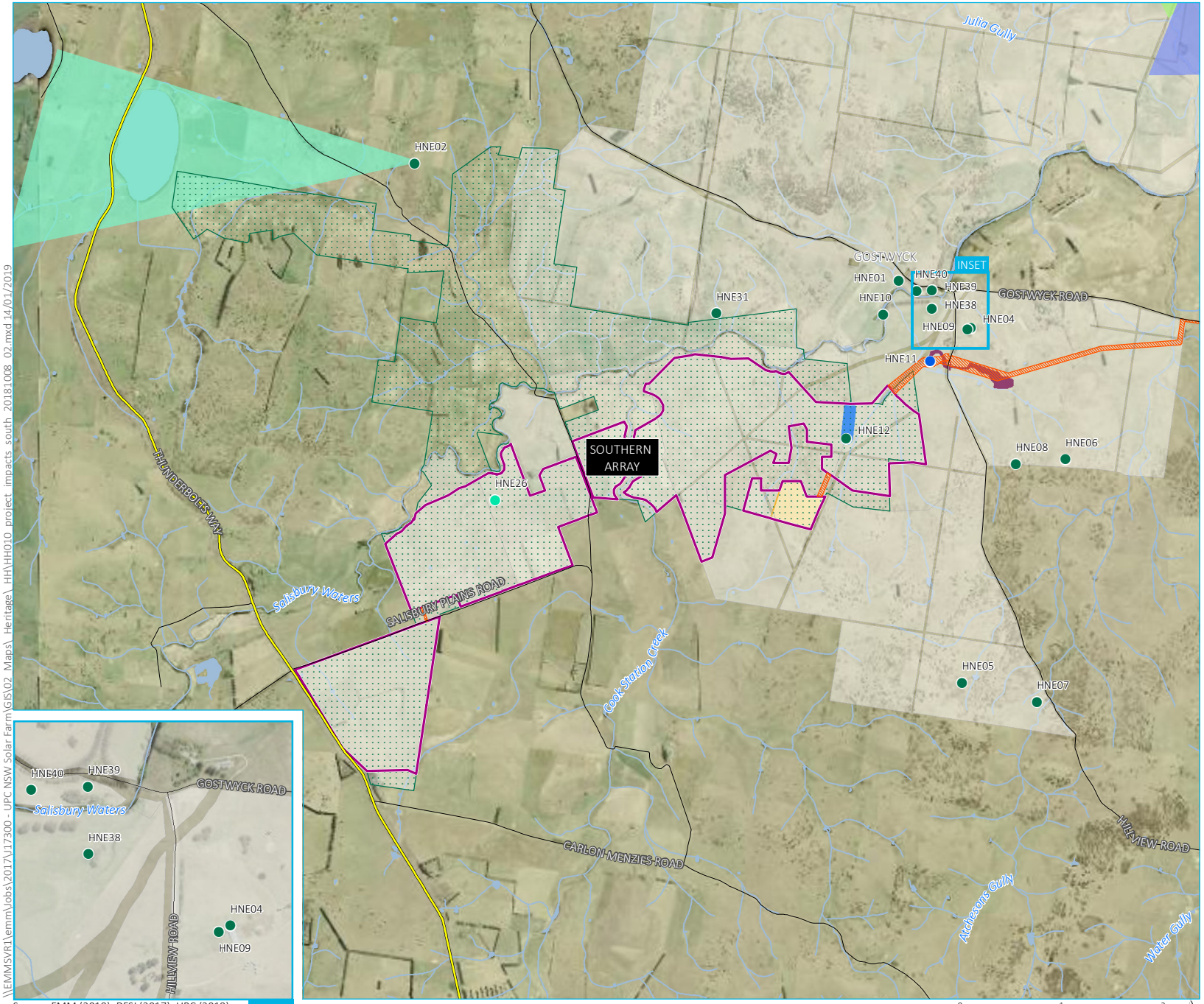
\\EMMSVR1\emm\Jobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HH\HH010 project impacts central 20181008 02.mxd 14/01/2019

