WEST WYALONG SOLAR PROJECT

Biodiversity Development Assessment Report

Prepared for:

Lightsource Development Services Australia Pty Ltd
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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Lightsource Development Services Australia Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.18343-R01-v4.0	21 January 2019	Gilbert Whyte	Jeremy Pepper	Jeremy Pepper

EXECUTIVE SUMMARY

Lightsource Development Services Australia Pty Ltd is proposing the development of a Solar Farm Project to be located to the north-east of West Wyalong in Western NSW. The proposed development will facilitate a 112 MW DC solar farm and supporting infrastructure. The project has been deemed 'State Significant Development' and will be assessed under Part 4 (Division 4.1) of the NSW *Environmental Planning and Assessment Act 1979*.

This Biodiversity Development Assessment Report has been prepared in accordance with the NSW Biodiversity Assessment Method. The assessment determines that the project site contains the following features and biodiversity values:

- The Project Site is comprised of Lot 17 and 18 (DP753081). The majority of the proposed development is restricted to Lot 18 (280 hectares) with access via Lot 17.
- The elevation within the Project Site ranges from 237m (north-east) to 227m (south-east);
- Mapped waterways occur within the Project Site; however, no aquatic habitat or obvious drainage channels are present. Five constructed dams are present; however, all of these lack aquatic and emergent vegetation;
- The soils within the Project Site consist of Red Earths derived from Devonian Wyalong Granite (north-west) and Quaternary alluvial deposits (south-east);
- Extensive vegetation clearing has (evidently) occurred for agricultural development. The remaining native vegetation consists of small patches of woodland and isolated paddock trees;
- A total of 123 plant species were identified. These comprise 86 native species and 37 exotic species.
- No threatened plant species listed under the NSW *Biodiversity Conservation Act 2016* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* were detected.
- Native vegetation comprises five plant community types. These consist of two non-listed vegetation communities and three threatened ecological communities as follows:
  - *Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions* (PCT 55).
  - *Dwyer's Red Gum - White Cypress Pine - Currawang shrubby woodland mainly in the NSW South Western Slopes Bioregion* (PCT 185).
  - *Blue Mallee - Bull Mallee - Green Mallee very tall mallee shrubland of the West Wyalong region, NSW South Western Slopes Bioregion* (PCT 177). This vegetation is listed as 'critically endangered' under the NSW *Biodiversity Conservation Act 2016* as *Mallee and Mallee-Broombush dominated woodland and shrubland, lacking Triodia, in the NSW South Western Slopes Bioregion*.
  - *Western Grey Box tall grassy woodland on alluvial loam and clay soils in the NSW South Western Slopes and Riverina Bioregions (PCT 76).* This vegetation is listed as 'endangered' under the NSW *Biodiversity Conservation Act 2016* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (*Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions*)
  - Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion (PCT 26). This vegetation is listed as 'endangered' under the NSW *Biodiversity Conservation Act 2016* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (*Weeping Myall Woodlands*).

- A total of 73 fauna species were detected within the Project Site, comprising 51 birds, 15 mammals and seven amphibians.
- Three threated fauna species listed under the NSW *Biodiversity Conservation Act 2016* were detected. These comprise the following species:
  - Grey-crowned Babbler (*Pomatostomus temporalis temporalis*);
  - Painted Honeyeater (*Grantiella picta*); and
  - Inland Forest Bat (*Vespadelus baverstocki*).
- The Painted Honeyeater (*Grantiella picta*) is also listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
- Important habitat features for fauna species within the Project Site include woodland vegetation and habitat trees containing hollows.

The proposed layout of the solar project has been specifically designed to avoid areas of high biodiversity value such as larger woodland patches with higher vegetation integrity. Impacts of the proposed development consist of the following:

- The removal of 1.83 hectares of native vegetation comprising;
  - 0.80 hectares of 'Belah woodland' (PCT 55); and
  - 1.03 hectares of Weeping Myall open woodland (PCT 26);
- The removal of 32 paddock trees;
- The removal of 1.83 hectares of woodland habitat for fauna species; and
- The removal of 11 habitat trees (containing 16 hollows).

Mitigation measures have been presented to reduce the potential for impacts to biodiversity values.

The BAM Calculator was used on the 18/12/2018 to determine the offset obligation for the removal of native vegetation (habitat for threatened species) and the removal of paddock trees within the development footprint of the Project Site. The purchase and retirement of 68 ecosystem credits is required to meet the offset obligation (subject to future development consent conditions). The offset obligation can also be met by purchasing and retiring credits from the biodiversity credit market or by direct payment of $188,143.67 into the Biodiversity Conservation Fund.

