

23 December 2020

Nicole Brewer  
Director  
Energy Assessments  
Department of Planning Industry and Environment



Dear Nicole

**Re: 20-432 Wollar Solar Farm Offsets – Status Report December 2020**

This letter has been prepared to provide a status report to Department of Planning, Industry and Environment (DPIE) on the outcome of the field work and a preliminary analysis of the progress of the stewardship assessment for Wollar Solar Farm. Secretary's Discretion to delay meeting offset obligations for this project was contingent on this status report by 31 December 2020.

The works to date encompass the initial field assessment, as part of Stage 3 in the NSW Offset Strategy, provided in Appendix E.

In accordance with earlier desktop investigations, the field work conducted in December 2020 at the proposed stewardship site now verifies the site is likely to provide a suitable number of credits to meet the ecosystem credit requirements for the project. In addition, some species credits are likely to be generated with Koala observed on site.

Please see attached for a summary of the works to date including an assessment of credits generated versus credit required to be retired.

If you have any questions, please contact me, 0410 349 284. I would be pleased to discuss this project with you further.

Yours sincerely,

**Beth Noël**  
Senior Environmental Consultant (Ecology)  
0410 349 284

**NGH Pty Ltd**  
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**ACN: 124 444 622**



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# 1 INTRODUCTION

The Wollar Solar Farm NSW Development Consent (SSD approval 9254, Appendix A) specifies offsets required to be retired using the Biodiversity Offset Scheme. The approval stipulated the retirement of credits must be completed *prior to commencing development*.

As Wollar Solar Farm intended to pursue biodiversity stewardship to retire the majority of their credits, a request to the Department of Planning, Industry and Environment (DPIE) was made to allow additional time for this assessment work to be undertaken. This request for Secretary's Discretion included an Offset Strategy (Appendix E) that detailed desktop investigations to date and a timeline over which works would need to be conducted in order to secure a stewardship site.

A letter dated 31 July 2020 was received allowing Wollar Solar Farm an extension to retire the required biodiversity credits (Appendix D). The extension was granted subject to the following conditions:

1. Provide a status report to the Department on the outcome of the field work and a preliminary analysis of the stewardship agreement by 31 December 2020.
2. Apply for a Biodiversity Stewardship Agreement and upload all relevant supporting documents to the Biodiversity Offsets and Agreement Management System by 30 April 2021; and
3. Retire any residual credits negotiated through the market and/or pay residual obligations to the Biodiversity Conservation Fund by 31 December 2021.

This report has been prepared to satisfy the point 1 above. It is noted that this aligns with Step 3 in the NSW Offset Strategy (provided in Appendix E).

## 2 CREDIT REQUIREMENTS

### 2.1 NSW

As of November 2020, the applicable Biodiversity Conservation Act credit requirement is from Schedule 3 condition 13 of the NSW Development Consent, set out below and in Appendix A.

Table 2-1 Consented ecosystem credits obligation BC Act

PCT	Credits
PCT 1303 White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion	479
PCT 281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	242
PCT 1610 White Box - Black Cypress Pine shrubby woodland of the Western Slopes	2

The following table details the approved species credit species requirements as detailed in Appendix A.

Table 2-2 Consented species credit obligation BC Act

Species Credit Species	Credits Required
Ausfeld's Wattle ( <i>Acacia ausfeldii</i> )	34
Bush Stone-curlew ( <i>Burhinus grallarius</i> )	34
Gang-gang Cockatoo ( <i>Callocephalon fimbriatum</i> )	67
Large-eared Pied Bat ( <i>Chalinolobus dwyeri</i> )	50
<i>Commersonia procumbens</i>	2
Large-leafed Monotaxis ( <i>Monotaxis macrophylla</i> )	34
Barking Owl ( <i>Ninox connivens</i> )	16
Powerful Owl ( <i>Ninox strenua</i> )	16
Squirrel Glider ( <i>Petaurus norfolcensis</i> )	34
Brush-tailed Phascogale ( <i>Phascogale tapoatafa</i> )	13
Koala ( <i>Phascolarctos cinereus</i> )	34
Masked Owl ( <i>Tyto novaehollandiae</i> )	16

Please note that the above consented ecosystem and species credits generated under the BC Act have been updated in November 2020, following Mod 2 approval as provided in Appendix A. Values differ from those detailed in the NSW Offset Strategy provided in Appendix E and those provided in the original extension request.

