BISON ENERGY
COMPANY

# SCOPING REPORT

## MURRAMI SOLAR FARM

APRIL 2019

ngh environmental

## Document Verification

Project Title: Scoping Report
Murrami Solar Farm

Project Number: 18-753

Project File Name: Murrami Solar Farm Scoping Report

| Revision | Date | Prepared by (name) | Reviewed by (name) | Approved by (name) |
|---|---|---|---|---|
| Draft v1.0 | 20/03/19 | Bridgette Poulton | Sarah Hillis | Erwin Budde |



NGH Environmental Pty Ltd (ACN: 124 444 622. ABN: 31 124 444 622)

**www.nghenvironmental.com.au e ngh@nghenvironmental.com.au**

suite 1, 39 fitzmaurice st (po box 5464)
wagga wagga nsw 2650
t 02 6971 9696

2/54 hudson st
hamilton nsw 2303
t (02) 4929 2301

unit 18, level 3, 21 mary st
surry hills nsw 2010 australia
t (02) 8202 8333

unit 8, 27 yallourn st (po box 62)
fyshwick act 2609
t (02) 6280 5053

suite 4, level 5, 87 wickham terrace
spring hill qld 4000
t 07 3129 7633

89-91 auckland st (po box 470)
bega nsw 2550
(02) 6492 8333

# CONTENTS

## TABLES



## FIGURES

# ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| ABS | Australian Bureau of Statistics |
| AHIMS | Aboriginal Heritage Information Management System |
| BAM | NSW Biodiversity Assessment Methodology |
| BC Act | *Biodiversity Conservation Act* (NSW) |
| BDAR | Biodiversity Development Assessment Report |
| Bison Energy | The Proponent |
| CCP | Community Consultation Plan |
| CEMP | Construction Environmental Management Plan |
| CSEP | Community and Stakeholder Engagement Plan |
| Cwth | Commonwealth |
| DPE | Department of Planning and Environment (NSW) |
| EEC | Endangered Ecological Community (listed under NSW BC Act) |
| EIS | Environmental Impact Statement |
| EPBC Act | *Environmental Protection and Biodiversity Conservation Act 1999* (Cwth) |
| EP&A Act | *Environmental Planning and Assessment Act 1979* (NSW) |
| ha | hectares |
| Heritage Act | *Heritage Act 1977* (NSW) |
| I&AP | Interested and affected parties |
| ISEPP | *State Environmental Planning Policy (Infrastructure) 2007 (NSW)* |
| km | kilometres |
| kV | kilovolt |
| LEP | Local Environment Plan |
| LGA | Local Government Area |
| m | metres |
| MNES | Matters of National Environmental Significance under the EPBC Act (*c.f.*) |
| MW | megawatts |
| NPW Act | *National Parks and Wildlife Act 1974* (NSW) |
| NSW | New South Wales |
| NV Act | *Native Vegetation Act 2003* (NSW) |
| OEH | Office of Environment and Heritage (NSW) |
| RET | Renewable Energy Target |
| RMS | Roads and Maritime Services |
| SEARs | Secretary's Environmental Assessment Requirements (issued by DPE) |
| SEPP | State Environmental Planning Policy (NSW) |
| SSD | State Significant Development |
| TEC | Threatened Ecological Community (listed under Commonwealth EPBC Act) |

# 1 INTRODUCTION

## 1.1 PROPOSAL OVERVIEW

Bison Energy proposes to develop a solar farm at a property on Matthews Road at the village of Murrami, New South Wales (the proposal). The development site is approximately 8 km north-east of the town of Whitton in the Leeton Shire Local Government Area (LGA).

The 120 megawatt (MW) alternating current (AC) solar farm would occupy around 262 ha of rural land currently used for primary production (irrigation cropping). The proposal infrastructure includes solar arrays, trackers, modules, invertors, a substation, underground cabling, security fencing and a cable run to connect the solar farm to TransGrid's soon to be upgraded Griffith to Yanco 132 kV transmission line.

Draft site constraints relating to biodiversity, landowners, existing infrastructure and hydrology are shown in Figure 1-1 and Figure 1-2.

## 1.2 THIS REPORT

This Scoping Report documents the first stage in the Environmental Impact Assessment (EIA) process. The Scoping Report identifies the main issues, considers the values of the site, the nature and extent of potential impacts, planning and regulatory requirements and the results of preliminary consultation. The Scoping Report helps to focus the detailed assessment phase on the matters of relevance to the proposal.

This Scoping Report:

- Describes the proposed development and the development site.
- Identifies statutory approval requirements.
- Identifies key environmental and amenity matters that are relevant to the proposal.

The Scoping Report has been prepared to support a request to the Department of Planning and Environment (DPE) for the Secretary's Environmental Assessment Requirements (SEARs). The SEARs would guide the preparation of an Environmental Impact Statement (EIS) for the proposed development, in accordance with Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The following terms are used in this document:

**The proposal:** The entire solar farm, including auxiliary construction infrastructure, fencing, access etc.

**Subject land:** Any and all lots to be directly impacted, in whole or part, by the proposed development.

**Development site:** The area of land that is subject to the proposed development. The development site is the area surveyed for this assessment.

**Development footprint:** The area of land that would be directly impacted by the proposal, including solar array design, perimeter fence, access roads, transmission line footprint and stockpile areas.

**The proponent**: Bison Energy.

## 1.3 BISON ENERGY

Bison Energy (the proponent) is a leading international company specialising in renewable energy. The company has many years of experience in developing, building and operating solar power projects in different

countries, such as Germany, Italy, Spain, UK, and Japan, and has been operating in Australia since 2017. Current Australian projects total 600 MW, consisting of four solar farms in the development process.

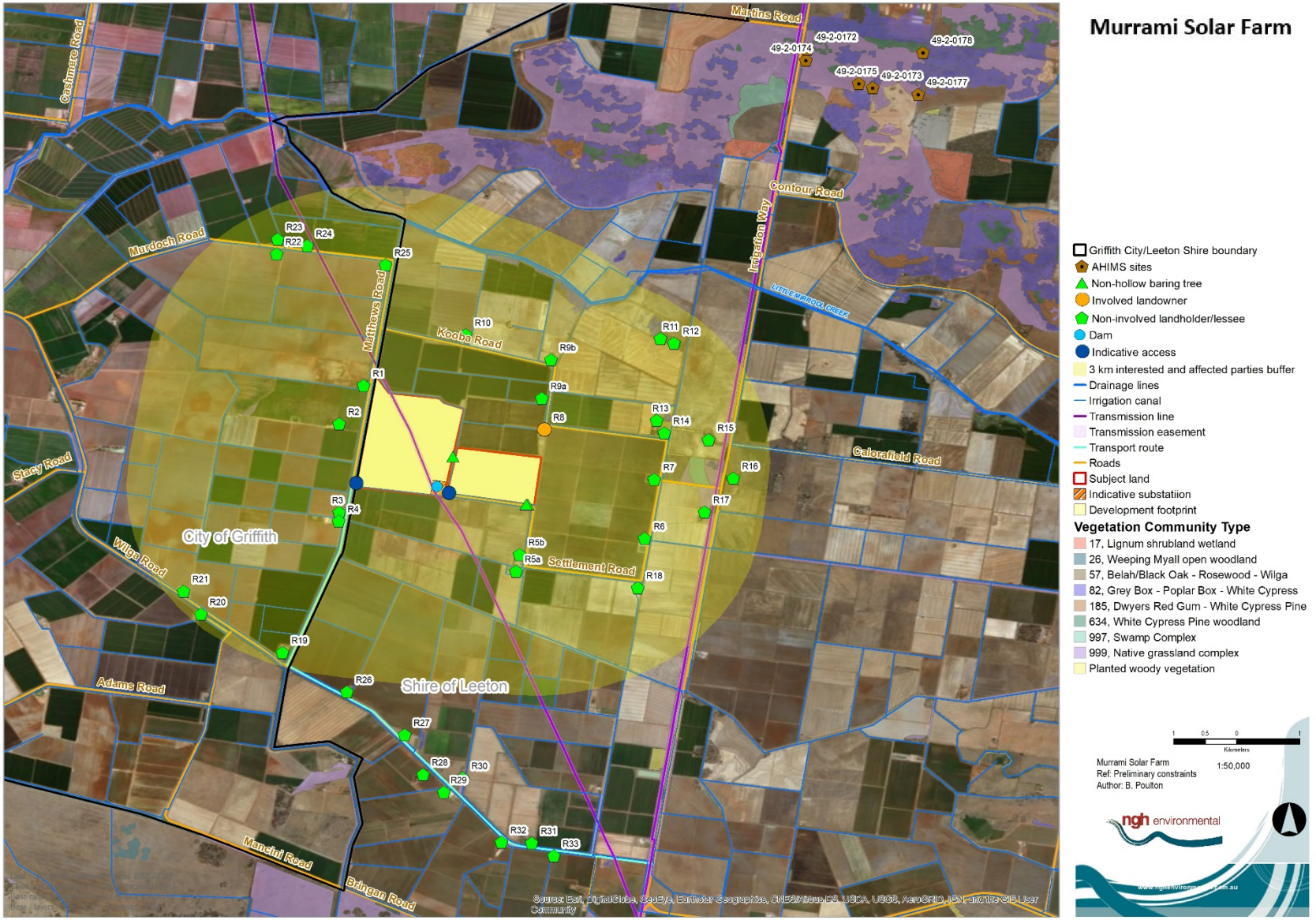



Figure 1-1 Preliminary constraints (locality view)

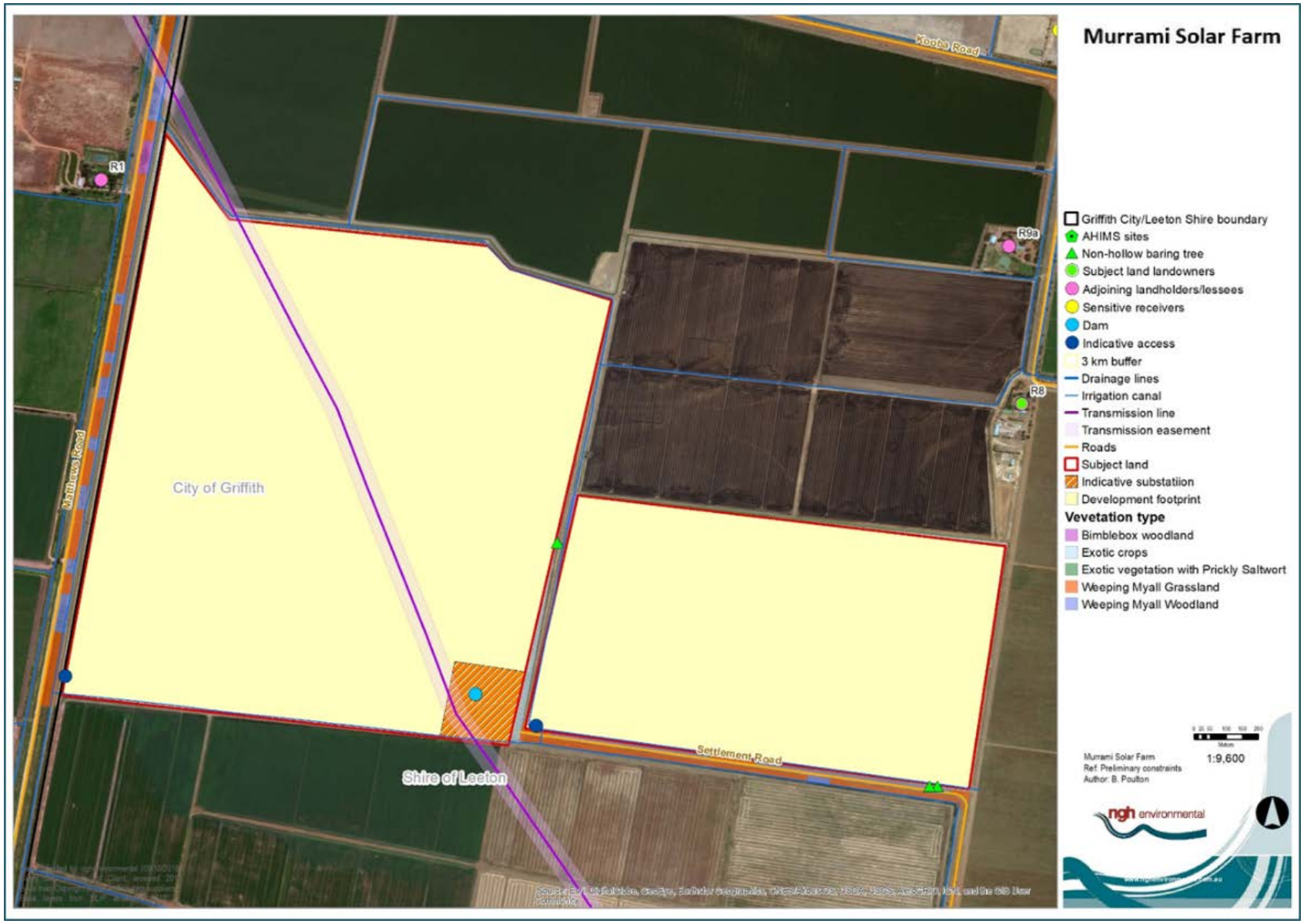



Figure 1-2 Preliminary constraints (subject land view)

# 2 DEVELOPMENT SITE DESCRIPTION

## 2.1 LOCATION

The development site is located within Leeton Shire Local Government Area (LGA). It is accessed primarily from Matthews Road, approximately 850 m west of Irrigation Way via Wilga Road (Figure 2-1). Matthews Road is a local road managed and maintained by Leeton Shire Council.

Irrigation Way is a regional highway servicing the Murrumbidgee Irrigation Area of the central Riverina including the towns of Griffith, Leeton, Yanco and Narrandera. Irrigation Way runs through three LGAs and provides a direct route between the national highway network and Griffith.

The region supports a diverse economy associated with agriculture, tourism, large commercial centres, residential facilities, health centres, rail road activities, energy generation (hydro, gas, solar), energy distribution, road freight and intermodal logistics.

Aerial imagery and a preliminary site inspection identified 25 residential receivers situated within 3 km of the proposal. The closest dwelling is approximately 80 m of the north western corner of the proposal. The TransGrid Griffith to Yanco transmission line traverses diagonally through the subject land.

Whitton is the is the closest town to the proposal, approximately 8 km south of the proposal. Its population in 2016 was recorded as 496 persons (ABS 2016). Whitton contains two general stores, a fire station, bowling club, a hotel, St Carthage Catholic Church and St John's Anglican Church. The closest services are located in the regional centre of Griffith, around 20 km northwest of the proposal. The population for Griffith's urban locality in 2016 was recorded as 18,196 persons (ABS 2018). It supports supermarkets, post offices, service stations, accommodation, restaurants, medical services and recreation facilities.

The Murrumbidgee River is located approximately 16 km south of the proposal. Little Mirrool Creek is located about 2.5 km north of the proposal. The proposal is also surrounded but numerous irrigation channels servicing productive agriculture in the area.

Interested and affected parties (within 3 km of the subject land) identified as part of the community & stakeholder engagement planning are listed Table 2-1 and shown on Figure 1-1.

Table 2-1 Location of sensitive receivers

| Receiver | Distance from subject land (m) | Receiver | Distance from subject land (m) |
|---|---|---|---|
| **R1** | 130 | **R13** | 1580 |
| **R2** | 370 | **R14** | 1660 |
| **R3** | 450 | **R15** | 2190 |
| **R4** | 590 | **R16** | 2510 |
| **R5a** | 1040 | **R17** | 2240 |
| **R5b** | 800 | **R18** | 1920 |
| **R6** | 1550 | **R19** | 2840 |
| **R7** | 1500 | **R20** | 2870 |
| **R8** | 440 | **R21** | 2800 |
| **R9a** | 910 | **R22** | 2320 |

| Receiver | Distance from subject land (m) | Receiver | Distance from subject land (m) |
|---|---|---|---|
| **R9b** | 1390 | **R23** | 2470 |
| **R10** | 980 | **R24** | 2220 |
| **R11** | 2400 | **R25** | 1750 |
| **R12** | 2510 | | |

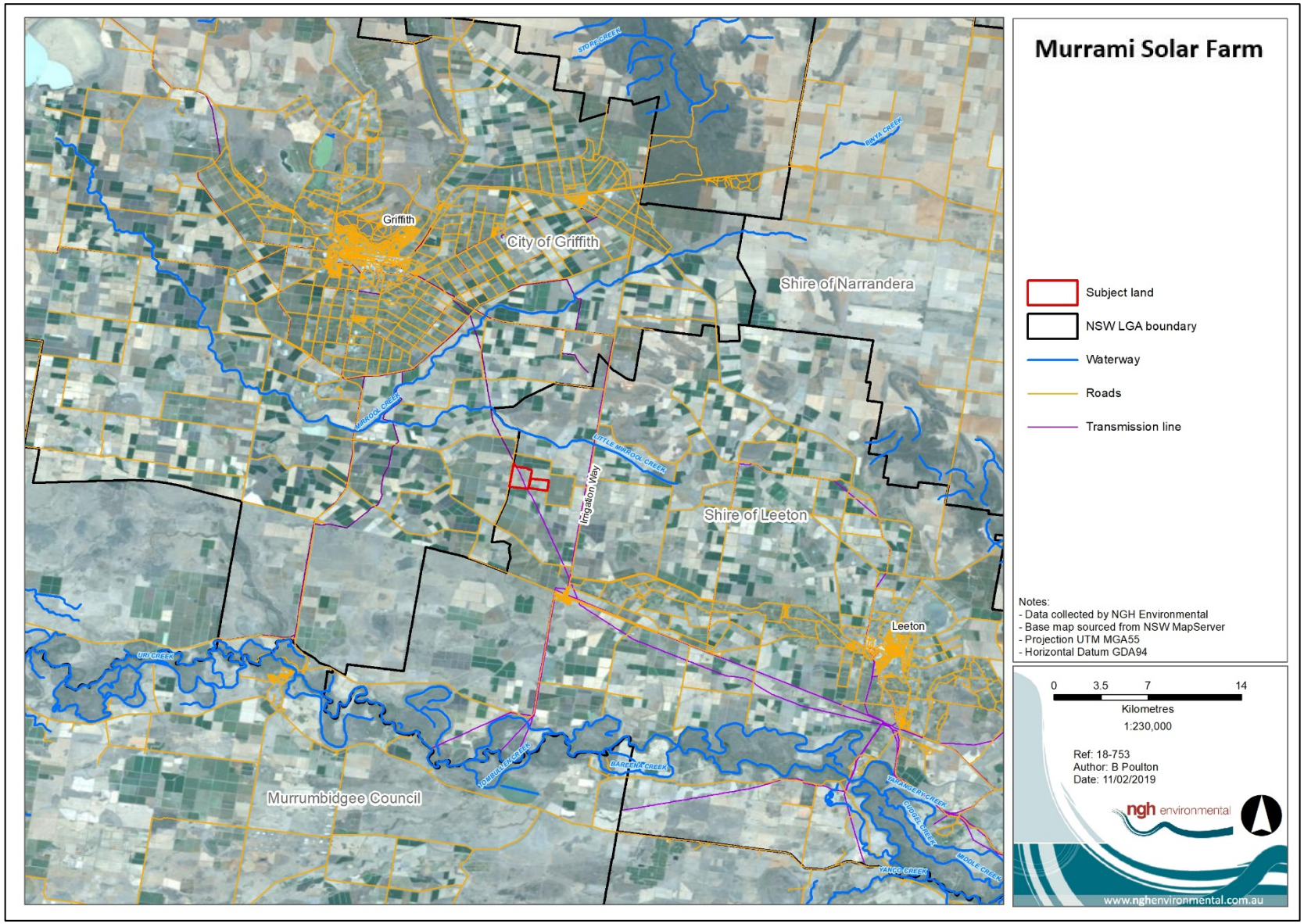



Figure 2-1 Location of the development site

## 2.2 SITE DESCRIPTION

The subject land is legally identified as the following Lots (Figure 2-3):

- Lot 80 DP 751689 (southern portion).
- Lot 81 DP 751689.