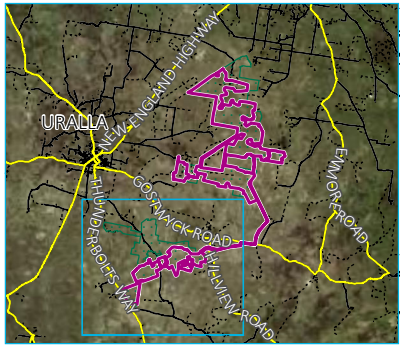
Source: EMM (2018); DFSI (2017); UPC (2018)

Project impacts to identified heritage values - central array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 7.2

EMM
creating opportunities





KEY

- Main road
- Local road
- Watercourse/drainage line
- Waterbody
- PEA site boundary
- Project boundary

Development footprint

- Solar array
- Potential site access/ETL easement/electrical cabling
- Potential substation/BESS footprint

Indicative site boundaries

- HNE02
- HNE11
- HNE12
- HNE15
- HNE16

Impact type

- None
- Physical
- Visual

Note: HNE37 is not shown as a point as it is representative of the cultural landscape

Source: EMM (2018); DFSI (2017); UPC (2018)

INSET

0 1 2 km

GDA 1994 MGA Zone 56

N

Project impacts to identified heritage values - southern array

New England Solar Farm
Historic heritage assessment
and statement of heritage impact
Figure 7.3

EMM
creating opportunities

\\EMMSVR1\emmJobs\2017\J17300 - UPC NSW Solar Farm\GIS\02 Maps\ Heritage\ HH\HH010 project impacts south 20181008 02.mxd 14/01/2019

8 Management measures

8.1 Heritage management objectives

The overriding objective in managing heritage significance is the avoidance of impacts. Avoidance removes the need for mitigation or amelioration and is in keeping with the philosophy of the *Burra Charter 2013* (Australia ICOMOS 2013).

In all cases where significant heritage values may be affected by a project, it is prudent to take a precautionary approach by excising the construction disturbance footprint where it intersects with heritage items or with areas that have been identified as having potential to contain relics. This has been the approach adopted by UPC as part of the refinement process for the project (see Section 7.2).

An overarching strategy to protect the significance of heritage items within the development footprint has been followed to date and will continue as needed through adoption of a precautionary approach. This will continue to be applied for all activities that could impact on heritage items or potential heritage items. That is, the items will either be completely excluded from the development footprint or its heritage values will be investigated and recorded prior to the works if its removal is appropriate.

8.2 General measures

The following general mitigation measures will be applied to the project:

1. Following project approval and prior to any work commencing, a historic heritage management plan (HHMP) will be prepared to guide the conservation of heritage items, unexpected finds and human remains including skeletal material, for the duration of the project. The relevant measures in the HHMP will be incorporated into the project construction environmental management plan (CEMP) to avoid accidental impacts during the construction and operational phase of the project.

   The HHMP will include the management measures in this document and identify the minimum locations for photographic archival recording.

2. Two types of avoidance zones will be created:

   a) Active protection zone – clearly identified by high visibility flagging and/or heavy bollards (eg for HNE11). Active protection is required for any item identified for protection that will be within 50 m of project activities.

   b) Passive protection zone – clearly identified during the project induction and toolbox talks as project exclusion zones. No project activities can occur in these areas even though they are not visually identified. Passive avoidance zones are those areas that are 51 m or more from any of the project activities.

3. Where construction and operation activities are within 10 m of identified items with heritage values, all efforts will be made to avoid impacts; this includes active protection of items through the use of high visibility rope, flags or sturdy bollards and total exclusion zones for construction activities and placement of infrastructure.

4. If moveable heritage is found in the development footprint during project construction it will be protected by re-locating it to another area of the property in consultation with the landholder. Moveable heritage includes items such as farm machinery and water tanks and stands. Details on identification and actions will be included in the HHMP.

