Statement of Heritage Impact and Historical Archaeological Assessment

Blind Creek

May 2022

Project Number: 20-403

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Acronyms and abbreviations

AC	Alternating current
ACT	Australian Capital Territory
BCSF	Blind Creek Solar Farm
BESS	Battery Energy Storage Systems
Cm	Centimetres
Cwth	Commonwealth
DC	Direct current
DCP	Development Control Plan
DP	Deposited Plan
DPIE	Department of Planning, Industry and Environment (NSW)
EIS	Environmental impact statement
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cwth)
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
ha	Hectares
ICOMOS	International Council on Monuments and Sites
Km	Kilometres
kV	Kilovolt
LEP	Local Environment Plan
LGA	Local Government Area
LiB	Lithium-ion Battery
m	Metres
mm	Millimetres
MW	Mega-watts

MWh	Mega-watt hours
NGH	NGH Pty Ltd
NSW	New South Wales
OEH	(Former) Office of Environment and Heritage (NSW) (now Heritage NSW)
PCU(s)	Power Conversion Unit(s)
PV	Photovoltaic
SEARs	Secretary's Environmental Assessment Requirements
SSD	State Significant Development

Table of definitions

Project	**Blind Creek Solar Farm (BCSF)**
Proponent	Blind Creek Solar Farm Pty Ltd (BCSF Pty Ltd).
Subject Land	All lots affected by the development.
Development site	The Development site is the area surveyed for the assessment prior to identifying the constraints and exclusions. The area is 1,026ha. Refer to Figure 1-1
Development footprint	The uppermost area of land that would be directly impacted by the Project including solar arrays, perimeter fence, access roads, transmission line footprint and areas used to store construction materials and manage environmental impacts (including all temporary and permanent impacts). Approval is sought for this area, to enable micro-siting of infrastructure during post approval detailed design. Generous delineation of this footprint in the EIS allows flexibility during the final design stages of the project. The final disturbance is likely to be smaller than the Development footprint presented within this EIS, subject to detailed design with appointed contractors (refer to Indicative infrastructure layout definition below). The area is 680-700ha. Refer to Figure 1-3
Indicative infrastructure layout	The Indicative infrastructure layout shows where key infrastructure components would be likely be located within the Development footprint. It most closely represents the area of actual impact required to construct and operate the solar farm. The final infrastructure layout will be subject to detailed design with appointed contractors. The area is approximately 475ha. Refer to Figure 1-4

Executive summary

Background information

NGH Pty Ltd (NGH) was commissioned by Blind Creek Solar Farm Pty Ltd (BCSF) to prepare a Statement of Heritage Impact (SOHI) and Historical Archaeological Assessment (HAA). This assessment is required to inform an Environmental Impact Statement (EIS) for the State Significant Development (SSD#: 13166280) referred to as the Blind Creek Solar Farm (BCSF). The proposed works to construct the solar farm have the potential to impact on heritage sites and historical archaeology. This assessment is a requirement of the Secretary's Environmental Assessment Requirements (SEARs), issued 11 February 2021.

Proposed Blind Creek Solar Farm

The Development site for the BCSF is 1,026 hectares (ha) on land extending from the south eastern shoreline of Lake George, New South Wales (NSW) and includes a development footprint of 700 ha. The Development site is accessed via Tarago Road, approximately 8km north of Bungendore, NSW, and 35km north east of Canberra, ACT, within the Queanbeyan-Palerang Local Government Area (LGA) of NSW (Parishes of Currandooly and Ellenden, County of Murray).

Project objective

The Project includes the following main items of infrastructure:

- Up to approximately 850,000 PV solar modules mounted on a single axis tracking system, up to 5m high.
- Up to approximately 85 inverters and transformers, most likely containerised in modified shipping containers, together known as Power Conversion Units ('PCUs').
- Steel mounting frames with pile-driven foundations to hold the tracking system.
- An onsite 330kV substation containing up to four transformers and associated switchgear to facilitate connection to the national electricity grid. This will cut into the existing 330kV transmission line that passes through the site.
- Battery Energy Storage Systems (BESS) and equipment, including up to nominally 300MW of lithium-ion batteries with inverters. The batteries may be configured in either a DC-coupled format by distributing batteries through the site, or in an AC-coupled layout by placing all batteries in a purpose-built facility.
- Underground power cabling to connect solar modules, combiner boxes, PCUs and batteries.
- Underground auxiliary cabling for power supplies, data services and communications.
- Buildings to accommodate a site office, switchgear, protection and control facilities, maintenance facilities, storage and staff amenities.
- A communications tower for high reliability grid operations.
- Internal tracks for construction, operation, and maintenance activities.
- Internal fencing of paddocks to contain grazing livestock.
- Stock fencing.
- Native vegetation planting to provide visual screening for specific receivers.

During the construction phase, temporary facilities would be established on the site. These will include:

- A construction laydown area with secure compound.

- Construction site offices and amenities.
- Car and bus parking areas for construction staff.

The works aim to have:

- no impact on locally listed *Currandooley* property (I175) on the grounds that it would have no impact on its physical and visual curtilage or historical heritage values,
- no impact on locally listed *Werriwa* property (I233) on the grounds that it would have no impact on its physical and visual curtilage or historical heritage values,
- to avoid any identified items or potential archaeological deposits with heritage values.

Heritage Items, Significance Assessment, Impact Assessment

Heritage Item	Proximity to the Project location	Statutory Heritage Listings	Rationale for inclusion in this report	Significance Assessment	Impact Assessment
Historical archaeological (non-Aboriginal) potential	The entire Development site	None	The Development site is part of land that was first subject to NSW colonial land grants in the 1830s. European settlers-built homesteads and used the land for grazing. The remains of the Currandooley Homestead, located on the southern bank of the Butmaroo Creek, which is outside of the proposed development footprint. There is the potential that the proposed ground disturbing works could impact upon archaeological evidence of the early settlement and pastoral practices of the land within the Development site.	Although there is nil-low potential for archaeological resources within the development footprint associated with the original land grants, any historical archaeological materials may have local significance for their ability to reveal information about the early European settlement of the Lake George region which cannot be garnered from available historical sources.	Nil-negligible potential to impact significant historical archaeological resources. The development footprint of the proposed Blind Creek Solar Farm is located on land that has been paddocks for grazing since the early land grants of the 1830s. The historical homesteads associated with the land consist of the original Currandooley homestead located south of Butmaroo Creek, outside of the development footprint, and the existing Currandooley homestead, located to the north of the Development site.
Trigonometrical Survey Station	Located within the Development site, inside the northern boundary.	None	The Trig Station was built in the early 1870s as part of trigonometrical baseline survey for NSW. Whilst the proposed works will not physically impact the structure, with a 10-15 metre buffer excised from the proposed development footprint, it is important to consider the potential impact of proposed works to ensure appropriate management.	The Trig Station within the BCSF Development site was constructed between 1870 and 1874 as part of the trigonometrical survey of NSW. This survey was commenced at Lake George and was undertaken by Major Thomas Mitchell and Robert Dixon, who had worked to create the 'Map of Nineteen Counties'. Governor Darling engaged Major Mitchell to undertake a trigonometrical survey of NSW to enable a more accurate mapping of NSW than previously achieved. Lake George was selected for the commencement of the trigonometrical survey Four attempts at establishing a base line have occurred at Lake George. The first was in 1828 by Thomas Mitchell, although no evidence has been found. The second was established by Government Astronomer GR Smalley in 1867 which is believed to have been marked by five stone pillars. That line was inundated and in 1870 the Surveyor General PF Adams commenced the third base line which was also inundated. A fourth attempt, further away from the lakebed, was made in 1873 when the north pillar was built and the baseline measured between the Trig Station within the BCSF Development site and another survey marker located approximately 9 kms to the south, completed in 1884 (Plowman 2009). The Trig Station has historic and association heritage significance at a state level for the role that it played in the trigonometrical survey commenced by Major Thomas Mitchell in the 18th century.	Nil-negligible impact on the unlisted Trigonometrical Station. This assessment has assessed the Trig Station to potentially have historical significance at a state level. The Trig Station is a relic of the 19th century trigonometrical survey of NSW. Trig Stations are built with consideration of the landscape so that they are visible and have a line of site to other markers. Surveyors, including Caption Major Mitchell, Dixon and Smalley, undertook a baseline survey at Lake George. The development footprint will excise the Trig Station by 10-15 metres. The Trig Station is located on elevated ground and at 4.3 metres will stand taller than the solar array, which will be installed on land that slopes away to the south of the Trig Station. The southern most Trig marker is located over 8kms away and is not visible with the naked eye or with binoculars. While it is recognised that the Project would alter the setting and visual curtilage of the Trig Station, the historical line of site to the south that forms the baseline no longer exists due to the planting and growth of vegetation within that property. The Trig Station within the BCSF Development site currently has no protection from livestock and machinery, however the proposed works will include the installation of a fence along the proposed buffer around the Trig Station which will help to protect the site from damage in the future.
Currandooley	The property is 1250 Ha located adjacent to the north of the Development site. Whilst the property boundary overlaps with the Development site it will not be impacted upon by the	Locally listed (Palerang LEP, listing ID: I175)	This listing includes the historical homestead and farm complex. The history of *Currandooley* is connected to the Development site through land grants and subdivisions. This report considers any potential historical archaeology and viewsheds that may be impacted by the proposed solar	Currandooley has belonged to the same family for more than 140 years. It represents a time of prosperity and development in NSW's rural areas and the aspirations at the time of successful landholders. Designed by renowned Sydney architect Ferdinand Reuss, the French style architecture and the extent of stonework for all major outbuildings are unusual and rare features for rural Australia. The impressive two storey homestead is set amongst old plantings of elms and pines and the whole complex presents a	Outside of the development footprint. No physical impacts. No visual impacts.

Heritage Item	Proximity to the Project location	Statutory Heritage Listings	Rationale for inclusion in this report	Significance Assessment	Impact Assessment
	development footprint. The homestead is located approximately 2.4 km from the northern extent of the Development site.		farm development.	particularly attractive image on arrival in the forecourt. Despite the previous fire there is a high degree of intactness and integrity especially architecturally. Overall a high degree of original intactness and integrity.	
Werriwa Homestead	Located outside of the Development site, approximately 1km to the east	Locally listed (Palerang LEP, listing ID: I233)	Since this property is listed on the LEP this report considers any potential viewsheds that may be impacted by the proposed solar farm development.	*An interesting example of the evolution of a homestead from the 1880s to the late 20th century. Association with some of the main 19th century pastoral families of the district. The buildings demonstrate architectural trends over a century as well as stonemasonry skills and joinery craftsmanship.*	Outside of the development footprint. No physical impacts. No visual impacts.

Recommendations

Recommendation 1: Stock fence around the Trig Station

It is recommended that a stock fence be installed along the proposed buffer around the Trig Station. There is currently no protection from livestock.

Recommendations 2: Archival Recording of the Trig Station

It is recommended that a photographic archival recording of the Trig Station be prepared in accordance with Heritage NSW guideline, *Photographic Recording of using Film or Digital Capture (2006)*. Making a photographic record of a heritage place or object documents it for the future, before it is lost or changed, either by progressive iterations or by time.

It is recommended that the photographic recording include additional research to confirm the existence of other Trig Station or markers that formed the baseline survey at Lake George in the 1870s. The photographic recording should include photos, descriptions and a brief historical account of these identified survey markers and their relationship to each other.

Recommendation 3: Unexpected Finds Procedure

Should historical archaeological materials be uncovered while undertaking works to develop the Blind Creek Solar Farm, all activities must stop, and Heritage NSW be immediately notified. An appropriately qualified archaeologist should also be consulted for the purpose of implementing best practice protection and conservation measures while the relevant approvals are obtained.

1. Introduction

1.1. Background

Blind Creek Solar Farm (BCSF) Pty Ltd propose to construct the Blind Creek Solar Farm on the south eastern shore of Lake George, NSW. This project has been determined as a State Significant Development (SSD#: 13166280).

NGH Pty Ltd (NGH) was commissioned by BCSF Pty Ltd to assess the potential impacts of works to construct the proposed BCSF upon historic (post-European settlement), non-Aboriginal, heritage sites, archaeology and values within the Development site (defined below in section 1.2). This assessment is a requirement of the Secretary's Environmental Assessment Requirements (SEARs), issued 11 February 2021.

NGH has prepared this Statement of Heritage Impact (SOHI) and Historical Archaeology Assessment (HAA) to inform an Environmental Impact Statement (EIS) for the SSD.

1.2. Location of the proposed Blind Creek Solar Farm

The Development site for the BCSF is 1225 hectares (ha) on land extending from the south eastern shoreline of Lake George, Australian Capital Territory (ACT) and includes a development footprint (Development site) of 700 ha. The Development site is accessed via Tarago Road, approximately 8km north of Bungendore, NSW, and 35km north east of Canberra, ACT, within the Queanbeyan-Palerang Local Government Area (LGA) of NSW (Parishes of Currandooly and Ellenden, County of Murray), refer to Figure 1-1 and Figure 1-2, below.

The Development site comprises of 1,225ha within the following Lot and Deposited Plans (DPs):

- Lot 2 DP1154765
- Lot 4 DP237079
- Lot 1 DP237079
- Lot 1 DP456698
- Lot 1 DP1154765
- Lot 9 DP237079
- Lot 2 DP237079
- Lot E DP38379
- Lot 3 DP237079

Lot 17 DP535180The substation, operations and maintenance building, and battery pad (if AC coupled) would occupy a portion of Lot 1 DP456698.

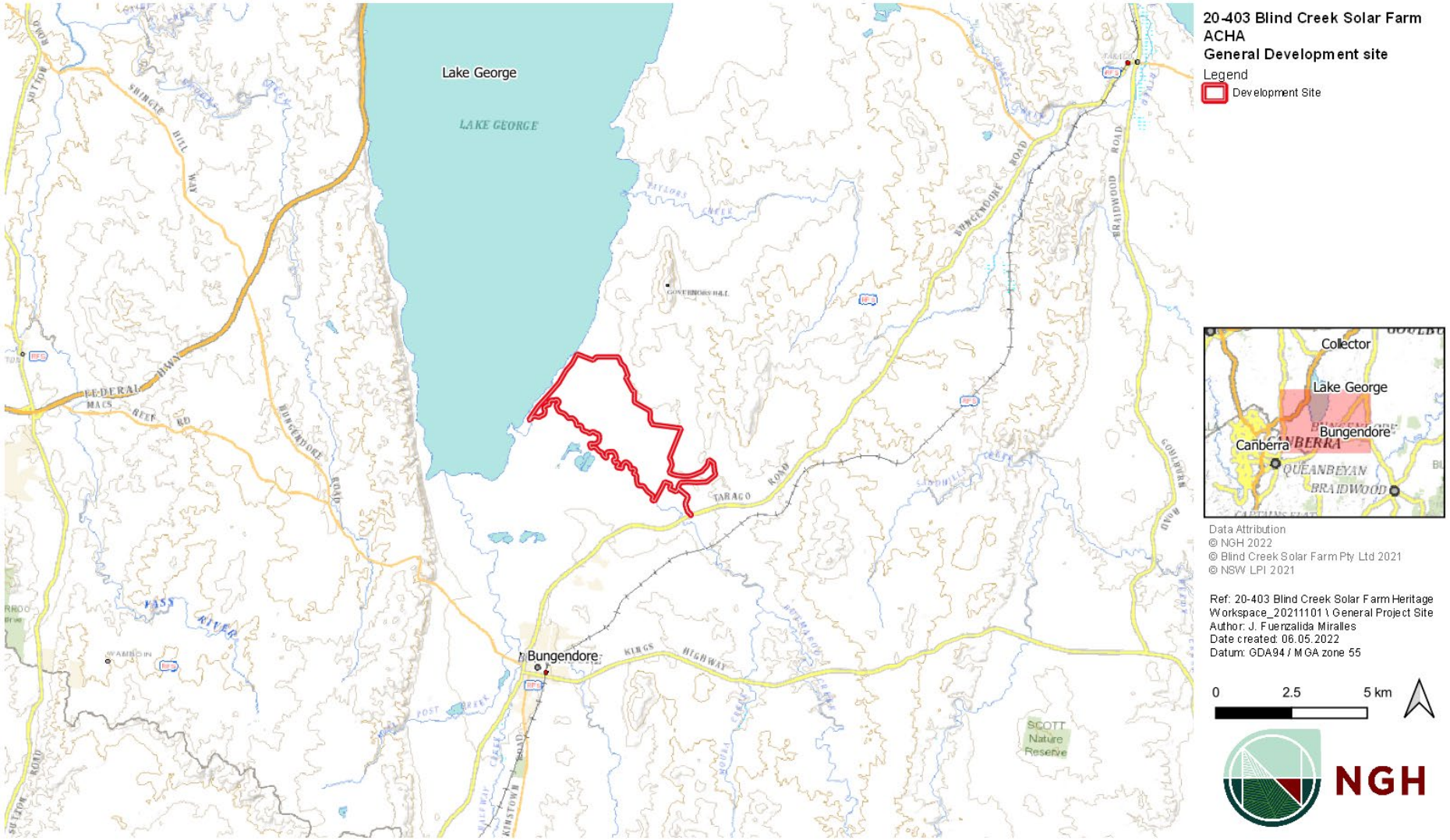

Figure 1-1 Blind Creek Farm Development site location map

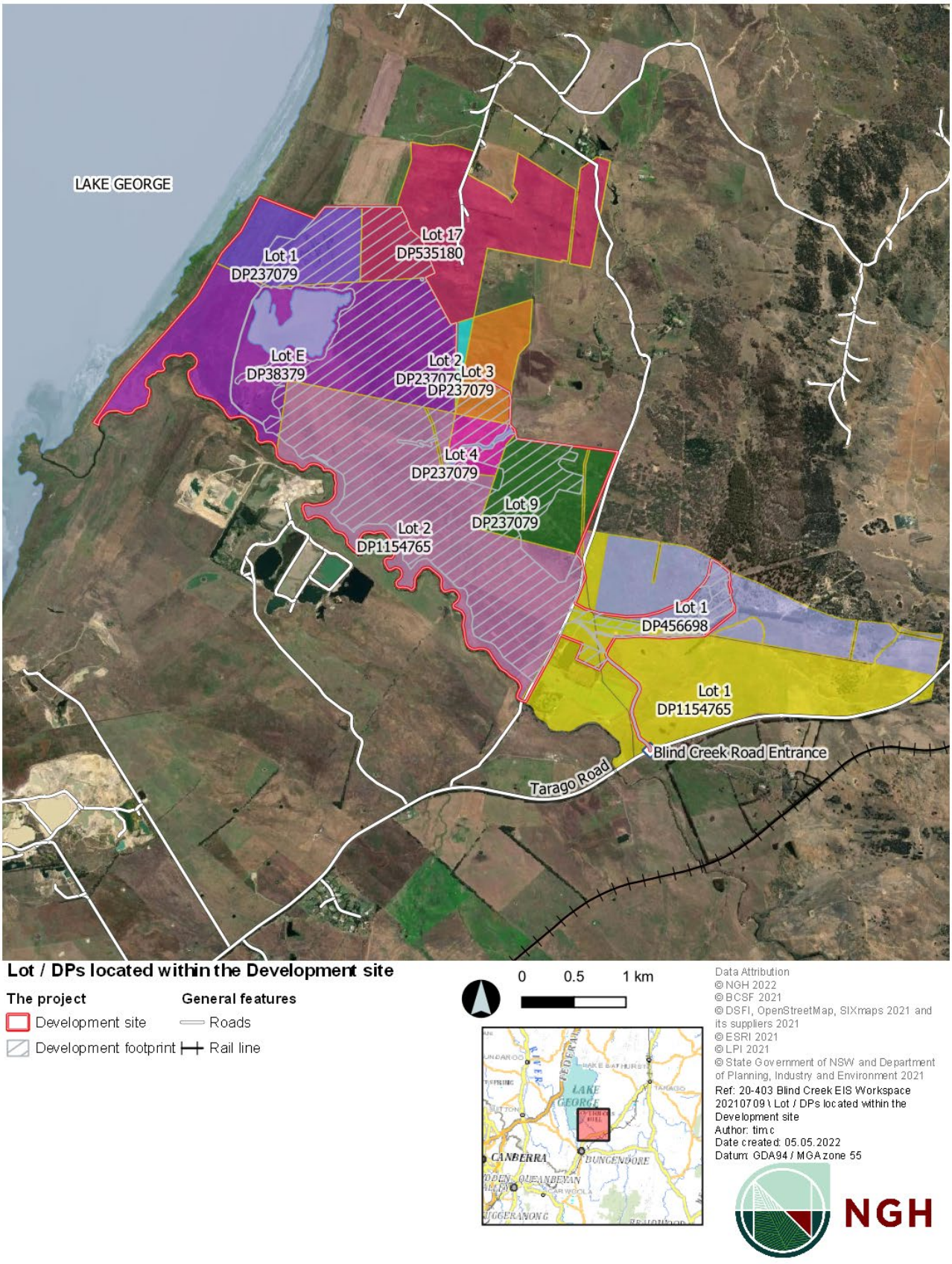

Figure 1-2 Blind Creek Solar Farm Development site showing Lot and DPs

1.3. Project objective

The Project includes the following main items of infrastructure:

- Up to approximately 850,000 PV solar modules mounted on a single axis tracking system.
- Up to approximately 85 inverters and transformers, most likely containerised in modified shipping containers, together known as Power Conversion Units ('PCUs').
- Steel mounting frames with pile-driven foundations to hold the tracking system.
- An onsite 330kV substation containing up to four transformers and associated switchgear to facilitate connection to the national electricity grid. This will cut into the existing 330kV transmission line that passes through the site.
- Battery Energy Storage Systems (BESS) and equipment, including up to nominally 300MW of lithium-ion batteries with inverters. The batteries may be configured in either a DC-coupled format by distributing batteries through the site, or in an AC-coupled layout by placing all batteries in a purpose-built facility.
- Underground power cabling to connect solar modules, combiner boxes, PCUs and batteries.
- Underground auxiliary cabling for power supplies, data services and communications.
- Buildings to accommodate a site office, switchgear, protection and control facilities, maintenance facilities, storage and staff amenities.
- A communications tower for high reliability grid operations.
- Internal tracks for construction, operation, and maintenance activities.
- Internal fencing of paddocks to contain grazing livestock.
- Stock fencing.
- Native vegetation planting to provide visual screening for specific receivers.