The proposed development would occupy approximately 262 ha. Four large sheds are present on the southeast corner of the western land parcel. The land consists of large paddocks with predominantly exotic groundcover as shown in Figure 2-2. Little Mirrool Creek runs approximately 2.5 km to the north of the proposal and the subject land parcels are bordered by irrigation canals, except for the eastern border of the eastern land parcel.

Lot 80 DP 751689 is currently subject to discussions between the landholder and the proponent of how to best to lease the southern portion of this land. The 30 m transmission line easement is located within the development site and is included in the lease area (subdivision of the transmission line is not proposed). A small subdivision of Lot 81 is required for development of a substation as part of the proposal.

Figure 2-2: Recently ploughed subject land

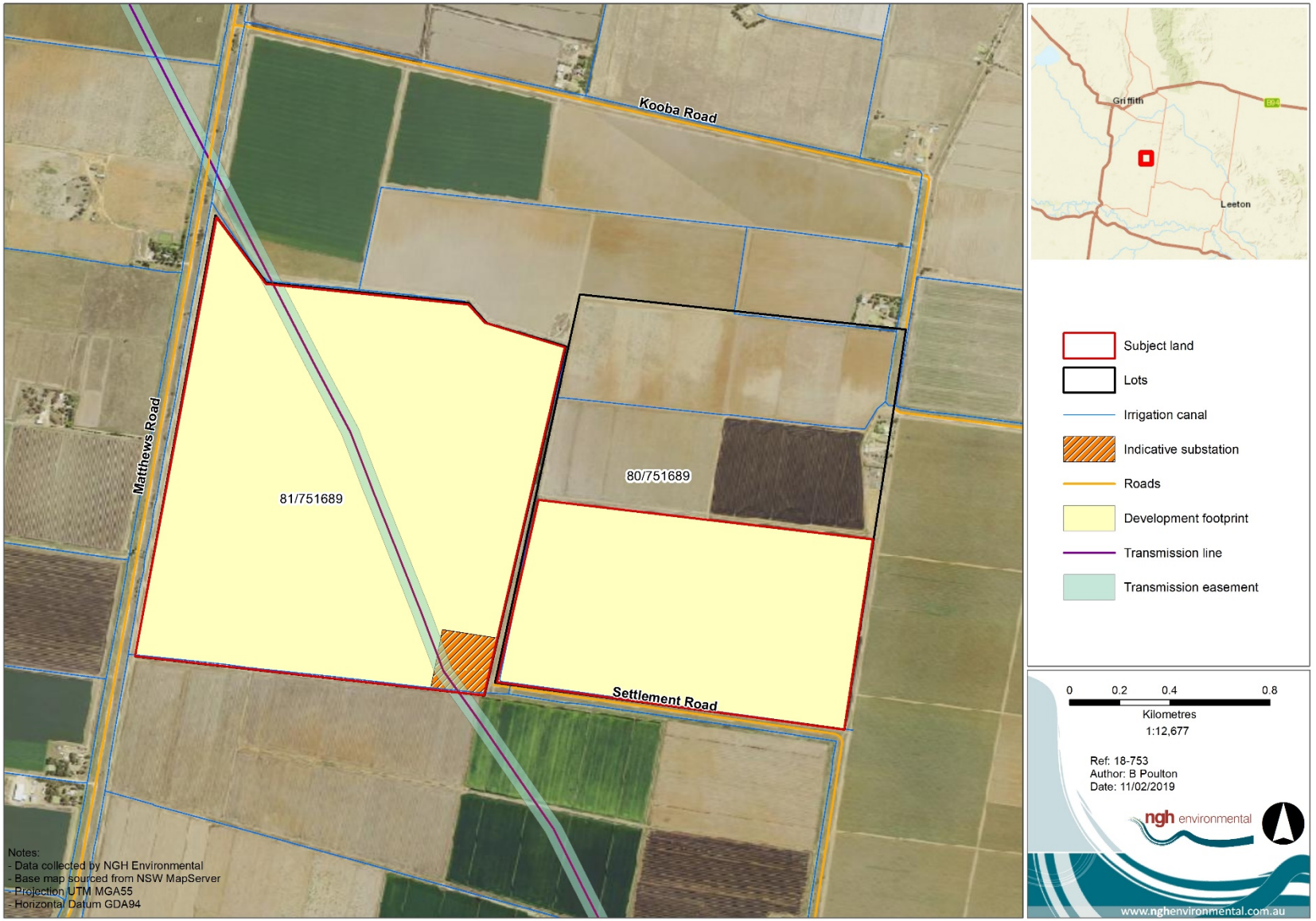



Figure 2-3 Proposed development infrastructure footprint

## 2.3 THE LOCALITY

The proposal is located in the Leeton Shire LGA, located in southern New South Wales between the regional centres of Leeton and Griffith. The shire has several small towns including Murrami, Stanbridge, Gogeldrie, Corbie Hill, Yanco, Whitton, Euroley and Cudgel. The LGA is 1,167 km² with a population of 11,602 as at the 2016 Census (ABS 2019a).

The Whitton/Murrami region also forms part of the Murray Irrigation Area, in the Leeton Irrigation District.

### *2.3.1 Whitton*

The town of Whitton is located around 20 km west of the major town of Leeton, with a population of 496 as of the 2016 Census (ABS 2019b). Whitton contains a hotel, two general stores, a post office, two churches, a fire station, a bowling club and a number of houses.

### *2.3.2 Murray Irrigation Area*

The Murray Irrigation Area covers an area of 724,000 ha, providing irrigation to over 2,200 farms and landholdings vis 3,000 km of gravity fed earthen channels. Water is released from the Hume Dam, which travels to the diversion point from the Murray River at Lake Mulwala. (Murray Irrigation 2019).

### *2.3.3 Population*

The median age of persons in Leeton LGA is 40; this is only slightly higher than the Australian average of 38 (ABS 2018). The 2016 census records state that 5.7% of the population are Aboriginal and Torres Strait Islander people (ABS 2018). A large portion, 81.6% of the community were born in Australia; 5.3% in Italy, 2.4% in England, 1.1% in India and 1.0% in New Zealand (ABS 2018).

### *2.3.4 Climate*

Leeton LGA is part of the Riverina Bioregion, Murrumbidgee subregion. This bioregion is dominated by a persistently dry semi-arid climate and characterised by hot summers and cool winters (OEH 2016). The BOM (2018) climate records available from the nearest climate station at Yanco Exp. Farm (station no. 074133, 20 km southeast of the proposal) indicate a mean summer maximum of 31.2°C (February) and a mean winter minimum of 3.5°C (August) (Figure 2-4). Rainfall records from the same station show a mean annual rainfall of 393.9 mm, and that rainfall is generally greatest over winter and spring, with the average monthly maximum occurring in June (46.7 mm).

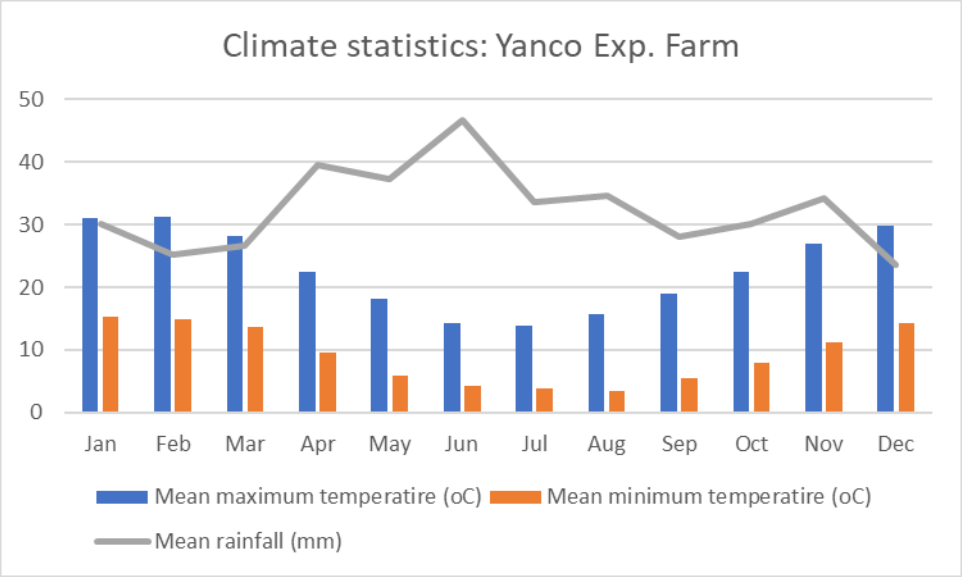



Figure 2-4 Climate statistics for Yanco Exp. Farm, nearest station to Whitton (BOM 2019)

### 2.3.5 Geology and Vegetation

The geology and vegetation characteristics for the Riverina – Murrumbidgee subregion are as follows (OEH 2016):

Table 2-2 Murrumbidgee subregion geology and vegetation.

| Geology | Characteristic Landforms | Typical Soils | Vegetation |
|---|---|---|---|
| Quaternary alluvial sediments. Clay and sand with source-bordering dunes and lakes. | Alluvial fan with distributary channels and floodplains, undulating plains with depressions. Source-bordering dunes common. | Red brown earths, grey and brown clays and deep siliceous sands on dunes. | River red gum and river cooba on channels. Black box, lignum and old man saltbush on floodplains. Myall and old man saltbush with other saltbush and grasses formerly widespread on backplains. White cypress pine on dunes. |

# 3 THE PROPOSAL

## 3.1 SITE SELECTION

The proposal site has been selected for the following reasons:

- Excellent solar exposure.
- Excellent access to local and major roads.
- Excellent access to the grid transmission network.
- Likely low level of environmental impact – the site has been largely cleared and heavily disturbed by cultivation and cropping.
- Suitable topography, land size and land zoning.

The use of the site would be based on a lease agreement between the proponent and the landowners for the life of the project.

## 3.2 PROPOSED WORKS

### *3.2.1 Proposed infrastructure*

The proposal involves the construction of a ground-mounted photovoltaic solar farm which would generate approximately 120 MW (AC) of renewable energy.

The design of the proposed development is somewhat adaptable and would be refined to avoid adverse impacts where feasible, and to minimise/mitigate environmental impacts if avoidance is not possible. The design would consider the results of consultation with relevant stakeholders, this Scoping Report and the Environmental Impact Assessment when prepared. The EIS would detail how stakeholder feedback has influenced the final proposal design.

The proposal would consist of the following components:

- Single-axis tracker photovoltaic solar panels mounted on steel frames (approximately 374,000 PV solar panels).
- Underground electrical conduits and cabling to connect the arrays and to the inverters and transformers.
- Inverters, a transformer and electrical conduits.
- On site substation.
- 132 kV electrical transmission line to connect the proposal to the existing TransGrid transmission line.
- Site office, site compound, vehicle parking areas, access tracks and perimeter fencing.
- Site access from Matthews Road.

The site is proposed to be accessed from Matthews Road. The proposal would require subdivision of Lot 81 for a substation and connection to the 132 kV Griffith to Yanco transmission line as shown in Figure 2-3.

The proposed infrastructure footprint is shown in Figure 2-3. This includes all land likely to be directly impacted by the construction, operation and decommissioning of the proposal, including auxiliary construction facilities (site compound, laydown, stockpiling etc.) and all considered options. It is important to note that the proposed

footprint is indicative only and will be refined as part of the EIS process (considering environmental constraints and engineering studies), with project infrastructure layout to be detailed in the EIS.

### 3.2.1 Construction, operation and decommissioning

The proposal is expected to operate for around 25 years. The construction phase of the proposal planned to commence in the second half of 2010 and would last 12 to 18 months. After the initial operating period, the solar farm would either be decommissioned, removing all above-ground infrastructure and returning the site to its existing land capability, or upgraded with new PV equipment.

### 3.2.2 Capital investment

The capital investment value of the proposal is estimated at $190 million.

A quantity surveyor's report would be prepared during the EIS process which would confirm the capital investment value.

### 3.2.3 Subdivision

The subject land will be leased from two private landowners. When land is leased from a landowner and the lease affects part of a lot or lots in a current plan, a subdivision under *s*.7A *Conveyancing Act 1919* (formerly s.327A *Local Government Act 1919* now repealed) is required when the total of the original term of the lease, together with any option for renewal, is more than five years. When the lease affects the whole lot in a current plan, the body of the lease identifies the area by lot and DP number with a subdivision not required.

The southern portion of Lot 80 DP 751689 will be leased (as shown in Figure 2-3), leased under an arrangement between the landholder and the proponent, comprising five separate and staged lease agreements of five years, for a total of 25 years. A small subdivision for the purpose of the internal substation and solar infrastructure will be required.

# 4 JUSTIFICATION AND ALTERNATIVES

## 4.1 STRATEGIC JUSTIFICATION

### *4.1.1 Technical feasibility*

The proposal would employ proven and mature solar technology. The solar site is highly suited to efficient, high output generation.

The site is on a low rise and has been previously cleared, making it an ideal location for a utility scale solar project.

The 132 kV Griffith to Yanco transmission line already exists and traverses the development site.

It is noteworthy that the electricity grid in New South Wales can present challenges in terms of having the capacity to connect utility scale renewable energy projects. The proposal benefits from having good connection options adjacent to the site with sufficient capacity in the transmission network to allow power generated at the Murrami site to be exported to wider NSW.

### *4.1.2 Climate change*

Electricity generation is the largest individual contributor of greenhouse gas emissions in Australia (Department of Environment 2016). The proposal would contribute to the New South Wales Renewable Energy Action Plan (NSW Government 2013), which supports the national target of 20 percent renewable energy by 2020. The proposal would also further the three goals of the Action Plan:

1. Attract renewable energy investment and projects.
2. Build community support for renewable energy.
3. Attract and grow expertise in renewable energy.

The *NSW 2021: A Plan to Make NSW Number One* (NSW Government 2011) has the following goal:

- *Contribute to the national renewable energy target … by promoting energy security through a more diverse energy mix, reducing coal dependence, increasing energy efficiency and moving to lower emission energy sources.*

The proposal would also contribute to the Commonwealth Government's objective to achieve an additional 33 GW from renewable sources by 2020 under the Renewable Energy Target (RET).

The COP21, also known as the 2015 Paris Climate Conference, achieved a legally binding and universal agreement on climate with the aim of keeping global warming below 2 degrees Celsius, chiefly by reducing greenhouse gas emissions. The proposal would form part of the Australian effort to help meet this target.

### *4.1.1 Electricity supply*

The Australian Energy Market Operator (AEMO 2016) forecasts that grid-supplied electricity consumption will remain flat for the next 20 years, despite the projected 30% growth in population. Although not required to meet projected electricity demand, the proposal would benefit the network by shifting electricity production closer to local consumption and regulating inputs to the grid using an Energy Storage Facility.

The electricity network was designed to deal with a small number of very large power generating stations. The localisation of power generation helps the grid to cope with the supply from diversified renewable energy projects.

### 4.1.2 Socio-economic benefits

#### Employment

The proposal would generate around 200 full time equivalent jobs during construction plus indirect supply chain jobs. In addition, it would employ approximately two or three full time equivalent staff during the operation and maintenance phase (expected to be 25 years).

The employment benefits for construction extend through the local supply chains to fuel supply, vehicle servicing, uniform suppliers, hotels/motels, bed and breakfasts, cafés, pubs, catering and cleaning companies, tradespersons, tool and equipment suppliers and many other businesses.

Further extension of employment benefit extends through the operation of the proposal, such as panel cleaning and maintenance, electrical maintenance, fence supplies and maintenance, road grading, adjustment and grazing of sheep.

In 2015/16, 11,150 Australians were directly employed in the renewable energy sector with an estimated additional 3,725 jobs created in the 2017/18 financial year (CEC 2016).

#### Electricity prices

According to Deloitte, Australian households will pay $510 million more for power in 2020 without renewable growth through the RET and up to $1.4 billion more per year beyond 2020. Renewables increase competition in the wholesale energy market – and, as in any market, more competition means lower prices.

#### Economic diversification

The proposal would diversify the use of land in the area. The predominant land use in the area is agriculture. The proposal would add to that and provide both local land holders and businesses in the broader area with an additional source of income and economic activity. The income created in the locality from the proposal would be consistent and stable and of greater security, being removed from the normal cycle and risks of agricultural activity (like flood and drought).