5. Prior to any changes to the landscape and specific heritage items that may result from project activities, a digital photographic archival record will be prepared. The photographic record will focus on the development footprint with views to and from a selection of landmark features (general landscape) and detailed photographs of archaeological sites and natural features using land-based and aerial (eg drone) photography. Table 8.1 identifies the sites that this management measure applies to. A number of archival quality digital photographs were taken during the assessment phase, which should be used as part of the archival record.

   Digital photographic archival recording will capture the landscape as working farmland prior to the changes that will result from the project. Photographic archival recording is important in recording change for posterity, future research and in cases where impacts will be reversed, providing guidance to the place's state before that change.

   The digital photographic record will be prepared in accordance with the Heritage Manual guidelines, Photographic Recording Of Heritage Items Using Film or Digital Capture (Heritage Office 2006).

6. LiDAR survey has been completed for the project and where possible the information from this survey can be incorporated into the archival record.

7. If unanticipated finds, including potential relics, is found during project activities, work in the vicinity (ie within 10 m) will cease until an assessment of the find is made by an archaeologist. The discovery of relics is reportable to OEH under Section 146 of the Heritage Act.

8. The discovery of human remains including skeletal material will halt work in a 10 m radius and the remains will not be tampered with. Personnel with the appropriate level of authority will contact the police and the coroner for investigation, which may include the involvement of OEH and advice from a physical anthropologist. A detailed protocol will be developed for the HHMP.

9. Tree line wind breaks will be retained where practicable (for example, where they are located to the south of PV module rows, so that they do not create shading issues).

8.3 Specific management measures

Site specific management measures for those identified items that will be impacted or potentially impacted by the project are outlined below.

A list of all the sites reported in this document, the anticipated impact and the general and site specific management measures to be applied are outlined in Table 8.1, with the expectation that their implementation will remove or reduce project impacts.

8.3.1 HNE11 Remnant of basalt wall 1

i Management and amelioration

Physical impacts to HNE11 as a result of the proposed ETL will be avoided through involvement of an archaeologist in the detailed design of the ETL alignment and during pole placement within the corridor, if the exclusion zone shown in Figure 5.3 cannot be avoided altogether.

Amelioration of potential visual impacts is unlikely to occur as it is not possible to screen pole structures of the scale required for the proposed ETL alignment. In addition, as noted above, an existing ETL exists in the landscape close to HNE11.

The 'gateway' that is currently used for farm access will be protected from impacts by all project-related vehicle movements. Heavy bollards will be placed to allow a 13 m width for vehicle circulation, and project personnel will be informed of the significance of this site as part of site induction and daily toolbox talks.

To improve safety and accessibility into the southern array area, it is understood that modifications to the existing track may be required prior to the commencement of construction. Modifications permitted in the vicinity of HNE11 should be limited to the preparation of the access track surface, where relevant, the laydown of gravel or similar, and minor excavation of drainage swales on either side of the track only.

Digital archival photographs will be taken of the views to the wall from the south as well as details of the gateway before any changes associated with the project are made.

8.3.2 HNE12 Remnant of basalt wall 2

i Management and amelioration

The loss of setting will be managed through the inclusion of this item in digital photographic archival recording. A record will also be made of its position in space using electronic topographic recording techniques.

Protection from inadvertent impacts will also be employed through active management with the use of sturdy bollards set on its perimeter. A curtilage of 10 m will be provided to the dry-stone wall.

8.3.3 HNE15 View through Gostwyck Station

i Management and amelioration

This view will be incorporated into the photographic archival record.

8.3.4 HNE16 View from granite tors

i Management and amelioration

This view will be incorporated into the photographic archival record.

8.3.5 HNE20 Old Gostwyck Road alignment

i Management and amelioration

The old alignment of the Old Gostwyck Road crosses briefly into the development footprint in the central array for approximately 670 m. The road is unformed and is currently an ephemeral farm track used by farm vehicles. This section of the road will not be upgraded and may have project infrastructure installed across it.

As noted in the management and amelioration recommendations for HNE37, photographic archival recording will include HNE20 within the development footprint for the central array area as part of the surrounding cultural landscape.

8.3.6 HNE21 Former fence line

i Management and amelioration

Refer to HNE37 Cultural landscape.