## 2.2 COMMONWEALTH

Additionally, as the project is subject to an approval under the Environment Protection and Biodiversity Act (Appendix B), offsets under this Act are required. In agreement with the Commonwealth government, the following credit requirements have been estimated using the BAM calculation formula to establish the number of credits required to be retired for CEEC EPBC listed Box Gum Woodland. Box Gum Woodland EPBC credits were generated by loss of derived grassland which didn't generate credits in the BAM calculator but met the requirements to be considered EPBC listed CEEC Box Gum Woodland.

Table 2-3 Estimated ecosystem credit requirement EPBC Act

PCT	Credits
PCT 1303 White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion	481
PCT 281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	612

Please note that the above Commonwealth credit requirements have not been confirmed by field survey. Further works in March 2021, within the Wollar Solar Farm, are proposed to delineate the CEEC area. Further delineation may reduce the credit requirement detailed in Table 2-3 above. A copy of the Commonwealth approval is provided in Appendix B.

### 3 WORKS TO DATE

Progress towards meeting the offset obligation has progressed since the submission of the Offset Strategy (Appendix E) and has included:

- Data base searches to ensure all areas of the site are suitable for a stewardship agreement
- Field work
- Preliminary analysis of the stewardship agreement

#### 3.1 BACKGROUND SEARCHES

Research shows an exploration license PEL456 is present across the site and surrounding area. Details show that it is owned by Hunter Gas Pty Ltd; Santos QNT Pty Ltd. The license date was granted 5 March 2008 and was last renewed on 1 March 2016. Exploration activity is described as 49.7 km NW of Denman and the resource described is petroleum. A map showing the licence area and site location is provided in Figure 3-1.

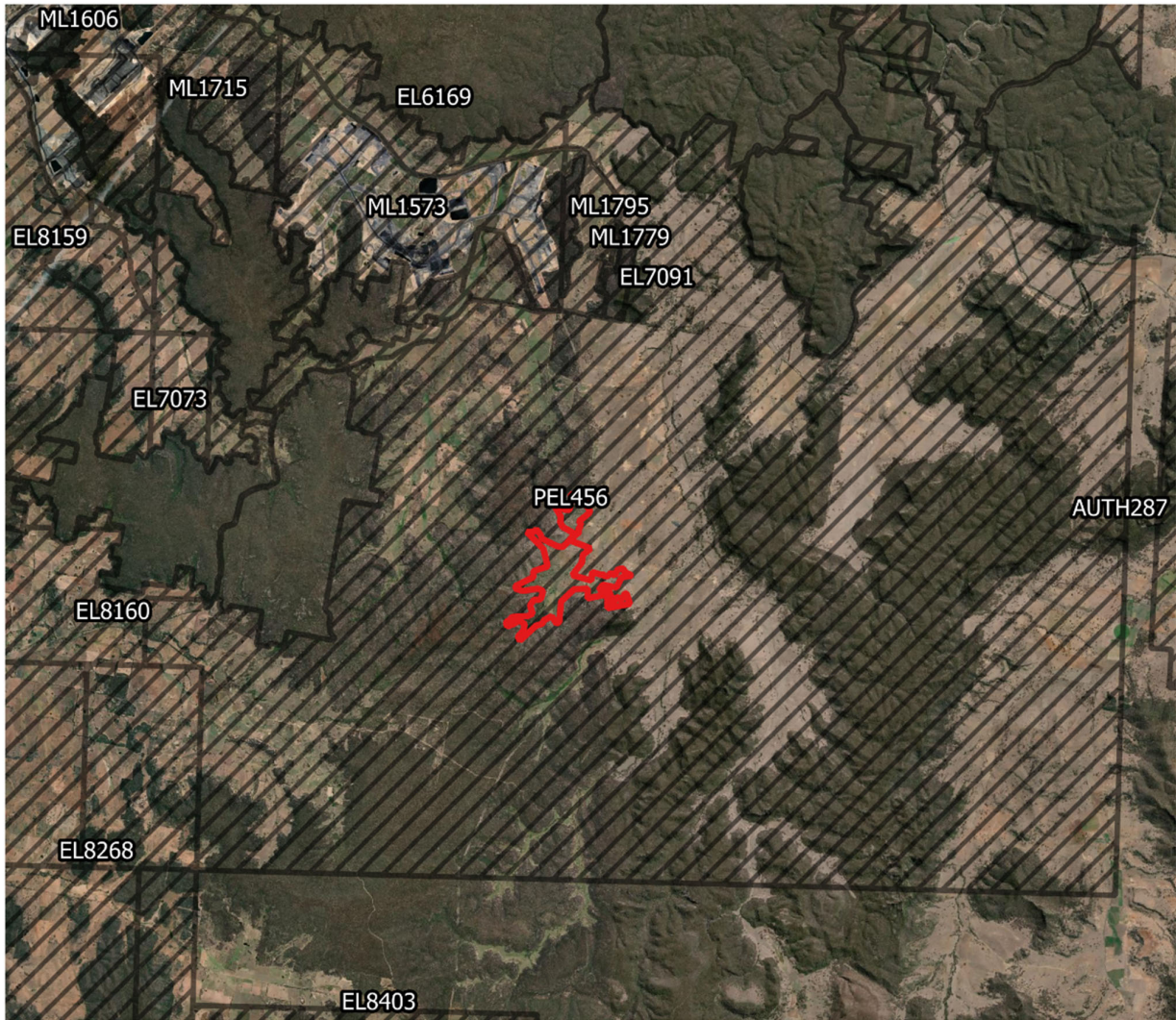
Further work has been conducted by Wollar Solar Development with Santos / Hunter Gas Pty Ltd to discuss the risk to the project of the exploration lease.