### 4.1.3 Land use

It is important to note that solar farms do not preclude the use of land for agriculture. Some agricultural activity is still possible whilst a solar farm is operating (e.g. grazing). Additionally, the degree of permanent land disturbance in the construction and operation of solar farms is small, and it is likely that agricultural activities that were occurring before the solar farm was constructed would be able to be continued once the solar farm is decommissioned and removed.

### 4.1.4 Site suitability

Key considerations for site selection are detailed within the *NSW Large-scale Solar Energy Guidelines* (DPE 2018). The preferable site conditions and site constraints with justification is detailed in the table below.

Table 4-1 Site suitability as defined by the *NSW Large-scale Solar Energy Guidelines* (2018)

| Preferable site conditions | Site justification |
|---|---|
| Visibility and topography – sites with high visibility, such as those on prominent or high ground positions, or sites which are located in a valley with elevated nearby residences with views toward the site. This is particularly important in the context of significant scenic, historic or cultural landscapes. | The proposal does not have high visibility. The site does not have prominent or high ground positions or located within a valley with residences with elevated views looking towards the site. |
| Biodiversity – areas of native vegetation or habitat of threatened species or ecological communities within and adjacent to the site, including native forests, rainforests, woodlands, wetlands, heathlands, shrublands, grasslands and geological features. | Based on preliminary biodiversity, heritage and other investigations carried out for the EIS, the indicative footprint would minimise environmental impacts overall. Very little native vegetation is present within the study area and mainly comprises roadside vegetation along Matthews Road. The final design would avoid the majority of native vegetation, habitat of threatened species or ecological communities.<br>Panel infrastructure would be installed over previously cropped exotic understorey. The site is also unobtrusive, flat, and has low-lying topography. |
| Residences – residential zones or urbanised areas. | The proposal is not within a residential zone or urbanised area. Consideration has been given to proximity to dwellings. |
| Agriculture – important agricultural lands, including Biophysical Strategic Agricultural Land (BSAL), irrigated cropping land, and land and soil capability classes 1, 2 and 3. Consideration should also be given to any significant fragmentation or displacement of existing agricultural industries and any cumulative impacts of multiple developments. | The proposal is not located on Strategic Agricultural Land, including industry clusters and biophysical strategic agricultural land. The proposal is located on Soil Capability Class 3 land.<br>The site has suitable soil type to sustain the level and type of infrastructure proposed and not considered Biophysical Strategic Agricultural Land (BSAL) as detailed further in section 5.2.5 on land capability.<br>The development site is not located within 10 km of any other known existing or proposed solar farm. |
| Natural hazards – areas subject to natural hazards such as flooding and land instability. | The scale and size of the proposal was influenced by the land area, geology, hydrology, adequate site access and road connections.<br>Little Mirrool Creek runs east-west 2.5 km north of the subject land that eventually confluences with the Lachlan River. |
| Resources – prospective resource developments, including areas covered by exploration licences, and mining and petroleum production leases. Solar development applicants should seek advice from the Department of Planning, Division of Resources and Geoscience about the coverage of resources-related licences. | Preliminary search of the Minview database (DPI 2018) indicates that there are no current mining or petroleum leases or applications relevant to the development site.<br>A letter from GSNSW received on 20 February 2019 confirmed that there are no current mineral, coal or petroleum titles and no extractive industries over the site or adjacent lands. |
| Crown Lands – if any part of the project or associated transmission or distribution | The development site comprises privately owned farm land, which will be leased for the life of the proposal. |

| Preferable site conditions | Site justification |
|---|---|
| infrastructure will cross Crown Lands, it may be subject to legislative requirements that restrict access to the land. | No crown roads will be intersected or utilised. A private canal owned and administered by Murrumbidgee Irrigation runs between the two land parcels. |

## 4.2 ALTERNATIVES TO THE PROPOSAL

### *4.2.1 Alternative sites*

The proponent has reviewed the solar generation potential of many areas in NSW using a combination of computer modelling and analysis, on the ground surveying and observation, and experience of the proponent. The site was selected because it provides the optimal combination of:

- Low environmental constraints (predominantly cleared cropping land).
- Low-rise terrain for cost-effective construction.
- High quality solar resource.
- Low density population and limited neighbouring properties.
- Suitable planning context.
- Acceptable flood risk.
- Road access.
- Access to the distribution network.
- High levels of available capacity on the grid distribution system.

The site is of a scale that allows for flexibility in design, allowing the proponent to avoid ecological and other constraints that may be identified during the EIS process. The factors that determine the final design area would be detailed in the EIS.

### *4.2.2 Alternative technologies*

Photovoltaic solar technology was chosen because it is cost effective, low profile, durable and flexible regarding layout and siting. It is a proven and mature technology that is readily available for broad scale deployment at the site.

### *4.2.3 The 'do nothing' alternative*

Not proceeding with the proposal would forego the benefits of the proposal, resulting in:

- The loss of a source of renewable energy that would assist the Australian and NSW Governments to reach their targets.
- The loss of cleaner energy and reduced greenhouse gas emission.
- The loss of additional electricity generation and supply into the grid.
- Loss of social and economic benefit through the provision of direct and indirect employment.

The 'do nothing' option may avoid any potential impact, however the likelihood of significant negative impacts is low. It is considered that the benefit of the proposed solar farm outweighs any potential impact whilst contributing to ecologically sustainable development.

# 5 PLANNING CONTEXT

## 5.1 NSW LEGISLATION

### 5.1.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and associated regulations and instruments set the framework for development assessment in NSW. The proposed development would be assessed under the provisions of Part 4 of the Act.

Section 4.36 of the Act provides that a State Environmental Planning Policy (SEPP), amongst other mechanisms, may declare particular development to be State Significant Development (SSD). The relevant provisions of the State Environmental Planning Policy (State and Regional Development) 2011 are discussed below.

#### State Environmental Planning Policy (State and Regional Development) 2011

The State Environmental Planning Policy (State and Regional Development) 2011 provides a framework for declaring certain types of development to be of State or Regional significance. It aims to facilitate the effective delivery of significant development in NSW by improving regulatory certainty and efficiency through a consistent planning process.

According to Clause 20 of Schedule 1, the SEPP makes a declaration of SSD in relation to electricity generating works as outlined below:

> *Development for the purpose of electricity generating works or heat or their co-generation (using any energy source, including gas, coal, biofuel, distillate, waste, hydro, wave, solar or wind power) that has a:*
>
> *(a) capital investment value of more than $30 million.*
>
> *(b) capital investment value of more than $10 million and is located in an environmentally sensitive area of State significance.*

The proposed development has an estimated capital investment cost greater than $30 million. The proposal is therefore classified as SSD under Part 4 of the EP&A Act.

Pursuant to Clause 4.5 of the EP&A Act, the consent authority for SSD is the Minister for Planning and Environment, or their delegate.

An Environment Impact Statement (EIS) is prepared in accordance with environmental assessment requirements issued by the Secretary of the Department of Planning and Environment (SEARs). In determining the SEARs, the Secretary must consult with relevant public authorities and would have regard to the need to assess key issues raised by those public authorities. A scoping study (this report) is to be submitted with the request for the SEARs.

### 5.1.2 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) provides the framework for a range of conservation actions including monitoring biodiversity, the scientific assessment of development, establishment of market-based conservation mechanisms and guiding conservation investment. The overall aim of the BC Act is to maintain a healthy, productive and resilient environment in consideration of the principles of ecologically sustainable development.

The proposed development is considered SSD (discussed in relation to the State Environmental Planning Policy (State and Regional Development) 2011 below) and would require biodiversity assessment under Section 7.9 of the BC Act. According to the provisions of the BC Act, a Biodiversity Development Assessment Report (BDAR) is required to support the application for development consent.

A preliminary assessment of potential impacts is outlined in section 5.2 of this Scoping Report.

### 5.1.3 Conveyancing Act 1919

The purpose of the *Conveyancing Act 1919* is to amend and consolidate the law of property and to simplify and improve the practice of conveyancing, and for such purposes to amend certain Acts relating thereto.

Subdivision is required to lease or creation of an easement may be required for the purpose of the transmission line and substation infrastructure.

### 5.1.4 Crown Land Management Act 2016

The objects of the *Crown Land Management Act 2016* (CLM Act) are to ensure that Crown land is managed for the benefit of the people of New South Wales. Under Division 2.5 of the Act, the Minister for Lands must be satisfied that the land has been assessed prior to any allocation action, i.e. reservation, dedication, sale, lease, licence or permit. The purpose of a land assessment is to ensure decisions made in relation to Crown land are in accordance with the principles of Crown land management by (amongst other matters) including an assessment of the capabilities of Crown land and the identification of suitable land uses.

No Crown paper roads or residual road corridors with no developed infrastructure exist adjacent to the proposal.

### 5.1.5 Heritage Act 1977

The *Heritage Act 1977* (Heritage Act) aims to conserve heritage values. The Heritage Act defines 'environmental heritage' as those places, buildings, works, relics, moveable objects and precincts listed in the Local or State Heritage Significance Register. Heritage items are listed in the environmental heritage schedule of the local Council's Local Environmental Plan (LEP) or listed on the State Heritage Register, a register of places and items of particular importance to the people of NSW.

Under Section 89J of the EP&A Act, an approval under Part 4 or a permit under Section 139 of the Heritage Act would not be required for an SSD. The proposal is unlikely to directly or indirectly affect any items of heritage significance (refer to section 5).

### 5.1.6 National Parks and Wildlife Act 1974

Under the *National Parks and Wildlife Act 1974*, the Director-General of the National Parks and Wildlife Service is responsible for the care, control and management of all national parks, historic sites, nature reserves, Aboriginal areas and state game reserves. The Director-General is also responsible under this legislation for the protection and care of native fauna and flora and Aboriginal places and objects throughout NSW.

The impact of the proposed development on Aboriginal places and objects would be investigated as part of the preparation of the EIS. Under Section 89J of the EP&A Act, an Aboriginal Heritage Impact Permit under Section 90 of the *National Parks and Wildlife Act 1974* would not be required for an SSD.

The potential impacts to Aboriginal heritage and native fauna and flora are discussed in section 5 of this Scoping Report.

### 5.1.7 Roads Act 1993

The *Roads Act 1993* (Roads Act) provides for the classification of roads and for the declaration of the Roads and Maritime Services (RMS) and other public authorities as roads authorities for both classified and unclassified roads. It also regulates the carrying out of various activities in, on and over public roads.

The need for upgrade works to any affected road would be considered as part of the traffic assessment conducted for the proposed development. The roads authority would be consulted during the preparation of the EIS and, if required, approval sought under section 138 of the Roads Act.

### 5.1.8 Water Management Act

The *Water Management Act 2000* provides for the sustainable and integrated management of the State's water resources. The proposal would require water during both construction and operation. Quantities and sources of water required would be identifies during the EIS stage.

### 5.1.9 State Environmental Planning Policy No 55 – Remediation of Land

The State Environmental Planning Policy No 55 – Remediation of Land provides a framework for the consideration of land contamination and remediation as part of any planning purpose.

Under clause 7 of the SEPP, the consent authority must not consent to a development unless it has considered whether the land is contaminated, whether land would be suitable where it is contaminated, whether land can be made suitable by remediation, and that remediation would take place prior to the proposed use.

The subject land is not on the register of Contaminated Sites notified to the NSW EPA. Further, the land is not on Leeton Shire Council's register of contaminated or potentially contaminated land. Historical aerial imagery indicates that the land has been utilised for agricultural activities, specifically irrigation cereal cropping, which is a potentially contaminating land use according to the 'Managing Land Contamination Planning Guidelines' (Environment Protection Authority, 1998).

Consideration of potential contamination risks to satisfy the requirements of clause 7 of the SEPP, would be provided in the EIS.

### 5.1.10 State Environmental Planning Policy (Infrastructure) 2007

Clause 34(7) of State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) provides that development for the purpose of a 'solar energy system' may be carried out by any person with consent on any land (except land in a prescribed residential zone).

The proposed development is located on land within the RU1 Primary Production zone and is permissible with consent under ISEPP.

### 5.1.11 State Environmental Planning Policy (Rural Lands) 2008

The State Environmental Planning Policy (Rural Lands) 2008 (the Rural Lands SEPP) rural planning principles, listed under clause 7, are:

*(a) the promotion and protection of opportunities for current and potential productive and sustainable economic activities in rural areas.*

*(b) recognition of the importance of rural lands and agriculture and the changing nature of agriculture and of trends, demands and issues in agriculture in the area, region or State.*

*(c) recognition of the significance of rural land uses to the State and rural communities, including the social and economic benefits of rural land use and development.*

*(d) in planning for rural lands, to balance the social, economic and environmental interests of the community.*

*(e) the identification and protection of natural resources, having regard to maintaining biodiversity, the protection of native vegetation, the importance of water resources and avoiding constrained land.*

*(f) the provision of opportunities for rural lifestyle, settlement and housing that contribute to the social and economic welfare of rural communities.*

*(g) the consideration of impacts on services and infrastructure and appropriate location when providing for rural housing.*

*(h) ensuring consistency with any applicable regional strategy of the Department of Planning or any applicable local strategy endorsed by the Director-General.*

It is considered that the proposal is consistent with the aims and planning principles of the Rural Lands SEPP. Part 4 of the Rural Lands SEPP relates to state significant agricultural land. Given the proposal area is not identified in Schedule 2, it is not identified as state significant agricultural land and Part 4 does not apply.

## 5.2 COMMONWEALTH LEGISLATION

### *5.2.1 Environmental Protection and Biodiversity Conservation Act 1999*

The *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides an assessment and approval process for actions likely to cause a significant impact on Matters of National Environmental Significance (MNES). These include:

- World Heritage properties.
- National Heritage places.
- Wetlands of international importance (listed under the Ramsar Convention).
- Listed threatened species and ecological communities.
- Migratory species protected under international agreements.
- Nuclear actions (including uranium mines).
- Commonwealth marine areas.
- The Great Barrier Reef Marine Park.

Approval by the Commonwealth Environment Minister is required if an action is likely to have a significant impact on a MNES. Assessments of significance based on criteria listed in the 'Significant Impact Guidelines 1.1' (Commonwealth of Australia, 2013) are used to determine whether the proposed action is likely to have a significant impact (i.e. is likely to be considered a 'controlled action').

A search of the Commonwealth Protected Matters Search Tool (10 km buffer, undertaken on 7 February 2019) identified four Endangered Ecological Communities, three threatened flora species and 15 threatened fauna species that have the potential to occur at the site. The search also identified four wetlands of international

importance, located greater than 200 km upstream, and one Ramsar listed wetland (Fivebough and Tuckerbil swamps) within 10 km. A summary of the EPBC Act search report is provided in section 7.2.1

Surveys to determine the presence and likelihood of impact to these entities would be undertaken during the preparation of the EIS.

A summary of the EPBC Act search report is provided in Table 5-1.

Table 5-1 Summary of EPBC Act Protected Matters Report search results

| *Protected Matter* | *Entities within the search area* |
|---|---|
| World Heritage Properties | 0 |
| National Heritage | 0 |
| Wetlands of International Significance (Ramsar) | 5 |
| Threatened Ecological Communities | 4 |
| Threatened Species | 18 |
| Migratory Species | 10 |
| Listed Marine Species | 16 |
| Commonwealth land | 1 |
| Commonwealth Heritage places | 0 |
| Critical habitats | 0 |
| Commonwealth reserves (terrestrial) | 0 |
| State reserves | 0 |
| Regional Forest Agreements | 0 |
| Invasive species | 29 |
| Nationally Important Wetlands | 0 |

### *5.2.2 Native Title Act 1993*

The *Native Title Act 1993* provides a legislative framework for the recognition and protection of common law native title rights. Native title is the recognition that Indigenous people had a system of law and ownership of their lands before European settlement. Where that traditional connection to land and waters has been maintained and where government acts have not removed it, the law recognises this as native title.

People who hold native title have a right to continue to practise their law and customs over traditional lands and waters while respecting other Australian laws. This could include visiting to protect important places, making decisions about the future use of the land or waters, hunting and gathering bush medicines. Further, when a native title claimant application is registered by the National Native Title Tribunal, the people seeking native title recognition gain a right to consult with anyone who wants to undertake a project on the area claimed.

Where native title does exist in relation to the proposal site, the proponent would comply with the provisions of the *Native Title Act 1993*.

A search of the National Native Title Tribunal website (NNTT, 2018) did not indicate any native title claims, land use agreements, applications or determinations within the development site.

## 5.3 LOCAL PLANNING INSTRUMENT

### *5.3.1 Leeton Local Environmental Plan 2014*

The proposal is in the Leeton Local Government Area (LGA) and is subject to the Leeton Local Environmental Plan (LEP) 2014.

The overall aims of the LEP are:

a. to encourage sustainable economic growth and development.
b. to preserve rural land for all forms of primary production.
c. to identify, protect, conserve and enhance Leeton's natural assets.
d. to identify and protect Leeton's built and cultural heritage assets for future generations.
e. to allow for the equitable provision of social services and facilities for the community.
f. to provide housing choices for the community.
g. to minimise land use conflicts and adverse environmental impacts.
h. to promote ecologically sustainable development.

The subject land is zoned RU1 Primary Production under the LEP, as shown in Figure 5-1, with a prescribed minimum lot size of 100 hectares.

The proposed development is defined as 'electricity generating works' according to the land use definitions in the LEP:

> *electricity generating works means a building or place used for the purpose of making or generating electricity.*

According to the RU1 land use table, electricity generating works are prohibited in the zone as they are not listed either permitted with or without consent. However, as discussed above, a solar generating system would be permitted on the subject land under the provisions of ISEPP with consent. As a state planning policy, the ISEPP provisions prevail over inconsistent provisions in the LEP.

#### Zone Objectives

According to clause 2.3(2) of the LEP, the consent authority must have regard to the objectives for development in a zone when determining a development application. The objectives of the RU1 zone are to:

- Encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- Encourage diversity in primary industry enterprises and systems appropriate for the area.
- Minimise the fragmentation and alienation of resource lands.
- Minimise conflict between land uses within this zone and land uses within adjoining zones.
- Maintain the rural landscape character of the land.