8.3.7 HNE43 Former fence line

i Management and amelioration

Refer to HNE37 Cultural landscape.

8.3.8 HNE26 Former stockyard

i Management and amelioration

The former stockyard HNE26 may be investigated as part of the Aboriginal archaeological test excavation proposed at the location of this site, as it is predicted that, at most, post holes will survive. If post holes are found, they will be recorded using archival quality digital photographic techniques and a site plan will be drawn as part of the record. Test excavation at this site as part of the ACHA will only occur if UPC want to explore opportunities to develop at this location.

8.3.9 HNE34 Former stockyard

i Management and amelioration

The loss of the site will be managed through including it in the digital photographic archival record of the cultural landscape and recording it through a plan drawing and topographic recording techniques. Amelioration is not possible for this item.

8.3.10 HNE37 Cultural landscape (HNE37)

i Management and amelioration

Impacts to the cultural landscape have been discussed with respect to individual sites including the two archaeological sites HNE17 and HNE19, which have been excised from the development footprint to enable their conservation. Other elements of the cultural landscape that will be affected by the project will be the obscuring of the landscape by project infrastructure and impacts that may occur to unanticipated sites.

The loss of significance, albeit through elements that will obscure it rather than remove it, will be managed through detailed digital photographic archival recording to capture the setting, the views and the vistas that will be temporarily lost. This management measure will be applied to a number of elements within the development footprint that have been identified as possessing heritage significance or contributing to the heritage significance of the place.

Photographic archival recording will include but not be limited to:

- HNE20 Old Gostwyck Road in the development footprint and as part of the surrounding cultural landscape;
- HNE21 Former fence line will be photographed in such a way that representative details are captured including specific elements as well as length and alignment;
- HNE43 Former fence line will be photographed in such a way that representative details are captured including specific elements as well as length and alignment;
- wind-breaks of cold-climate trees and ornamentals; and
- views and vistas across the development footprint and the project boundary with the inclusion of landscape reference points such as the granite tors (HNE14) and the shepherd's hut archaeological site (HNE17).

Photographs will be taken from ground level and using drone photography to capture discrete sites with more detail than current aerial photography allows.

8.3.11 Unanticipated finds protocol

An unanticipated finds protocol will be refined in the HHMP to provide guidance to construction personnel should works uncover objects and fabric that may indicate relics.

Work will stop if objects such as bonded bricks, timber or stones appearing in formation indicating a wall or floor for instance are found, or if soil with artefacts concentrations, is excavated. A detailed materiality threshold will be determined prior to construction as part of the HHMP and staff involved in excavation work will be informed about how to apply it.

The unanticipated finds protocol will include actions such as:

- if the find meets the materiality threshold defined in the HHMP, work will immediately but temporarily cease within 5 m of the find and the site supervisor or appropriate responsible person will be informed;
- an archaeologist will be contacted to assess the find, where relevant, and determine if it is clearly a relic or has moderate to high potential to be a relic (this may require additional research);
- if the find is determined to be a relic, a s146 (of the Heritage Act) is to be forwarded to the Heritage Council who will be consulted on the appropriate management measure; and
- if the find is assessed and is not a relic, work inside the area that was made a no-go area can re-commence.

Appropriate management measures range from do nothing to archaeological excavation.