During the construction phase, temporary facilities would be established on the site. These will include:

- A construction laydown area with secure compound.
- Construction site offices and amenities.
- Car and bus parking areas for construction staff.

Further and more detailed information relating to the construction and infrastructure requirements and the potential associated ground disturbance are provided in Section 5.1.

Figure 1-4 provides an indicative design, upon which this assessment is largely based. The design may be subject to change according to engineering, construction and approval requirements.

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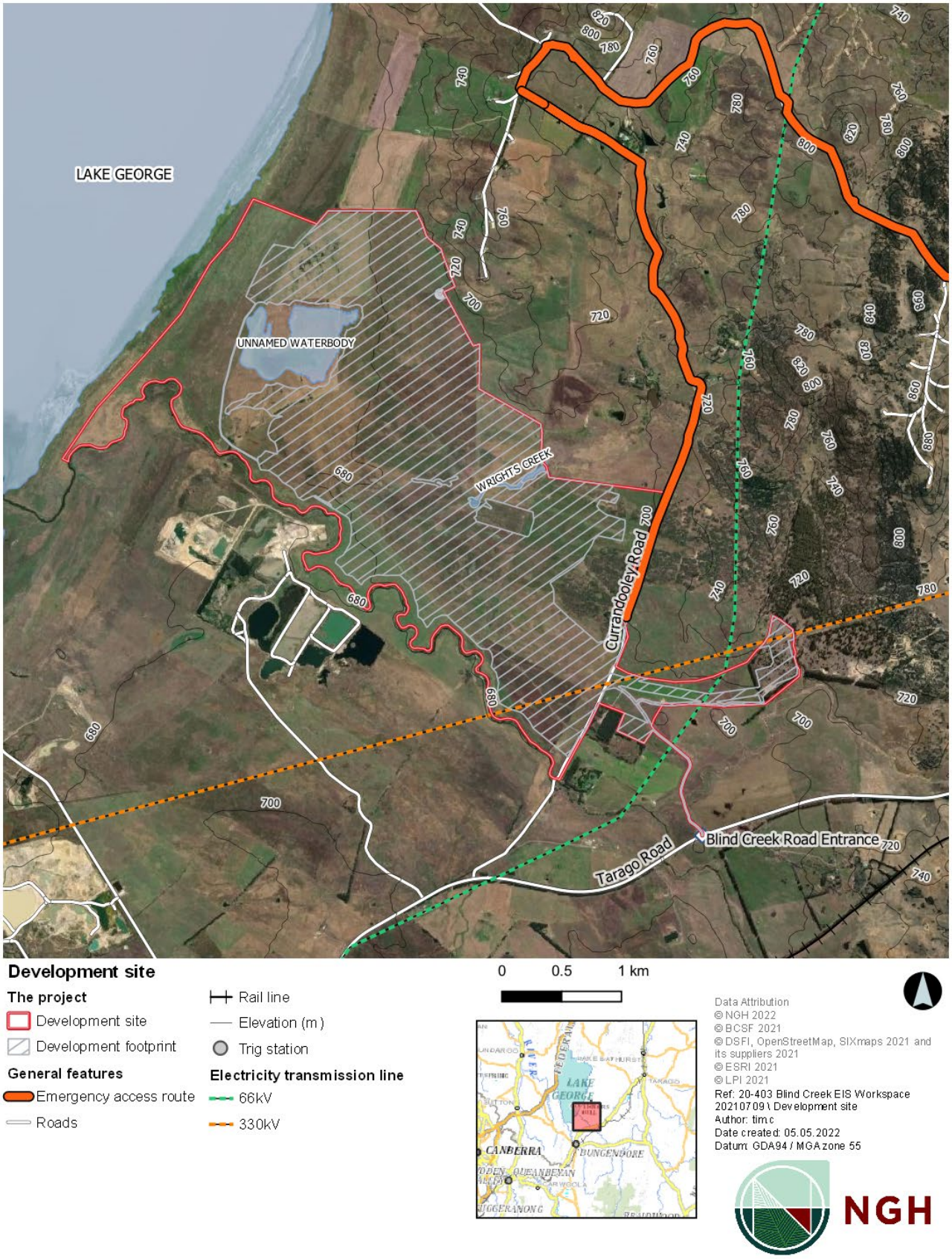

Figure 1-3 Blind Creek Solar Farm Development site and Development footprint showing indicative ground disturbance activities.

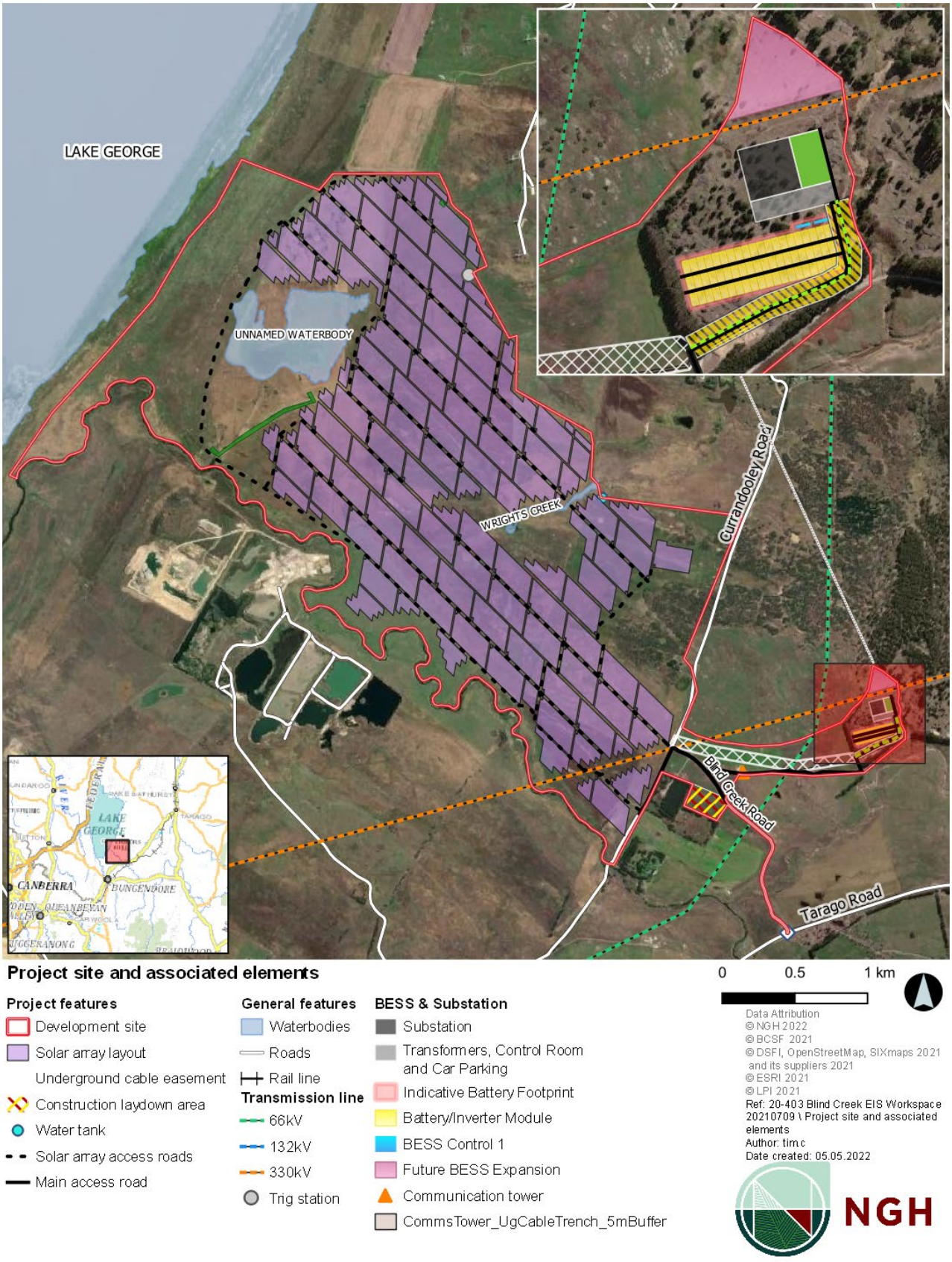

Figure 1-4 Indicative infrastructure layout

1.4. Approach

The Development site is located within the local government area of Queanbeyan-Palerang Regional Council. The region has a rich local heritage that includes early NSW colonial exploration, European settlement and pastoralism, and gold prospecting and mining. The purpose of this study is to assess the potential impact upon any historic (non-Aboriginal) heritage sites, values, and archaeological potential as a result of the proposed works.

The report specifically includes the following:

- Searches of all statutory and non-statutory heritage databases. This includes the Australian Heritage Database (National and Commonwealth Heritage Lists, as well as the archived and non-statutory Register of the National Estate), and the NSW State Heritage Inventory.
- Search of the Palerang Local Environmental Plan (LEP; 2014).
- Site visit and condition assessment of the heritage items.
- Assessment of the heritage significance of the site and heritage items, and determination of the impacts on these items and if they are acceptable.
- Recommendations are provided accordingly that would help to avoid, minimise or mitigate against impacts to the identified cultural heritage values of the heritage items.

Whilst the proposed BCSF has been designated as a State Significant Development and therefore does not require approvals from local government, this report has been prepared to align with the local government planning instruments, namely the Palerang Local Environmental Plan (LEP; 2014) and the Palerang Development Control Plan (DCP; 2015). The Heritage Schedule of the LEP was informed by a thematic history, prepared for Council in 2008 (Plowman 2008), which NGH has utilised as a source for this assessment.

This SOHI and HAA has identified four (4) heritage sites to assess, listed below in Table 1-1 and shown in Figure 1-4.

Table 1-1. Heritage sites subject to this heritage impact assessment.

Heritage Item	Proximity to the Project location	Statutory Heritage Listings	Rationale for inclusion in this report
Historical archaeological (non-Aboriginal) potential	The entire Development site	None	The Development site is part of land that was first subject to NSW colonial land grants in the 1830s. European settlers-built homesteads and used the land for grazing. The remains of the Currandooley Homestead are located on the southern bank of the Butmaroo Creek, outside of the proposed development footprint. There is the potential that the proposed ground disturbing works could impact upon archaeological evidence of this early settlement and pastoral practices.
Trigonometrical Survey Station	Located within the Development site, inside the northern boundary.	None	The Trig Station was built in the early 1870s as part of trigonometrical baseline survey for NSW. Whilst the proposed works will not

Heritage Item	Proximity to the Project location	Statutory Heritage Listings	Rationale for inclusion in this report
			physically impact the structure with a 10-15 metre buffer to be excised from the proposed development footprint, it is important to consider the potential impact of proposed works to ensure appropriate management.
Currandooley	The property is immediately adjacent and located to the north of the Development site. Whilst the property boundary overlaps with the Development site it will not be impacted upon by the development footprint. The homestead is located approximately 2.4 km from the northern extent of the Development site.	Locally listed (Palerang LEP, listing ID: I175)	This listing includes the historical homestead and farm complex. The history of *Currandooley* is connected to the Development site through land grants and subdivisions. This report considers any potential historical archaeology and viewsheds that may be impacted by the proposed solar farm development.
Werriwa Homestead	Located outside of the Development site, approximately 1km to the east	Locally listed (Palerang LEP, listing ID: I233)	Since this property is listed on the LEP this report considers any potential viewsheds that may be impacted by the proposed solar farm development.

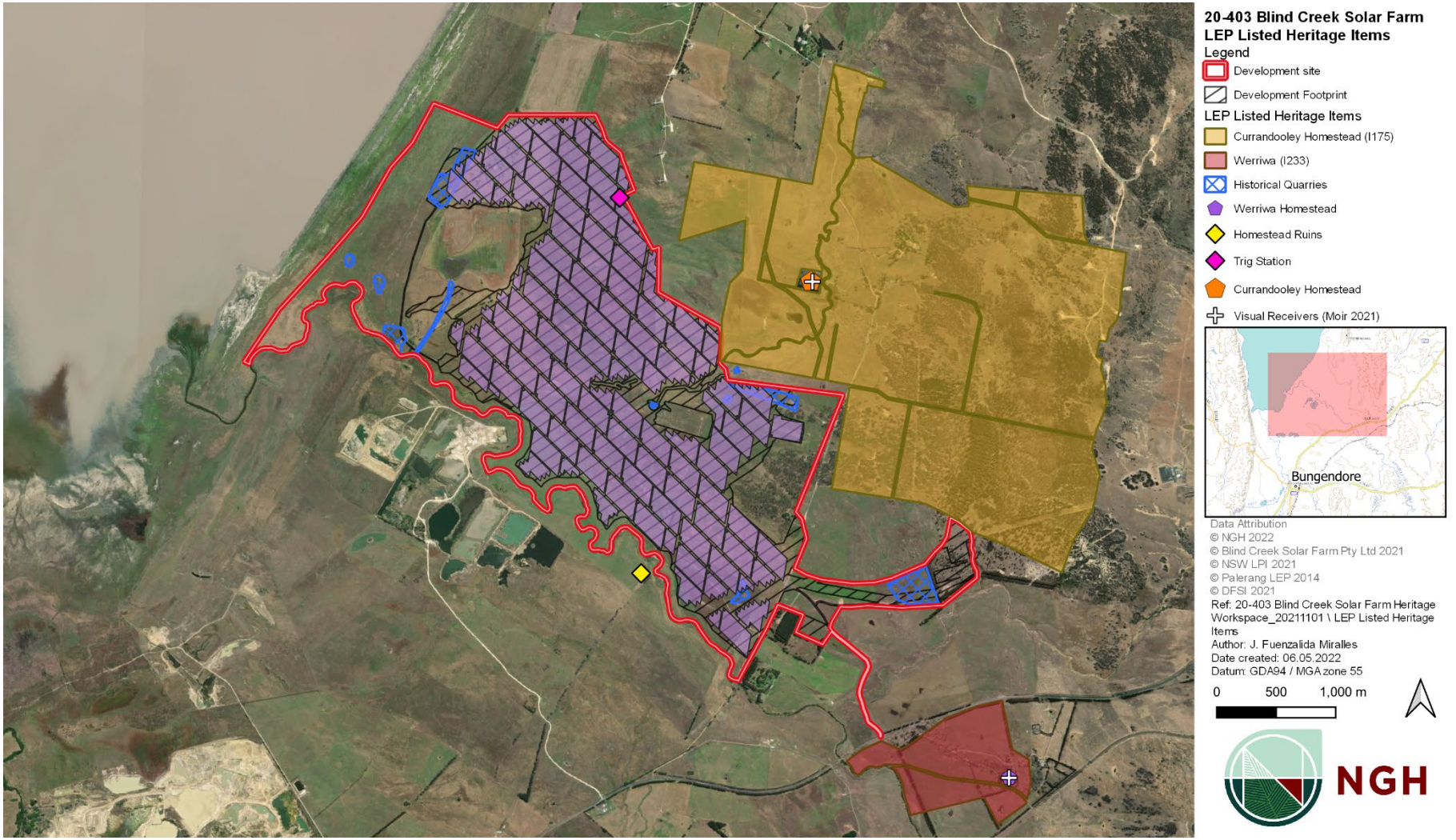

Figure 1-5 Heritage Items subject of this assessment within and adjacent to the proposed Blind Creek Development site (historical sand quarries are not heritage items but are provided to indicate areas of ground disturbance, which is a consideration to inform an assessment of potential archaeology.

1.5. Important report terminology

Apart from the Acronyms, Abbreviations and Definitions provided after the table of contents, there are a few important terms used in this report that require some clarification.

1.5.1. 'Ngungara' or 'Weereewa' (Lake George)

NGH has been informed that the traditional name for Lake George is either 'Ngungara' or 'Weereewa' (with variations on the spelling), depending upon the traditional language of the speaker. The name recorded by Charles Throsby in the 1820s for Lake George was Wee:ree:waa, which is now frequently spelled 'Weereewa'. The name Weereewa has been suggested to be a Wiradjuri word and not the name used by the local Aboriginal people who used the word, 'Ngungara'. NGH refers to 'Lake George' only for consistency with reference to environmental and geographic mapping and data. This report uses 'Weereewa' when quoting historical, European references, and we use Ngungara/Weereewa when referring to the name that local and visiting Aboriginal people are likely to have used.

1.5.2. Historical Archaeology (Non-Aboriginal/European)

Historical Archaeology (Non-Aboriginal/European) in NSW is the study of the physical remains of the past, in association with historical documents, since the British occupation of NSW in 1788.

Below are definitions of specific terms used and discussed throughout this report.

- **Archaeological Sites**:

Archaeological sites include above-ground and subsurface evidence of people living, working, altering the landscape, and dying. This evidence includes:

  - buildings, building remains and foundations,
  - occupation deposits,
  - rubbish pits,
  - cesspits,
  - dams and wells,
  - cultural landscapes, such as major foreshore reclamation.

- **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 (NSW Heritage Act 1977, Definitions, Part 1.4)

- **Archaeological Potential**

Archaeological potential is defined as a site's potential to contain archaeological relics which fall under the provisions of the *Heritage Act 1977* (amended). This potential is identified through historical research and by judging whether current building or other activities have removed all evidence of known previous land use.

- **Research Potential**

The ability of archaeological evidence, through analysis and interpretation, to provide information about a site that could not be derived from any other source and which contributes to the archaeological significance of that site and its 'relics'.

1.6. Report structure

This report:

- Outlines the background of the current Project (Section 1).
- Discusses issues such as statutory heritage listings and legislative requirements (Section 2).
- Provides a brief summary in terms of an historical and physical overview of the place (Section 3).
- Provides a description and evaluates the significance of affected items (Section 4).
- Provides a description of the proposed works and assesses the potential impacts from the Project (Section 5).
- Makes recommendations regarding the items in regard to those impacts (Section 6).

1.7. Authorship

The assessment was undertaken by NGH archaeologist Jakob Ruhl. NGH archaeologists, Jorge Fuenzalida Miralles, Ali Byrne, Kirwan Williams, Miles Robson, Tom Knight, Bronwyn Partell and Matthew Barber participated in the survey of the Development site.

NGH Senior Heritage Consultant Ingrid Cook provided a technical review of the report. Ali Byrne, Regional Manager, reviewed the report for quality assurance purposes.

1.8. Acknowledgements

NGH acknowledges that we work on the traditional lands of the Ngun(n)awal people and recognises the enduring connection to the land. We pay our respects to elders, past present and emerging.

2. Legislative and Non-Statutory Considerations

Places of heritage value can be subject to different levels of recognition and protection. This protection (at local, state and national levels) includes specific measures for the protection of heritage items. The text below provides a summary of the legislative framework at each level of government.

2.1. Environmental Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework for the protection and management of places of national environmental significance. The heritage lists addressed by the EPBC Act include the United Nations Educational, Scientific and Cultural Organisation (UNESCO), World Heritage List (WHL), National Heritage List (NHL) and the Commonwealth Heritage List (CHL).

The Australian Heritage Database (AHD) includes the NHL, which includes the natural, historic and indigenous places that are of outstanding national heritage value to the Australian nation. The AHD also contains the CHL, which comprises those places on Commonwealth lands and waters, or under Australian Government control which could possess heritage value. Items on both of these lists are protected under the EPBC Act. The AHD also includes places listed as World Heritage value by UNESCO.

References to the Register of the National Estate (RNE) were removed from the EPBC Act in 2012. The RNE is no longer a statutory list but remains an archive of information about more than 13,000 places throughout Australia.

The AHD was searched when research commenced for this assessment, and again upon completion of the report. No listings were identified related to the historical (non-Aboriginal) heritage significance of Lake George. However, three entries are listed on the Register of the National Estate for Lake George in relation to it's geological and biodiversity heritage values. While providing a contribution to understanding the character and heritage values of the Development site, the RNE listings do not provide any insight into the historical (non-Aboriginal) heritage significance of Lake George.

2.2. NSW Heritage Act 1977

State Heritage Register

Natural, cultural and built heritage is protected in NSW under the Heritage Act 1977. Administration of the Act is currently in transition from the Heritage Division of the NSW Office of Environment and Heritage to Heritage NSW, Community Engagement Group of the Department of Premier and Cabinet.

The Act creates the State Heritage Register (SHR) which provides permanent protection for State Significant heritage items and places. Items of State heritage significance are defined as a place, building, work, relic, moveable object or precinct which is of historical, scientific, cultural, social, archaeological or natural significance to the State (Section 4A(1) of the Act). The effect of SHR listing is that a person cannot damage, destroy, alter or move an item, building or land without approval from the Heritage Council. Information about items included on the SHR can be found in the NSW State Heritage Inventory (SHI), an electronic database of statutory listed heritage items in NSW.

The Heritage Council of NSW, constituted under the Heritage Act 1977, is appointed by the Minister for Heritage and is responsible for heritage in NSW. The Council reflects a cross-section of community, government and conservation expertise with Heritage NSW being the operational arm of the Council.

The 2001 NSW Heritage Manual Update, published by the NSW Heritage Office (now 'Heritage NSW') provides guidelines for 'Assessing Heritage Significance'. The Manual includes specific criteria for assessing heritage significance and the significance assessment within this report has been completed in accordance with these guidelines.

When items are listed on the SHR applications to carry out works on those items need to be made to the Heritage Council under Section 60 of the Act.