The proposal would have negligible impact on primary industry production within the Leeton LGA. The degree of permanent land disturbance as a result of construction and operation of the solar farm is small and would not result in fragmentation and alienation of resource lands. Some agricultural activity is still possible whilst the solar farm is operating (e.g. grazing), and it is likely that agricultural activities which were occurring before the solar farm was constructed would be able to be continued once the solar farm is decommissioned and removed.

### Clause 2.6 Subdivision – consent requirements

According to clause 2.6 of the LEP, consent is required for the subdivision of land. The proposed development would involve the subdivision of land (Lot 81 DP 751689) to create a smaller allotment for the substation that would connect the solar farm infrastructure to the wider electricity grid. Consent for the subdivision is sought as part of the proposed development. Lot 80 would not be subdivided as the proponent would lease the southern portion of the land for five years, and then consecutive lease agreements of five years for a total of 25 years.

Clause 8(2) of the State and Regional Development SEPP states that if a single development application comprises development that is only partly SSD, the remainder of the development is also declared to be SSD. In this case, the proposed subdivision is also taken to form part of the SSD.

### Clause 4.1 Minimum subdivision lot size

Clause 4.1(3) of the LEP states that "the size of any lot resulting from a subdivision of land to which this clause applies is not to be less than the minimum size shown on the Lot Size Map in relation to that land".

With regard to the subject land, the prescribed minimum lot size is 150 ha. The proposed lot size of portion to be leased by the proponent is 92 ha and the northern portion would also be under 150 ha is subdivided. As outlined above, it is proposed to not to subdivide Lot 80 DP 751689, so that the landholder does not have to acquire additional land to consolidate with the northern portion to meet the minimum lot size. All lots would remain over the minimum lot size of 150 ha under the provisions of clause 4.1 of the LEP, with the exception of the substation.

As outlined above, clause 8(2) of the State and Regional Development SEPP provides that if one aspect of a proposal is SSD, all aspects are to be considered under the SSD provisions. Further, clause 4.38(3) of the *Environmental Planning & Assessment Act 1979*, states that development consent for SSD may be granted despite the development being prohibited by an environmental planning instrument. Accordingly, the consent authority may consent to the proposed subdivision, despite the subdivision being prohibited by the LEP.

Leeton Shire Council has indicated that they would not object to consent being granted by the Minister for the proposed subdivision under the minimum lot size for the purpose of the substation.

### Clause 4.2 Rural subdivision

The objective of clause 4.2 of the LEP is to provide flexibility in the application of standards for subdivision in rural zones to allow land owners a greater chance to achieve the objectives for development in the relevant zone. The clause applies to subdivisions in several zones including the RU1 Primary Production zone.

Clause 4.2(3) states that a lot of a size that is less than the minimum size shown on the Lot Size Map in relation to that land may be created for the purpose of primary production. It is considered that the purpose of the proposed lot is inconsistent with a primary production purpose and could not invoke the provisions of this clause.

As outlined above, the proposed development (including the required subdivision) is SSD according to the State Environmental Planning Policy (State and Regional Development) 2011. According to clause 4.38(3) of the *Environmental Planning & Assessment Act 1979*, development consent for SSD may be granted despite part of the development being prohibited by the environmental planning instrument.

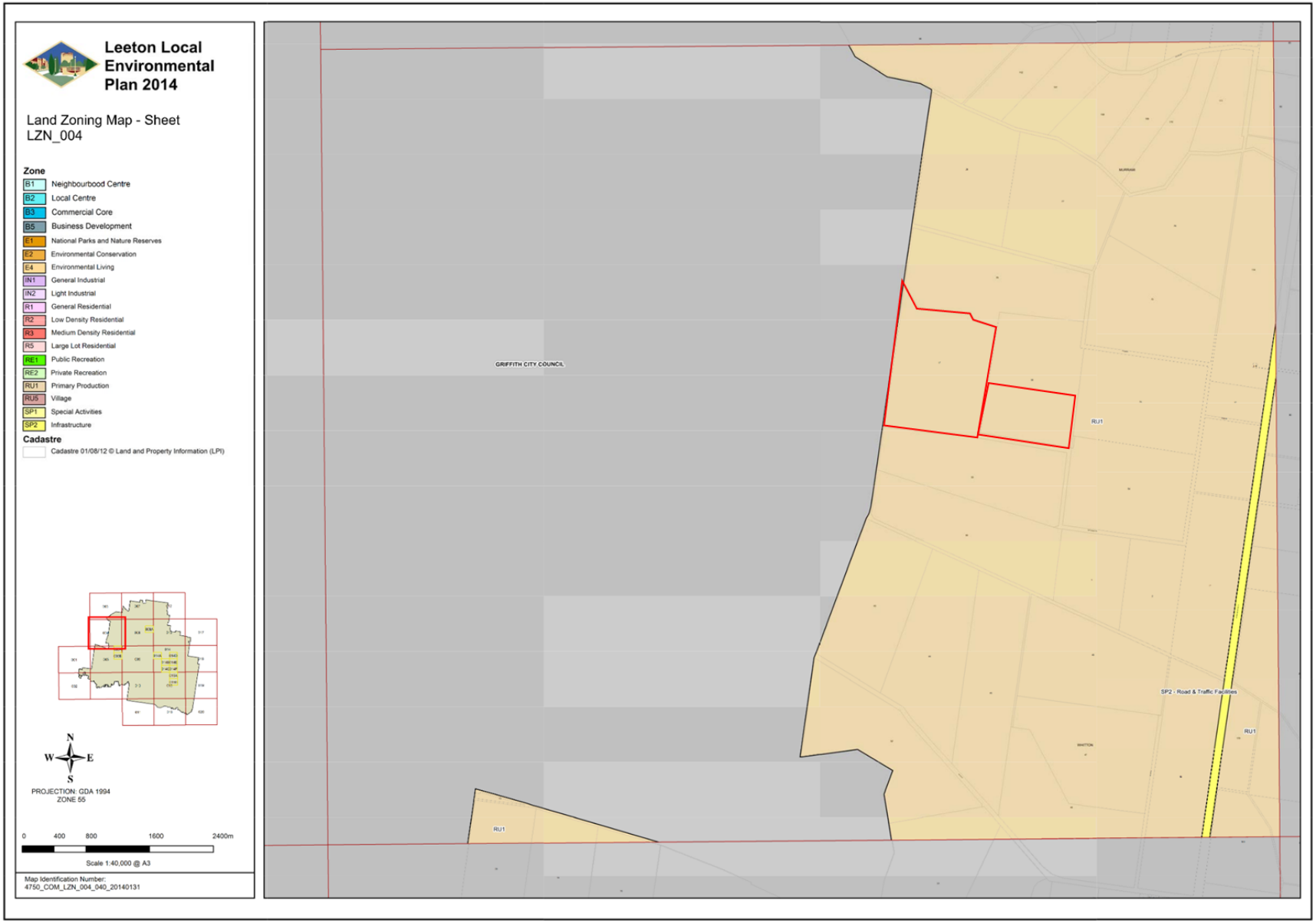



Figure 5-1 Leeton LEP zoning, location of proposal shown in red (source: Leeton LEP 2014)

# 6 COMMUNITY & STAKEHOLDER ENGAGEMENT

## 6.1 ENGAGEMENT APPROACH

Community and stakeholder engagement with the affected community and stakeholders (interested and affected parties (I&APs)) is integral to development of the proposal. Aligned to the requirements of the DPE *Draft Environmental Impact Assessment Guidelines Series – Community and Stakeholder Engagement* (June 2017), for the purpose of this project, the following groups are identified as I&APs:

- The proponent.
- The community – neighbours within a 3 km radius around the subject land.
- Other stakeholders – special interest groups, broader community, etc.
- Government departments and consent authorities – NSW DPE and local Councils.

Although there are numerous benefits to good community consultation for such a project, the following are considered as being key benefits for valuable engagement:

- An ongoing opportunity for I&APs to gain an understanding of the proposal from the early scoping phase through to the impact assessment. This creates greater project awareness and encourages proponent transparency of the proposal throughout the process.
- An opportunity for I&APs to provide input to possible mitigation measures for identified specific-, local- or regional project impacts. This not only empowers I&APs to help develop mitigations for impacts that could directly affect them but also assists the proponent to develop flexible, tailored solutions as part of the project's overall planning.

A preliminary Community & Stakeholder Engagement Plan (CSEP) has been prepared to provide a framework to engage with the I&APs about the proposal. This CSEP ensures opportunities for providing input into the assessment and development process are understood including:

- Upfront discussions with the DP&E and local Councils to introduce them to the proposal, as well as determine project-specific considerations that need to be accounted for.
- Face-to-face meetings with key community neighbours within the 3 km subject land radius. This includes distribution of information flyers (Appendix A) about the proposed project as well as an outline of the community and stakeholder engagement process. (Where neighbours were not at home or available for face-to-face meetings, flyers were left at their properties).
- Opportunities for broader community information sharing at two planned community engagement sessions, during the assessment process. These will take place in the local Council areas.
- Establishment of a website for the proposal (www.murramisolarfarm.com.au), on which key project information can be found.
- Ongoing consultation opportunities in the form of phone calls, feedback forms, e-mails, a post-assessment newsletter, etc.

The CSEP aims to ensure that there is effective, ongoing liaison with the community. Measures to reduce adverse impacts and promote positive impacts would be identified in the EIS and appropriate management plans developed for the proposal.

Agency consultation would also be undertaken in accordance with any requirements of the SEARs.

## 6.2 IDENTIFIED I&APS

I&APs were identified as those community members and stakeholders potentially being impacted by the solar farm proposal or having an interest in the proposal (Table 6-1):

Table 6-1 Impacted or interested stakeholder groups identified as part of the project scoping engagement

| *I&AP group* | | *Defining characteristics* |
|---|---|---|
| Community | Adjacent neighbours | Neighbours with properties directly adjacent to the proposed subject land. These neighbours are deemed to possibly be directly affected by the proposal by, for example, view of infrastructure, or noise or vibration from haulage routes or construction activities. These neighbours may be either landowners or lessees.<br><br>There are nine landowners/lessees that have been identified on land directly adjacent to the subject land. Table 6-2 provides the ownership details of these properties (owner or lessee), as well as the type of dwelling (house, shed, etc.). Figure 1-1 further illustrates their geographic location, with the pink dots demarcating these adjacent neighbours (label IDs 1 – 9). |
| | Neighbours within a 3km radius from the subject land | Considered a major development within a small town. Direct impacts may be of interest to local residents and businesses (cropping farmlands). Based on upfront discussions with the DPE, a 3 km radius from the proposed subject land has been used to capture the values and potential impacts to this group of I&APs. It will further assist the assessment process and development of appropriate mitigation strategies from a local landowner/lessee perspective.<br><br>There are 16 local landowners / lessees within this 3 km radius. Table 6-2 provides the details of these local neighbours with their geographic locations illustrated as yellow dots on Figure 1-1 (label IDs 10 – 25).<br><br>An additional eight residences have also been identified along the preferred haulage route of Wilga Road. |
| Stakeholders | Special interest groups | The following relevant special interest groups were identified for this proposal:<br><br>• Murrumbidgee Irrigation Limited.<br>• Murrumbidgee Land Care Inc.<br><br>Depending on the community engagement feedback, consultation with these groups may take place during the assessment process. |

| *I&AP group* | | *Defining characteristics* |
|---|---|---|
| | Media | Various media outlets will be used to distribute information about the project.<br><br>A project-specific website (www.murramisolarfarm.com.au) has been developed for the proposal. This is the main information portal for I&APs to gain an understanding of the proposal, as well as learn more about the impacts and mitigations around solar farms.<br><br>Advertisements for planned community gatherings relevant to the proposal will be posted in the local Leeton newspaper. |
| | Broader community & representative bodies | The project is likely to be of interest to the broader local and regional community.<br><br>Community engagement planning will include two community meeting sessions within the Leeton LGA during the assessment process. This will allow for queries to be raised with the proponent and project team about the project by the broader community and representative bodies.<br><br>Currently, the following representative groups have been identified as possibly showing an interest in the project:<br>• Leeton Business Chamber.<br>• Local, State and National members of Parliament.<br>• Leeton and District Aboriginal Land Council.<br>• Leeton Visitors' Information Centre.<br>• TransGrid. |
| Government departments & consent authorities | Department of Planning & Environment | Key regulatory decision-maker for this proposal. |
| | Leeton Shire /Griffith City Council | As the subject land is located in the Leeton Shire LGA, upfront engagement with the Leeton Shire Council has already taken place. This engagement is important to understand local planning needs as well as to identify any specific local council concerns that need to be included in the assessment process.<br><br>To ensure inclusivity, the Griffith City Council has also been identified as an I&AP as the subject land is located on the boundary of the Leeton and Griffith LGAs. Engagement with the Griffith City Council has already been initiated.<br><br>Both Councils have also been consulted regarding their preferred transport route to the proposal. |

Table 6-2 List of interested & affected parties (within 3 km of the subject land) identified as part of the community & stakeholder engagement planning

| Location | Label ID | Type | Ownership details | |
|---|---|---|---|---|
| Directly adjacent neighbour to the subject land | 1 | House | Owner | Subject landowner (does not stay on this property) |
| | | | Lessee | Adjacent neighbour |
| | 2 | House | Owner | Subject landowner (does not stay on this property) |
| | | | Lessee | Adjacent neighbour |
| | 3 | House | Owner | Subject landowner (does not stay on this property) |
| | | | Lessee | Adjacent neighbour |
| | 4 | House | Owner | Subject landowner (does not stay on this property) |
| | | | Lessee | Adjacent neighbour |
| | 5a | House (derelict) | Owner | Adjacent neighbour (does not stay on this property) |
| | 5b | House | Lessee | Adjacent neighbour |
| | 6 | House | Owner | Adjacent neighbour (does not stay on this property) |
| | | | Lessee | Adjacent neighbour |
| | 7 | House | Owner | Adjacent neighbour (does not stay on this property) |
| | | | Lessee | Adjacent neighbour |
| | 8 | House | Owner | Subject landowner (main residence) |
| | 9a | House | Owner | Adjacent neighbour (main residence) |
| | 9b | Shed | | |
| Within 3 km radius from subject land | 10 | House | Owner | Subject landowner (family residence) |
| | 11 | House (derelict) | Owner | Local landowner (does not stay on this property) |
| | 12 | Sheds (unused) | Owner | Local landowner (does not stay on this property) |
| | 13 | Sheds (unused) | Owner | Local landowner (does not stay on this property) |
| | 14 | House | Owner | Local landowner (does not stay on this property) |
| | | | Lessee | Local tenant |
| | 15 | House | Owner | Local landowner (main residence) |
| | 16 | House | Owner | Local landowner (does not stay on this property) |
| | | | Lessee | Local tenant |
| | 17 | House (unused) | Owner | Local landowner (does not stay on this property) |
| | 18 | House | Owner | Local landowner (does not stay on this property)) |

| Location | Label ID | Type | Ownership details | |
|---|---|---|---|---|
| | | | Lessee | Local tenant |
| | 19 | House | Owner | Local landowner (main residence) |
| | 20 | House | Owner | Local landowner (main residence) |
| | 21 | House (unused) | Owner | Local landowner (does not stay on this property) |
| | 22 | House (unused) | Owner | Local landowner (does not stay on this property) |
| | 23 | House | Owner | Local landowner (does not stay on this property) |
| | | | Lessee | Local tenant |
| | 24 | House (unused) | Owner | Local landowner (does not stay on this property) |
| | 25 | House | Owner | Local landowner (does not stay on this property) |
| | | | Lessee | Local tenant |

## 6.3 ENGAGEMENT TO DATE

To date, the engagement activities consistent with the preliminary CSEP that have been undertaken are provided in Table 6-3. This table also highlights key discussion points raised during the engagement that will need to be considered as part of the EIA process.

Table 6-3 Community and stakeholder engagement to date (as part of the proposal scoping)

| *I&AP group* | *Engagement activities* | *Date* | *Aspects to be considered during the EIA* |
|---|---|---|---|
| Community and other stakeholders | • The neighbours identified in the 3km subject land radius area were visited on 13 March 2019 to discuss the proposal. Where neighbours weren't home the proponent left a flyer with website and contact information (Appendix A).<br>• Many neighbours were not too concerned about the project (as much of the directly adjacent land is owned by the subject land owner). Where concerns were raised, these were documented for further clarification and/or assessment. | 13 March 2019 | • Visual impact of the solar panels (reflectivity & glare).<br>• Noise during the construction period.<br>• Truck movement around routes that have school bus pick-up and drop-off points.<br>• Loss of the ability to expand personal farming areas due to the use of the subject area for a land use different to agricultural activities.<br>• Potential work opportunities for some of the lessees. |

| *I&AP group* | *Engagement activities* | *Date* | *Aspects to be considered during the EIA* |
|---|---|---|---|
| | • The proponent has maintained ongoing consultation with TransGrid since conception of the proposal. | 2017, ongoing | • Supportive of project.<br>• Confirmed transmission line and network capacity for the proposal. |
| Departments & consent authorities | • The proponent met with the NSW DP&E in Sydney (Scoping Meeting), to:<br>o Introduce the proposed project to the Department.<br>o Discuss the assessment pathway.<br>o Discuss relevant matters to be considered in the EIA.<br>o Discuss the proposed approach to I&AP engagement.<br>o Discuss how the Scoping Report should be presented. | 7 March 2019 | • Need for consultation with Council to verify if they are supportive of such projects, as well as if they had any objections to sub-divisions of land where required.<br>• Consultation with community and other stakeholders, including those along key infrastructure routes.<br>• Consultation with the identified energy provider to ensure capacity to utilise proposed solar energy generation. |
| | • The proponent met with both the Leeton Shire Council and the Griffith City Council to introduce them to the proposed project.<br>• An information flyer was also left with both Councils (an electronic copy as well as the project website details was e-mailed to the representative after the meetings).<br>• Both Leeton Shire Council and Griffith City Council expressed appreciation at the upfront engagement and have indicated general support for the proposal. | 13 March 2019 | • Sourcing of skilled local people for construction activities.<br>• Traffic management during construction – traffic movements including shuttle buses for workers, parking, heavy vehicle movements, and impact on school bus routes.<br>• Accommodation for construction workers.<br>• Addressing perceived community impacts such as loss of agricultural land, solar panel glare and regional solar farm cumulative impacts.<br>• Logistics around planned future community engagement sessions – most appropriate locations, dates, times. |

The advertising and registration for the Aboriginal Cultural Heritage Assessment process will occur concurrently with the submission period for this Scoping Report.