Wollar Solar development is working actively with Santos to resolve and finalise this issue.

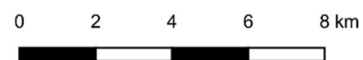
#### 3.2 FIELD WORK

A total of 27 Biodiversity Assessment Method (BAM) plots were undertaken in PCT 281, 1303 and 1610 in the proposed stewardship area, adjacent Wollar Solar Farm. Vegetation mapping including vegetation condition stratification was also undertaken. Works were conducted from 30 November to 4 December 2020. One Anabat unit (bat recording device) was deployed to record microbat call activity. During field work a Koala was heard calling near BAM plot 8. All field data is shown on Figure 3-2.





**Mining Exploration Lease**



**Legend**

- Location Marker
- Stewardship Boundary
- Mining and Exploration Leases



Data Attribution  
 © NGH [December 2020]  
 © Department of Minerals and Energy

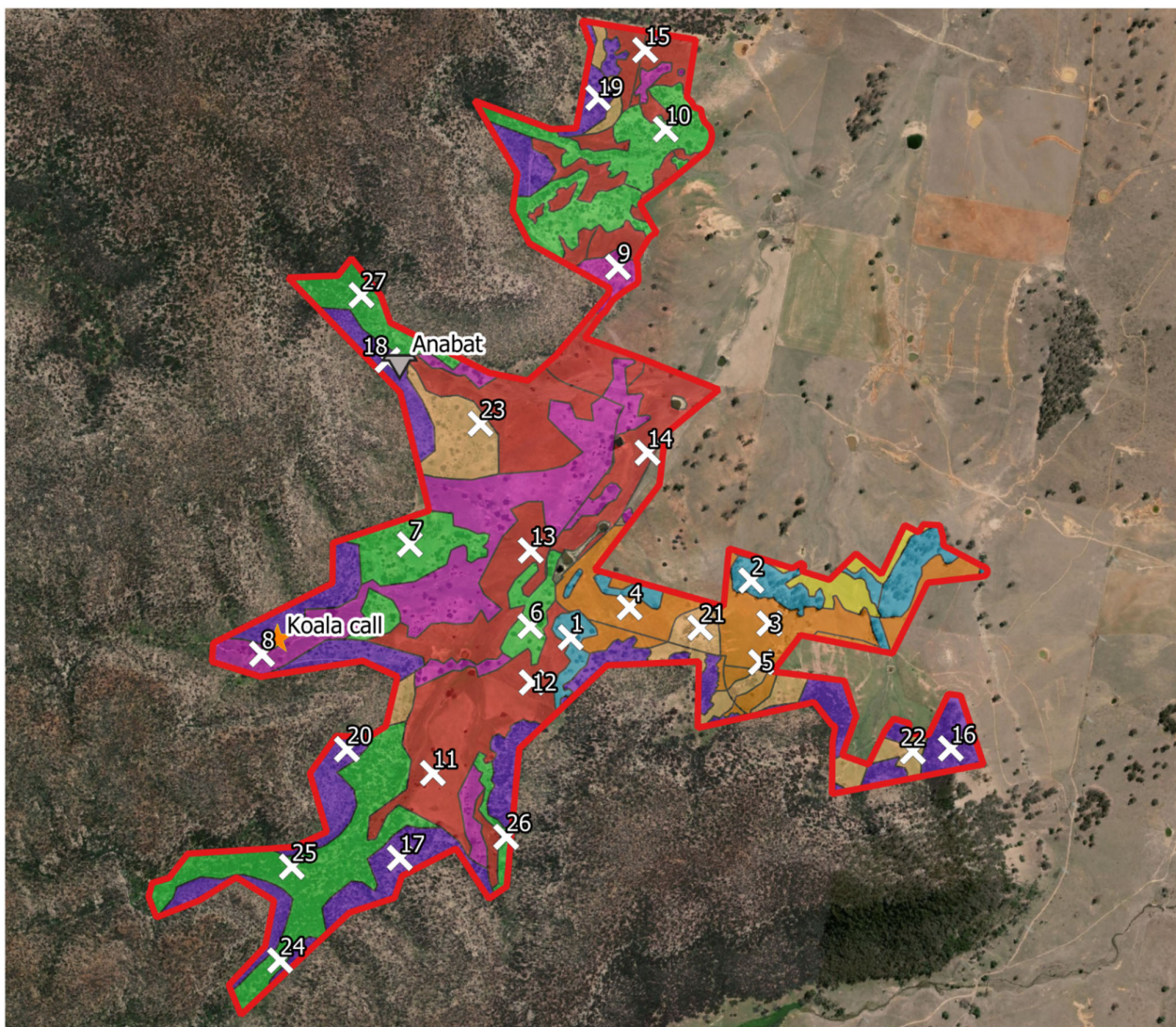
Ref:  
 20-423\_Wollar\_Offsets\_Biodiversity\_261120  
 \ Mining Exploration Lease  
 Author: beth.n  
 Date created: 21.12.2020  
 Datum: GDA94 / MGA zone 55



**NGH**

Figure 3-1 Site location including mining and exploration leases





### Stewardship Field Results

#### Legend

- |   |   |
|---|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Stewardship Boundary  | <span style="background-color: #FFB6C1; border: 1px solid black; padding: 2px;"> </span> Zone 5 PCT 281<br>woodland low       |