A search of the Project Area and surrounds indicated that there are no items listed on the SHR within proximity of the Development site.

State Agency Heritage Registers

Under Section 170 of the Heritage Act, State agencies and authorities in NSW are required to keep a register of heritage places for which they are responsible. The s.170 registers are also held in the SHI.

A search of the Project Area and surrounds indicated that there are no items listed on any s.170 within proximity of the Development site.

Historical Archaeology

The Heritage Act gives statutory protection to relics that form part of historical archaeological deposits.

The NSW *Heritage Act* is designed to protect heritage state-wide. Amendments to the *Heritage Act* in 2009 changed the definition of a 'relic' and provided provisions for these archaeological sites to be protected under the NSW *Heritage Act*. The *Heritage Act* (as amended 2009), section 4(1) defines a relic as;

> *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.*

This report has been drafted in accordance to the NSW Office of Environment and Heritage's *Assessing Significance for Historical Archaeological Sites and 'Relics'* (OEH 2010). The guidelines provide advice on how to assess the heritage significance of known and potential archaeological resources, features or deposits.

The practical application of the changes to the *Act* is that is not necessary to apply for exemptions if an item has been assessed as having no heritage significance. Sections 139-145 of the Heritage Act prevents the excavation or disturbance of land for the purpose of discovering, exposing or moving a relic, except in accordance with an excavation permit issued by the Heritage Council of NSW. The level of heritage significance of an item determines the excavation permit necessary for the works.

If any works require excavation to be undertaken on an item of local heritage significance, a Section 140 excavation permit under the Heritage Act 1977, or a Section 139 Exception will be required from the Heritage Council. Any works that require a Section 140 excavation permit will require an Archaeological Assessment, Research Design and Methodology that details the proposed archaeological work and an archaeologist present during any excavation works.

Section 139 prohibits the excavating or disturbing of land leading to a relic being discovered, exposed, moved, damaged or destroyed. To excavate and disturb land in the context of the NSW Heritage Act is associated with the activity of digging or unearthing. The new definition also indicates that the 'relic' being exposed or disturbed is considered significant (or has the potential to be significant) at the time of its excavation, removal or destruction.

A S139 (1B) exception is for excavation or disturbance of land that will have a minor impact on archaeological relics including the testing of land to verify the existence of relics without destroying or removing them.

Whilst SSD do not require specific excavation permits for work if archaeology is identified, a brief assessment (this document) of the potential for archaeology within the project area is required prior to SSD approval.

2.3. NSW Environmental Planning & Assessment Act 1979

The *Environmental Planning & Assessment Act 1979* (EP&A Act) controls land use planning in NSW. The planning system established by the EP&A Act requires that local authorities prepare an LEP and associated DCP under Part 3. These planning instruments include provisions relating to the management and protection of heritage and in particular, the LEP contains a schedule of all known heritage items within an LGA which are subject to these protections.

Heritage items are added to the heritage schedule of a LEP often following identification and assessment from a local shire heritage study. The SHI also holds local heritage items listed by local councils in NSW. These items are given protection by the heritage provisions within the relevant plan, which will then require consent of Council for certain developments.

2.3.1. Palerang Local Environmental Plan, 2008

Land use planning policy in Queanbeyan-Palerang Regional Council is defined through the Local Environmental Plans, Development Control Plans, Community Plans of Management, section 94 Development Contribution Plans, Local Planning Agreements, section 7.11 Development Servicing Plans and NSW State Environmental Planning Policies.

The Development site falls within the boundaries of the Palerang LEP (2014). The LEP identifies and protects heritage conservation areas and listed buildings/items, identifies environmentally sensitive land, and prescribes land use practices. Heritage items (if any) are listed and described in Schedule 5. Heritage conservation areas are shown on the Heritage Map as well as being described in Schedule 5.

There are a number of local heritage items in the vicinity of the project area, however there are only 2 listed sites that are within relative proximity on the surrounding blocks to the Development site, listed in Table 2-1 (below).

Table 2-1. LEP listed heritage items within close proximity to the Development site

Name and Listing ID	Details
1. Currandooley Homestead, including garden and stables *Palerang LEP ID: I175* *Inventory datasheet: LG2*	Currandooley Road, Bungendore Currandooley is an historical property listed on the Palerang LEP as an item of local significance. The property is formally described as Lot 11, DP237079. The property is immediately adjacent and located to the north of the Development site. Whilst the property boundary overlaps with the Development site it will not be impacted upon by the development footprint. The homestead is located approximately 2.4 km from the northern extent of the Development site. Listing includes: Homestead, barn, stables, outbuildings, cottage, shearing

Name and Listing ID	Details
	shed, plantings, cemetery Area/Group/Complex: Currandooley Farm Complex
2. Werriwa, including homestead, garden, cottages, & outbuildings *Palerang LEP ID: I233* *Inventory datasheet: LG5*	866 Tarago Road, Bungendore Large, single storey homestead built of limestone with brick detailing, in some cases rendered. Enclosed verandahs attached staff quarters. House set in attractive gardens with mature trees and stone walls. In 1880 when Nathaniel Osborne married Catherine Gordon, from Manar near Braidwood, Pat Hill Osborne of Currandooley offered to sell the couple a piece of his land and it was there they built the Werriwa homestead in about 1882. It was a four room house with wide main hall and a kitchen at the back, constructed of stone from the property. The property is formally described as Lot 1, DP1039100, and Lot 1, DP1173605. The property is located approximately 1 km outside of the BCFS Development site and will not be impacted by the proposed development footprint, refer to Figure 2-1. The homestead is located approximately 2.4 kms from the Development site. Listing includes: Homestead, barn, stables, outbuildings, cottage, shearing shed, plantings, cemetery Area/Group/Complex: Currandooley Farm Complex

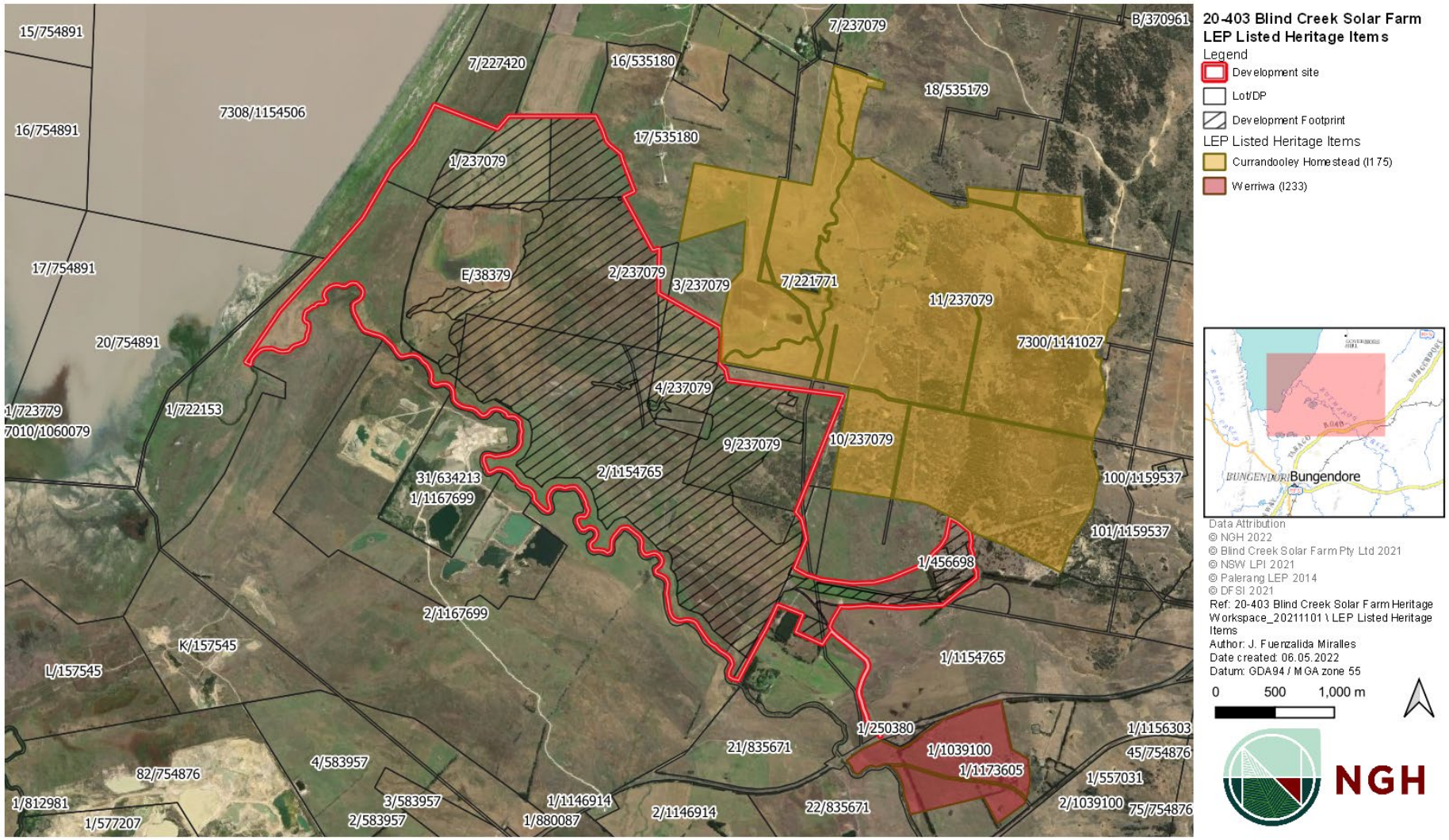

Figure 2-1 Blind Creek Solar Farm Development site, showing the LEP listed heritage sites and land parcels (Lot and DP)

2.4. The Burra Charter

The Australia ICOMOS (International Council on Monuments and Site) Charter for the conservation of places of cultural significance (the Burra Charter) (current edition 2013) sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance including owners, managers and custodians. The Charter is not a statutory document but does provide specific guidance for physical and procedural actions that should occur in relation to significant places. A copy of the charter can be accessed at http://icomos.org/australia. This SOHI has been prepared in accordance with the Burra Charter.

An appreciation of landscape is highlighted in the 1999 revision of the Burra Charter of Australia ICOMOS, placing greater emphasis on 'setting'. Article 8 of the Burra Charter now reads:

"*Conservation* requires the retention of an appropriate visual *setting* and other relationships that contribute to the *cultural significance* of the *place*. New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate".

The Development site is located within an historical, pastoral setting. The visual impact of the proposed project has been assessed within the EIS through a Visual Impact Assessment (Moir 2021). This heritage report considers the potential impact of the proposed solar farm upon the historic viewsheds.

3. Physical & historical overview

This section of the report provides a physical description and historical background of the Development site within the Lake George region.

The history provided below is informed predominantly by the *Thematic History: Lake George, Molonglo Valley & Burra* (2008) prepared for Palerang Council by Suzannah Plowman of Victoria Design & Management Pty Ltd, and *Magnificent Lake George* (2012) by Graeme Barrow. The history pertinent to the Development site was directed by historical property searches.

3.1. Local area

3.1.1. Historical Timeline – an overview

The following table provides a chronological overview of the history of Project Area and the Lake George region.

Date	Event/Detail	Report Section
1820	Weereewa (Lake George) was first seen by European explorers in 1820. Joseph Wild was sent by Dr Charles Throsby to find water south of Sutton Forest (in the Southern Tablelands).	3.1.3
1824	The first two land grants around Lake George to former convict Robert Cooper and Francis Kenny.	3.1.4
1825	The Currandooley property was originally taken up by William Lithgow in 1825 and after his death in 1864 it was sold to Pat Hill Osborne who lived with his family in a house on Deep Creek.	3.1.4
1828	Census recorded 32 people living at Lake George	3.1.4
1828	In early 1828, Governor Darling directed Deputy Surveyor General, Major Thomas Mitchell, to undertake a trigonometrical survey of NSW.	3.2.1
1830s	The wool boom of the 1830s encouraged more settlers to come to the NSW.	3.1.4
1831	By 1831 Governor Darling had virtually abolished the system of land grants and introduced a sale by auction of crown lands for the sum of five shillings an acre	3.1.4
1833	The population of the County increased to over 500.	3.1.4
1835	Of the parcels of land within the Development site, the first land holder was Captain Joseph Thompson (Lot 2 D.P. 1167699).	3.1.4
1836	The population of the County increased to 1728.	3.1.4
1840s	The economic downturn of 1843 and 1844 forced a few land owners were to sell, often to their financially more stable neighbours, thus resulting in the increase of in size of stations around Lake George, Bungendore and in the Molonglo Valley.	3.1.4

Date	Event/Detail	Report Section
1866	1866 real estate listing for the Currandooley notes that the property contained 16,784 acres.	3.1.4
1869-18j70	Currandooley homestead floods due to its location on lower ground, and the suggestion is to move the house elsewhere on the property on higher ground to avoid further chances of flood damage in the future.	3.1.4
1869 - 1874	In 1869, Mr Smalley (Government Astronomer) reported that Lake George had been chosen as a site for the first triangulation baseline in NSW. Work took place between 1870-1874. Trigonometrical stations, including 'Ellenden', 'North Base' and 'South Base', and 'Osborne' were established during these works.	3.2.1
1873	Osborne arranged construction of a 25 room homestead (Currandooley) in the style of a French chateau. The house and the stables and bachelor quarters were completed in 1873 and all were built of granitic gneiss from the property and had shingled roofs.	3.1.4
1880	The Lake George triangulation chain was extended north and west until in 1880 a base of verification for the Lake George Base was measured at Richmond.	3.2.1
c.1880	Mr Osborne offered Nathaniel and Katherine Powell a part of Currandooley. They called their property 'Werriwa' and built a four room house with stone from the property.	3.1.4
1920	Currandooley stone cottage was completed about 1920 as was the butchers shop and dairy.	3.1.4
1967	By 1976, historical imagery indicates three new sand extraction areas within the Development site.	3.2
1992	By 1992 most sand mining activities within the current Development site had ceased, with a single active quarry adjacent to the proposed substation site.	3.2

3.1.2. General description

The Development site is located within close proximity to the significant hydrological landscape of Lake George. Lake George is 69km long, north to south, and 19km wide, east to west. The lake is 700m above sea level. The lake is believed to be more than a million years old and has no outflow to rivers or oceans (endorheic) (Abell 1985, p.2). The Lake George Escarpment on the western side of the lake was formed along a fault line blocking creeks and rivers that previously drained into the Yass River, forming the Lake, which extends for approximately 25km in length and 10km in width (Abell 1985:4).

The lake is fed by precipitation directly onto the lake's surface, with the remaining inflow from short streams no greater than ~20km in length. The main named creeks within the proposed BCSF are Butmaroo (locally known as Deep), Wrights, and Bridge (locally known as Blind).

The proposed solar development consists predominantly of near-level paddocks, with a maximum local relief of approximately 12m. The Development site includes undulations and rises, with

increasing slope gradients to the north-east, east, and south-east. The paddocks are predominantly covered with exotic grassy vegetation, the density of which varies with seasonal conditions, interspersed with cropping cycles for weed control. A section of remnant native woodland has been excised by the proponent.

3.1.3. Exploration

Intense grazing, drought and caterpillar plagues hit the Cumberland Plains and the fledgling NSW colony hard in the early years of the 19th century. Exploration was urgently required to find suitable grasslands. With the coast to the east, and the Great Dividing Range to the west, initial explorations and expansion of the colony focused on moving to the north and south with settlement moving quickly into the Southern Highlands (Plowman 2008, p.13). Charles Throsby, who had a property at Moss Vale, sought to find an overland route to Jervis Bay in 1918 (Plowman 2008, p.13), eventually leading to the exploration inland towards present-day Lake George.

Charles Throsby

Charles Throsby (1777-1828) was a surgeon, settler and explorer, was born at Glenfield, near Leicester, England, the younger son of John Throsby, historian and antiquarian (Parsons n.d.).

Charles Throsby arrived in New South Wales in 1802 as naval surgeon of the Coromandel. From that time on he held a number of positions including medical officer and magistrate, as well as senior government administrative positions (Parsons n.d.).

Throsby was one of the first settlers in the Illawarra district and one of the first to settle in the Moss Vale district. In August 1817 he explored the country west of Sutton Forest with Hamilton Hume, a family friend. In March and April 1818 he accompanied Surveyor-General James Meehan on a journey from the Cowpastures through Moss Vale to Bundanoon Creek and south-east to Jervis Bay; after the party divided, Throsby reached the Shoalhaven River and Jervis Bay. In 1819 Throsby discovered a pass between the Illawarra and Robertson districts and successfully drove a herd of cattle through it. In March 1820 he explored the country around Goulburn and Lake Bathurst and penetrated as far as the Breadalbane Plains. Macquarie gave him superintendence over the building of the road from the Cowpastures to the new country, which was placed under the direction of Throsby's servant Joseph Wild (Parsons n.d.).

Joseph Wild and the discovery of Weereewa/Ngungara (Lake George)

Weereewa (Lake George) was first seen by European explorers in 1820. Joseph Wild was sent by Dr Charles Throsby to find water south of Sutton Forest (in the Southern Tablelands).

Wild's account of his discovery of the lake is given in a letter written for him to Throsby by Sylvester Hall, clerk to the road party, from “Wollondellie" on August 28, 1820 (Jones 1952):

> *"On the day you (Throsby) parted from him (Wild) (Saturday, the 29th) after a direction about S.W., he (Wild) came in view of the Lake Weerawa from a hill at four miles distance. Arriving at the N. end of the lake. he turned towards the southwards on a level bank grassy to the water's edge and found the land good pasture but unfavourable for cultivation. From the hills the party saw the fires of the natives who appeared numerous. 'They pursued their course on Sunday over capital land to the southward by the bank of the lake and slept between two creeks on the E. side. On Monday the 21st he followed the lake and encamped at a creek at the southern point-all this day over very excellent land, fit for any purpose, clear of timber. A strong westerly wind caused a heavy rolling surf like the ocean."*

3.1.4. Early Settlement of the Development site

After the discovery of Lake George in 1820 and the visit of Governor Lachlan Macquarie, the expansion into the 'New Country' of the south west began in earnest (Barrow 2012, p.23). The first two land grants around Lake George were in 1824 to former convict Robert Cooper and Francis Kenny. Robert Cooper was granted a property called, 'Willeroo', 2000 acres on the eastern side of the lake. Francis Kenny was granted 120 acres on the southern end of lake, which later became known as 'Kenny's Point'. Kenny was subsequently promised 1000 acres the following year opposite Cooper's grant (Barrow 2012, p.23).

Other land grants outside of the proposed Blind Creek Solar Farm Project Area included Joseph Grose (on the eastern shore), Richard Brooks (to the south), Richard Guise (Geary's Gap was the only land grant with frontage on the western shore, and Terrence Murray.

The 1828 census recorded 32 people living at Lake George but is considered somewhat unreliable as some landholder did not appear on the census at all. Amongst the people living at Lake George were property owners and their families, shepherds, labourers, watchmen, housekeepers, and servants. Convicts were said to make up some of the workers on the properties (Barrow 2012, p.24).

Convicts

Convicts built the first roads constructing access to the estates where they were assigned. Convicts were used for back breaking labour, making the land suitable for agriculture and pastoralism. They were the shepherds and stock keepers.

At a number of the older stations there is evidence of convicts and their work. At Winderadeen the stone homestead and outbuildings were constructed with convict labour (Plowman 2008, p.18).

Transportation of convicts to New South Wales ceased around 1840 resulting in squatters having to look elsewhere for labour.

Captain Joseph Thompson, William Lithgow, Grantham Park and Currandooley Estate

Of the parcels of land within the Development site, the first land holder was Captain Joseph Thompson (Lot 2 D.P. 1167699). Captain Joseph Thompson was a merchant seaman who arrived in NSW in 1806. Thompson owned a large herd of cattle, which was managed for him at Bathurst and Goulburn. In 1827, he sent the animals to Lake George, where he was granted land in 1835 bounded to the north by "Currondolee" creek that flowed into the south-eastern end of the lake (Barrow 2012, p.39). Thompson named his homestead *Grantham Park* (Barrow 2012, p.39). Grantham Park was acquired later that same year by Auditor General, William Lithgow. William Lithgow established a property on the opposite side of the 'Great Creek', also known as Deep Creek, referred to today as Butmaroo Creek (Barrow 2012, p.39).

The Currandooley estate came into being when Grantham Park and Ellenden estates were combined (Barrow 2012, p.38). After Lithgow's death in 1864, Patrick Hill Osborne purchased the Currandooley property.

Patrick Hill Osborne

The 1866 real estate listing for the Currandooley notes that the property contained 16,784 acres, almost in one block; had a 'never-ending supply' of fresh water from Butmaroo (also referred to as Deep Creek); and access to additional grazing land when the lake receded exposing a 'vast area of pasturage', where 'thousands of sheep and cattle may feed on the splendid herbage of salsolaceous

plants upon which the cattle graze with avidity and improve rapidly, and which has all the invaluable properties of the far-famed saltbush' (*Sydney Morning Herald* 1866, p.11).

Pat Osborne lived in a cottage built originally by Thompson on Deep Creek, believed to be the original Grantham Park homestead (Barrow 2012:40), located approximately 100m south of the creek (pers comms. Mr Dom Osborne, 16.08.2021). During 1869-70, severe storms repeatedly inundated the cottage. One account referenced by Barrow recounts that the family escaped one flood episode by exiting the cottage via a window and leaving by boat, only to return once the waters receded to find 2-4 feet of sand covering the floor of the cottage (Barrow 2012:39). These experiences may have motivated Osborne to build a new homestead on higher ground.