The comments identified will all be taken forward as part of the assessment process.

Once the proposal SEARs have been obtained and the assessment phase of the project is initiated, the further community and stakeholder engagement highlighted in section 6.1 will be initiated.

# 7 PRELIMINARY ENVIRONMENTAL ASSESSMENT

## 7.1 METHODOLOGY

A preliminary environmental risk assessment has been conducted to assist in the identification of key environmental matters that would require detailed assessment within the EIS. Risks were identified for both the construction and operation phase of the proposal and analysed in relation to their possible consequence and likelihood of occurrence. From this analysis, some environmental matters were deemed to be key issues on the basis that they had the potential, without suitable mitigation, to have a significant impact on the environment.

The assessment is based on a desktop review and preliminary site inspection (involving flora and fauna surveys) to identify potential high-level constraints and major risks to the proposal. Preliminary constraints maps is provided in Figure 1-1 and Figure 1-2. This will be used to guide further detailed investigations and ultimately the site infrastructure layout. Constraints mapping will also be refined based on these investigations prior to submission of the EIS.

A summary of the key environmental issues is provided in section 7.2. The intent of the discussion is to demonstrate an understanding of the issues that require further environmental assessment and likely mitigation measures for these key issues. The potential impacts and management of other (less significant) issues are discussed in section 7.3.

The following environmental risks are considered to be key aspects:

- Biodiversity.
- Aboriginal Heritage.
- Visual amenity.
- Construction noise.
- Land use and resources.
- Watercourses and hydrology.

## 7.2 ASSESSMENT OF KEY ENVIRONMENTAL ISSUES

### *7.2.1 Biodiversity*

#### Methodology

A preliminary constraints assessment was conducted of the proposal to identify potential high-level constraints and major risks to the proposal.

The potential ecological constraints within the study area have been identified based on the following information sources:

- Threatened species and community listings under the BC Act and EPBC Act.
- Commonwealth EPBC Act Protected Matter Search Tool, using a 10 km search radius.
- Areas of outstanding biodiversity values declared under the BC Act.
- Threatened species and communities' records in the Bionet Database (OEH), using a 10 km search radius.

- Threatened species and communities records in the IBRA Region Riverina and Murrumbidgee subregion.
- Office of Environment and Heritage (OEH) Vegetation Information System (VIS) Mapping.
- NSW Government's SEED (Sharing and Enabling Environmental Data) Mapping.
- Vegetation surveys conducted by ecologists.

### Overview

The subject land has been selected on the basis that it supports limited native vegetation. The land has been extensively farmed, including cropping and grazing over a long period of time.

The primary constraint is associated with remnant woodland vegetation throughout the proposal site, though the proposed development footprint avoids the majority of native vegetation within the development site. Further survey of the area is a requirement of the EIS, and a full assessment of the impact to potential habitat in these areas would be conducted.

### Database searches

The EPBC Act Protected Matters Search undertaken on 7 February 2019 indicated four listed threatened ecological communities, which may or are likely to occur in the search area (Appendix B).

The EPBC Act search indicated three threatened flora species and 15 threatened fauna species that are either known to occur or have potential to occur in the search area.

The NSW Bionet search undertaken on 7 February 2019 indicated no threatened flora species and 1 threatened fauna record for the search area including the Superb Parrot. However, dates of the records are unavailable, meaning that recent habitat modifications affecting species presence are not taken into account. A range of other species were identified that could occur in the proposal area (Appendix B).

### Vegetation mapping

An assessment was undertaken of existing vegetation mapping of the proposed development site. No areas of outstanding biodiversity value were identified under the BC Act within the study area.

The NSW Government's SEED mapping for the locality identified two plant community types (PCT) along Matthews Road that may be impacted by access points to the site. These are

- PCT 26 – Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes.
- PCT 44 – Forb-rich Speargrass – Windmill Grass – White Top grassland of the Riverina Bioregion.

No native vegetation types were identified within the development site as confirmed by preliminary vegetation surveys shown in Figure 7-1.

### Site inspection

Field surveys were undertaken on 10 January 2019 for the purpose of constraints analysis and identifying native plant community types. The results of the field survey are shown in Figure 7-1.

The development site has been cropped frequently in recent years. The vegetation within the development site has been previously cleared, with evidence of clearing including stumps and fallen timber also having been removed to facilitate cropping. The groundcover within the development site consists of exotic grasses and crop stubble.

Three Weeping Myall (*Acacia pendula*) paddock trees are present within the development site located along fence line.

Remnant native vegetation along Matthews Road belongs to three native vegetation community types including Weeping Myall Woodland, Weeping Myall Grassland and Bimble Box Woodland as shown in Figure 7-1. The road reserves bordering the development site have a mix of native groundcovers, shrubs and over-storey canopy.

Two farm dams are located on the development site. One is located on the south eastern corner of Lot 81 DP 751689 and is surrounded by a small patch of Chenopod shrubland. The other is located on Lot 80 DP 751689 and is not close to any native vegetation. Both dams contained water at the time of the site survey. The man-made dams could provide habitat for the Southern Bell Frog (*Litoria raniformis*) with abundant irrigation canals present in the locality. The Southern Bell Frog is associated with swamps and billabongs along floodplains and river valleys. The dams would be further assessed for the presence of threatened species as part of the EIS.

Four man-made buildings are also present on the south eastern corner of Lot 81 DP 751689. These buildings may provide habitat for threatened bat species such as Southern Myotis (*Myotis macropus*) and the Little Pied Bat (*Chalinolobus picatus*). The bat habitat potential for threatened bat species would be determined by targeted surveys in preparation of the EIS.

The areas of remnant vegetation provide habitat and fauna movement corridors. Hollow bearing trees and a good condition over-storey could provide habitat for several threatened woodland birds and mammals such as the Superb Parrot (*Polytelis swainsonii*) and Koala (*Phascolarctos cinereus*). These areas of remnant vegetation would be further surveyed for fauna species during the preparation of the EIS.

### Plant Community Types and Endangered Ecological Communities

Based on existing vegetation mapping and the initial site inspection, vegetation within the proposed development site was assigned to (PCTs in accordance with the Vegetation Information System Classification Database. PCTs were determined based on the presence of diagnostic species identified in the site survey. The results are preliminary in nature and would be refined following detailed vegetation survey of the site, and the undertaking of Floristic Plots in accordance with the Biodiversity Assessment Methodology (OEH, 2017).

One PCT was identified within the study area:

- PCT 26 – Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes.

PCT 26 forms part of the Threatened Ecological Community *Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion*. This community is listed as Endangered under the BC Act. Further investigation is required to determine whether the vegetation communities form part of the Critically Endangered community – *Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes Bioregions* under the EPBC Act.

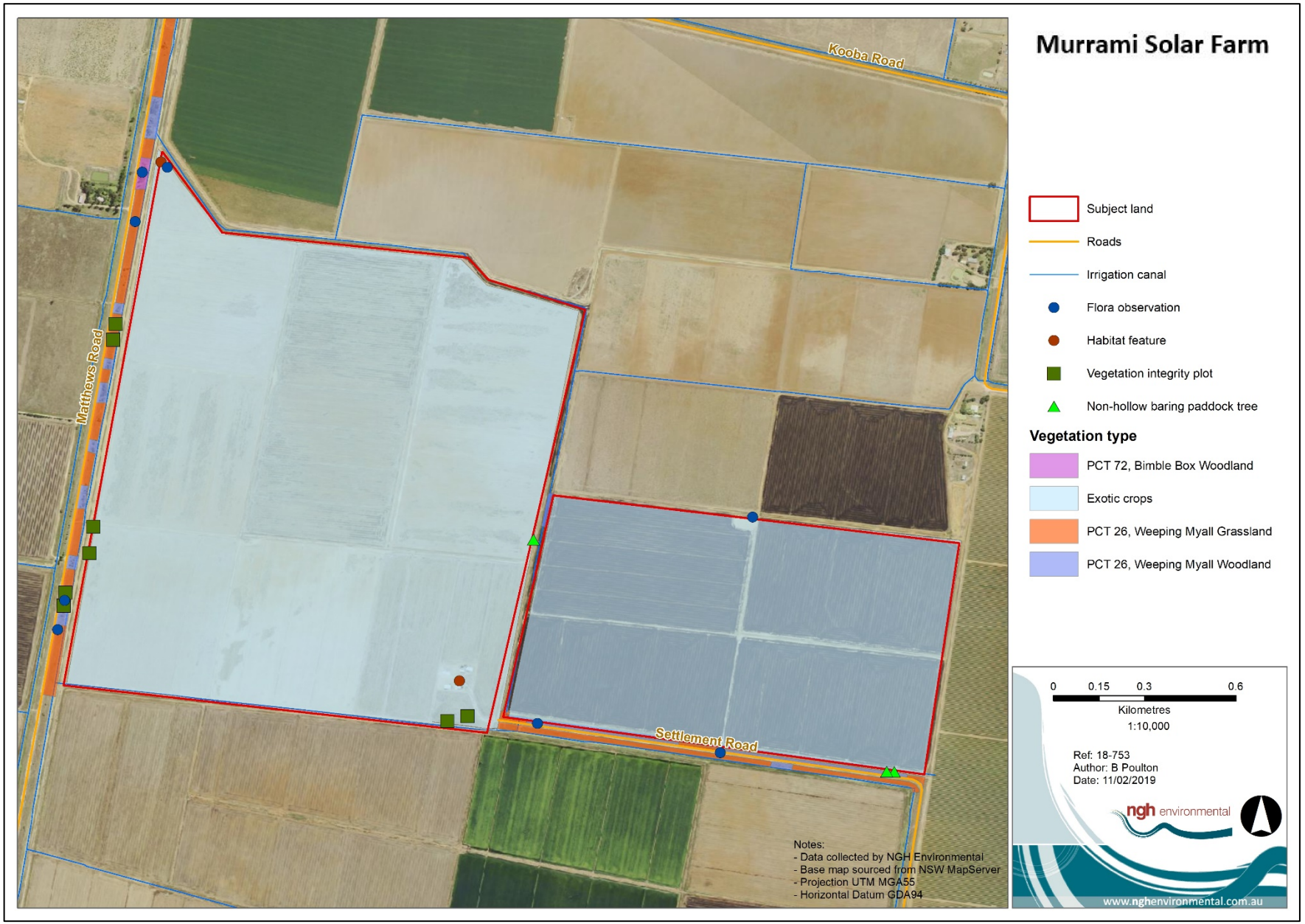



Figure 7-1 Preliminary biodiversity survey results

### Threatened species

The proposal would be assessed through the Biodiversity Assessment Methodology (BAM) (OEH 2017). Once full floristic plots have been undertaken in areas of native vegetation to be impacted, the BAM Calculator would determine credit species requiring further consideration. A draft BAM Calculator was run for the results of the initial biodiversity survey. The results of the draft BAM calculations are listed in Table 7-1 and are used to provide preliminary advice on species that may require further assessment during the preparation of the EIS. Bionet and EPBC Protected Matters Search results are included in Appendix B.

Table 7-1 Preliminary BAM calculations

| Common Name | Scientific Name | Survey Period |
|---|---|---|
| **Fauna** | | |
| **Australian Bustard** | *Ardeotis australis* | All year |
| **Bush Stone-curlew** | *Burhinus grallarius* | All year |
| **Little Eagle** | *Hieraetus morphnoides* | August – October |
| **Koala** | *Phascolarctos cinereus* | All year |
| **Major Mitchell's Cockatoo** | *Lophochroa leadbeateri* | September – December |
| **Masked Owl** | *Tyto novaehollandiae* | May – August |
| **Square-tailed Kite** | *Lophoictinia isura* | September – January |
| **Superb Parrot** | *Polytelis swainsonii* | September – November |
| **White-bellied Sea-Eagle** | *Haliaeetus morphnoides* | July – December |
| **Flora** | | |
| **Austral Pillwort** | *Pilularia novae-hollandiae* | All year |
| **Bindweed** | *Convolvulus tedmoorei* | August – November |
| **Lanky Buttons** | *Leptorhynchos orientalis* | September – November |
| **Red Darling Pea** | *Swainsona plagiotropis* | August – September |
| **Slender Darling Pea** | *Swainsona murrayana* | September – February |
| **Silky Swainson-pea** | *Swainsona sericea* | September – February |
| **Turnip Copperburr** | *Sclerolaena napiformis* | November – February |
| **Winged Peppercress** | *Lepidium monoplocoides* | November – February |
| **Not on site** | | |

| Common Name | Scientific Name | Survey Period |
|---|---|---|
| **A spear-grass** | *Austrostipa wakoolica* | September – December |
| **Chariot Wheels** | *Maireana cheelii* | September - November |

### Potential Impacts

The following impacts upon biodiversity have been considered as having potential to occur during the construction and operation of the proposal:

- Removal of a small amount of native vegetation to one two access point to the site on Matthews Road.
- The removal of three juvenile Weeping Myall paddock trees.
- Loss of nesting sites.
- Introduction and spread of invasive species and weeds.
- Disturbance or displacement of fauna.
- Microclimate impacts due to shading, water availability, temperature etc.
- Movement barrier and collision hazard by perimeter fencing.

### Further assessment

A full floristic plot survey is required to determine the floristic composition, condition and TEC status of native vegetation at the proposal site. Fauna survey and habitat assessment is also required to determine the potential for the presence of threatened fauna species and habitat features such as tree hollows. These surveys and assessments would be undertaken as part of the EIS, under the BAM. This would include the calculation of any biodiversity offset required for the project.

## *7.2.2 Aboriginal heritage*

A search of the Aboriginal Heritage Information Management System (AHIMS) on 6 February 2019 identified 19 Aboriginal sites and no Aboriginal places within 1 km of the proposed development site (Appendix B), with none recorded on-site.

Landforms, vegetation and soils over much of the proposal site have been heavily disturbed by earthworks for irrigation canals and clearing for irrigation cropping. This is likely to reduce the potential for Aboriginal heritage sites of significance in the affected areas. It is noted that field assessment is required to confirm this and that any Aboriginal heritage sites/items/etc. identified would be a moderate to high constraint, requiring impact mitigation.

### Aboriginal consultation

Consultation with Aboriginal stakeholders would be undertaken in accordance with clause *80C* of the *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010* following the consultation steps outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents provided by OEH.

A brief summary of the consultation process includes:

1. Registration and initial consultation and registration of Aboriginal community members.
2. Review of survey methodology by Registered Aboriginal Parties (RAPs).
3. Completion of field work and reporting.

4. Review of report by RAPs.
5. Report finalisation.

Advertisement and registration for the Aboriginal Cultural Heritage Assessment will be undertaken concurrently with the submission of this Scoping Report.

#### Potential impacts

The following impacts upon Aboriginal heritage have been considered as having potential to occur during the construction of the proposal:

- Uncovering an unexpected or unidentified Aboriginal heritage item.

#### Further assessment

An Aboriginal heritage assessment of the development footprint and stakeholder consultation process would be completed as part of the EIS. The significance of any Aboriginal heritage sites that may be potentially affected by the proposal would be determined in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011).

### *7.2.3 Visual amenity and landscape character*

The proposal has potential to result in visual impacts to neighbouring houses and road users adjacent to the site. The site is located within a rural area with large lot agricultural production and sparsely distributed residences usually located some distance from main roads. There are approximately 25 potential sensitive receivers within 3 km of the subject land (Figure 1-1). The flat to gently undulating terrain and intermittent tree cover limits long range views in the locality.

An assessment of the level of visual disturbance would be undertaken as part of the EIS. The EIS would also consider the potential for the solar farm to affect local landscape character. Additional consultation with specific affected residences would be undertaken to identify the nature and significance of impacts and the need for mitigation measures.

It is noted that solar panels are designed to absorb as much sunlight as possible. They therefore reflect a very low percentage of the light and are not considered likely to result in glare or reflections that would affect traffic or nearby receivers.

#### Further assessment

A visual impact assessment including photo montages and community consultation would be prepared as part of the EIS to investigate visual impacts and mitigation options.

### *7.2.4 Noise*

There are 25 potential sensitive receivers within 3 km of the subject land (Figure 1-1). Noise impacts, for the most part, would only occur during construction (generated by construction vehicles and machinery), with minimal noise likely to be generated during operation. The proponent would adopt best practice mitigation measures during construction, such as standard work hours and regular vehicle and machinery maintenance to reduce the risk of adverse noise impacts.

During the operation of the solar farm, low level noise would be potentially produced by the solar tracking system, the substation and switchgear and any maintenance works undertaken at the site. Noise impacts during operation of the solar farm are expected to be very low.

### Further assessment

A construction and operational noise assessment would be undertaken as part of the EIS to assess potential noise impacts. The assessment would be undertaken in accordance with the Interim Construction Noise Guideline (DECC 2009) and NSW Noise Policy for Industry (NSW EPA 2017).

### Land use and resources

The region supports a diverse range of land uses. Regional industries include high and low intensity agricultural production, quarrying, transport, electricity generation, electricity distribution, freight and logistics, commercial and residential and railway activities.

The Mining, Petroleum, Production and Extractive Industries State Environmental Planning Policy 2007 (the Mining SEPP) extends across the proposal. The land is not classed as BSAL in the Mining SEPP Strategic Agricultural Land Map; BSAL has been described as land with high quality soil and water resources capable of sustaining high levels of productivity.

There are no mineral titles and no mineral applications relevant to the proposed development site indicated in the Minview database (DPE 2018) (Appendix B). A letter from GSNSW received on 20 February 2019 confirms that there are no current mineral, coal or petroleum titles on no extractive industries over the site or adjacent lands.