Table 8.1 Site management measures

Site ID	Site name	Site type	Significance / grading	Impact type	Project modifications	Management or mitigation options
HNE01	Demolition rubble	Built/archaeological	None/NA	None	None required	Include in general landscape digital photographic archival record. Passive protection.
HNE02	View to Dangars Lagoon	Landscape/aesthetic	None/High	None	None required	Include in general landscape digital photographic archival record.
HNE04	Deeargee Woolshed	Built/archaeological	State	None	None required	Include in general landscape digital photographic archival record. Avoid all project impacts to the curtilage of this item, which will protect HNE09 Old Gostwyck Woolshed as well.
HNE05	Old Gostwyck platform 1	Built/archaeological	State (potentially)/High	None	None required	Include in general landscape digital photographic archival record Passive protection.
HNE06	Old Gostwyck platform 2	Built/archaeological	State (potentially)/High	None	None required	Include in general landscape digital photographic archival record Passive protection.
HNE07	Toongabbie Station	Built/archaeological	State (potentially)/Exceptional	None	None required	Include in general landscape digital photographic archival record Passive protection.
HNE08	Remnant stockyard	Built/archaeological	Local (potentially)/Moderate	None	None required	Include in general landscape digital photographic archival record. Active protection.
HNE09	Old Gostwyck Woolshed	Built/archaeological	State/Exceptional	None	None required	Include in general landscape digital photographic archival record. Passive protection.
HNE10	Brick-making site	Built/archaeological	Local/High	None	None required	Include in general landscape digital photographic archival record. Passive protection of this item.
HNE11	Remnant basalt wall 1	Built/archaeological	State/High	Visual	None possible	Detailed digital photographic archival recording.

Table 8.1 Site management measures

Site ID	Site name	Site type	Significance / grading	Impact type	Project modifications	Management or mitigation options
						Topographic survey. Active protection of this item with the use of sturdy bollards to protect from accidental impacts.
HNE12	Remnant basalt wall 2	Built/archaeological	State/High	None	Will be avoided and protected.	Detailed digital photographic archival recording. Topographic survey. Provide a curtilage of 10 m around the entire wall and define with sturdy bollards to protect from accidental impacts.
HNE14	Granite tors	Landscape/aesthetic	None/High	None	Will be avoided.	Include in general landscape digital photographic archival record.
HNE15	View through Gostwyck Station	Landscape/aesthetic	None/High	Visual	None possible	Include in general landscape digital photographic archival record.
HNE16	View from granite tors	Landscape/aesthetic	None/Moderate	Visual	None possible	Include in general landscape digital photographic archival record.
HNE17	Historical Gostwyck shepherd's hut	Archaeological	State/Exceptional	None	Development footprint for central array area modified to avoid this site.	Detailed digital photographic archival recording. Active protection of this item with the use of sturdy bollards to protect from accidental impacts.
HNE18	Stockyard (recent, disused)	Built	None/Moderate	None	None required	Include in general landscape digital photographic archival record. Passive protection of this item.
HNE19	Remnant house archaeological site	Archaeological	Local (potentially)/High	None	Development footprint for northern array area modified to avoid this site.	Include in general landscape digital photographic archival record.
HNE20	Old Gostwyck Road alignment inside the development footprint and as part of the landscape.	Landscape	None/Little	None	None possible	Include in general landscape digital photographic archival record.

Table 8.1 Site management measures

Site ID	Site name	Site type	Significance / grading	Impact type	Project modifications	Management or mitigation options
HNE21	Remnant fence line	Landscape/aesthetic	None/Moderate	Physical	None possible	Detailed digital photographic archival recording. Topographic survey of fence line.
HNE26	Former stockyard	Built/archaeological	None/Moderate (potentially)	Physical	None possible	Investigate as part of the Aboriginal archaeological excavation. Include in general landscape digital photographic archival record.
HNE28	Spring Camp house site	Built/archaeological	Local (potentially)/High	None	None required	Include in general landscape digital photographic archival record. Active protection of this site to avoid accidental impacts.
HNE31	Farm house	Built/archaeological	Local (potentially)/High	None	None required	N/A
HNE34	Former stockyard	Built/archaeological	None/Moderate	Physical	None possible	Detailed digital photographic archival recording. Topographic survey. If possible avoid this item.
HNE35	Old Gostwyck Platform 3	Built/archaeological	State (potentially)/High	None	None required	Include in general landscape digital photographic archival record. Passive protection of this item.
HNE36	Saumarez Hut	Built/archaeological	State/Exceptional	None	Development footprint for northern array area modified to avoid this site.	Include in general landscape digital photographic archival record. Passive protection of this item.
HNE37	Cultural landscape	Overall cultural landscape and views	State/Exceptional	Physical/visual	Modifications to the development footprint made in a number of locations (refer Section 7.2).	Will require full archival digital photographic recording of development footprint and immediate surrounds prior to impacts. The development footprint and its surrounds are part of a larger significant cultural landscape, which will be partially physically impacted. Views will also be affected. Details of locations and subjects of