Economical influences: The Wool-Boom of the 1830s and the Downturn of 1843-44

The wool boom of the 1830s encouraged more settlers to come to NSW, who were further encouraged by news of unlimited rich grazing lands, available free of charge (Plowman 2008, p.17). By 1831 Governor Darling had virtually abolished the system of land grants and introduced a sale by auction of crown lands for the sum of five shillings an acre (Plowman 2008, p.17).

The population of the County increased to over 500 by 1833 and trebled to 1728 in 1836. By then the number of women had risen to 250 and the closest town was Goulburn (Plowman 2008, p.17).

During the 1840s decade there was a marked increase in the number of cattle and horses but many landowners were set back by the economic downturn of 1843 and 1844. The price of Australian wool fell to 6d a pound on the London market and sheep held such little value for their fleeces they were boiled down for tallow. Whilst the wool market quickly recovered, a few primary producers were forced to sell, often to their financially more stable neighbours, thus resulting in the increase of in size of stations around Lake George, Bungendore and in the Molonglo Valley (Plowman 2008, p.19).

As Plowman (Plowman 2008, p.19) points out, "the families of the old runs in the Molonglo Valley, Lake George and adjacent districts are inextricably intertwined through marriages and pastoral holdings, creating a complicated tapestry of generations moving into and out of each other's lives and homes. They were part of some of the pastoral dynasties, prominent for more than a century in the development of rural Australia".

Currandooley

The following section is taken from the SHI database listing for Currandooley Homestead, including garden and stables:

> *The property was originally taken up by William Lithgow in 1825 and after his death in 1864 it was sold to Pat Hill Osborne who lived with his family in a house on Deep Creek. The rubble stone walls of the original house are still standing* (on the southern bank of Butmaroo Creek, outside of the proposed BCSF development footprint).
>
> *After several storms and floods Osborne sent his wife and children to England while he arranged construction of a 25 room homestead in the style of a French chateau. The house and the stables and bachelor quarters were completed in 1873 and all were built of granitic gneiss from the property and had shingled roofs. The stone cottage was completed about 1920 as was the butchers shop and dairy. All stonework was carried out by William Follet and his son. All roofs were replaced with Marseilles tiles after a fire in the stables in 1890. The property has remained in the ownership of the Osborne family being handed down through successive generations. About 1994 a fire gutted the homestead burning out the second storey which had to be partially rebuilt although the*

> *stone walls remained standing. There is a small private cemetery on the property, the earliest burial 1902, consecrated about 1910 by Bishop Barlow, and the last burial 1970. The woolshed was built in 1878 and a Wolseley shearing machine installed in 1888, the same year Wolseley installed machines at Toganmain and the first year shearing was done mechanically.*
>
> *Currandooley is essentially a substantial and conventional two storeyed Victorian country house built of local squared rubble. There is a large service wing and outbuildings behind the house which overlooks a rambling garden broken by walls. After a fire in 1890 the shingle roof was replaced with the newly available French Marseilles pattern tiles and this together with an engaging dovecote has given the original house a more exotic and somewhat French character. Additions during the 1880s and 1890s and alterations during the 1930s and 1940s first by architect Bertram Chisholm and later by Leslie Wilkinson, changed the entrance to the side and replaced the single storey front verandah to a pergola. These alterations and additions, together with the rearrangement of the garden since the 1920s, have enhanced the architectural value of the place. Currandooley was originally built in 1873-74 to the design of Ferdinand Reuss who is perhaps best known as a land surveyor. Reuss is a strange choice especially when the Osborne family, who built the house, were amongst the first and best patrons of the more talented and avant garde architect John Horbury Hunt. The house was built for Pat Hill Osborne, (1832-1902) who purchased the property in 1866; it is still owned by his descendants. Building Material: Local squared rubble, French Marseilles tile roof, dovecote*

SHI Statement of Significance:

> *Continuity of family occupants combined with a rich social history and quality of architecture make Currandooley one of the most important homestead properties in Australia.*

Currandooley Homestead burnt down in about 1990, leaving the walls, outbuildings and some of the downstairs floor intact but roof and entire second storey were destroyed in the fire. It was subsequently rebuilt by Pat and Sally Osborne.

Werriwa

About 1880, Mr Osborne offered Nathaniel and Katherine Powell a part of Currandooley. They called their property ‘Werriwa’ and built a four room house with stone from the property.

Werriwa Homestead is located approximately 2.4 km to the south east of the Development site. The Visual Impact Assessment completed as part of the EIS for this project has confirmed that the proposed solar farm development will not be visible from the Werriwa Homestead.

3.2. After initial European settlement, pastoralism and sand mining

From the time of European exploration (1820), the Development site and region was cleared of vegetation to provide grazing country to cattle and sheep.

When the lake ran dry, sheep and cattle were grazed on the lake bed (Barrow 2012, p.24). Settlers also used the dry lake bed as a transport route for Bullock teams, evidence of this practice such as bullock bows and chain hooks have been found within the lake bed (Barrow 2012, p.25).

The Osborne family descendants have continued to live on and farm the land. The properties in the area contain a number of residences and associated agricultural structures such as shearing sheds

and accommodation, work and storage sheds, fencing, stockyards, communications infrastructure, local sealed and unsealed roads and tracks.

With the exception of sand quarrying, major ground disturbance is characterised by the establishment of tracks and construction of dams. The removal of the native woodlands would have also influenced erosion across the Development site, specifically along creek lines and valleys. The removal of trees will have also removed any potential occurrences of any marked trees.

At present, the Development site is privately owned and predominantly used for grazing and cropping, with a single operational sand quarry within the Development site.

Sand quarries

The sand deposits within the region are known to be of a high quality for construction purposes. A total of three operational sand quarries are located close to the Development site. Figure 1-4 shows mapped ground disturbance throughout the Development site where sand quarrying as occurred.

Previously geotechnical investigations within the Development site also confirm that many of the sand deposits reach substantial depths. The historic imagery shows that pre-1967, the current Development site had not been used for its sand resources. By 1976, historical imagery appears to show the appearance of three new sand extraction areas within the Development site (see Figure 3-1), the largest of which was close to the shores of Lake George along the strandline landform; the remaining two areas are smaller and located closer to Currandooley Road. Imagery from that year also shows a small runway for aircraft in the east of the Development site, close to Currandooley Road, which the Osborne family understand to have been constructed circa 1946.

By 1985 it appears that the three sand mining quarries that were active had been decommissioned and three new quarries had been opened near the mouth of Butmaroo Creek in the 9-year interlude. The 1985 aerial image indicates that of the three new quarries, only one was in use at the time the imagery was collected. It is also during this time that Bungendore Sands began its mining operation adjacent to the Development site on the south-western side of Butmaroo Creek.

By 1992 most sand mining activities within the current Development site had ceased, with a single active quarry adjacent to the proposed substation site. The Proponent of this BCSF has confirmed that this quarry site, to the south of the proposed BESS, has a DA in place for a larger area, even though the land rights (i.e. a licence) for quarrying within the solar farm's Development site boundary no longer exist (email from E.Walker of Octopus Investments to J.Ruhl of NGH, 28.02.2022). The termination of these activities within the Development site coincides with the expansion of sand mining activities at Bungendore Sands to the west and other sand mining quarries in the region.

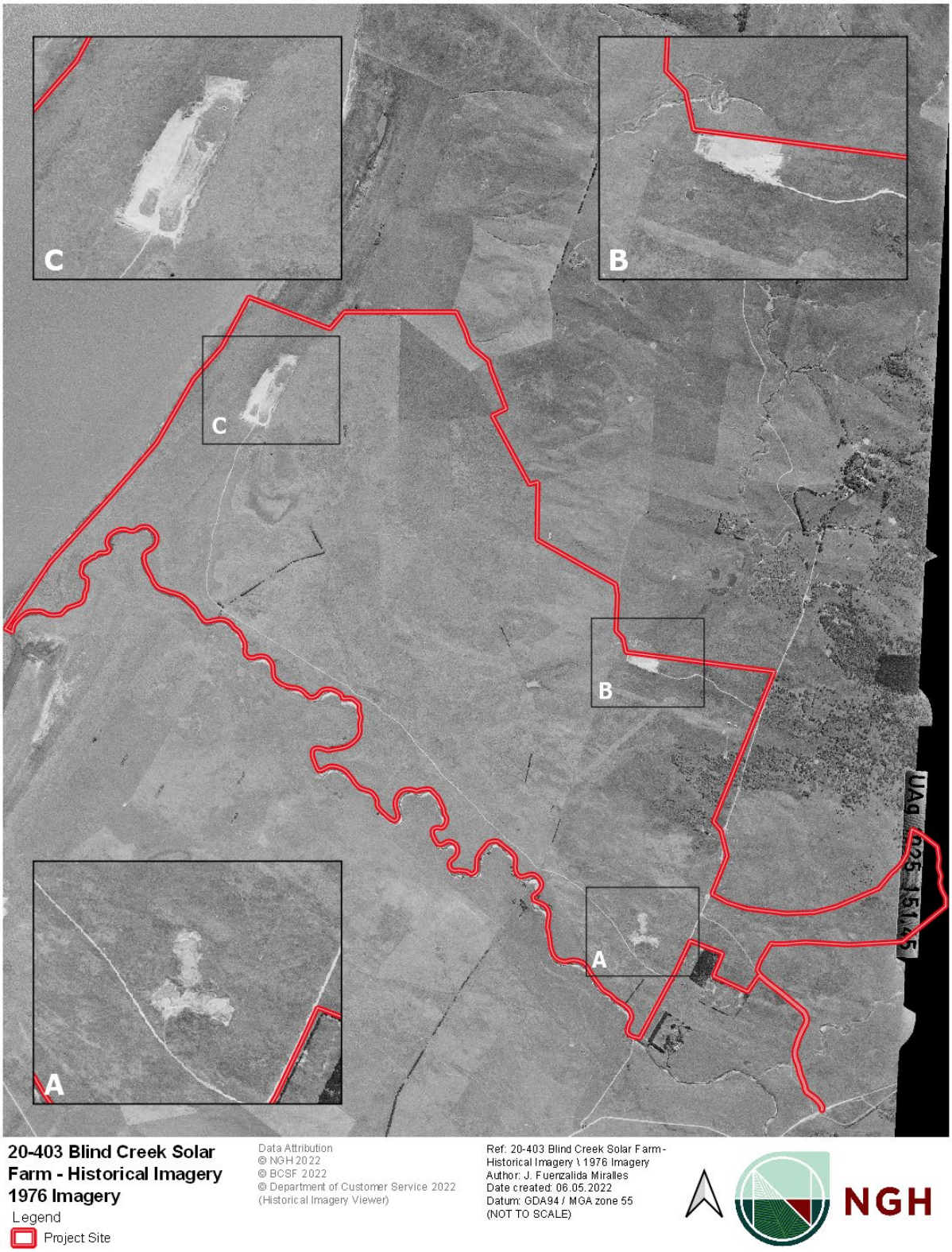

Figure 3-1 1976 Historical Imagery over the entire Development site It is clearly visible that by 1976 three separate sand quarrying operations had been set up within the Development site. A small airfield is also visible to the south of the middle sand quarry. (Generalised outline of project area in red indicative only.)

3.2.1. Lake George and the mapping of NSW: Map of Nineteen Counties and Survey Baselines

Before 1826, land grants in NSW were given exclusively by the Governor, who also decreed the limits of the land grant locations. However prior to a formal survey of NSW and therefore detailed and reliable maps, land grants were somewhat disorderly. Surveys were initially undertaken with crude and inaccurate instruments and usually with the aid of the magnetic needle, which is liable to deflection owing to the presence of ironstone or other magnetic substances in the earth. Areas were measured in isolated localities, often without any connection to other measurements and subsequent surveys of the intervening country usually disclosed error in both bearing and distance. Under such circumstances the compilation of accurate maps or the certainty of location of any particular estate was impossible (Australian Government 2003). The occupation of Crown land without legal title became a widespread practice in the colony from the 1820s. Such landholders, who took up residence on large unoccupied tracts of land for pastoral purposes, were known as 'squatters'.

In early 1828, Governor Darling directed Deputy Surveyor General, Major Thomas Mitchel, to undertake a trigonometrical survey of NSW. A survey was required to facilitate settlement in a more orderly manner than previously, which had been characterized by squatting. This work was completed between 1828 and 1834, and resulted in the publication of the ‘Map of Nineteen Counties’. 900 plans formed the map, covering 38,000 square miles (Marshall 2002, p.120). In 1829, the boundaries of land grants were extended to encompass the Nineteen Counties surrounding Sydney. The concept of areas within and without the Nineteen Counties were discontinued in 1847.

The only adequate basis of a comprehensive system of survey is triangulation, whereby the relative positions of a number of points on the earth's surface are ascertained by the measurement of the angles of a system or network of triangles connecting them, their distances being found by calculations based upon the measurement of one, or at the most a few, lines of the system. Two such lines have been measured in New South Wales: one at Lake George in 1870-71, the total length being 6.5 miles and the other at Richmond in 1879-80, its mean length being 7 miles 9 yards 2ft 4.36896in (Australian Government 2003).

In 1869, Mr Smalley (Government Astronomer) reported that Lake George had been chosen as a site for the first baseline in NSW. Work took place between 1870-1874. There are a number of peaks surrounding Lake George that were used as trigonometrical stations, including ‘Carter’, St. George’, Purrorumba’, and ‘Smalley’. Within a short distance of the lake on the eastern side are some peaks that were established as a trigonometrical stations, including ‘Ellenden’, ‘North Base’ and ‘South Base’, and ‘Osborne’ (Jones 1952, 1 August). The triangulation chain was extended north and west until in 1880 a base of verification for the Lake George Base was measured at Richmond (now located within the Richmond Australian Airforce base, and previously registered as a heritage item on the now redundant Register of the National Estate) (Marshall 2002, p.120).

One of the Lake George Trig Stations is located within the BCSF development footprint. It consists of a tall stone pillar and is located at the northern point of the baseline with a smaller survey cairn approximately 8 kms to the south (Barrow 2012, p.56).

3.3. Heritage items in proximity of the Development Site

Table 3-1 Currandooley Homestead

Name	Currandooley Homestead, including garden and stables
Location	Currandooley Road, Bungendore
Heritage listing	Palerang LEP ID: I175 Inventory datasheet: LG2
Description	Currandooley is an historical property listed on the Palerang LEP as an item of local significance. The property is formally described as Lot 11, DP237079. The property is immediately adjacent and located to the north of the Development site, refer to Figure 2 1. Whilst the property boundary overlaps with the Development site it will not be impacted upon by the development footprint. The homestead is located approximately 800 m from the northern extent of the Development site. Listing includes: Homestead, barn, stables, outbuildings, cottage, shearing shed, plantings, cemetery Area/Group/Complex: Currandooley Farm Complex
Photo	 Figure 3-2 Rear façade – Currandooley Homestead (Photo taken prior to fire at the site. Rebuild is similar). Source: Palerang Council Heritage Study - Inventory Datasheets (April 2009)

Name	Currandooley Homestead, including garden and stables
	 Figure 3-3 Photo of a small view of the northern portion of the solar farm from the homestead. Note on that photo the young elm trees that would eventually block the view of the solar farm. Not shown in the photo further to the north is a view-shed of existing turbines that are clearly visible from the homestead.
Management issues	Located predominantly outside of the Development site and will not be impacted upon by the proposed development footprint. Historical viewsheds are the primary heritage management issue.

Table 3-2 Werriwa Homestead

Name	**Werriwa, including homestead, garden, cottages, & outbuildings**
Location	886 Tarago Road, Bungendore
Heritage listing	Palerang LEP ID: I233 Inventory datasheet: LG5
Description	Large, single storey homestead built of limestone with brick detailing, in some cases rendered. Enclosed verandahs, attached staff quarters. House set in attractive gardens with mature trees and stone walls. In 1880 when Nathaniel Osborne married Catherine Gordon, from Manar near Braidwood, Pat Hill Osborne of Currandooley offered to sell the couple a piece of his land and it was there they built the Werriwa homestead in about 1882. It was a four room house with wide main hall and a kitchen at the back, constructed of stone from the property. The property is formally described as Lot 1, DP1039100, and Lot 1, DP1173605. The property is outside of the BCFS Development site and will not be impacted by the proposed development footprint. Listing includes: Homestead, barn, stables, outbuildings, cottage, shearing shed, plantings, cemetery Area/Group/Complex: Werriwa Homestead Farm Complex
Photo	 Plate 3-1 Front façade – Werriwa Homestead. Source: Palerang Council Heritage Study - Inventory Datasheets (April 2009)
Management issues	The property boundary is located approximately 1 km outside of the proposed Development site. The Homestead is located approximately 2.4 kms outside of the Development site. Historical viewsheds are the primary heritage management issue.

Table 3-3 Original Currandooley Homestead remains

Name	**Original Currandooley Homestead remains**
Location	100-150m south of the Butmaroo Creek Easting: 725327 Northing: 6102413
Heritage listing	No statutory listing
Description	Stone foundations and walls oriented as a rectangle, approximately 20 x 10 metres, surrounded by large, mature trees. Whilst portions of the walls remain standing, there are no other surviving elements. It is believed that the ruined building was the original Grantham Park homestead built by Joseph Thompson.
Photo	 Plate 3-2 Stone walls of the ruined building. Source: (Barrow 2012, p.40)
Management issues	Outside of the proposed development footprint

Table 3-4 Trig Station

Name	Trig Station
Location	725148 E 6105577 N
Heritage listing	No statutory listing
Description	Stone pillar and marker. Height 4.3 m
Photo	 Plate 3-3 Trig Station within the BCSF Development site
Management issues	Whilst it has been excised from the proposed development footprint by a 10m buffer, it's historical line of sights and visibility within the landscape may be interrupted by the solar arrays.

Trig Station – *excised from the development footprint with a 10-15m buffer*

Trig stations are the foundations of a classical survey control network and provide the basis from which all over surveys are controlled (Gowans, McElroy & Janssen 16-18 March, pp.68–69). They come in a variety of forms but generally consist of a primary monument or standpoint surrounded by witness/eccentric marks. The primary monument can vary in form ranging from concrete or steel survey pillars, obelisks, rock cairns, and metal rods (Gowans, McElroy & Janssen 16-18 March, p.69).

A trig station is often more than just the physical infrastructure. They are usually located on a prominent landscape feature, such as a hilltop, for ease of sight and may include a large area of land as well as cleared lanes to distant yet associated trig stations or survey markers (Gowans, McElroy & Janssen 16-18 March, p.69).

The Surveyor General is responsible under the Surveying and Spatial Information Act 2002 for the maintenance of survey marks and may delegate this to the relevant public authority for markers located on public land. In practice, however, these maintenance works have been carried out by Lands and Property Information (LPI). LPI is as a result the custodian of the geodetic infrastructure in New South Wales, consisting of approximately 6,000 traditional trigonometric stations that formed the basis of the survey control network before the introduction of more than 160 CORSnet-NSW stations. Almost two thirds of all trig stations consist of pillar or ground mark located on private land.

The Trig Station within the BCSF Development site is a tall stone pillar constructed between 1870-1874 and is one of the oldest survey markers in NSW. It is located at the northern point of a survey baseline with a smaller survey cairn approximately 8 kms to the south (Barrow 2012, p.56). Two such lines have been measured in New South Wales: one at Lake George in 1870-74, the total length being 6.5 miles and the other at Richmond in 1879-80, its mean length being 7 miles 9 yards 2ft 4.36896in (Australian Government 2003).

Plate 3-4 Southern Trig Station, located approximately 8kms from the BCSF Trig Station (source: Mr Luke Osborne)

Plate 3-5 Southern Trig Station stands approximately 1.2m high (source: Mr Luke Osborne).

Plate 3-6 Close-up of inscription chiselled into the Trig Station marker: *S – No V*

The Trig Station was part of trigonometrical survey of NSW undertaken by Major Thomas Mitchell and his assistant, Robert Dixon. The trigonometrical survey of NSW took place at Lake George between 1870-1874. There are a number of peaks surrounding Lake George that were used as trigonometrical stations, including 'Carter', St. George', Purrorumba', and 'Smalley'. Within a short distance of the lake on the eastern side are some peaks that were established as a trigonometrical stations, including 'Ellenden', 'North Base', and 'Osborne' (Jones 1952, 1 August). The triangulation chain was extended north and west until, in 1880, a base of verification for the Lake George Base was measured at Richmond (now located within the Richmond Australian Airforce base, and registered as a heritage item on the Commonwealth Heritage List) (Marshall 2002, p.120).