The current land use on the development site is irrigation cropping agriculture. The development site comprises 10 paddocks, which have been previously cleared and repeatedly cropped. The land is classified as Class 3 under the Land and Soil Capability Assessment Scheme (OEH 2012) and is described as suitable for cultivation (Figure 7-2) on a rotation basis though productivity will vary with soil fertility and management practices. Class 3 land is widespread of the NSW slopes and coast. Major agricultural producing areas of the State are largely comprised of Class 3 land.

The Land and Soil Capability Assessment Scheme, however, does not take into account climate and economic factors affecting agricultural businesses. Due to recent low rainfall and high cost of irrigation water, many local producers struggle to maintain a financially viable enterprise. Leasing some their land for renewable energy may help to offset running costs, while enabling some agricultural activities (e.g. grazing) to persist beneath solar panels.

For the construction period, there would be a complete reduction in agricultural activities within the development footprint. During the operational phase, not all agricultural activities would be precluded, and it is highly likely that limited production such as occasional grazing could continue. As such, it can be expected that the nature of the agricultural activities would change from cropping and grazing to predominately grazing within the development site. This would be further explored in the EIS.

If the solar farm is decommissioned at the end of its operational life, all infrastructure (above and below ground) would be removed. It is expected that the land would be returned to its prior production uses, as solar farms typically do not have significant permanent impacts to soil and landform.

### Further assessment

The impact on agricultural production in the locality and region would be assessed in detail in the EIS.

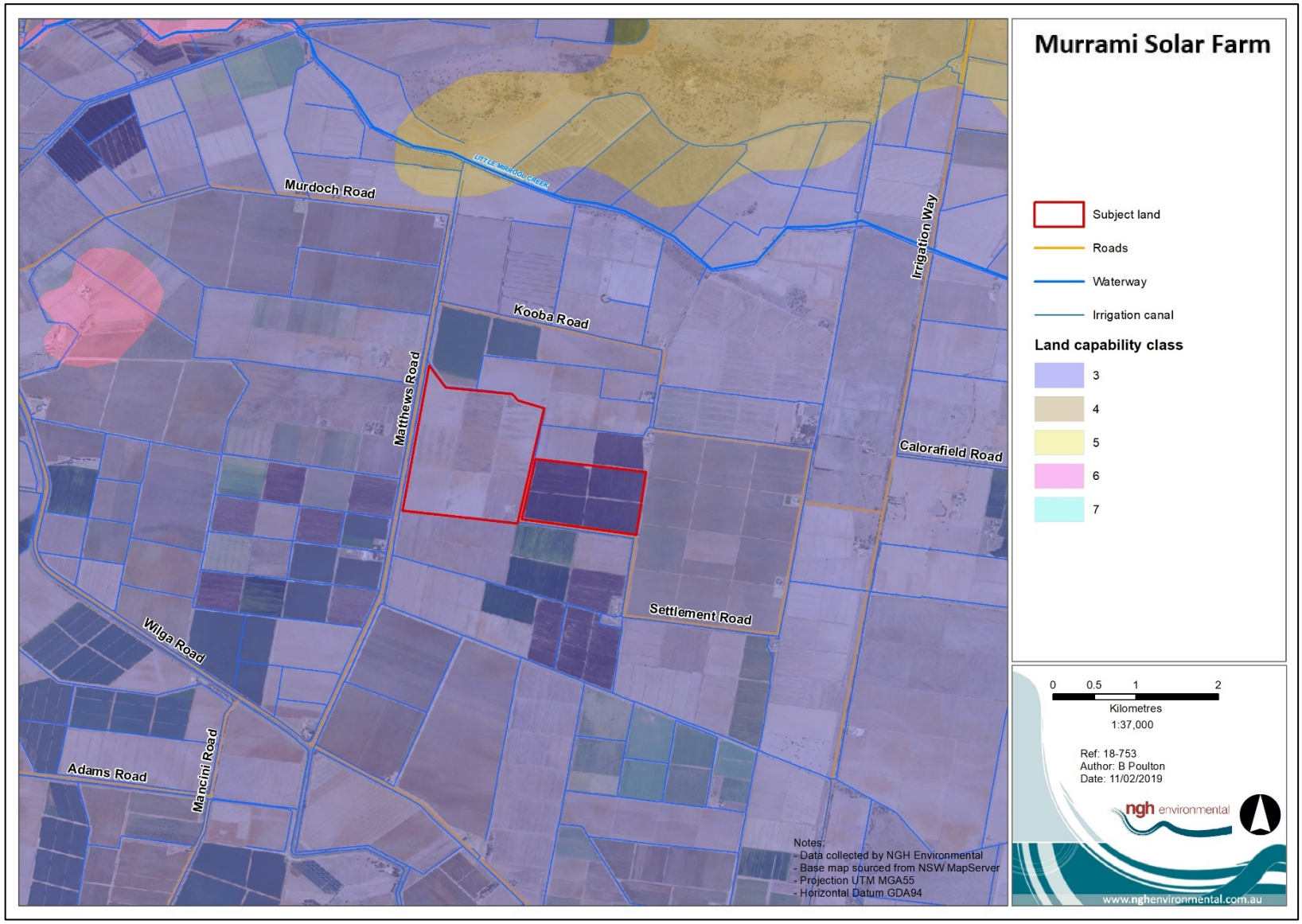



Figure 7-2 Land and soil capability of the proposed development site

### 7.2.5 Watercourses and hydrology

The proposal is located approximately 16 km north of the Murrumbidgee River. Little Mirrool Creek runs east to west, 2.5 km north of the development site and flows into the Lachlan River.

One man-made dam exists within Lot 81 DP751689, which will be filled in during construction. Irrigation canals will not be impacted by the proposal. As such, any impact to threatened aquatic systems are likely to be minimal.

Water demand for the proposal would be relatively small, as construction of the solar farm is not water intensive. Approval will be sought from Leeton or Griffith Shires for use of a standpipe for water extraction. No surface or groundwater extraction of water is required.

There are no aquatic groundwater dependant ecosystems (GDE) as shown in Figure 7-3. Terrestrial GDEs mapped within and in proximity to the development site are shown in Figure 7-4. There is a low potential for groundwater to be encountered during excavations and earthwork for the construction.

The proposal area is not identified as flood prone land under the Leeton LEP.

#### Potential Impacts

Impacts upon watercourses and hydrology that are considered as having the potential to occur during the construction of the proposal include:

- Removal of suitable aquatic habitat for threatened species by filling in one dam.
- Accidental release of hydrocarbons by inappropriate storage, use and disposal of chemicals.
- Domestic waste, effluent and putrescibles causing contamination.
- Erosion of soil and sedimentation through stormwater runoff.
- Dewatering sediment laden water from excavations.

#### Further assessment

The EIS would assess the impacts to waterways during construction and operation and include appropriate mitigation measures as required.

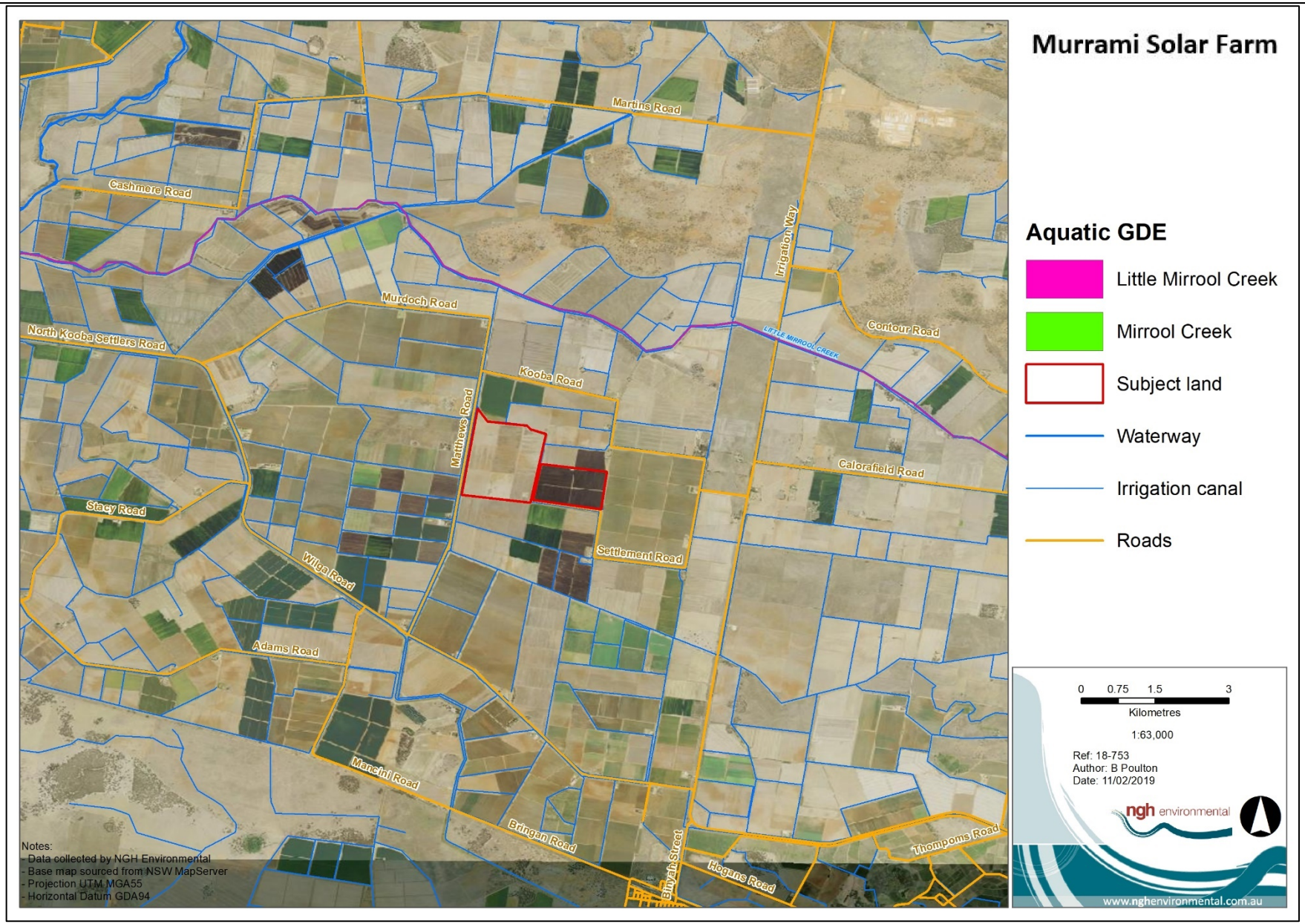



Figure 7-3 Aquatic Groundwater Dependent Ecosystems

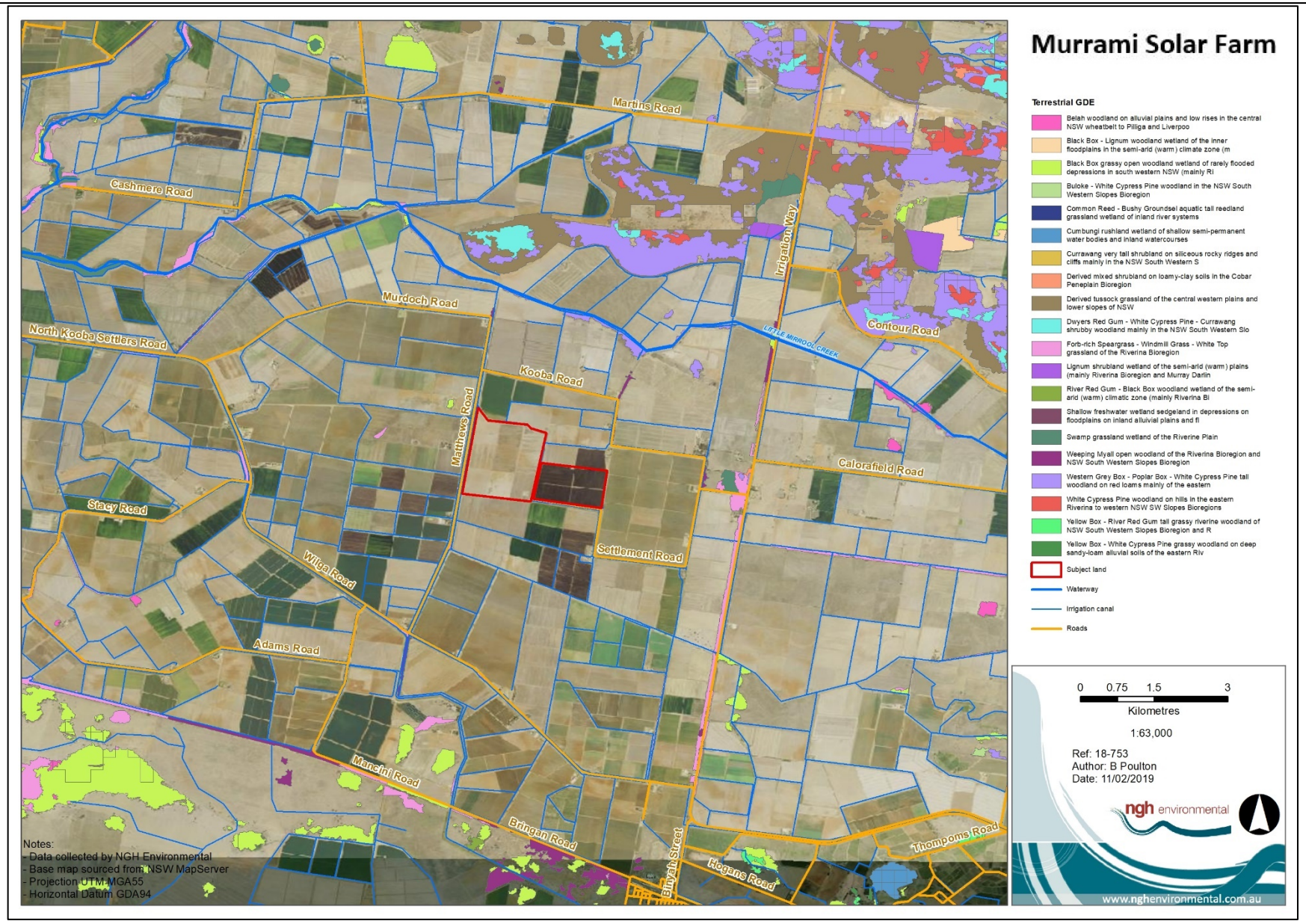



Figure 7-4 Terrestrial Groundwater Dependant Ecosystems

## 7.3 OTHER ENVIRONMENTAL ISSUES

There are a range of potential environmental issues associated with the proposal which are not considered to be key issues. These are considered secondary issues for investigation, given the characteristics of the proposal and the availability of appropriate safeguards for mitigation. These issues are outlined in Table 7-2. The impacts and any required mitigation relating to these issues would be addressed at an appropriate level of detail in the EIS.

Table 7-2 Other environmental issues

| Existing environment | Potential impacts | Management and mitigation |
|---|---|---|
| **Soils** | | |
| An eSPADE soil profile (OEH 2019) across entirety of the development site records self-mulched brown clay with no recorded mottling. No soil fauna activity, cracks or macropores were observed in the characterising sample. Soil across the subject land and surrounding area are characterised as vertosols, which are recognised as promoting soil erosion by concentrating water in the furrows (Lu *et al*. 2001). | Construction activities would include minor excavations and vegetation removal which have the potential to cause soil erosion and sedimentation and dust issues. | The design would provide all weather access at the site during construction and operation to avoid erosion/sedimentation impacts and tracking of soil, in particular after rain events.<br>The EIS would provide thorough consideration of soil impacts and proposed mitigation measures during construction and operation. |
| **Historical heritage** | | |
| A search of the NSW heritage Register on 6 February 2019 for the Leeton LGA identified 1 Aboriginal place under the National Parks and Wildlife Act, 7 items under the NSW Heritage Act, 56 items listed under the Leeton LEP and by state agencies, and no items on the Australian Heritage Database (Appendix B).<br>The closest listed heritage item is the Gogeldrie Weir, approximately 19 km south-east from the western boundary of the proposed development site (Appendix B). | There is considered to be a low risk of impact to heritage items. | The heritage status of the site would be assessed during fieldwork undertaken as part of the archaeological assessment. Appropriate management measures would be implemented if required. |
| **Access and traffic** | | |
| Site access will be constructed at one location on Matthews Road. Access design and location is indicative only, subject to further assessment and specialist input. Internal access tracks would be constructed as part of the works.<br>The major transport route is also subject to further assessment, specialist input and consultation with Leeton Shire. No restricted access intersections exist along the proposed access route. Irrigation Way is an existing 19 m B-double route. | Construction traffic could impact traffic along Matthews Road. Maintenance access tracks during operation would also be required across the development site.<br>During construction, there may be impacts to residences along the access route associated with dust, vibration and noise. | Construction traffic impacts would be considered in the EIS. Consultation would be undertaken with the local council and local residents regarding the works that may affect roads or traffic.<br>The design would also consider any requirements from the Roads and Maritime Services (RMS), local council |

| Existing environment | Potential impacts | Management and mitigation |
|---|---|---|
| | | and other relevant stakeholders on access arrangements to the proposal site.<br>The mitigation measures would require a Traffic Management Plan to be prepared. |
| **Contamination** | | |
| The EPA contaminated land register identified no contaminated sites within the Leeton LGA (Appendix B).<br>Contamination associated with agricultural activities (e.g. pesticides, petrochemicals) may still be present on the site. | There is potential that contaminants may be uncovered during excavation activities at the site. | Risks associated with contamination at the site are considered low and therefore no detailed investigation is likely to be required within the EIS.<br>The mitigation measures would require a CEMP to be prepared to manage any contamination identified during site construction. |
| **Air quality** | | |
| The air quality in the study area is expected to be good and typical of rural settings in NSW with low population density and few industrial pollution sources. Existing sources of air pollution are expected to include vehicle emissions, emissions, dust from agricultural practices and smoke from seasonal stubble burning. During colder months, solid fuel heating may result in a localised reduction in air quality, particularly if temperature inversions operate overnight. | The construction of the proposal is not anticipated to have a significant impact on air quality and would mostly be related to dust during dry periods and vegetation removal. Impacts to air quality during operation would be negligible. | The mitigation measures would require a CEMP to be prepared to manage air quality impacts during the construction phase. There is an opportunity to improve local air quality by maintaining ground cover vegetation under the panels. |
| **Hazard and risk – electric and magnetic fields (EMF)** | | |
| The existing TransGrid transmission line runs diagonally across Lot 81 DP 751689. Additional infrastructure which forms part of the proposal such as connecting powerlines and substation would produce additional electromagnetic emissions at the site. | The substation and network connection would be located on the proposal site. The powerlines constructed as part of the proposal would not pass through any neighbouring properties. The EMF that | The EMF levels of the proposed powerlines and substation would be assessed as part of the EIS. |