Table 8.1 Site management measures

Site ID	Site name	Site type	Significance / grading	Impact type	Project modifications	Management or mitigation options
						photographs to be included in the HHMP.
HNE38	Gostwyck Hall	Building	Local/Moderate	None	None required	Include in general landscape digital photographic archival record.
						Passive protection.
HNE39	Grave site	Two graves	Unknown/Moderate (potentially)	None	None required	Include in general landscape digital photographic archival record.
						Active protection with flagging.
HNE40	Site of two dwellings	Two dwellings	Local (potentially)/High	None	None required	Include in general landscape digital photographic archival record.
						Passive protection.
HNE41	Rows of poplars	Poplar wind break	None/Moderate	Physical	None possible	Include in general landscape digital photographic archival record.
HNE43	Former fence line	Landscape/aesthetic	None/High	Physical	None possible	Detailed digital photographic archival recording.
						Topographic survey of fence line.

9 Conclusion

This historical heritage assessment and SoHI has reviewed the history of the study area to determine significance that is based on known and predicted heritage values, the historical development of the area and the role it played in the development of the colony. The assessment was completed by analysis of texts, maps and plans, and through field assessment, to verify the level of potential for relics, the existence of a significant cultural landscape and individual structures, plantings and other evidence of historical use that has the ability to contribute to knowledge about important themes in NSW's history.

Most of the built and archaeological sites were found through landholder knowledge, with only a small number discovered through survey (namely HNE12 and HNE19). The level of field assessment that was completed for this report is considered to be suitable as the information has been obtained from individuals who have significant amounts of knowledge of the potential area of impact (ie the development footprint) and the broader study area. The predictive model also indicates that there is a low likelihood of more shepherd's huts within the development footprint as these features were spread across the squatting runs and not crowded in one location.

Impacts to heritage, largely to the visual aspect of the cultural landscape, will occur. If managed carefully, these impacts will not be great as all known significant archaeological sites have been excised from the development footprint. One minor and potential archaeological site (HNE26), being the stockyard shown on a c1867 plan, will be investigated as part of the Aboriginal archaeological test excavation proposed in the same location to be completed during either public exhibition of the EIS or the preparation of the RTS report. This will be to confirm if evidence survives in the landscape, which will contribute to future research questions. This item however, does not justify stand-alone test excavation.

The project is for the production of energy from solar power. A secondary outcome will be to drought-proof the affected properties, thereby allowing the activities that made the study area historically significant to continue.

References

Arnold Wothers Architects & Heritage Research and Conservation Services (AWA) 2000, *Deeargee Woolshed Conservation Plan*, report for Deeargee Pastoral Company Pty Limited and New South Wales Heritage Office.

Australia ICOMOS n.d., Understanding Cultural Landscapes, viewed 10 September 2018, available: https://australia.icomos.org/resources/australia-icomos-heritage-toolkit/cultural-landscapes/.

Bowdler S and J Coleman 1981 'The Aboriginal people of the New England tablelands: Ethnohistory and archaeology. *Armidale and District Historical Society Journal* Vol 24, pp 11–26.

Campbell, J F 1922. 'Discovery and Early Pastoral Settlement of New England', *Royal Australian Historical Journal and Proceedings, Vol. VIII, Part V,* pp 225–288.

Colonial Secretary's Office 1848 *New South Wales Government Gazette,* 11 August, no 87.

Connah, G 1975, "Current research at the Department of Prehistory and Archaeology, University of New England", in *Australian Archaeologist,* pp 28–31.

Croft 1990 *Matthew Henry and Eliza Mary Marsh, Charles William and Janetta Maria Marsh, their descendants and Salisbury Court,* National Trust, Uralla.

Esmaeili, H and Grigg, B 2016, *The Boundaries of Australian Property Law,* Cambridge University Press.