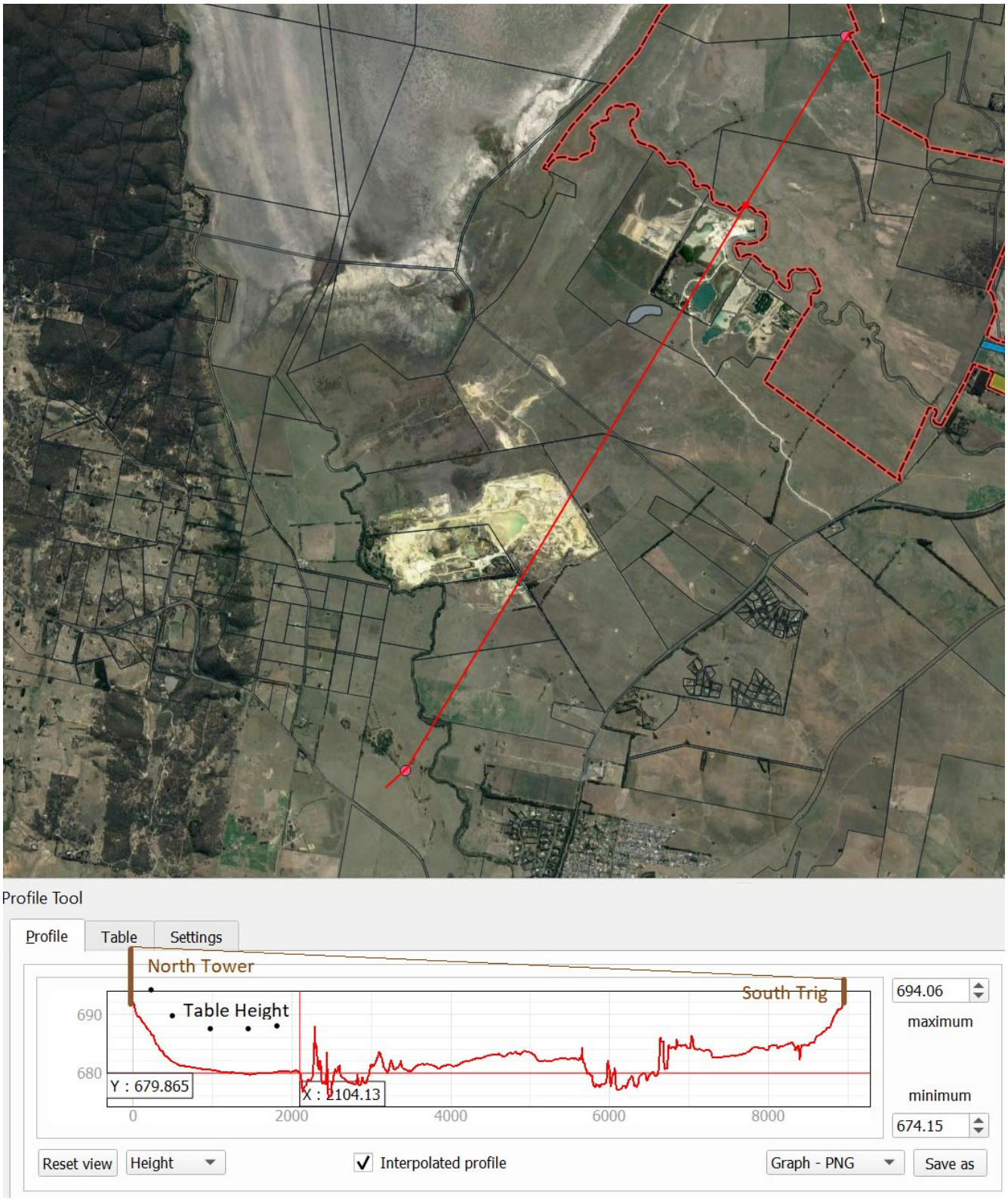

Figure 3-4 Line of site between the trig stations including a terrain profile. The southern end of the baseline is near the Turalla homestead.

3.4. Archaeological assessment

Historical research has informed of the location of the original Currandooley Homestead, located to the south of Deep Creek (Butmaroo Creek), which was subsequently abandoned after flooding events. The remains of this building have been confirmed to be outside of the Development site by the current land owner, secondary historical materials, and by NGH during the site visit. The existing Currandooley Homestead was built in 1873 to the north and outside of the Development site. The historical research has not resulted in maps or descriptions of the paddocks, such as how they were laid out, fenced (if at all), and used, other than that both sheep and cattle were grazed.

The property was originally taken up by William Lithgow in 1825 and after his death in 1864 it was sold to Pat Hill Osborne who lived with his family in a house on Deep Creek.

Pat Osborne lived in a cottage built originally by Thompson on Deep Creek, believed to be the original Grantham Park homestead (Barrow 2012:40), located approximately 100-150m south of the creek. During 1869-70, severe storms repeatedly inundated the cottage and Osborne arranged construction of a 25 room homestead in the style of a French chateau, located to the north and outside of the proposed Blind Creek Solar Farm Development site.

The second and existing Currandooley Homestead, stables and bachelor quarters were completed in 1873, and all were built of granitic gneiss from the property and had shingled roofs. The stone cottage was completed about 1920 as was the butchers shop and dairy. There is a small private cemetery on the property, the earliest burial 1902, consecrated about 1910 by Bishop Barlow, and the last burial 1970. The woolshed was built in 1878 and a Wolseley shearing machine installed in 1888, the same year Wolseley installed machines at Toganmain and the first year shearing was done mechanically (Douglas Partners 2021).

3.5. Archaeological potential

The archaeological potential of the Development site relates to the historical practices described in the previous sections, namely settlement, pastoral and agricultural. Pastoral and agricultural activities date from the time of the first land grant in the 1830s and continue to the present-day. Archaeological materials could relate to early accommodation and personal belongings, as well as pastoral infrastructure, machinery and equipment, with technological changes overtime, and personal items and equipment of stockmen (such as saddlery; pipes).

From the time of European exploration (1820), the Development site and region was mostly cleared of vegetation to provide grazing country to cattle and sheep.

The Osborne family descendants have continued to live on and farm the land. The properties in the area contain a number of residences and associated agricultural structures such as shearing sheds and accommodation, work and storage sheds, fencing, stockyards, communications infrastructure, local sealed and unsealed roads and tracks.

The original Currandooley Homestead, located to the south of Butmaroo Creek, may have been surrounded by stables, outbuildings and various accommodations for agricultural workers and stockmen, with yards on either side for mustering horses, sheep and cattle. This homestead precinct would have been contained by post and rail fences but beyond this the sheep and cattle would have been allowed to graze freely under the supervision of the stockmen. Archaeological evidence of early pastoral occupation and activities would therefore be centred around the location of the homestead, which is outside of the Development site.

The archaeological potential of the development footprint could therefore include remains of:

- fences and gates, nails and structural fittings;
- animal stock runs, sheds, and pens/stock yards;
- dams;
- farming equipment, such as ploughs and tractors;
- saddlery; and
- personal belongings of stockmen, such as clay pipes, smoking accessories; leather and potentially other fabric remains, such as buttons; and glass bottles.

3.6. Archaeological preservation

Historical Ground Disturbance

Major ground disturbance has been characterised by the establishment of tracks and construction of dams, as well as sand quarrying. The removal of the native woodlands would have also influenced erosion across the Development site, specifically along creek lines and valleys.

At present, the Development site is privately owned and predominantly used for grazing and cropping, with a single operational sand quarry within the Development site. Previous cropping, requiring ploughing, would have likely disturbed the top layer of soil to the depth of the ploughshare (usually between 10cm-15cm but up to 30cm) therefore potentially affecting the integrity of archaeological sites to that depth. A view of a portion of the Development site at the height of its cropping phase in 2011 can be seen in Figure 3-5 below. However, localised artefact movement is common through natural processes such as bioturbation and does not necessarily affect overall site context. Additionally, ploughing will not disturb deeper archaeological deposits below the plough zone.

Figure 3-5 An example of the Development site in a cropping phase (circa 2012 Google Earth Pro 2021)

Soils and Geotechnical testing

Geotechnical testing was undertaken for the Blind Creek Solar Farm Project (Douglas Partners 2021). The purpose of these investigations was to assess the subsurface soil and groundwater conditions of the Development site. The geotechnical investigations included the excavation of two test pits, drilling of eleven boreholes, two electrical resistivity tests and also the testing of select samples within a laboratory.

The results of the geotechnical investigations highlighted three consistent units across the Development site:

- **Topsoil** – a sandy deposit varying from loose to medium densities, ranging from 15-20cm in all borehole locations, while the topsoil characteristics of the two test pits excavated highlighted a more-loose-and-fine to medium grained silty sand, reaching depths between 25-30cm.
- **Sand** – the deposit underlying the topsoil in all geotechnical investigation locations consisted of sand, with highly variable densities from loose to compact. The sand was typically fine grained with some medium grained sands occurring at depth. Within the eleven boreholes, the deposits reached a minimum depth of 90cm to a maximum depth of 3m. Within the two test pits excavated, the sand deposits reached 1-2m in depth.

- **Silty Clay** – Sandy Clay – Clayey Sand. The underlying stratigraphy present within the geotechnical results identifies more of a ranging difference throughout the Development site. This deposit is characterised by clay of a low to high plasticity that is dense to very dense terminating at depths between 3-5m. Within the eleven boreholes, the stratigraphy varied from a silty clay to a clayey sand. This deposit had ranging plasticity and density from low to high, with the deposit terminating between 2.05-3.2m in depth.

The results of the laboratory testing also highlight the varied pH across the Development site, with the majority of tested soils being moderately acidic with a pH between 5.8 and 8.1.

The varying acidity of the soils suggests that there is a possibility for organic archaeological materials, such as wood and leather, to remain within the topsoil in areas that contain a neutral pH. Durable archaeological material, such as metal, located in upper soil layers will have likely been displaced from their original position by ploughing and agricultural ground disturbing practices, although likely to be heavily corroded.

3.7. Site visit

Survey Fieldwork for the heritage assessment of the proposed Blind Creek Solar Farm was undertaken over two stages from 22 July 2021 to 6 August 2021, and from 18 to 22 October 2021. NGH led the Aboriginal heritage and non-Aboriginal (or historical archaeology) surveys simultaneously.

The preliminary results of the first stage of fieldwork led to the Proponent to seek to minimise impact to identified archaeological sites and sensitivity by altering the Development site and the development footprint.

NGH archaeologists, Jorge Fuenzalida Miralles, Miles Robson, and Matthew Barber participated in the surveys.

3.7.1. Survey methodology

The historical heritage survey methodology was informed by background research which included the historical uses of the property and investigation of aerial photography to identify the following areas of interest:

- a Trigonometrical Station, located in the north of the Development site;
- building remains of the original Currandooley Homestead, located south of Butmaroo Creek;
- areas of historical ground disturbances.

The remains of the original Currandooley Homestead were not visited as they are located to the south of Butmaroo Creek and are outside of the development footprint.

The survey of the Development site otherwise consisted of a sample of each of the landforms present. A sample survey of the Development site was considered appropriate as the historical property information identified that the land within the Development site had been used for pastoral purposes and would not have included any built structures apart from fences, gates and stock runs, and those items listed above. A sample survey of each of the landforms provided an unbiased, random approach to investigate the land.

Where possible the vegetation was mown in selected areas prior to the pedestrian survey, providing higher visibility in landforms where vegetation would have made surface survey impractical or ineffective. This practice was unable to be used across the entire Development site due to the cost, time, and biodiversity impact of mowing an area of this size.

3.7.2. Survey results

The Development site is currently covered by vegetation, primarily pasture and sedge grasses, with pockets of eucalypt and pine woodlands in some areas, due to good seasonal rains. The Winter and Spring of 2021 was particularly wet which provided highly favourable conditions for grass growth across the Development site, limiting ground visibility in some areas. Visibility was generally considered good enough however to find evidence of historical, structural remains, although more difficult to find small, isolated artefacts. No historical archaeological features or materials were found during the survey.

3.8. Site survey photos

During the site survey, it was noted that areas of visibility were often limited to patches of bare ground, vehicle tracks, and animal tracks/burrows, limiting the ground exposure outside of these areas. This however was to be expected, given the good growing season and the grass cover that was present.

Table 3-5. Site survey photos

	
Plate 3-7 View east over the Development site within the floodplain landform	Plate 3-8 View west over the Development site from the northern bank of Butmaroo creek
	
Plate 3-9 View east over the Development site within the beach landform	Plate 3-10 View west over the Development site within the wetland depression landform

	
Plate 3-11 View south over the Development site within the elevated sand body landform	Plate 3-12 View north over the Development site within one of the elevated sand body landforms
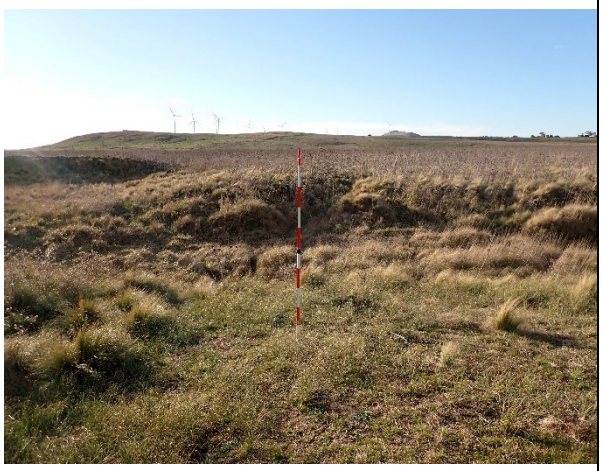	
Plate 3-13 View north over the Development site within the elevated creek flat landform	Plate 3-14 View south over the Development site within the elevated creek flat landform
	
Plate 3-15 Stone trig station, looking north	Plate 3-16 Stone trig station, looking WSW

	
Plate 3-17 Stone trig station, looking ENE	Plate 3-18 Trig station, facing west
	
Plate 3-19 Marker located on top of the stone pillar	Plate 3 13 Plaque reads: Central Mapping Authority; Geodetic Station; Base Lake George North

Plate 3-20 View south from the Trig station. The southern Trig Station located approximately 8kms cannot be seen and has been confirmed to be screened by vegetation

Plate 3-21 View north from the Trig station

Plate 3-22 View east from the Trig station

4. Heritage significance

4.1. Introduction

'Heritage significance' is a term used to describe the inherent cultural and historical value of an item. Significance may be contained within the fabric of a building or other place, in its setting and its relationship with other nearby items.

The main aim in assessing significance is to produce a succinct statement of significance, which summarises an item's heritage values. The statement is the basis for policies and management structures that will affect the item's future (NSW Heritage 2001).

Heritage NSW recommends assessment of heritage items in a number of situations, which include:

- Making decisions about whether to retain an item.
- Considering changes to an item.
- Preparing a heritage study.
- Preparing a conservation management plan.
- Considering an item for listing on the State Heritage Register or on the schedule of heritage items in a local environmental plan, or.
- Preparing a statement of environmental effects or a heritage impact statement as part of the development and building approval process.

The following assessment of significance is based on the NSW heritage assessment criteria. The criteria encompass the four values in the Australia ICOMOS Burra Charter (1999), which are commonly accepted as generic values by Australian heritage agencies and professional consultants:

- Historical significance.
- Aesthetic significance.
- Scientific significance.
- Social significance.

The above are expressed as criteria in a more detailed form than this to:

- Maintain consistency with the criteria of other Australian heritage agencies.
- Minimise ambiguity during the assessment process.
- Avoid the legal misinterpretation of the completed assessments of listed items.

4.2. Heritage assessment criteria

Assessments of Significance

The following assessment follows the guidelines set out by the Heritage NSW and the principles of the Australia's ICOMOS Burra Charter.

The guidelines for *Assessing Heritage Significance (Heritage Office* (former), 2001) states that an item will be considered to be of state and/or local heritage significance if it meets one or more of the NSW Heritage Assessment Criteria, below:

Table 4-1. NSW Heritage Assessment Criteria

Criteria	Description
Criterion (a)	An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area);
Criterion (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 cultural or natural history (or the cultural or natural history of the local area);
Criterion (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);
Criterion (d)	An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons;
Criterion (e)	An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area);
Criterion (f)	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area);
Criterion (g)	An item is important in demonstrating the principal characteristics of a class of NSW's • cultural or natural places; or • cultural or natural environments. (or a class of the local area's • cultural or natural places; or • cultural or natural environments.)

In order to undertake an assessment of an item against the NSW heritage assessment criteria, the guidelines recommend that the following steps be undertaken:

- Investigate the historical context of the item or study area,
- Investigate the community's understanding of the item,
- Establish local historical themes and relate them to the State themes,
- Investigate the history of the item, and
- Investigate the fabric of the item.

4.3. NSW Historical themes

An historical theme is a way of describing a major force or process which has contributed to history. Historical themes provide a context within which the heritage significance of an item can be understood, assessed and compared. In using themes to assess heritage items and places it is useful to identify both local or regional themes applying to the item and the broader state theme to which the local or regional theme relates.

The following table shows the correlation between national and state heritage themes with those relating to the subject site, including Werriwa Homestead, Currandooley Homestead, Original Currandooley Homestead Remains, and the Trig Station. This table has been adapted from a document produced by the Heritage Council of NSW in 2001: *New South Wales Historical Themes*.

Table 4-2. NSW Historic Themes and the surrounding items of heritage significance

Australian Theme	NSW Theme	Description	Examples	Werriwa Homestead	Currandooley Homestead	Original Currandooley Homestead remains	Trig Station
3 Developing local, regional and national economies	Agriculture	Activities relating to the cultivation and rearing of plant and animal species, usually for commercial purposes, can include aquaculture	Hay barn, wheat harvester, silo, dairy, rural landscape, plantation, vineyard, farmstead, shelterbelt, silage pit, fencing, plough markings, shed, fish farm, orchard, market garden, piggery, common, irrigation ditch, Aboriginal seasonal picking camp.	Nineteenth century homestead including associated outbuildings used for farming practices.	Nineteenth century homestead including associated outbuildings used for farming practices.	Remains of the original nineteenth century homestead building that included farming practices.	*Not relevant*
3 Developing local, regional and national economies	Environment - cultural landscape	Activities associated with the interactions between humans, human societies and the shaping of their physical surroundings	A landscape type, bushfire fighting equipment, soil conservation structures, national park, nature reserve, market garden, land clearing tools, evidence of Aboriginal land	*Not relevant*	*Not relevant*	*Not relevant*	Trig station constructed between 1870-1874 as part of the first baseline in NSW. The site

Australian Theme	NSW Theme	Description	Examples	Werriwa Homestead	Currandooley Homestead	Original Currandooley Homestead remains	Trig Station
			management, avenue of trees, surf beach, fishing spot, plantation, place important in arguments for nature or cultural heritage conservation.				was chosen due to the flat plains of the area and the surrounding hills.
3 Developing local, regional and national economies	Events	Activities and processes that mark the consequences of natural and cultural occurrences	Monument, photographs, flood marks, memorial, ceremonial costume, honour board, blazed tree, obelisk, camp site, boundary, legislation, place of pilgrimage, places of protest, demonstration, congregation, celebration.	*Not relevant*	*Not relevant*	*Not relevant*	Trig station constructed between 1870-1874 as part of the first baseline in NSW.
3 Developing local, regional and national economies	Exploration	Activities associated with making places previously unknown to a cultural group known to them.	Explorers route, marked tree, camp site, explorer's journal, artefacts collected on an expedition, captain's log, surveyor's notebook, mountain pass, water source, Aboriginal trade route, landing site, map.	*Not relevant*	*Not relevant*	*Not relevant*	Trig station constructed between 1870-1874 as part of the first baseline in NSW.
3 Developing local, regional and national economies	Pastoralism	Activities associated with the breeding, raising, processing and distribution of livestock for human use	Pastoral station, shearing shed, slaughter yard, stud book, photos of prizewinning stock, homestead, pastoral landscape, common, fencing, grassland, well,	Nineteenth century homestead including associated outbuildings	Nineteenth century homestead including associated outbuildings	Remains of the original nineteenth century homestead building that	*Not relevant*

Australian Theme	NSW Theme	Description	Examples	Werriwa Homestead	Currandooley Homestead	Original Currandooley Homestead remains	Trig Station
			water trough, freezer boat shipwreck, wool store.	used for farming practices.	used for farming practices.	included farming practices.	
4 Building settlements, towns and cities	Towns, suburbs and villages	Activities associated with creating, planning and managing urban functions, landscapes and lifestyles in towns, suburbs and villages	Town plan, streetscape, village reserve, concentrations of urban functions, civic centre, subdivision pattern, abandoned town site, urban square, fire hydrant, market place, abandoned wharf, relocated civic centre, boundary feature, municipal Coat of Arms.	*Not relevant*	*Not relevant*	*Not relevant*	Trig station constructed between 1870-1874 as part of the first baseline in NSW.
4 Building settlements, towns and cities	Land tenure	Activities and processes for identifying forms of ownership and occupancy of land and water, both Aboriginal and non-Aboriginal	Fence, survey mark, subdivision pattern, land title document, boundary hedge, stone wall, shelterbelt, cliff, river, seawall, rock engravings, shelters & habitation sites, cairn, survey mark, trig station, colonial/state border markers.	*Not relevant*	*Not relevant*	*Not relevant*	Trig station constructed between 1870-1874 as part of the first baseline in NSW.
4 Building settlements, towns and cities	Accommodation	Activities associated with the provision of accommodation, and particular types of accommodation –	Terrace, apartment, semi-detached house, holiday house, hostel, bungalow, mansion, shack, house boat, caravan, cave, humpy,	Nineteenth century homestead including associated	Nineteenth century homestead including associated	Remains of the original nineteenth century homestead	*Not relevant*

Australian Theme	NSW Theme	Description	Examples	Werriwa Homestead	Currandooley Homestead	Original Currandooley Homestead remains	Trig Station
		does not include architectural styles – use the theme of Creative Endeavour for such activities.	migrant hostel, homestead, cottage, house site (archaeological).	outbuildings used for farming practices.	outbuildings used for farming practices.	building that included farming practices.	
8 Culture – Developing cultural institutions and ways of life	Domestic life	Activities associated with creating, maintaining, living in and working around houses and institutions.	Domestic artefact scatter, kitchen furnishings, bed, clothing, garden tools, shed, arrangement of interior rooms, kitchen garden, pet grave, chicken coop, home office, road camp, barrack, asylum.	Nineteenth century homestead including associated outbuildings used for farming practices.	Nineteenth century homestead including associated outbuildings used for farming practices.	Remains of the original nineteenth century homestead building that included farming practices.	*Not relevant*

4.4. Comparative analysis

A comparative analysis of a heritage item with similar heritage items is a useful tool to assist in the identification of heritage values that may be shared and therefore whether an item has representative values. Additionally, it is used to identify where an item is rare or unique. Sometimes items were once very common but now rarely survive. A comparative analysis has been used to explore the representative and rarity heritage values of the Trigonometrical Station located within the Development site since it is not listed on any statutory heritage register. A comparative analysis was not deemed necessary or useful in the heritage assessment of the other heritage subjects of this assessment, principally because they are located outside of the Development site.