| Existing environment | Potential impacts | Management and mitigation |
|---|---|---|
| | would be generated by the proposed powerlines and substation is expected to be below the guideline for public exposure and would not be expected to have an adverse impact on human health. | |
| **Hazard and risk - bushfire** | | |
| The development site has been previously cleared for agriculture. However, there is regeneration of native flora occurring across the site and woodland borders the northern and eastern boundaries. The property is not identified as bush fire prone land by the NSW Rural Fire Service or within the Leeton LEP. | There is a low risk that the proposal could be affected by bushfire or pose a significant bushfire risk. | Bushfire impacts and risk would be assessed in the EIS. Risk of fire from proposed infrastructure will also be addressed in the EIS. |
| **Social and economic impacts** | | |
| The proposal is located within the Leeton LGA. In 2015, Leeton LGA had a population of 11,645. The main industry of employment in 2011 was manufacturing, employing 20.2% of workers. Agriculture was the second largest employer, providing employment for 10.8% or workers (ABS 2019).<br>Workforce accommodation would be required for potentially 200 workers during peak construction periods. A large majority of these would already reside locally. For visiting workers, accommodation can be sought from Leeton, Griffith or other towns within a 100 km radius, including Narrandera, Ardlethan and Darlington Point. | The proposal would reduce the availability of agricultural land but would generate economic benefits during construction and operation, including local employment opportunities. Other socio-economic impacts would include traffic and access, noise, air quality and visual impacts. | The EIS would assess potential social and economic impacts of the proposal. |
| **Utilities** | | |
| **Electricity network**<br>TransGrid manages and operates the high voltage electricity transmission network in NSW. TransGrid has restrictions on development within powerline easements.<br>TransGrid guidelines state that activities and encroachments are prohibited within a transmission line easement, including 'the installation of fixed plant or equipment', and 'the placing of obstructions within 20 metres of any part of a transmission line structure or supporting guy wire'. Roads or tracks within 10 | The proposed works would involve works adjacent to these utilities. The solar farm will need to connect to the TransGrid electricity network. | The EIS would assess the proposal against the setback and approval requirements of TransGrid. The solar farm would be designed to comply with required setback, approval and consultation requirements of TransGrid. |

| Existing environment | Potential impacts | Management and mitigation |
|---|---|---|
| metres of the centre-line of a transmission line 132 kV are prohibited although roads that cross the transmission line as a thoroughfare may be permitted. | | |
| **Waste management** | | |
| The proposal would generate several waste streams and utilise a variety of materials during the construction phase. | During construction, excavated material and green waste would be generated as waste. Packaging from panels and other components would require disposal. Limited operational waste would be associated with the proposal. | A Waste Management Plan would be incorporated into the CEMP, applying the principles to avoid, re-use and recycle to minimise wastes. Cleared trees would be recycled as fauna habitat where possible. |
| **Cumulative impacts** | | |
| The proposed Murrami Solar Farm will contribute to overall infrastructure development in the region.<br>A review of the State Significant Development register for the Leeton LGA was conducted on 08/02/2019. One major solar farm development (Yanco) has been applied for and has SEAR issued. Three other State Significant Developments have been applied for including a logging operation, freight terminal and ethanol plant but these applications have either been revoked or withdrawn. One small 30 MW solar Farm (not SSD) also exists in the Leeton LGA.<br>Approved and known planned solar farm developments in the surrounding region include:<br>• City of Griffith – Griffith Solar Farm (Determination) and Riverina Solar Farm (Determination).<br>• Shire of Narrandera – Avonlie Solar Farm (Assessment), Sandigo Solar Farm (Determination) and Yarrabee Solar Farm (Determination).<br>• Murrumbidgee Council – Coleambally Solar Farm (Determination) and Darlington Point Solar Farm (Determination). | During construction and operation, key cumulative impacts may include additional stress on the grid, community complaints such as visual amenity impacts, stress on local business for supply and demand (in particular staff accommodation), noise impacts, air quality, waste management, traffic etc. | Early consultation with the community regarding cumulative impacts should be conducted. Further assessment/investigation of cumulative impacts will be required, and the EIS would assess potential impact and risk. |

# 8 CONCLUSION

The Preliminary Environmental Assessment has outlined the proposed Murrami Solar Farm and established the environmental and planning context of the proposal. The proposal would be assessed under Part 4 of the EP&A Act and classed as SSD under *State Environmental Planning Policy* (*State and Regional Development*) 2011.

The report has been prepared to assist the development of the SEARs for the proposal, which will guide the preparation of the EIS.

The report identifies the following key environmental issues associated with the proposal, based on the preliminary investigations:

- Biodiversity.
- Aboriginal Heritage.
- Visual amenity.
- Noise.
- Land use and resources.
- Watercourses and hydrology.

These uses will be assessed in detail in the EIS. It is likely that other issues such as soil values, traffic impacts and natural hazards can be readily addressed by appropriate standard mitigation and management measures. The relevance and importance of issues would be reviewed throughout the EIS process.

# 9 REFERENCES

ARENA (n.d). Establishing the social licence to operate large scale solar facilities in Australia: Insights from social research for industry, Australian Renewable Energy Agency (ARENA).

Australian Bureau of Statistics (ABS) (2016) *Griffith QuickStats*. http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/SSC11782

Australian Bureau of Statistics (ABS) (2016) *Leeton QuickStats*. http://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/SSC12293

Australian Energy Market Operator (AEMO) (2016) *National Electricity Forecasting Report - For the National Electricity Market (NEM) 2016*. <https://www.aemo.com.au/-media/Files/Electricity/NEM/Planning_and_Forecasting/NEFR/2016/2016-

National-Electricity-Forecasting-Report-NEFR.pdf> [accessed August 2018]

Department of Environment and Climate Change NSW (DECC) (2002). Descriptions for NSW (Mitchell) Landscapes, Version 2.

Department of Environment and Climate Change NSW (DECC) (2009) Interim Construction Noise Guideline. <http://www.epa.nsw.gov.au/noise/constructnoise.htm>

Department of Environment and Energy (DEE) (2016) *Quarterly update of the National Greenhouse Gas Inventory*. <http://www.environment.gov.au/climate-change/greenhouse-gas-measurement/publications/quarterly-update-australias-national-greenhouse-gas-inventory-jun-2016> [accessed August 2018]

Department of Planning and Environment – Resources and Energy (2019) *Minview.* <http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/geoscience-information/services/online-services/minview> [accessed February 2019]

EPA (NSW) (2019) Search the contaminated land record. <http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>

Lu, H., Gallant, J., Prosser, I.P., Moran, C. and Priestley, G. (2001) 'Prediction of sheet and rill erosion over the Australian continent, incorporating monthly soil lass distribution,' *CSIRO Land and Water Technical Report 13/01*, May 2001.

National Native Title Tribunal (NNTT) (2019). <http://www.nntt.gov.au/searchRegApps/FutureActs/Pages/default.aspx> [accessed February 2019]

NSW Government (2014) Leeton Local Environmental Plan (LEP). <https://www.legislation.nsw.gov.au/#/view/EPI/2014/353/maps#LAP> [accessed February 2019]

NSW Government (2018) Large-scale Solar Energy Guideline for State Significant Development December 2018 <http: https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/large-scale-solar-energy-guideline-2018-12-11.ashx?la=en>

Office of Environment and Heritage (OEH) (2011) Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW. <http://www.environment.nsw.gov.au/licences/investassessreport.htm> [accessed February 2019]

OEH (2012) The land and soil capability assessment scheme: second approximation, https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Land-and-soil/land-soil-capability-assessment-scheme-120394.pdf

OEH (2017) eSpade v2.0 http://www.environment.nsw.gov.au/eSpade2WebApp [accessed February 2019]

Rural Fire Service (2019) Check if you're in bush fire prone land. <http://www.rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bush-fire-protection/bush-fire-prone-land/check-bfpl> [accessed February 2019]

Transgrid (n.d.) TransGrid Easement Guidelines - Third Party Development <https://www.transgrid.com.au/being-responsible/public-safety/living-and-working-with-powerlines/Documents/Easement%20guidelines%20for%20third%20party%20developers.pdf

# APPENDIX A COMMUNITY ENGAGEMENT FLYER

12 April 2019

# PROPOSED DEVELOPMENT
# MURRAMI SOLAR FARM

**Matthews Road, Murrami - NSW**

BISON ENERGY COMPANY

ngh environmental

# PROJECT OVERVIEW

## LOCATION & MOTIVATION

**Location**

- ~8 km north-east Whitton,
- Leeton Shire Council area & Griffith City Council area, NSW
- 262.3 ha on Lot 80 DP 751689 & Lot 81 DP 851689
- Currently large paddocks with predominantly exotic groundcover

**Motivation (for location)**

- Excellent solar exposure
- Excellent access to local and major roads
- Excellent access to the grid transmission network
- Likely low level of environmental impact (site already cleared and disturbed)
- Suitable topography, land size and land zoning

## KEY INFRASTRUCTURE

- 374,000 ground-mounted photovoltaic (PV) solar panels, generating approximately 120 MW (AC) of renewable energy
- Trackers, modules, invertors, substation
- Underground cabling, security fencing
- Cable to connect the solar farm to TransGrid's soon to be upgraded Griffith-to-Yanco transmission line
- Upgrades to Settlement Road, Matthews Road & Koomba Road from Irrigation Highway

## POSSIBLE ENVIRONMENTAL IMPACTS

A preliminary environmental risk assessment has been conducted, highlighting key environmental and social matters that would require detailed assessment. These include:

- Biodiversity
- Aboriginal heritage
- Visual amenity
- Construction noise
- Land use and resources
- Watercourses and hydrology

## POSSIBLE SOCIAL BENEFITS

- 200+ direct jobs and indirect supply chain jobs during construction
- 2 - 3 full-time staff during operation
- Contribution to future possible reduced energy prices
- Diversification of local land use - additional / alternative source of income and economic activity

## TIME LINES

- Construction: 12 - 18 months
- Operation: 30 years
- Decommissioned, or upgraded; depending on regional planning needs at that time.

13 March 2019

# PROPOSED DEVELOPMENT
# MURRAMI SOLAR FARM

**Settlement Road, Murrami - NSW**

# COMMUNITY CONSULTATION

## INTERESTED & AFFECTED PARTIES (I&APs)

**Regulatory authorities**

**STATE GOVERNMENT**
Department of Planning & Environment

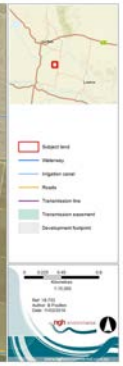
**LOCAL GOVERNMENT AREA (LGA)**
Leeton Shire Council
Griffith City Council

**Landowners / Lessees**

**OF PROPOSED DEVELOPMENT SITE**

**ADJACENT TO DEVELOPMENT SITE**

**3 KM FROM DEVELOPMENT SITE**



## HOW CAN YOU GET INVOLVED?

There will be an opportunity to find out more about the project during two upcoming community meetings. Key affected landowners will also be contacted personally. Should you wish to attend the meetings, or raise any comments before then, please contact:

**Ms Raina Hattingh - Community Liaison Officer**
02 6923 1564 / community@murramisolarfarm.com.au, or go to:
**www.murramisolarfarm.com.au**

## COMMUNITY CONSULTATION APPROACH

| | | | 2019 time frames |
|---|---|---|---|
| **One-on-one discussions** | **PROJECT INTRODUCTION & OVERVIEW** | Regulatory Authorities<br>Landowners / lessees of development site | March |
| **Information letters / flyers** | **PROJECT INTRODUCTION & OVERVIEW** | All I&APs | March |
| **Community meetings** | **MEETING NO. 1** → **MEETING NO. 2** | | May / June |
| **I&AP Register & Feedback** | **E-MAIL COMMUNICATION** → **POST-CONSULTATION 'NEWSLETTER'**<br>→ **REGISTER OF I&APs & COMMENTS RAISED / ADDRESSED** | | March - July |
| **Input to Environmental Impact Statement** | **COMMUNITY CONSULTATION PLAN** | | July - August |

# APPENDIX B BACKGROUND SEARCH RESULTS

## A.1 BIONET AND EPBC PROTECTED MATTERS SEARCH RESULTS

| Species | Indicated in search? | |
|---|---|---|
| | EPBC Act | BC Act |
| **Plants** | | |
| A Speargrass (*Austrostipa wakoolica*) | - | ✓ |
| Pine Donkey Orchid (*Diuris tricolor*) | - | ✓ |
| Silky Swainson-pea (*Swainsona sericea*) | - | ✓ |
| Mossgiel Daisy *(Brachyscome papillosa)* | - | ✓ |
| Slender Darling-pea, Slender Swainson, Murray Swainson-pea (*Swainsona murrayana*) | - | ✓ |
| **Birds** | | |
| Australasian Bittern (*Botaurus poiciloptilus*) | ✓ | ✓ |
| Australian Painted Snipe (*Rostratula australis*) | ✓ | ✓ |
| Regent Honeyeater (*Botaurus poiciloptilus*) | ✓ | ✓ |
| Black-chinned Honeyeater (*Melithreptus gularis*) | - | ✓ |
| Curlew Sandpiper (*Calidris ferruginea*) | ✓ | ✓ |
| Glossy Black Cockatoo (*Calyptorhynchus lathami*) | - | ✓ |
| Dusky Woodswallow (*Artamus cyanopterus)* | - | ✓ |
| Major Mitchell's Cockatoo (*Lophochroa leadbeateri*) | - | ✓ |
| Swift Parrot (*Lathamus discolour*) | ✓ | ✓ |
| Painted Honeyeater (*Grantiella picta*) | ✓ | ✓ |
| Malleefowl (*Leipa ocellata*) | ✓ | ✓ |
| Bush Stone-curlew (*Burhinus grallarius*) | - | ✓ |
| Square-tailed Kite (*Lophoictinia isura*) | - | ✓ |
| Superb Parrot (*Polytelis swainsonii*) | ✓ | ✓ |
| Speckled Warbler (*Chthonicola sagittata*) | - | ✓ |
| Varied Sittella (*Daphoenositta chrysoptera*) | - | ✓ |
| Grey-crowned Babbler eastern subspecies (*Pomatostomus temporalis temporalis*) | - | ✓ |
| Little Eagle (*Hieraaetus morphnoides*) | - | ✓ |
| Hooded Robin south-eastern form (*Melanodryas cucullata cucullata*) | - | ✓ |
| Scarlet Robin (*Petroica boodang*) | - | ✓ |
| Flame Robin (*Petroica phoenicea*) | - | ✓ |
| Barking Owl (*Ninox connivens*) | - | ✓ |
| Masked Owl (*Tyto novaehollandiae*) | - | ✓ |

| Species | Indicated in search? | |
|---|---|---|
| | EPBC Act | BC Act |
| Turquoise Parrot (*Neophema pulchella*) | - | ✓ |
| Gilbert's Whistler (*Pachycelphala inornata*) | - | ✓ |
| Diamond Firetail (*Stagonopleura guttata*) | - | ✓ |
| Eastern Curlew (*Numenius madagascariensis*) | ✓ | - |
| Plains-wanderer (*Pedionomous torquatus*) | - | ✓ |
| **Mammals** | | |
| Corben's Long-eared Bat, South-eastern Long-eared Bat (*Nyctophilus corbeni*) | ✓ | ✓ |
| Koala (*Phascolarctos cinereus*) | ✓ | ✓ |
| Southern Myotis (*Myotis macropus*) | - | ✓ |
| Grey-headed Flying-fox (*Pteropus poliocephalus*) | ✓ | ✓ |
| Little Pied Bat (*Chalinolobus picatus*) | - | ✓ |
| Yellow-bellied Sheathtail Bat (*Saccolaminus flaviventris*) | - | ✓ |
| **Fish** | | |
| Flathead Galaxias (*Galaxias rostratus*) | ✓ | - |
| Macquarie Perch (*Macquaria australasica*) | ✓ | - |
| **Frogs** | | |
| Southern Bell Frog (*Litoria raniformis*) | ✓ | ✓ |
| **Reptiles** | | |
| Pink-tailed Legless Lizard (*Aprasia parapulchella*) | ✓ | ✓ |

# A.2 ABORIGINAL HERITATE INFORMATION MANAGEMENT SYSTEM SEARCH RESULTS

Office of Environment & Heritage NSW GOVERNMENT

**AHIMS Web Services (AWS)**
**Extensive search - Site list report**

Your Ref/PO Number : Murrami Solar Farm
Client Service ID : 397064

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | SiteFeatures | SiteTypes | Reports |
|---|---|---|---|---|---|---|---|---|---|---|
| 49-2-0010 | Griffith Quarry; | AGD | 55 | 427257 | 6195521 | Open site | Valid | Artefact : -, Stone Quarry : - | Open Camp Site,Quarry | 336 |
| Contact | | Recorders | ASRSYS | | | | | Permits | | |
| 49-2-0019 | Griffith Brick Works; | AGD | 55 | 412400 | 6194000 | Open site | Valid | Artefact : - | Isolated Find | |
| Contact | | Recorders | Harvey Johnston | | | | | Permits | | |
| 49-2-0014 | Wambulgal Carrawatha | AGD | 55 | 427540 | 6197470 | Open site | Valid | Stone Quarry : -, Artefact : - | Open Camp Site,Quarry | 890 |
| Contact | | Recorders | Cellia Ingram | | | | | Permits | | |
| 49-2-0127 | McWilliams Isolated Find 1 | GDA | 55 | 412269 | 6198552 | Open site | Valid | Artefact : - | | |
| Contact | | Recorders | OzArk Environmental and Heritage Management | | | | | Permits | | |
| 49-2-0128 | McWilliams Isolated Find 2 | GDA | 55 | 412183 | 6198586 | Open site | Valid | Artefact : - | | |
| Contact | | Recorders | OzArk Environmental and Heritage Management | | | | | Permits | | |
| 49-2-0131 | Wum-ST1 | GDA | 55 | 429879 | 6195323 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Miss.Jennifer Bertolani | | | | | Permits | | |
| 49-2-0132 | Wum-ST2 | GDA | 55 | 429176 | 6196364 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Miss.Jennifer Bertolani | | | | | Permits | | |
| 49-2-0140 | Wambilgan 1 | GDA | 55 | 431889 | 6197392 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0141 | Wambilgan 2 | GDA | 55 | 431901 | 6197410 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0142 | Wambilgan 3 | GDA | 55 | 431921 | 6197409 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0143 | Wambilgan 4 | GDA | 55 | 431909 | 6197430 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0144 | Wambilgan 5 | GDA | 55 | 431920 | 6197422 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |