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Stage 1 - Biodiversity Assessment

1 Introduction

This section introduces the proposal and provides the context of the Biodiversity Development Assessment Report (BDAR). Key features of the Project Site, the proposed development, report objectives and key acts and policies are detailed below.

1.1 The Project Site

The Project Site is located within the Bland Shire Local Government Area (LGA) in Western NSW, approximately 15 km north-west of West Wyalong (**Figure 1**). The Project Site occupies a large portion of the parcels of land titles identified in **Figure 2** and is zoned "RU1 - Primary Production" under the provisions of the *Bland Local Environment Plan 2013* (LEP, 2011). For the purposes of this assessment, the road reserves known as Blands Lane (north-west boundary), Gordons Lane (north-east) and Myers Lane (south-east boundary) have also been assessed. The long-standing and existing use of the Project Site is traditional agricultural production. A summary of relevant project details are presented in **Table 1**.

Table 1 Project details

West Wyalong Solar Farm	
Address	Blands Lane, West Wyalong, NSW South Wales, 2671
Applicant	Lightsource Development Services Australia Pty Ltd
Council	Bland Shire Council
Titles	Lot 17 and 18 (DP753081)
Total Indicative Development Area	280 hectares for primary solar farm infrastructure
Land Use	Agriculture (Cropping)
Solar Farm Capacity	112 MW DC

1.2 The Project

Lightsource Development Services Australia Pty Ltd is proposing the development of a Solar Project within the Project Site. The proposed development will facilitate a 112 MW DC solar farm and supporting infrastructure. The key features of the proposal include the following:

- Installation of 296,000 solar panels on a mounting structure with tracking capabilities. Each panel will be approximately 1.95 metres (m) x 0.992 m with a depth of 50 millimetres (mm). Total height of the mounted panels will be 4.01 metres;
- Substation and battery energy storage system up to eight metres in height with the exception of an 18 metre lightening rod;
- Internal access roads and access points;
- Perimeter security fencing up to two metres high;
- A connection to powerline via Myers Lane; and

- CCTV poles up to 2.5 metres high located along the perimeter of the Project Site.

The solar farm will operate for 30-40 years. The existing agricultural use of grassing will continue during operation. After decommissioning, the Project Site would be returned to its pre-works state. Any areas excavated during decommissioning will be backfilled with top soil, harrowed, and either seeded or left ready for crops.

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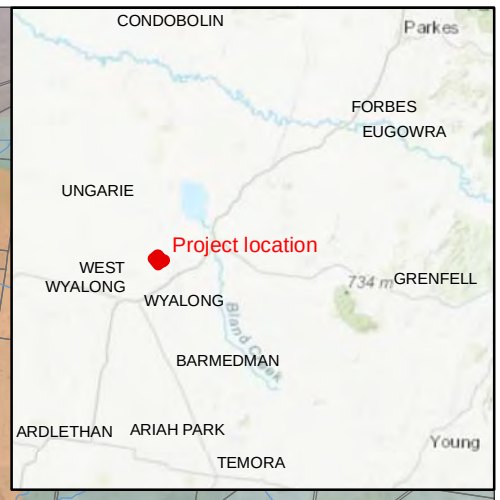
6270000 6265000 6260000 6255000 6250000 6245000 6240000

BLOW CLEAR ROAD
GIRRAL ROAD
LONERGANS LANE
CLEAR RIDGE STATE FOREST
GORDONS LANE
BLANDS LANE
WYRRA STATE FOREST
BOXALLS STATE FOREST
NEWELL HIGHWAY
BACK CREEK STATE FOREST
MYERS LANE
CLEAR RIDGE ROAD
WAMBOYNE ROAD
UNGARIE ROAD
SLEE STREET
BLAND SHIRE COUNCIL
NSW South Western Slopes IBRA region
Lower Slopes IBRA subregion
West Wyalong
MAIN STREET
NEELD STREET
Wyalong
QUANDIALLA ROAD
WAARBILLA ROAD



LEGEND

- Watercourse
- Railway
- Electricity transmission line
- Project site boundary
- 1500m buffer
- State Forest
- Cadastre

Mitchell Landscapes

- Ardlethan Hills
- Bimbi Plains
- Lachlan - Bland Channels and Floodplains
- Manitoba Hills and Footslopes
- Manna Hills and Footslopes

0 1 2 3 4 km

Scale: 1:100,000
GDA 1994 MGA Zone 55

20-Dec-2018
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Location Map

FIGURE 1