The following information regarding trig stations and the criteria under whether they should be maintained is taken from Gowans, N, McElroy, S & Janssen, V 16-18 March, 'Survey Infrastructure Preservation and Upgrade: Trigonometrical Stations in NSW', in Proceedings of the 20th Association of Public Authority Surveyors Conference, Coffs Harbour:

> *Which Trig Stations Should Be Maintained?*
>
> *Understandably, all trig stations are not equal. LPI's motivation to preserve and maintain trig stations can vary with regard to several criteria, including:*
>
> - *Previous survey work performed (e.g number of terrestrial and GNSS observations).*
> - *Prominence within the survey network.*
> - *Ease of access.*
> - *Suitability for GNSS observations.*
> - *Suitability for further survey work (e.g. vegetation level, towers or structures, security).*
> - *Historical significance.*
> - *Local community identification (e.g. lookouts, public visits).*
> - *Land ownership.*
> - *Monument quality.*
> - *Condition of monument.*
> - *Uniqueness of structure.*
> - *Number of Deposited Plans connected to the trig station.*
>
> *These criteria are used to assess each trig station across NSW and provide a rating out of 5 stars.*
>
> *TS778 Lake George South base…. is currently the highest-scoring trig station NSW.*

4.4.1. Comparative analysis methodology and notes

The Heritage NSW State Heritage Inventory (SHI) and Australian Heritage Database (AHD) were searched for trigonmetrical items.

The search of the AHD identified one trigonometrical station, *North Base Trig Station, Dight St, Richmond RAAF Base, NSW*. The North Base Trig Station is listed on the Commonwealth Heritage List (CHL), listing ID: 105240, as an heritage asset of the Commonwealth government.

The North Base Trig Station has been chosen as an appropriate heritage item to compare with the BCSF Trig Station due to their historical connection as being part of two baseline surveys undertaken in the 1870s.

North Base Trig Station, Dight St, Richmond RAAF Base, NSW

The following information is taken directly from the AHD database, listing 105240.

The North Base Trig Station was built at Richmond in 1879-80 as part of the trigonometrical survey of NSW and geodetic survey network. This network was developed employing known distances and triangulation. The North Base Trig Station is one of two defining the Richmond Baseline.

The only adequate basis of a comprehensive system of survey is triangulation, whereby the relative positions of a number of points on the earth's surface are ascertained by the measurement of the angles of a system or network of triangles connecting them, their distances being found by calculations based upon the measurement of one, or at the most a few, lines of the system. Two such lines have been measured in New South Wales: one at Lake George in 1870-71, the total length being 6.5 miles and the other at Richmond in 1879-80, its mean length being 7 miles 9 yards 2ft 4.36896in.

A massive, circular stone 4ft in diameter and 9in thick has been used to cover the circular brick wall surrounding the north base. The terminals of the base are marked by very fine dots made in small silver discs, let into copper plugs sunk in large solid stones, well embedded in massive concrete foundations. The base structure is surrounded by a modern steel fence to protect it from mowing. A plaque recording the rehabilitation in 1977 is attached to the surrounding concrete plinth.

Significance Assessment

Criterion A Processes

The North Base Trig Station is the northern end of a baseline which established the datum for survey data extending some 300 miles (500 Kilometres) to the north west as part of the geodetic triangulation system in New South Wales.

Criterion D Characteristic values

The North Base Trig Station (1879-80) is of exceptional interest as a permanent survey marker defining one of two nineteenth century trigonometrical baselines in New South Wales.

Statement of Significance

The North Base Trig Station (1879-80) is of exceptional interest as a permanent survey marker defining one of two nineteenth century trigonometrical baselines in New South Wales. (Criterion D.2)

The North Base Trig Station is the northern end of a baseline which established the datum for survey data extending some 300 miles (500 Kilometres) to the north west as part of the geodetic triangulation system in New South Wales. (Criterion A.4)

(Australian Historic Themes: 3.3.5 Laying out boundaries)

4.4.2. Comparative analysis of the BCSF Trig Station and the Richmond North Base Trig Station

These two trigonometrical stations were built in the 1870s as part of a comprehensive trigonometrical survey of NSW.

The trigonometrical survey of NSW was the attempt to accurately measure distances and map NSW. Settlement in NSW began with land grants without any detailed measurements. Certainty of location of any particular estate was impossible without accurate maps. The only adequate basis of a comprehensive system of survey is triangulation, whereby the relative positions of a number of points on the earth's surface are ascertained by the measurement of the angles of a system or network of triangles connecting them, their distances being found by calculations based upon the measurement of one, or at the most a few, lines of the system. Two such lines have been measured in New South Wales: one at Lake George in 1870-71, the total

length being 6.5 miles and the other at Richmond (Richmond North Base) in 1879-80, its mean length being 7 miles 9 yards 2ft 4.36896in.

4.5. Heritage assessment

In this section, the three identified heritage items located within or in proximity of the BCSF Development site are assessed against the seven NSW Heritage Significance criteria listed in Section 4.2 (Table 5) per the guidelines provided below. The three heritage items assessed are:

- The Trig Station (no heritage listing)
- The Currandooley Station property (listed on the Palerang LEP, I175)
- The Werriwa Station property (listed on the Palerang LEP, I233)

The archaeological item has been addressed separately in Section 4.7.

4.5.1. Criterion (a) – Historical:

An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (a)
Guidelines for INCLUSION:
• shows evidence of a significant human activity • is associated with a significant activity or historical phase • maintains or shows the continuity of a historical process or activity
Guidelines for EXCLUSION:
• has incidental or unsubstantiated connections with historically important activities or processes • provides evidence of activities or processes that are of dubious historical importance • has been so altered that it can no longer provide evidence of a particular association

The Trig Station:

The Trig Station is a tall stone pillar constructed between 1870-1874 and is one of the oldest survey markers in NSW. It is located at the northern point of a survey baseline with a smaller survey cairn approximately 9 kms to the south (Barrow 2012, p.56). This baseline was a part of an early survey in the Colony of NSW lines and is connected to another at Richmond, constructed in 1879-80, its mean length being 7 miles 9 yards 2ft 4.36896in (Australian Government 2003).

The Trig Station was part of trigonometrical survey of NSW commenced by Major Thomas Mitchell and his assistant, Robert Dixon. The trigonometrical survey of NSW took place at Lake George between 1870-1874. There are a number of peaks surrounding Lake George that were used as trigonometrical stations, including 'Carter', St. George', Purrorumba', and 'Smalley'. Within a short distance of the lake on the eastern side are some peaks that were established as a trigonometrical stations, including 'Ellenden', 'North Base', and 'Osborne' (Jones 1952, 1 August).

The triangulation chain was extended north and west until, in 1880, a base of verification for the Lake George Base was measured at Richmond (now located within the Richmond Australian Airforce base, and registered as a heritage item on the Commonwealth Heritage List) (Marshall 2002, p.120).

The Trig Station within the BCSF Development site has historical significance as a relic of one to two baseline surveys undertaken in the colony of NSW in the 1870s, one at Lake George and the other at Richmond. It has historical significance for the early mapping and settlement of the colony of NSW.

The Trig Station meets criterion (a) at a state level.

Currandooley:

The property was originally taken up by William Lithgow in 1825 and after his death in 1864 it was sold to Pat Hill Osborne who lived with his family in a house on Deep Creek. The rubble stone walls of the original house are still standing south of Butmaroo Creek, outside of the Development site.

SHI database – Heritage ID: 2920573 listing contains the following information:

After several storms and floods Osborne constructed a 25 room homestead in the style of a French chateau. The house and the stables and bachelor quarters were completed in 1873 and all were built of granitic gneiss from the property and had shingled roofs. The stone cottage was completed about 1920 as was the butchers shop and dairy. All stonework was carried out by William Follet and his son. All roofs were replaced with Marseilles tiles after a fire in the stables in 1890. The property has remained in the ownership of the Osborne family being handed down through successive generations. About 1994 a fire gutted the homestead burning out the second storey which had to be partially rebuilt although the stone walls remained standing. There is a small private cemetery on the property, the earliest burial 1902, consecrated about 1910 by Bishop Barlow, and the last burial 1970 (the landowner confirms that there has been one burial since then: J. Osborne pers. comms., 25.02.2022). *The woolshed was built in 1878 and a Wolseley shearing machine installed in 1888, the same year Wolseley installed machines at Toganmain and the first year shearing was done mechanically.*

Currandooley is a grand, 19th century homestead and part of the original land grant within which the Development site is located. The homestead is still within the possession of the Osborne family, descendants of Patrick Hill Osborne.

Currandooley meets criterion (a) at a local level.

Werriwa:

In 1880 when Nathaniel Osborne married Catherine Gordon, from Manar near Braidwood, Pat Hill Osborne of Currandooley offered to sell the couple a piece of his land and it was there they built the Werriwa homestead in about 1882.

Werriwa is a 19th century homestead and part of the pastoral history of Lake George with associations to the Osborne family, descendants of Patrick Hill Osborne.

Werriwa meets criterion (a) at a local level.

4.5.2. Criterion (b) – Associative:

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW' s cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (b)
Guidelines for INCLUSION:
• shows evidence of a significant human occupation • is associated with a significant event, person, or group of persons

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (b)
Guidelines for EXCLUSION:
• has incidental or unsubstantiated connections with historically important people or events • provides evidence of people or events that are of dubious historical importance • has been so altered that it can no longer provide evidence of a particular association

The Trig Station:

The Trig Station within the BCSF Development site was constructed between 1870 and 1874 as part of the trigonometrical survey of NSW. This survey was commenced at Lake George and was undertaken to enable a more accurate mapping of NSW than previously achieved.

Four attempts at establishing a base line have occurred at Lake George. The first was in 1828 by Thomas Mitchell, although no evidence has been found. The second was established by Government Astronomer GR Smalley in 1867 which is believed to have been marked by five stone pillars. That line was inundated and in 1870 the Surveyor General PF Adams commenced the third base line which was also inundated. A fourth attempt, further away from the lakebed, was made in 1873 when the north pillar was built and the baseline measured between the Trig Station within the BCSF Development site and another survey marker located approximately 9 kms to the south, completed in 1884 (Plowman 2009).

The trigonometrical survey provided detailed maps of NSW that facilitated the settlement of NSW.

The Trig Station meets criterion (b) at a state level.

Currandooley:

The property was originally taken up by William Lithgow in 1825 and after his death in 1864 it was sold to Pat Hill Osborne who lived with his family in a house on Deep Creek (Butmaroo Creek). The property has remained in the ownership of the Osborne family being handed down through successive generations.

Currandooley meets criterion (b) at a local level.

Werriwa:

Werriwa does not have any significant associations with historically important people or events.

Werriwa does not meet criterion (b) at a local level.

4.5.3. Criterion (c) – Aesthetic/Technical:

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (c)
Guidelines for INCLUSION:
• shows or is associated with, creative or technical innovation or achievement • is the inspiration for a creative or technical innovation or achievement • is aesthetically distinctive • has landmark qualities • exemplifies a particular taste, style or technology

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (c)
Guidelines for EXCLUSION:
• is not a major work by an important designer or artist • has lost its design or technical integrity • its positive visual or sensory appeal or landmark and scenic qualities have been more than temporarily degraded • has only a loose association with a creative or technical achievement

The Trig Station:

The Trig Station is a tall, stone pillar structure. Survey markers come in a variety of forms but generally consist of a primary monument or standpoint surrounded by witness/eccentric marks. The primary monument can vary in form ranging from concrete or steel survey pillars, obelisks, rock cairns, and metal rods (Gowans, McElroy & Janssen 16-18 March, p.69).

The Trig Station within the BCSF Development site was constructed to provide a baseline with another survey marker, located approximately 9 kms to the south. It is located within a low spur landform with hilltops nearby. Due to the undulating landscape, the Trig Station is not visible from all vantage points. It has some landmark qualities on account of its construction rather than its visibility within the landscape.

The Trig Station meets criterion (c) at a local level.

Currandooley:

The homestead was constructed with 25 rooms in the style of a French chateau. The house and the stables and bachelor quarters were completed in 1873 and all were built of granitic gneiss from the property and had shingled roofs. The stone cottage was completed about 1920 as was the butchers shop and dairy. All stonework was carried out by William Follet and his son. All roofs were replaced with Marseilles tiles after a fire in the stables in 1890.

Currandooley meets criterion (c) at a local level.

Werriwa:

Substantial single storey homestead built of limestone with brick detailing, in some cases rendered. It was a four room house with wide main hall and a kitchen at the back, constructed of stone from the property. Enclosed verandahs, cgi roof, attached staff quarters. House set in attractive gardens with mature trees and stone walls.

Interior features quality cedar joinery, wide hallway and spacious rooms. Stone stables and farm cottage. Weatherboard staff cottage.

Werriwa meets criterion (c) at a local level.

4.5.4. Criterion (d) – Social:

An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (d)
Guidelines for INCLUSION:

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (d)
• is important for its associations with an identifiable group • is important to a community's sense of place
Guidelines for EXCLUSION:
• is only important to the community for amenity reasons • is retained only in preference to a proposed alternative

The Trig Station:

The Trig Station has historical importance as part of the early trigonometrical survey of NSW and as such has importance to surveyors, but this historical association is not enough to recommend the site as having social heritage significance. Surveyors do not constitute an identifiable community group.

The Trig Station does not meet criterion (d).

Currandooley:

Currandooley is not important for its associations with an identifiable group or to a community's sense of place.

Currandooley does not meet criterion (d).

Werriwa:

Werriwa is not important for its associations with an identifiable group or to a community's sense of place.

Werriwa does not meet criterion (d).

4.5.5. Criterion (e) – Research

An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (e)
Guidelines for INCLUSION:
• has the potential to yield new or further substantial scientific and/or archaeological information • is an important benchmark or reference site or type • provides evidence of past human cultures that is unavailable elsewhere
Guidelines for EXCLUSION:
• the knowledge gained would be irrelevant to research on science, human history or culture • has little archaeological or research potential • only contains information that is readily available from other resources or archaeological sites

The Trig Station:

The Trig Station within the BCSF Development site is of a standard survey marker type, being a stone pillar structure. It was built to form a baseline at Lake George, which was the part of the early trigonometrical survey of NSW.

19th Century survey standards and techniques are well documented. The Trig Station within the BCSF Development site is unlikely to provide any further research opportunities regarding the history of surveying in NSW.

The Trig Station does not meet criterion (e).

Currandooley:

Currandooley does not have the potential to yield new or further substantial scientific and/or archaeological information about early colonial settlement of the Lake George region; nor the work and leisure activities of the land owner and employees.

Currandooley does not meet criterion (e).

Werriwa:

Werriwa does not have the potential to yield new or further substantial scientific and/or archaeological information about early colonial settlement of the Lake George region; nor the work and leisure activities of the land owner and employees.

Werriwa does not meet criterion (e).

4.5.6. Criterion (f) – Rarity

An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (f)
Guidelines for INCLUSION:
• provides evidence of a defunct custom, way of life or process • demonstrates a process, custom or other human activity that is in danger of being lost • shows unusually accurate evidence of a significant human activity • is the only example of its type • demonstrates designs or techniques of exceptional interest • shows rare evidence of a significant human activity important to a community
Guidelines for EXCLUSION:
• is not rare • is numerous but under threat

The Trig Station:

The Trig Station within the BCSG Development site is one of approximately 6,000 traditional trigonometric stations in NSW that formed the basis of the survey control network before the introduction of more than 160 CORSnet-NSW stations. Almost two thirds of all trig stations consist of pillar or ground mark located on private land and therefore the subject site is not rare has a type of infrastructure. It does have the distinction of being unique as one of the survey markers used to measure the baseline at Lake George.

The Trig Station meets criterion (f) at a local level.

Currandooley:

The French style architecture and the extent of stonework for all major outbuildings are unusual and rare features for rural Australia.

Currandooley meets criterion (f).

Werriwa:

Werriwa is not a rare example of its type.

Werriwa does not meet criterion (f).

4.6. Criterion (g) – Representative:

An item is important in demonstrating the principal characteristics of a class of NSW' s cultural or natural places; or cultural or natural environments. (or a class of the local area' s)

Guidelines for the inclusion or exclusion of an item as being of state or local heritage significance against criterion (g)
Guidelines for INCLUSION:
• is a fine example of its type • has the principal characteristics of an important class or group of items • has attributes typical of a particular way of life, philosophy, custom, significant process, design, technique or activity • is a significant variation to a class of items • is part of a group which collectively illustrates a representative type • is outstanding because of its setting, condition or size • is outstanding because of its integrity or the esteem in which it is held
Guidelines for EXCLUSION:
• is a poor example of its type • does not include or has lost the range of characteristics of a type • does not represent well the characteristics that make up a significant variation of a type

The Trig Station:

The Trig Station is in good condition although over time it will deteriorate without some maintenance. It is a good example of a prominent monument stye survey marker being tall and constructed of stone.

The Trig Station meets criterion (g) at a local level.

Currandooley:

Currandooley Homestead cannot be considered to be representative a type or class of building.

Currandooley does not meet criterion (g).

Werriwa:

Werriwa homestead and buildings cannot be considered to be representative a type or class of building.

Currandooley does not meet criterion (g).

4.7. Archaeological significance

The concept of archaeological significance is independent of archaeological potential. For example, there may be 'low potential' for certain relics to survive, but if they do, they may be assessed as being of state significance.

Archaeological significance has long been accepted as linked directly to archaeological (or scientific) research potential: a site or resource is said to be scientifically significant when its further study may be expected to help answer questions. Whilst the research potential of an archaeological site is an essential consideration, it is one of a number of potential heritage values which a site or 'relic' may possess. Recent changes to the Heritage Act 1977 (Section 33(3) (a)) reflect this broader understanding of what constitutes archaeological significance by making it imperative that more than one criterion be considered.

The below assessment of archaeological significance considers the criteria, as outlined in the NSW Heritage Branch publication Assessing Significance for Historical Archaeological Sites and 'Relics'. Sections which are extracted verbatim from this document are italicized.

For the purposes of this assessment, significance is ranked as follows:

- No Significance – it is unlikely that any archaeological resources recovered will be attributed significance in accordance with the assessment criteria on a state or local level.
- Local Significance – it is likely that archaeological resources recovered will be significant on a local level in accordance with one or more of the assessment criteria.
- State Significance – it is likely that archaeological resources recovered will be significant on a state level in accordance with one or more of the assessment criteria.

The following Criteria are used to assess archaeological significance (from Assessing Significance for Historical Archaeological Sites and 'Relics', Heritage Branch NSW).

Table 4-3 Archaeological Significance Criteria

Criterion	Criterion Description	Definition
E	**Archaeological Research Potential**	*Archaeological research potential is the ability of archaeological evidence, through analysis and interpretation, to provide information about a site that could not be derived from any other source, and which contributes to the archaeological significance of that site and its 'relics'*
A, B & D	**Associations with individuals, events or groups of historical importance**	*Archaeological remains may have particular associations with individuals, groups and events which may transform mundane places or objects into significant items through the association with important historical occurrences.*
C	**Aesthetic or technical significance**	*Whilst the technical value of archaeology is usually considered as 'research potential' aesthetic values are not usually considered to be relevant to archaeological sites. This is often because until a site has been excavated, its actual features and attributes may remain unknown. It is also because aesthetic is often interpreted to mean attractive, as opposed to the broader sense of sensory perception or 'feeling' as expressed in the Burra Charter. Nevertheless, archaeological excavations which reveal highly intact and legible remains in the form of aesthetically attractive artefacts, aged and worn fabric and remnant structures, may allow both professionals and the community to connect with the past through tangible physical evidence.*

Criterion	Criterion Description	Definition
A, C, F & G	**Ability to demonstrate the past through archaeological remains**	*Archaeological remains have an ability to demonstrate how a site was used, what processes occurred, how work was undertaken and the scale of an industrial practice or other historic occupation. They can demonstrate the principal characteristics of a place or process that may be rare or common.*

4.7.1. Assessment of Archaeological Significance of the proposed Blind Creek Solar Farm

This section only assesses archaeological potential of the proposed Blind Creek development footprint.

Table 4-4 Archaeological Significance Criteria

Criterion Description	Discussion
Archaeological Research Potential	Although there is nil-low potential for archaeological resources associated with the original land grants, these may have local significance for their ability to reveal information about the early European settlement of the Lake George region which cannot be garnered from available historical sources.
Associations with individuals, events or groups of historical importance	Although there is nil-low potential for archaeological resources associated with the late 19th century development of the subject area, should evidence be uncovered it may have significance at a local level to reveal information about early pastoral and agricultural practices.
Aesthetic or technical significance	Material evidence of 19th century pastoral and agricultural practices found within the Development site are unlikely to reveal information not already known and available through other historical archaeological resources.
Ability to demonstrate the past through archaeological remains	Archaeological remains could demonstrate past pastoral and agricultural practices.

4.8. Statement of Significance

The following statements of heritage significance are either taken from the current listings for each item or developed by NGH. The NGH assessment of each heritage item against the NSW Heritage Significance criteria in the preceding section supports the existing heritage significance statements for each item, and so no new assessment of significance is required for this report.

4.8.1. The Trig Station

The Trig Station within the BCSF Development site was constructed between 1870 and 1874 as part of the trigonometrical survey of NSW. This survey was commenced at Lake George and was commenced by Major Thomas Mitchell and Robert Dixon, who had worked to create the 'Map of Nineteen Counties'. Governor Darling engaged Major Mitchell to undertake a trigonometrical survey of NSW to enable a more accurate mapping of NSW than previously achieved.

Lake George was selected as an appropriate place for a baseline owing to its flat terrain allowing accurate measurement and visibility from terminal to terminal. Four attempts at establishing a base line have occurred at Lake George. The first was in 1828 by Thomas Mitchell, although no evidence has been found. The

second was established by Government Astronomer GR Smalley in 1867 which is believed to have been marked by five stone pillars. That line was inundated and in 1870 the Surveyor General PF Adams commenced the third base line which was also inundated. A fourth attempt, further away from the lakebed, was made in 1873 when the north pillar was built and the baseline measured between the Trig Station within the BCSF Development site and another survey marker located approximately 9 kms to the south, completed in 1884 (Plowman 2009).