Evening News 1872 'Weekly Register, 26 February.

Ferry, J 1988, 'John and Grace Danger and the Gostwyck Estate' in Armidale and District Historical Society Journal, No. 31, p.99.

- 1995, "Mapping the New South Wales Free Selection Acts in colonial New England", in *Journal of the Australian Map Circle*, pp 29–42.

- 1999, *Colonial Armidale,* University of Queensland Press, St. Lucia.

Guilford E, 1966, 'Edward Gostwyck Cory (1797-1873)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/cory-.

Heritage Branch Department of Planning 2009 *Assessing Significance for Historical Archaeological Sites and 'Relics'*

Lawrence, S & Davies, P 2011, 'Pastoralism and Agriculture', In: *An Archaeology of Australia Since 1788. Contributions to Global Historical Archaeology*. Springer, New York, NY.

Legislative Assembly of NSW. 1904. Royal Commission on Sites for the Seat of Government of the Commonwealth: Report of the Commissioners with Appendices and Plans. *Papers respecting the selection of a site for seat of government of the Commonwealth.* Sydney, 1904 (second session).

Meinig 1979, *The Interpretation of Ordinary Landscapes: Geographical Essays*, Oxford University Press.

Museum of Australian Democracy n.d. *Documenting a Democracy* 'Crown Lands Acts 1861 (NSW)', viewed 18 June 2018, available: https://www.foundingdocs.gov.au/item-sdid-80.html.

NSW Heritage Council 2004, *Investigating Heritage Significance*.

- 2006, *Statements of Heritage Impact Guidelines*.
- 2011, *Assessing Heritage Significance*.

NSW Office of Heritage and Environment (OEH) 2016, 'New England Bioregion', viewed 18 June 2018, available: https://www.environment.nsw.gov.au/bioregions/NewEnglandTablelandBioregion.htm.

Oppenheimer, J 2006 'Homesteads' in Atkinson, Ryan, Davidson & Piper (eds) *High Lean Country: Land, People and Memory in New England,* Allen and Unwin, Crows Nest.

Palmberg, C 1977, "Introduction and Improvement of Poplars in Australia", *Australian Forestry*, 40:1, 20-27, DOI: 10.1080/00049158.1977.10675663.

Pickard, J 2008, 'Shepherding in Colonial Australia', *Rural History*, vol 19, issue 1, p. 55-80.

Roberts, D A 2006 'The Frontier' in Atkinson, Ryan, Davidson & Piper (eds) *High Lean Country: Land, People and Memory in New England,* Allen and Unwin, Crows Nest.

Starr, J & Nicholas, M 1978, *Pioneering New England,* Rigby, Adelaide.

Stuart, I 1999 'Squatting landscapes in south-eastern Australia (1820-1895)', PhD thesis, Prehistoric and Historic Archaeology, University of Sydney.

Stuart, I 2012 "Selection on the Cooleman Run, county of Cowley, New South Wales." *Journal of the Royal Australian Historical Society*, vol. 98, no. 1, 2012, p. 75ff.

Sydney Living Museum (SLM) 2017, Limits of location, viewed 14 June 2018, available: https://sydneylivingmuseums.com.au/convict-sydney/limits-location.

Walker, L 2006 'Gostwyck, an Ongoing History' in *Australian Garden History,* Vol 17, no 5.

Woodhouse, M C A 1993, 'Elements of a pastoral landscape: Holowiliena, South Australia in 1888' in *Australasian Historical Archaeology,* vol11 pp88-9.

SYDNEY
Ground floor, Suite 01, 20 Chandos Street
St Leonards, New South Wales, 2065
T 02 9493 9500

NEWCASTLE
Level 1, Suite 6, 146 Hunter Street
Newcastle, New South Wales, 2300
T 02 4907 4800

BRISBANE
Level 10, Suite 01, 87 Wickham Terrace
Spring Hill, Queensland, 4000
T 07 3648 1200

ADELAIDE
Level 1, 70 Pirie Street
Adelaide, South Australia, 5000
T 08 8232 2253

www.emmconsulting.com.au