**Report generated by AHIMS Web Service on 06/02/2019 for Bridgette Poulton for the following area at Lat, Long From : -34.5168, 146.0416 - Lat, Long To : -34.3382, 146.3292 with a Buffer of 1000 meters. Additional Info : Project heritage constraints analysis. Number of Aboriginal sites and Aboriginal objects found is 19**

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 1 of 2

Office of Environment & Heritage NSW GOVERNMENT

**AHIMS Web Services (AWS)**
**Extensive search - Site list report**

Your Ref/PO Number : Murrami Solar Farm
Client Service ID : 397064

| SiteID | SiteName | Datum | Zone | Easting | Northing | Context | Site Status | SiteFeatures | SiteTypes | Reports |
|---|---|---|---|---|---|---|---|---|---|---|
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0145 | Dalton Rd 1 | GDA | 55 | 433427 | 6200831 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0146 | Dalton Rd 2 | GDA | 55 | 433449 | 6200882 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-2-0147 | Dalton Rd 3 | GDA | 55 | 433426 | 6200825 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Mark Saddler | | | | | Permits | | |
| 49-5-0142 | The Homestead 3 | GDA | 55 | 419677 | 6179293 | Open site | Valid | Modified Tree (Carved or Scarred) : - | | |
| Contact | | Recorders | Mr.Peter Ingram | | | | | Permits | | |
| 49-2-0172 | GLIF003 | GDA | 55 | 427385 | 6195230 | Open site | Valid | Artefact : - | | |
| Contact | | Recorders | Mr.Matthew Barber,NGH Heritage - Fyshwick | | | | | Permits | | |
| 49-2-0173 | GLIF002 | GDA | 55 | 428354 | 6194764 | Open site | Valid | Artefact : - | | |
| Contact | | Recorders | Mr.Matthew Barber,NGH Heritage - Fyshwick | | | | | Permits | | |
| 49-2-0174 | GLIF001 | GDA | 55 | 427403 | 6195360 | Open site | Valid | Artefact : - | | |
| Contact | | Recorders | Mr.Matthew Barber,NGH Heritage - Fyshwick | | | | | Permits | | |

## A.3 POSTCOLONIAL HISTORY SEARCH RESULTS

### Section 1. Aboriginal Places listed under the National Parks and Wildlife Act.

Your search returned 1 record.

| Aboriginal place name | Local government area | Local Aboriginal Land Council | Latitude | Longitude | Gazettal date and page numbers | Comments |
|---|---|---|---|---|---|---|
| Koonadan | Leeton | Leeton And District | -34.4969932452 | 146.361755778 | 11/04/1983 p. 4995 | |

### Section 2. Items listed under the NSW Heritage Act.

Your search returned 7 records.

| Item name | Address | Suburb | LGA | SHR |
|---|---|---|---|---|
| Gogeldrie Weir | Murrumbidgee River | Narrendera (near) | Leeton | 00961 |
| Hydro Hotel | Chelmsford Place | Leeton | Leeton | 00247 |
| Leeton District Lands Office | Chelmsford Place | Leeton | Leeton | 00965 |
| Leeton District Office - Artefacts in Reception Lobby Showcase 1 | Chelmsford Place | Leeton | Leeton | 00966 |
| Leeton Railway Station and yard group | Dunn Avenue | Leeton | Leeton | 01178 |
| Roxy Community Theatre | 114-118 Pine Avenue | Leeton | Leeton | 01747 |
| Yanco Weir and site | | Yanco | Leeton | 00969 |

### Section 3. Items listed by Local Government and State Agencies.

Your search returned 56 records.

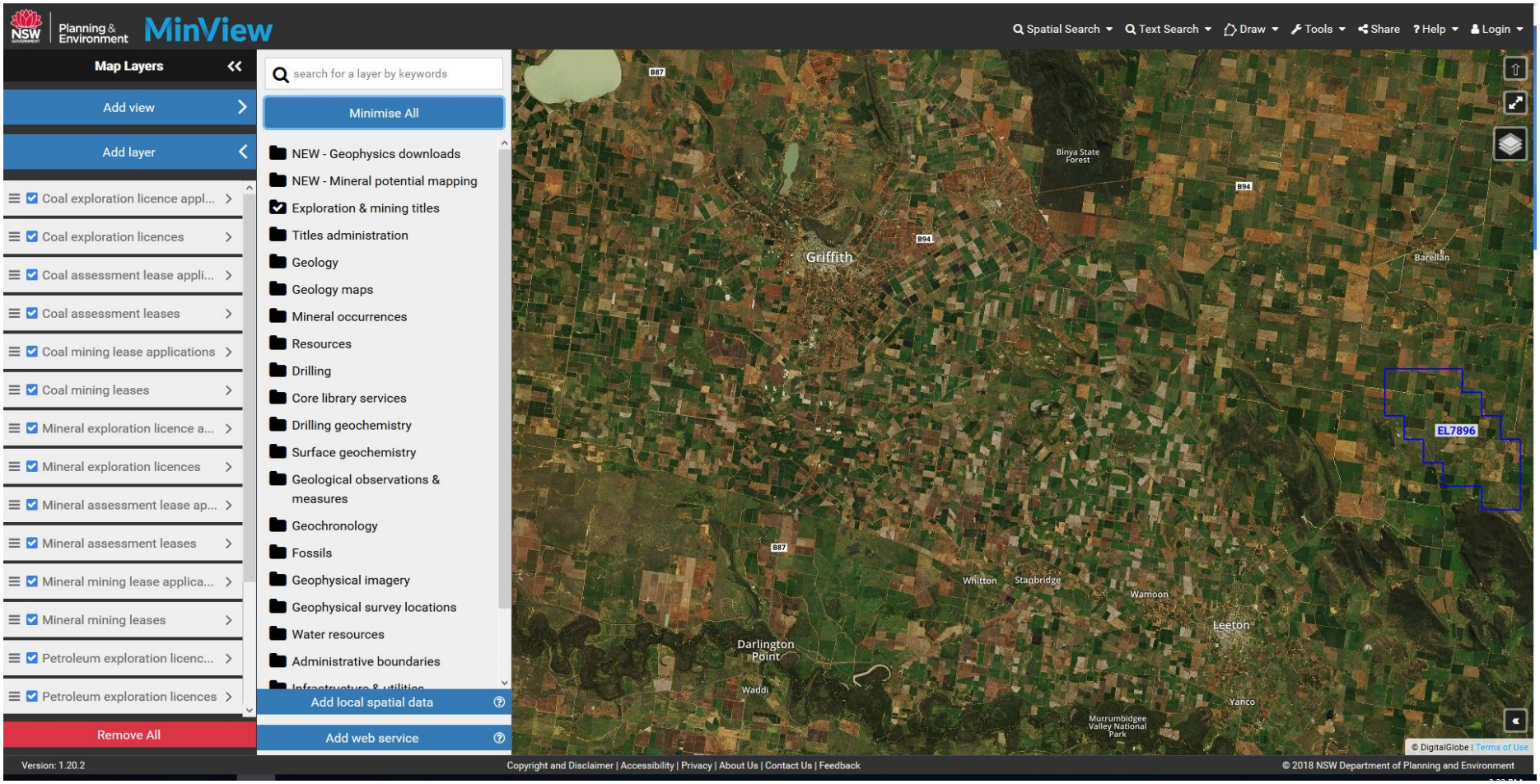
| Item name | Address | Suburb | LGA | Information source |
|---|---|---|---|---|
| Blue Gate Dam and Cudgel Escape, McCaughey Irrigation Works | State Forest | Yanco | Leeton | LGOV |
| Colonial State Bank | 18-22 Kurrajong Avenue | Leeton | Leeton | LGOV |
| Commonwealth Bank | 123 Pine Avenue | Leeton | Leeton | LGOV |
| Courthouse | Wade Avenue | Leeton | Leeton | LGOV |

| | | | | |
|---|---|---|---|---|
| Driveway Palm Trees | Trunk Road 80 | Yanco | Leeton | SGOV |
| Gaol and Solitary Confinement Cell | Trunk Road 80 | Yanco | Leeton | SGOV |
| Gogeldrie Weir | Murrumbidgee River | Yanco | Leeton | SGOV |
| House | Euroley Bridge Road | Leeton | Leeton | LGOV |
| Hulong Tank | 9 Mile Main Road 80 | Whitton | Leeton | LGOV |
| Hydro Hotel (fromer) | Wade Avenue | Leeton | Leeton | LGOV |
| Infant School | Mallee Street | Leeton | Leeton | LGOV |
| Item | 7 Wade Avenue | Leeton | Leeton | LGOV |
| Item | 38 Wade Avenue | Leeton | Leeton | LGOV |
| Leeton Ambulance Station | Grevillia Street | Leeton | Leeton | SGOV |
| Leeton Courthouse | Church Street | Leeton | Leeton | SGOV |
| Leeton District Hospital | Palm Avenue | Leeton | Leeton | SGOV |
| Leeton Fire Station | 19 Wade Avenue | Leeton | Leeton | SGOV |
| Leeton High School | Mallee Street | Leeton | Leeton | LGOV |
| Leeton Hospital Nurses Home | Palm Avenue | Leeton | Leeton | LGOV |
| Leeton Police Station and Site | 24 Oak Street | Leeton | Leeton | SGOV |
| Leeton Railway Goods Shed | | Leeton | Leeton | LGOV |
| Leeton Railway Precinct | Railway Avenue | Leeton | Leeton | SGOV |
| Leeton Railway Precinct | Railway Avenue | Leeton | Leeton | SGOV |
| Leeton Railway Station | | Leeton | Leeton | LGOV |
| Leeton Soldiers Club | Yanco Avenue | Leeton | Leeton | LGOV |
| Madonna Place | Wade Avenue | Leeton | Leeton | LGOV |
| Manager's Residence (Dep of Water Resources) | Yanco Avenue | Leeton | Leeton | LGOV |
| Motor Registry | Church Street | Leeton | Leeton | LGOV |

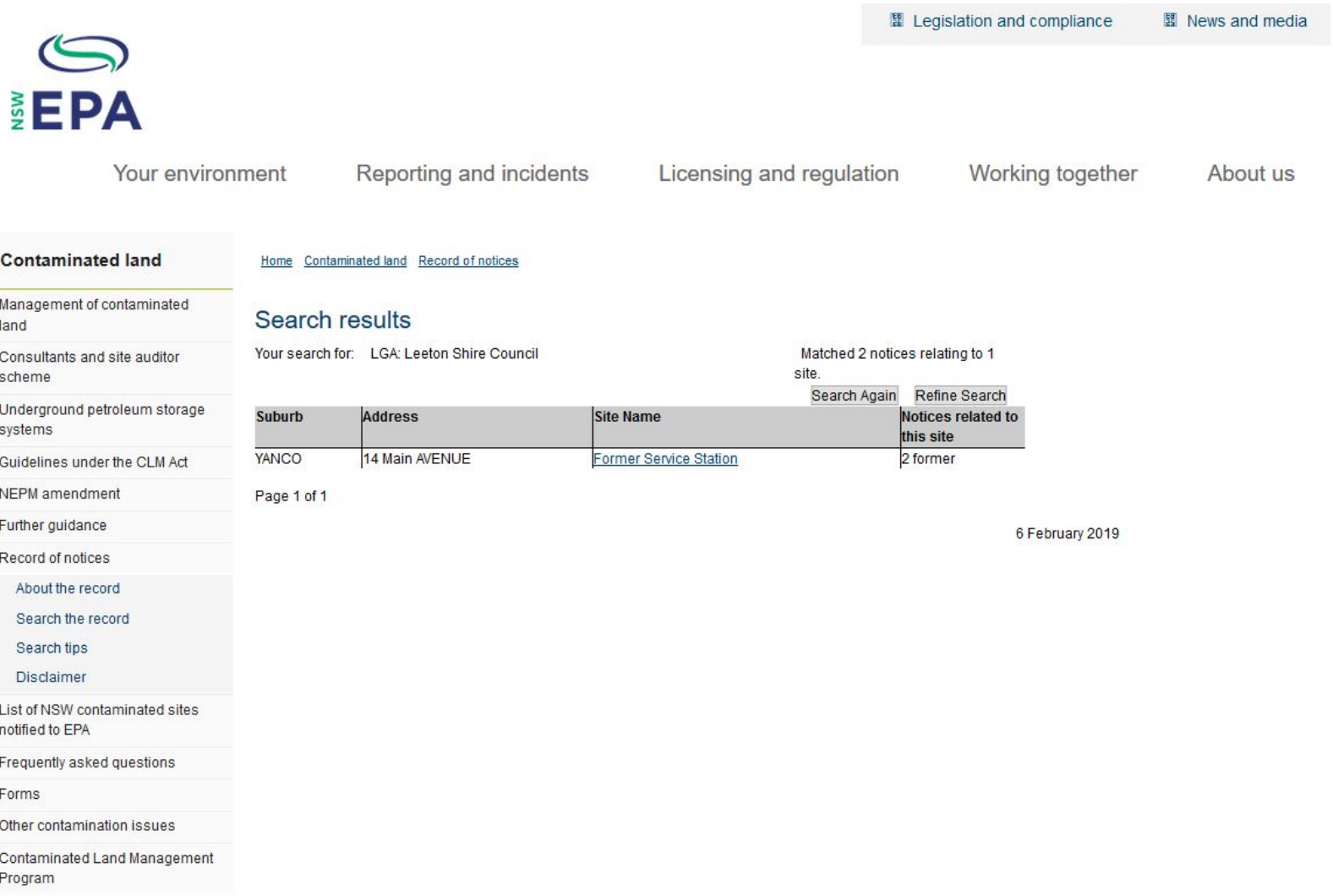
| | | | | |
|---|---|---|---|---|
| Olive Trees | Trunk Road 80 | Yanco | Leeton | SGOV |
| Police Station (former) | Gogeldrie Street | Whitton | Leeton | LGOV |
| Rice Seed Germplasm Collection | Trunk Road 80 | Yanco | Leeton | SGOV |
| Riverina Butcher | 74 Pine Avenue | Leeton | Leeton | LGOV |
| Roman Catholic Church | Wade Avenue | Leeton | Leeton | LGOV |
| Roman Catholic Presbytery | Wade Avenue | Leeton | Leeton | LGOV |
| Roxy Theatre | Pine Avenue | Leeton | Leeton | LGOV |
| Showground Pavilions and Old Grandstand | Acacia Avenue | Leeton | Leeton | LGOV |
| St. Joseph's Infant School | Ash Street | Leeton | Leeton | LGOV |
| St. Mary's Convent | Ash Street | Leeton | Leeton | LGOV |
| St. Peters' Church of England (demolished) | Church Street | Leeton | Leeton | LGOV |
| St. Peter's Hall | Church Street | Leeton | Leeton | LGOV |
| Takasuka Monument | Trunk Road 80 | Yanco | Leeton | SGOV |
| Uniting Church | Church Street | Leeton | Leeton | LGOV |
| Wade Chambers | 50 Pine Avenue | Leeton | Leeton | LGOV |
| Wade Hotel | 42 Pine Avenue | Leeton | Leeton | LGOV |
| Wade Sports Club | Church Street | Leeton | Leeton | LGOV |
| War Memorial | Chelmsford Place | Leeton | Leeton | LGOV |
| Water Filtration Plant | Acacia Avenue | Leeton | Leeton | LGOV |
| Water Storage Towers | Chelmsford Place | Leeton | Leeton | LGOV |
| Whitton Railway Water Tank | | Whitton | Leeton | LGOV |
| Whitton Uniting Church | | Whitton | Leeton | LGOV |
| Yanco Agricultural Institute | Trunk Road 80 | Yanco | Leeton | SGOV |
| Yanco Creek Bridge | Sturt Highway (SH 14) | Narrandera | Leeton | SGOV |

| | | | | |
|---|---|---|---|---|
| **Yanco Old Weir** | Murrumbidgee River | Yanco | Leeton | SGOV |
| **Yanco Police Station and Official Residence** | 37 Main Street | Yanco | Leeton | SGOV |
| **Yanco Post Office (former)** | Main Avenue | Leeton | Leeton | LGOV |
| **Yanco Public Hall** | Main Avenue | Yanco | Leeton | LGOV |

## A.4 MINVIEW SEARCH RESULTS



## A.5 CONTAMINATED LAND REGISTER SEARCH RESULTS



Legislation and compliance News and media

NSW EPA

Your environment Reporting and incidents Licensing and regulation Working together About us

**Contaminated land**

+ Management of contaminated land
+ Consultants and site auditor scheme
+ Underground petroleum storage systems
Guidelines under the CLM Act
NEPM amendment
+ Further guidance
– Record of notices
About the record
Search the record
Search tips
Disclaimer
List of NSW contaminated sites notified to EPA
Frequently asked questions
Forms
+ Other contamination issues
+ Contaminated Land Management Program

Home Contaminated land Record of notices

Search results

Your search for: LGA: Leeton Shire Council

Matched 2 notices relating to 1 site.

Search Again Refine Search

| Suburb | Address | Site Name | Notices related to this site |
|---|---|---|---|
| YANCO | 14 Main AVENUE | Former Service Station | 2 former |

Page 1 of 1

6 February 2019