The Trig Station has historical and association heritage significance at a state level for the role that it played in the trigonometrical survey of the 18th century.

4.8.2. Currandooley

Palerang Heritage Study Inventory:

Currandooley has belonged to the same family for more than 140 years. It represents a time of prosperity and development in NSW's rural areas and the aspirations at the time of successful landholders. Designed by renowned Sydney architect Ferdinand Reuss, the French style architecture and the extent of stonework for all major outbuildings are unusual and rare features for rural Australia. The impressive two storey homestead is set amongst old plantings of elms and pines and the whole complex presents a particularly attractive image on arrival in the forecourt. Despite the previous fire there is a high degree of intactness and integrity especially architecturally. Overall a high degree of original intactness and integrity. Historic (a), associational (b), aesthetic (c), research (e) and rare (f) heritage significance .

SHI database entry, Heritage ID: 2920573 (accessed 15.02.2022):

Continuity of family occupants combined with a rich social history and quality of architecture make Currandooley one of the most important homestead properties in Australia.

4.8.3. Werriwa

SHI database entry, Heritage ID:2921699 (accessed 15.02.2022):

An interesting example of the evolution of a homestead from the 1880s to the late 20th century. Association with some of the main 19th century pastoral families of the district. The buildings demonstrate architectural trends over a century as well as stonemasonry skills and joinery craftsmanship. Historic (a), associational (b), aesthetic (c) and research (e) heritage significance.

5. Impact assessment

5.1. Proposed development

Construction of the solar farm does not include the demolition of any existing structures but does include ground disturbance works and new construction. However, the extent of the disturbances which will result from the proposed development is low in comparison to other potential developments for this site such as sand mining or residential development.

In the early stage of the project, the proposed development footprint was amended in consultation with NGH, with the intention of avoiding impacts to areas identified to have historical heritage values, which include items of built heritage and potential archaeological remains. The assessment approach is discussed in Section 1.4.

Any potential physical impacts to historical heritage items would be limited to the approximately 12-18 month construction period, with operation and decommissioning phases unlikely to result in any disturbance beyond that which will occur during construction. Visual impacts to items of heritage value, if identified, would be ongoing through the operational phase. Construction will include the following:

- Installation of upright piles to support the PV modules,
- Trenching to connect these modules to inverters,
- Deeper trenching to connect these inverters to the substation,
- Construction of access tracks to allow for construction and maintenance of the site,
- The construction of a substation comprising a switching station, transformers, control buildings storage facility and carparking,
- Temporary construction laydown and offices, and
- Fencing.

The nature of these works is outlined in detail below.

The array at the Blind Creek Solar Farm will include up to approximately 850,000PV solar modules mounted on single axis tracking tables. The tracking tables can be in two configurations, which impact the pile density and therefore the ground disturbance from piles. A certain amount of design flexibility is required, which is why two options are provided below. In terms of the assessment of impact.

1-in-Portrait (1P): Approximately 0.25 piles per panel (210,000 piles in total)

2-in-Portrait (2P): Approximately 0.125 piles per panel (105,000 piles in total)

In addition to the above, trenching for infrastructure, access tracks and ancillary facilities will also cause ground disturbance to some extent, which would have the potential to impact on historical archaeological relics, where present. However, the footprint has been designed to avoid all identified items of heritage value.

5.1.1. Solar arrays

Piles would be driven into the ground to support the solar array's mounting system. Each pile is a steel profile, such as an i-beam or channel, up to 275mm wide and 100mm deep, and pile depth will be greater than 1m into the ground. The pile heights will vary according to topography and expected flood level. Ground disturbance will be limited to the piles themselves, as well as churning of topsoils by tracked machines used to install the piles (Plate 5-1). Flat plate PV modules would be installed and mounted across the site. Each of them would be linked to an inverter and a transformer. An example of what the arrays look like once installed and connected is provided in Plate 5-2.

Plate 5-1 Example of machinery typically used to drive poles into the ground for the solar array supports (source: NGH stock image).

Plate 5-2 Example of final appearance of solar arrays (source: NGH stock image)

5.1.2. Power conversion units

Each sub-array will be connected to a housed power conversion unit ('PCU'). The purpose of the PCU is to convert direct current (DC) electricity, generated by the solar panels, to alternating current (AC) which is used by the national electricity grid. The conversion is performed by inverters, and the voltage is stepped up to the site's reticulation value (approximately 33kV) using transformers. The PCUs hold all power conversion devices, switchgear, communication devices, and ancillary equipment.

The precise layout of PCUs within the BCSF solar array is subject to detailed design and technology selection. An indicative design includes a single PCU which includes one inverter and one transformer and is connected to 12,000 solar modules forming a subarray and under this configuration, approximately 85 PCUs of this size would be needed. The PCUs would be constructed on a concrete foundation, or a pile as required by detail design. This design is indicative only, as it is possible that an alternative architecture may be selected. For this site, it is most likely that the PCU will be installed on piles to raise the unit above 1% AEP flood level (approximate 1 in 100-year event). An example of a PCU product that could be used in this configuration is shown in Figure 5-1.

Impacts associated with PCUs is to a large extent associated with the 'cable pit' below the PCU, which allows underground cabling to enter under the unit (see Figure 5-2) and the slight elevation of the unit which may give it greater visibility across the Development site.

Figure 5-1 Typical housed PCUs used within a commercial solar power plant (source SMA). The dimensions of this specific product are 6058mm (W) * 2896mm (H) * 2438mm (D)

Figure 5-2 PCU installed on pile foundation. Courtesy Octopus Investments Australia

5.1.3. Underground cabling

Two types of cable are necessary on the site: DC and AC. Competing requirements dictate whether they are installed above or below ground. While above-ground cabling would reduce ground disturbance, it would result in greater visual impact. Underground cabling improves the resilience, safety, agricultural access and visual impact of the site and is therefore the preferred option.

DC cabling connects each 'string' of panels (approximately 30) to the PCU. They may be installed either in cable trays above ground, or in trenches to Australian Standards. AC cabling connects the PCUs with the substation. As this is far higher voltage and more dangerous it must be installed at a depth of at least 500mm (typically 600mm – 800mm) following the relevant Australian Standard (see Figure 5-3).

Figure 5-3 Example of AC cabling at a depth of 500mm, a similar style of underground cabling will be adopted for the proposed Blind Creek Solar Farm

5.1.4. Energy storage

The Project has been designed to include energy storage in the form of batteries to firm the generating capacity.

Subject to detailed design, the Project is seeking approval for up to nominally 300MW of storage with nominally 2 hours of full export capacity (600MWh) using Lithium-ion batteries (LiBs). The LiBs would be constructed on concrete footings or driven piles, as required, to provide stable and resilient service. The physical layout of the batteries on the site will be specified during the detailed design phase with two configurations identified below. These configurations are indicative only, and it is possible that a hybrid or alternative architecture may be selected. Figure 5-4 below provides an indicative layout of an AC coupled storage system which is similar to that intended for the BCSF.

Figure 5-4 Example of an AC-coupled energy storage facility. The Hornsdale Power Reserve is 100MW / 129MWh and has a footprint of less than one hectare (Source Hornsdale Power Reserve).

5.1.5. Transmission network connection

To connect to the national electricity grid, the Project will make use of the existing 330kV transmission line that traverses the site. This line connects Canberra to Kangaroo Valley. To facilitate this connection, a new transmission substation will be constructed as part of this Project.

It would be built on the eastern edge of the development footprint and would have a footprint of approximately one hectare. For ongoing operation and maintenance of the substation, it can be accessed via Blind Creek Road and use existing internal access tracks.

To connect the solar array to the national electricity grid, additional transformers would be installed.

The Project allows for up to approximately four transformers to be installed for this purpose, in addition to those already included in the PCUs. These transformers would be located at the onsite substation.

5.1.6. Associated operations buildings

For the ongoing operation of the solar farm, permanent buildings would be installed for control, switch room and storage facilities. Indicative descriptions of these buildings are provided below. Each building would contain essential fire safety equipment as required by the relevant standards.

Control room and Site Office

This facility would be a single storey building, up to approximately 20m x 10m. It would contain an office and amenities for staff (toilet, kitchen, first aid, potable water supply, etc.) as required for the safe operation of the site.

The foundations, finishings, and other features would be designed as required by relevant standards.

Switch room

A building footprint of approximately 20m x 5m and approximately 5m high would be constructed for the HV switch room, with services, protection and control facilities. The building may be installed on stilts and will be designed and constructed to meet relevant standards.

Storage shed

A storage shed with footprint of approximately 20m x 15m and approximately 6m high would be constructed. The building will have appropriately designed foundations, finishings and other features as required by relevant standards.

Communications tower

A communications tower will be installed. This tower will be monopole in design and up to 25m tall. It will be connected underground with power and communication cables for most of its length and may be overhead close to the substation, operations buildings etc.

5.1.7. Site access and internal tracks

Site access

The site will be accessed from the Tarago Road, which runs between Tarago and Bungendore.

Three existing access points were considered: Blind Creek Entrance, Currandooley Road Entrance and Bungendore Sands Entrance. It was found that the Blind Creek Entrance had the least impacts on local traffic and requires the least amount of work to upgrade.

The Blind Creek Entrance requires some widening to accommodate turn treatments, but the intersection already has suitable sightlines.

The final intersection designs would be completed in consultation Queanbeyan-Palerang Regional Council following approval of the Project.

Internal tracks

The site will use both existing tracks (approximately 6.6km), upgraded where necessary, and new tracks where none exist (approximately 20km). The tracks within the array will also form laneways for movement of sheep between blocks as part of the landowner's regenerative agri-solar plan.

The final design for new tracks will not be completed until post approval. The internal tracks would be constructed of local or engineered fill, crowned for run-off and topped with a gravel cap. The existing roads, which service the laydown compound and the substation would be approximately 4–6m wide (including shoulders and any required drainage), whilst newly constructed internal roads would be approximately 3.5–5m wide.

Access tracks would be clearly marked on the site environmental management plan and passing lanes and turning circles would be provided to internal tracks in line with the bushfire management plan.

The low-level crossing over Blind (Bridge) Creek and Wrights Creek will require upgrades, including the replacement of blocked culvert drains and resurfacing with concrete.

The new crossing will be approximately 5-6m wide at the road level, with a flare outward by approximately one metre to the exposed bedrock of the creek (see Figure 5-5 and Plate 5-3 below).

The pipes would be sized to facilitate crossings in normal flood conditions (approx. one in five-year flood) and will act to preserve connectivity. The battered sides and drains of the existing ramps in and out of the crossing may be reinforced with loose stone to stabilise them during flood conditions (see Plate 5-4 below).

Figure 5-5 Proposed new crossing over Blind Creek. Concrete deck to be approximately 5m wide (Source: Stride Renewables).

Plate 5-3 The repaired crossing would be similar to the one depicted here. (Source: Stride Renewables).

Plate 5-4 Example of the battered side of the creek crossing with loose stones as reinforcement. (Source: Stride Renewables).

5.1.8. Security and fencing

Solar panel array area

The solar array will be located on private land with no public access. For this reason, the area will be fenced.

Substation/Battery area

The substation area would be enclosed by a security fence in accordance with safety requirements.

5.1.9. Landscaping and revegetation

Landscaping and screen planting would be undertaken in some sections of the perimeter of the development site to minimise visual impacts. Tree and shrub species suited to site conditions would be used, placed and selected to avoid shading impacts on the array and to achieve effective screening of the solar farm infrastructure.

The ten-metre minimum bushfire protection setback (APZ) from solar farm infrastructure would be applied to the solar farm, in accordance with Planning for Bush Fire Protection guidelines (RFS 2019). Where remnant or planted woody vegetation is present within the development footprint, an APZ buffer of minimum 10m would be maintained between this vegetation and solar farm infrastructure.

Areas disturbed during the construction phase would be stabilised and revegetated with suitable perennial grass species immediately after construction.

5.1.10. Temporary construction facilities

The site will require up to approximately 10 transportable offices. These will be removed at the conclusion of construction. The offices may be powered with either an off-grid solar-based solution or through a connection to the nearby 11kV network.

A construction laydown would be established adjacent to the site offices. This area would include a cleared gravel pad and would be used to unload vehicles, store materials and vehicles.

5.1.11. Decommissioning and rehabilitation

At the end of the operational life of the solar farm, decommissioning and rehabilitation of the site will be undertaken. During the decommissioning process, all below-ground infrastructure would be removed to a depth of 500mm or less. All above-ground infrastructure will also be removed, with the possible exception of the 330kV substation. Rehabilitation of the site would commence at this stage.

5.2. Heritage Impact considerations

As outlined in Section 3.3, the proposed solar farm and associated ancillary works are within proximity to the following known heritage items:

- Currandooley Homestead, including garden and stables (Palerang LEP Item ID I175)
- Werriwa Homestead, including homestead, garden, cottages and outbuildings (Palerang LEP Item ID I233)
- Original Currandooley Homestead Ruins (no statutory listing)
- Trig Station (no statutory listing)

Of these items, none will be physically impacted as a result of the works, as the development footprint has been designed in order to ensure avoidance. The locations of all items in relation to the Development Footprint are shown in Figure 1-4.

The Heritage NSW guidelines, *Principles of Conservation Work on Heritage Places,* and *Design in Context: guidelines for infill development in the historic environment* (Heritage Office 2005) outline principles that should be considered when planning work to and adjacent to a heritage item. Although the Project will not impact physically upon any historic, non-Aboriginal, heritage item, there are other considerations which must be made to fully address potential impacts upon heritage items. The design of a development within a heritage context should include consideration of the cultural, social, historical, political, economic and physical values of the heritage area and buildings. Aesthetic values including views and vistas have been identified to contribute to the heritage significance of both Currandooley Homestead and Werriwa Homestead and as such visual impact must be considered for these two items. The Trig Station possesses aesthetic value for its physical construction, and views between this and other Trig Stations would once have been important for the function of the item. The Original Currandooley Homestead archaeological site does not possess aesthetic value and its setting is not significantly altered by the development. As such, views and vistas have not been considered.

The guidelines recommend that "*new development affecting an established and valued setting… should understand and respond to that place in a positive way that is of its own time*" (2005,2). The relationships between a building/structure and its setting contribute to that place's special character. Depending on its design and position, a new building/structure can have a beneficial or detrimental effect on the setting and character of an adjacent heritage item.

The following principles apply to the BCSF and have therefore been addressed: **2.11 Respect the building's context and location** and **2.13 Maintain views.** Significant views to and from heritage buildings should be identified and maintained. In order to assess the impact of the Project upon the surrounding heritage items and their context, the guidelines recommend using the following considerations: character, scale, form, siting, material and colour, and detailing. However, information regarding the visual impact has been detailed in the Visual Impact Assessment (Moir LA 2021) and the results of this assessment have identified that there will be no visual impact to the two homestead sites. The relevant information is summarised below and taken from the Visual Impact Assessment (Moir LA 2021). Moir LA identified via desktop mapping a "Zone of Visual Influence", which represents the area within which a development is theoretically visible, based on a Digital Terrain Model. Currandooley and Werriwa Homestead were identified as having 75-100% potential visibility towards the development based on topography. However, a field assessment was then undertaken which identified nil visual impacts for these sites, as outlined in . Currandooley Homestead is identified in the report as R7, and Werriwa Homestead is identified as R37.

Table 5-1 Assessment of visual impacts to Currandooley and Werriwa Homesteads (Moir LA 2021: Table 5)

Address (site)	Visual assessment	Visual impact rating
R7 - 484 Currandooley Road, Tarago (Currandooley Homestead)	The Project is located to the southwest of this dwelling. A low rise in the topography will screen the views to the Project from this dwelling.	Nil
R37 - 866 Tarago Road, Lake George (Werriwa Homestead)	The Project is located north west of this dwelling. Majority of the proposed development will likely be hidden by surrounding vegetation associated with this dwelling.	Nil

With regard to the Trig Station, the significance assessment has identified that the views between the Trig Station and other trig stations form part of the value set for this heritage item. However, this would also be considered a function rather than a part of the aesthetic characteristics of the item, as it cannot be viewed without use of a theodolite or similar tool, due to the distance between the stations. The Trig Station is situated on a low ridgeline overlooking the proposed location of the solar arrays and will remain at a higher elevation than the arrays following their construction. As such, it is assessed that the views to and from the Trig Stations will not be impacted by the solar arrays.

The physical appearance of the Trig Station will also not be impacted and it's aesthetic value as a structure will therefore not be impacted.

5.3. Heritage Impact questions

The following questions are presented in the NSW Heritage Manual document *Statements of Heritage Impact* to address development proposals on heritage items (NSW Heritage Office 2002).

What aspects of the proposal respect or enhance the heritage significance of the subject item?

The proposed works do not respect or enhance the heritage significance of any of the identified heritage items.

What aspects of the proposal could have a detrimental effect on the heritage significance of the subject item?

The assessment has identified that the Project will not have either a physical or visual impact on any of the identified heritage items, and as such, no detrimental effects will occur.

Have more sympathetic solutions been considered and discounted? Why?

The Project has included re-design of the development footprint to avoid physical impacts to the Trig Station as well as to avoid incursion into the curtilage of Currandooley Homestead's property (Lot 11 DP 237079). There are no other sympathetic solutions that are viable for the project, and none are required.

New development adjacent to a heritage item

- **How is the impact of the new development on the heritage significance of the item or area to be minimised?**

There is no identified impact to any of the heritage items within proximity to the Project.

- **Why is the new development required to be adjacent to a heritage item?**

  The new development is located within low-lying floodplain pasture land which has been selected for its suitability to contain solar arrays and required infrastructure which is already present.

- **How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?**
  As outlined above, no significant views or vistas from either Currandooley Homestead or Werriwa Homestead will be impacted. The views to and from the Trig Station will not be obstructed as it will remain elevated above the arrays. Similarly, there are no aesthetic values associated with the Original Currandooley Homestead Archaeological Site and as such, while it will be in view of arrays on the northern side of Butmaroo Creek, this will not have a negative impact on the identified heritage value for the item.
- **Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?**
- **Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?**
  The development will not impact on any known or likely archaeological deposits. One known archaeological site, the Original Currandooley Homestead Archaeological Site, has been identified on the southern side of Butmaroo Creek, which is outside of the development footprint and will not be subject to any disturbance.
- **Will the additions visually dominate the heritage item? How has this been minimised?**
  As noted in the VIA (Moir LA 2021) the arrays and ancillary facilities will not be visible from the Currandooley or Werriwa Homesteads, and as such, cannot visually dominate these items. The arrays will not visually dominate the Trig Station heritage item as it will remain elevated above them. The development footprint is on the other side of Butmaroo Creek from the location of the Original Currandooley Homestead Archaeological Site, and while the development will dominate the immediate landscape visually, this will not be directly over the site and will not impact the heritage values, which do not include aesthetic value.
- **Will the public, and users of the item, still be able to view and appreciate its significance?**
  As there are no identified physical or visual impacts to the identified items of historical heritage significance in proximity to the development footprint, it is expected that all users of these items will continue to be able to appreciate their significance.

5.4. Scope of Works assessment

The individual components of the proposed works are listed below and assessed for the potential impact on the identified heritage values and significance of the subject item (Table 5-3). The definitions of the assessment gradings are provided below.

Table 5-2. Heritage Impact Assessment Gradings

Heritage Impact Assessment Gradings
Positive – the Project will enhance the heritage values and/or contribute to the preservation of the heritage item.
Nil/Neutral – no impact will result on the heritage significance of the heritage conservation zone.

Heritage Impact Assessment Gradings
Low – the Project will impact minimally upon a heritage item or area but without impacting upon its significance.
Adverse – the Project will impact directly upon identified heritage values of an item or area. However, the implementation of mitigation measures will reduce the impact and not alter heritage significance of the item or area.
High – the Project represents excessive overall impact on the heritage item or area, directly reducing or removing the heritage significance of the item or area.

Table 5-3 Assessment of the proposed works to the BCSF in relation to the heritage significance of the subject site

Proposed works	Currandooley Homestead (Item I175)	Werriwa Homestead (Item I233)	Trig Station	Old Currandooley Homestead Archaeological Site
Solar arrays	Nil impacts	Nil impacts	Visual impacts, neutral impact on significance	Visual impacts, neutral impact on significance
Ancillary facilities including substation, battery site, communications tower, roads and offices	Nil impacts	Nil impacts	Nil impacts	Nil impacts
Trenching and other ground disturbance works	Nil impacts	Nil impacts	Nil impacts	Nil impacts

5.5. Summary of impacts

In summary, it has been assessed that the proposed BCSF development will have nil impact on any of the four identified historical heritage items. This is due to:

- No physical impacts to Currandooley Homestead, Werriwa Homestead, or the Old Currandooley Homestead Archaeological Site as a result of any of the proposed works, including construction of arrays, substation, battery storage site, roads, trenching, or other infrastructure. All items are outside of the development footprint in their entirety.
- No physical impacts to the Trig Station as the development has been designed specifically to avoid this site, including a buffer of 10-15 m.
- No visual impacts to the two listed items Currandooley Homestead and Werriwa Homestead, with reference to the VIA (Moir LA 2021).

- Changes to the visual amenity in the vicinity of the Trig Station will not impact the heritage significance of this items, as it will remain elevated above the arrays and therefore will retain the ability to view between other trig stations if extant. The physical aesthetics of the item will not be altered.
- Changes to the visual amenity in the vicinity of the unlisted item Old Currandooley Homestead Archaeological Site will not impact the heritage significance of this items, as its significance does not rely on aesthetic values or vistas.

In summary, the cumulative impact of the proposed development is assessed to be nil to very low.

6. Conclusion & recommendations

A detailed impact assessment of the proposed works has been undertaken in Section 5 of this report. The proposed Blind Creek Solar Farm has been assessed to have:

- no impact on locally listed *Currandooley* property (I175) on the grounds that it would have no impact on its physical and visual curtilage or historical heritage values,
- no impact on locally listed *Werriwa* property (I233) on the grounds that it would have no impact on its physical and visual curtilage or historical heritage values,
- a nil-negligible impact on the unlisted Trigonometrical Station. This assessment has assessed the Trig Station to potentially have historical significance at a state level. The Trig Station is a relic of the 19th century trigonometrical survey of NSW. Trig Stations are built with consideration of the landscape so that they are visible and have a line of site to other markers. Caption Major Mitchell, Dixon and Smalley participated in a baseline surveys at Lake George. The development footprint will excise the Trig Station by 10-15 metres. The Trig Station is located on elevated ground and at 4.3 metres will stand taller than the solar array, which will be installed on land that slopes away to the south of the Trig Station. The southernmost Trig marker is located over 8kms away and is not visible with the naked eye or with binoculars. While it is recognised that the Project would alter the setting and visual curtilage of the Trig Station, the historical line of site to the south that forms the baseline no longer exists due to the planting and growth of vegetation, and
- nil-negligible potential to impact significant historical archaeological resources. The development footprint of the proposed Blind Creek Solar Farm is located on land that has been paddocks for grazing since the early land grants of the 1820/30s. The historical homesteads associated with the land consist of the original Currandooley homestead located south of Butmaroo Creek, outside of the development footprint, and the existing Currandooley homestead, located to the north of the Development site.

For the reasons stated above, the proposed works are recommended for approval from a historic (non-Aboriginal) heritage perspective having regard to the proposed recommendations below.

6.1. Recommendations

Recommendation 1: Stock fence around the Trig Station

It is recommended that a stock fence be installed along the proposed buffer around the Trig Station. There is currently no protection from live stock.

Recommendations 2: Archival Recording of the Trig Station

It is recommended that a photographic archival recording of the Trig Station be prepared in accordance with Heritage NSW guideline, *Photographic Recording of using Film or Digital Capture (2006)*. Making a photographic record of a heritage place or object documents it for the future, before it is lost or changed, either by progressive iterations or by time.

It is recommended that the photographic recording include additional research to confirm the existence of other Trig Station or markers that formed the baseline survey at Lake George in the 1870s. The photographic recording should include photos, descriptions and a brief historical account of these identified survey markers and their relationship to each other.

Recommendation 3: Unexpected Finds Procedure

Should historical archaeological materials be uncovered while undertaking works to develop the Blind Creek Solar Farm, all activities must stop, and Heritage NSW be immediately notified. An appropriately qualified archaeologist should also be consulted for the purpose of implementing best practice protection and conservation measures while the relevant approvals are obtained

7. References

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Appendix A Historical property information

Appendix A The Historical Property information for land parcels relevant to the proposed Blind Creek Solar Farm Project Site

A.1 Description:

- Lots 1 to 4 & 9 to 11 D.P. 237079,
- Lot 2 D.P. 1167699,
- Lots 1 & 2 D.P. 1154765 & Lot 1 D.P.456698,
- Also Lot E D.P 38379 & Lot 17 D.P. 535180.

A.1.1 Lots 1 & 2 D.P. 237079

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.11.1835	William Lithgow (Grantee) (& his deceased estate)	Serial 44 Folio 51 Portion 1 (1180 acres – Crown Plan 111-642)
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier) (For his life now deceased – recital in Volume 109 Folio 43)	Book 824 No. 390
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Book 824 No. 390
1947	D.P. 38379	
1965	D.P. 227420	
1969	D.P. 237079	
29.08.1969	Michael Ryrie Osborne (Grazier)	Book 2956 No. 502 Then Vol 11497 Fol's 6 & 7 Now 1 & 2/237079
17.06.2014	# Catherine Patricia Osborne	1 & 2/237079

# Denotes current registered proprietor

A.1.2 Lot 9 D.P. 237079

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.11.1835	William Lithgow (Grantee) (& his deceased estate)	Serial 46 Folio 21 Portion 41 (893 acres – Crown Plan 154-642)
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier) (For his life now deceased – recital in Volume 109 Folio 43)	Book 824 No. 390
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Book 1831 No. 212 (Mortgage in own right) (Recitals in Volume 109 Folio 43)
1947	D.P. 38379	
	D.P. 221771	
22.06.1964	Currandooley Pty Ltd	Book 2706 No. 751
1969	D.P. 237079	
29.08.1969	# Brian John Hamilton Osborne (Grazier)	Book 2956 No. 506 Then Vol 11490 Fol 150 Now 9/237079

# Denotes current registered proprietor

A.1.3 Lot 10 D.P. 237079

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.11.1835	William Lithgow (Grantee) (& his deceased estate)	Serial 46 Folio 21 Portion 41 (893 acres – Crown Plan 154-642)
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier) (For his life now deceased – recital in Volume 109 Folio 43)	Book 824 No. 390
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Book 1831 No. 212 (Mortgage in own right)

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
		(Recitals in Volume 109 Folio 43)
1947	D.P. 38379	
	D.P. 221771	
22.06.1964	# Currandooley Pty Ltd	Book 2706 No. 751 Then Vol 11490 Fol 151 Now 10/237079
1969	D.P. 237079	

# Denotes current registered proprietor

A.1.4 As regards part Lot 11 D.P. 237079 within the scope of the investigation

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
	As regards the part within Portion 13	
29.09.1870	Pat Hill Osborne (Esquire)	Vol 109 Fol 43 Portion 13 (320 acres – Crown Plan 711-1956)
	As regards the part within Portion 20	
24.03.1874	Lewis Solomon	Vol 183 Fol 112 Portion 20 50 acres – Crown Plan 711-1956)
22.08.1882	Patrick Hill Osborne (Esquire)	Vol 183 Fol 112
	Continued as regards the whole.	
24.04.1903	Elizabeth Jane Osborne (Widow) Henry Osborne (Grazier) Pat Hamilton Osborne (Grazier) Stephen Messman Osborne (Grazier) (Transmission Application not investigated)	Volume 109 Fol 43 & Vol 183 Fol 112
14.03.1907	Henry Osborne (Grazier) (For his life now deceased)	Volume 109 Fol 43 & Vol 183 Fol 112

A.1.5 Continued as regards Lot 11 D.P. 237079

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
1964	D.P. 221771	
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Volume 109 Fol 43 & Vol 183 Fol 112 Then Vol 4882 Fol 66 Then Vol 6430 Fol 135 Now Vol 9826 Fol's 95 & 96
	Continued as regards the part within Volume 9826 Folio 95	
22.03.1967	Marjorie Granville Osborne (Widow) Henry Pat Granville Osborne (Grazier) Michael Ryrie Osborne (Grazier) Brian John Hamilton Osborne (Grazier)	Vol 9826 Fol 95 Now Vol 11521 Fol 37
29.08.1969	Henry Pat Granville Osborne (Grazier)	Vol 11521 Fol 37
29.08.1969	# Currandooley Pty Limited	Vol 11521 Fol 37 Now 11/237079
	Continued as regards the part within Volume 9826 Folio 96	
22.03.1967	Marjorie Granville Osborne (Widow) Henry Pat Granville Osborne (Grazier) Michael Ryrie Osborne (Grazier) Brian John Hamilton Osborne (Grazier)	Vol 9826 Fol 95
22.06.1964	# Currandooley Pty Limited	Vol 9826 Fol 96 Then Vol 11521 Fol 37 Now 11/237079

# Denotes current registered proprietor

A.1.6 As regards Lot 2 D.P. 1167699

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
07.07.1835	Joseph Thompson	Serial 34 Folio 112 Portion 9

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
		(2560 acres – Crown Plan 18-642)
20 & 21.10.1835	William Lithgow (Merchant)	Book H No. 866
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier) – For life (Now deceased)	Book 824 No. 390
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Book 824 No. 390
19.10.1940	Grantham Park Pty Limited	Book 1886 No. 58 Now 2/1167699

A.1.7 Continued as regards Lot 2 D.P. 1167699

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
1950	D.P. 157545	
20.10.1983	D.P. 634213	
07.01.2014	# Henry Everard Thompson	2/1167699

# Denotes current registered proprietor

A.1.8 As regards Lots 1 & 2 D.P. 1154765

A.1.9 As regards the part formerly comprised in Lot J D.P. 38379 (Portion 41)

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.11.1835	William Lithgow (Grantee) (& his deceased estate)	Serial 46 Folio 21 Portion 41 (893 acres – Crown Plan 154-642)
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier) (For his life now deceased – recital in Volume	Book 824 No. 390

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
	109 Folio 43)	
15.02.1937	Pat John Bryan Osborne (Grazier)	Book 824 No. 390
14.01.1949	Lakelands (Bungendore) Limited Now Lakelands Pty Limited	Book 2073 No. 411 Then Vol 14344 Fol 129 Now 1/1154765 & 2/1154765
1947	D.P. 38379	
2010	D.P. 1154765	

A.1.10 As regards the part formerly comprised in Lot F D.P. 38379 (Portion 17)

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
26.06.1882	Crown Reserve No. 152 for Camping	Gazette (Crown Plan 146-3020 not available)
03.10.1898	Pat Hill Osborne	Vol 1263 Fol 99 Portion 17 (488 acres – Crown Plan 5168-1956)
24.04.1903	Elizabeth Jane Osborne (Widow) Henry Osborne (Grazier) Pat Hamilton Osborne (Grazier) Stephen Messman Osborne (Grazier) (Transmission Application not investigated)	Vol 1263 Fol 99
14.03.1907	Henry Osborne (Grazier) (For his life now deceased)	Vol 1263 Fol 99

A.1.11 Continued as regards the part formerly comprised in Lot F D.P. 38379 (Portion 17)

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Vol 1263 Fol 99 Now Vol 4882 Fol 66
1947	D.P. 38379	

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
14.01.1949	Lakelands (Bungendore) Limited Now Lakelands Pty Limited	Vol 4882 Fol 66 Now 2/1154765
2010	D.P. 1154765	

A.1.12 As regards the part formerly comprised in Lot H D.P. 38379 (Portion 50)

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.10.1878	Pat Hill Osborne (Grazier)	Volume 409 Folio 73 Portion 50 (60 acres – Crown Plan 1367-1956)
24.04.1903	Elizabeth Jane Osborne (Widow) Henry Osborne (Grazier) Pat Hamilton Osborne (Grazier) Stephen Messman Osborne (Grazier) (Transmission Application not investigated)	Volume 409 Folio 73
14.03.1907	Henry Osborne (Grazier) (For his life now deceased)	Volume 409 Folio 73
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Volume 409 Folio 73 Now Vol 4882 Fol 66
1947	D.P. 370961 & D.P. 38379	
14.01.1949	Lakelands (Bungendore) Limited Now Lakelands Pty Limited	Vol 4882 Fol 66 Now 1/1154765
2010	D.P. 1154765	

A.1.13 Continued as regards Lot 1 D.P. 1154765

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
08.02.2011	# Dominic Granville John Osborne	1/1154765

# Denotes current registered proprietor

A.1.14 Continued as regards Lot 2 D.P. 1154765

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
15.02.2012	Lucy Alexandra Mora Chloe Victoria Osborne	2/1154765
11.11.2020	# Lakelands Pty Ltd	2/1154765

# Denotes current registered proprietor

A.1.15 As regards Lot E D.P 38379

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.11.1835	William Lithgow (Grantee) (& his deceased estate)	Serial 44 Folio 51 Portion 1 (1180 acres – Crown Plan 111-642)
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier) (For his life now deceased – recital in Volume 109 Folio 43)	Book 824 No. 390
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Book 824 No. 390
1947	D.P. 38379	
14.01.1949	Lakelands (Bungendore) Limited Now Lakelands Pty Limited	Book 2073 No. 411 Then Vol 14344 Fol 129 Now E/38379
15.02.2012	# Lucy Alexandra Mora # Chloe Victoria Osborne	E/38379

# Denotes current registered proprietors

A.1.16 As regards Lot 17 D.P. 535180

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
06.11.1835	William Lithgow (Grantee) (& his deceased estate)	Serial 44 Folio 51 Portion 1 (1180 acres – Crown Plan 111-642)

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
27.11.1837	William Lithgow (Grantee) (& his deceased estate)	Serial 42 Folio 85 Portion 2 (1920 acres – Crown Plan 155-642)
01.07.1866	Patrick Hill Osborne (Esquire) (or Pat Hill Osborne) (& his deceased estate)	Book 99 No. 412
14.03.1907	Henry Osborne (Grazier)	Book 824 No. 390
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Book 824 No. 390
1947	D.P. 38379	
1969	D.P. 237079	
1969	D.P. 535180	
29.08.1969	Henry Pat Granville Osborne (Grazier)	Book 2956 No. 504
29.08.1969	# Currandooley Pty Limited	Book 2956 No. 505 Then Vol 14344 Fol 129 Now E/38379

# Denotes current registered proprietor

A.1.17 As regards the part of Lot 1 D.P. 456698 within original Portions 50. 51, 58, 60 and 67 to 69.

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
02.10.1878	Pat Hill Osborne (Grazier)	Volume 409 Folio 73 duplicate Portion 50 (60 acres – Crown Plan 1367-1956)
02.10.1878	Pat Hill Osborne (Grazier)	Volume 409 Folio 74 Portion 51 (60 acres – Crown Plan 1367-1956)
27.06.1881	Pat Hill Osborne (Grazier)	Volume 553 Fol 173 Portion 60 (115 acres – Crown Plan 2117-1956)
27.06.1881	Pat Hill Osborne (Grazier)	Volume 553 Fol 176

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
		Portion 67 (121 acres 1 rood – Crown Plan 2117-1956)
1880	Pat Hill Osborne (Grazier)	Crown Tenure Conditional Purchase 1880/128 Queanbeyan Portion 59 (140 acres 2 roods – Crown Plan 2117-1956) See Crown Grant Volume 1801 Folio 131

A.1.18 Continued as regards the part of Lot 1 D.P. 456698 within original Portions 50. 51, 58, 60 and 67 to 69.

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
27.06.1881	Pat Hill Osborne (Grazier)	Volume 553 Fol 177 Portion 68 (36 acres 1 rood – Crown Plan 2117-1956)
27.06.1881	Pat Hill Osborne (Grazier)	Volume 553 Fol 178 Portion 69 (40 acres 3 roods – Crown Plan 2117-1956)
24.04.1903	Elizabeth Jane Osborne (Widow) Henry Osborne (Grazier) Pat Hamilton Osborne (Grazier) Stephen Messman Osborne (Grazier) (Transmission Application not investigated)	Volume 409 Folios 73 & 74 & Volume 553 Folios 173 & 176 to 178
27.07.1907	Elizabeth Jane Osborne (Widow) Henry Osborne (Grazier) Pat Hamilton Osborne (Grazier) Stephen Messman Osborne (Grazier) (Transmission Application not investigated)	Vol 1801 Fol 131
14.03.1907 (Entered on title 20.07.1908)	Henry Osborne (Grazier) – For life (Now deceased)	Volume 409 Folios 73 & 74, Volume 553 Folios 173 & 176 to 178 & Vol 1801 Fol 131
15.02.1937	Pat John Bryan Osborne (Grazier) (& his deceased estate)	Volume 409 Folios 73 & 74, Volume 553 Folios 173 & 176 to 178 & Vol 1801 Fol 131

Date of Acquisition	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
		Now Vol 4882 Fol 66
14.01.1949	Lakelands (Bungendore) Limited Now Lakelands Pty Limited	Vol 4882 Fol 66 Now 1/456698
08.02.2011	# Dominic Granville John Osborne	1/456698

# Denotes current registered proprietor

Appendix B Palerang Council Heritage Study Inventory Data Sheets – April 2009

- Currandooley
- Werriwa

Heritage Inventory

LAKE GEORGE, MOLONGLO VALLEY & BURRA

PALERANG COUNCIL

NEW SOUTH WALES

Volume II

St Thomas Church – Carwoola

April 2009
Suzannah Plowman
Victoria Design & Management Pty Ltd

Item No: IS9

Name of Item: Lake George Trigonometrical Baseline Previous/Other Names:
Owner/s:
Address: Lakelands & Turalla, Lake George, Bungendore
Type of Item/s: Trig stations Area/Group/Complex:
Curtilage/Boundary: Lot boundaries
Assessed Significance: State – recommended LEP
Statement of Significance: The Lake George Trigonmetrical Base-Line is one of a number around the state from which surveys are calculated. Its earliest existence is evidence of the first white explorers to Lake George and the following efforts to establish the trig points and line demonstrate the development of the young colony. They are some of the most historic trig points in NSW and the north point one of the most substantial in the state. Historic (a), associational (b), research (e) and rare (f) heritage significance.
Historical Notes: Lake George was selected was selected as an appropriate place for a baseline owing to its flat terrain allowing accurate measurement and visibility from terminal to terminal. Four attempts at establishing a base line have occurred at Lake George. The first was in 1828 by Thomas Mitchell, although no evidence has been found. The second was established by Government Astronomer GR Smalley in 1867 which is believed to have been marked by five stone pillars. That line was inundated and in 1870 the Surveyor General PF Adams commenced the third base line which was also inundated. A fourth attempt, further away from the lakebed, was made in 1873 when the north pillar was built and the baseline measurements where finally completed in 1884.
Designer/Maker/Builder:
Year Started: 1828 Year Completed: 1884 Circa:
Physical Description: The north pillar, on Lakelands, is a 3m tall tower built of granite surmounted by a concrete theodolite mount. The south point, on Turalla, is a concrete theodolite mount, set at ground level about 1m high and surrounded by a pile of stones.
Physical Condition 2009: Good

Lake George North Pillar – Lake George Baseline
Alex Petrow

Item No: LG2

Name of Item: Currandooley Previous/Other Names:
Owner/s: Pat & Sally Osborne
Address: Currandooley Road, Bungendore
Type of Item/s: Homestead, barn, stables, outbuildings, cottage, shearing shed, plantings, cemetery Area/Group/Complex: Currandooley Farm Complex
Curtilage/Boundary: Property boundaries
Assessed Significance: State – recommended LEP
Statement of Significance: Currandooley has belonged to the same family for more than 140 years. It represents a time of prosperity and development in NSW's rural areas and the aspirations at the time of successful landholders. Designed by renowned Sydney architect Ferdinand Reuss, the French style architecture and the extent of stonework for all major outbuildings are unusual and rare features for rural Australia. The impressive two storey homestead is set amongst old plantings of elms and pines and the whole complex presents a particularly attractive image on arrival in the forecourt. Despite the previous fire there is a high degree of intactness and integrity especially architecturally. Overall a high degree of original intactness and integrity. Historic (a), associational (b), aesthetic (c), research (e) and rare (f) heritage significance .
Historical Notes: The property was originally taken up by William Lithgow in 1825 and after his death in 1864 it was sold to Pat Hill Osborne who lived with his family in a house on Deep Creek. The rubble stone walls of the original house are still standing. After several storms and floods Osborne sent his wife and children to England while he arranged construction of a 25 room homestead in the style of a French chateau. The house and the stables and bachelor quarters were completed in 1873 and all were built of granitic gneiss from the property and had shingled roofs. The stone cottage was completed about 1920 as was the butchers shop and dairy. All stonework was carried out by William Follet and his son. All roofs were replaced with Marseilles tiles after a fire in the stables in 1890. The property has remained in the ownership of the Osborne family being handed down through successive generations. About 1994 a fire gutted the homestead burning out the second storey which had to be partially rebuilt although the stone walls remained standing. There is a small private cemetery on the property, the earliest burial 1902, consecrated about 1910 by Bishop Barlow, and the last burial 1970. The woolshed was built in 1878 and a Wolseley shearing machine installed in 1888, the same year Wolseley installed machines at Toganmain and the first year shearing was done mechanically.
Designer/Maker/Builder: Ferdinand Reuss, Prussian architect. OW (?) Chisholm designed sunroom 1930s. Prof. Leslie Wilkinson remodelled front verandah 1950s. William Follet, stonemason. Laid Corby remodelled the shearing shed in 1950s.
Year Started: 1872 Year Completed: 1950s Circa:

Physical Description: Substantial two storey homestead, large barn, stables, cottage and other outbuildings all constructed of granitic gneiss with Marseilles tile roofs. There are 11 headstones in the cemetery, mostly members of the Osborne family. Corrugated iron shearing shed and concrete dam built in 1930s.
Physical Condition 2009: Good

Front facade -Currandooley Homestead

Rear façade - Currandooley Homestead

Currandooley Stables

Currrandooley Outbuilding

Currandooley Outbuilding

Appendix C Unexpected Finds procedure

An unexpected heritage item means any unanticipated discovery of an actual or potential heritage item, for which the Proponent does not have prior approval to disturb or does not have a safeguard in place to manage the disturbance.

These discoveries are categorised as either:

a) Aboriginal objects
b) Historic/non-Aboriginal heritage items
c) Human skeletal remains

If any of the above items are suspected or identified during construction activities then a series of steps must be followed. These are outlined below:

1. all work should cease in that area and notify a Project Manager or Supervisor immediately of the find,
2. A 'no-go' zone should be established around the find, using visibility fencing (where applicable),
3. Inform all on-site personnel and staff of the find and the demarcated 'no-go' zone,
4. Contact a qualified archaeologist/heritage consultant to inspect the find and provide recommendations,
5. In the event that human remains are identified, complete steps 1-3. Replace Step 4 by immediately contacting the local police to investigate if the find relates to a criminal investigation. The police may take command of part or all of the site,
6. Once clearance of the site has been given by the qualified archaeologist/heritage consultant then works may proceed within the 'no-go' zone UNLESS specifically instructed by the professional that no further works can be completed.