| <span style="font-size: 2em;">X</span> BAM Plot   | <span style="background-color: #FFB6C1; border: 1px solid black; padding: 2px;"> </span> Zone 6 PCT 281<br>grassland low      |
| <span style="color: orange;">★</span> Koala call  | <span style="background-color: #E6B89C; border: 1px solid black; padding: 2px;"> </span> Zone 8 PCT 1610<br>woodland moderate |
| <span style="font-size: 1.5em;">▲</span> Anabat detector  | <span style="background-color: #FFDAB9; border: 1px solid black; padding: 2px;"> </span> Zone 9 PCT 1610<br>grassland low     |
| <b>PCT Mapping</b>  |   |
| <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> Category 1 land                       | <span style="background-color: #90EE90; border: 1px solid black; padding: 2px;"> </span> Zone 10 PCT 281<br>woodland moderate |
| <span style="background-color: #ADD8E6; border: 1px solid black; padding: 2px;"> </span> Zone 1 PCT 1303<br>woodland moderate |   |
| <span style="background-color: #FFDAB9; border: 1px solid black; padding: 2px;"> </span> Zone 2 PCT 1303<br>grassland low     |   |



Data Attribution  
© NGH [December 2020]

Ref:  
20-423\_Wollar\_Offsets\_Biodiversity\_261120  
Stewardship PCT and BAM Plot Map  
Author: beth.n  
Date created: 22.12.2020  
Datum: GDA94 / MGA zone 55



Figure 3-2 Stewardship field data results

## 3.3 BAM CALCULATIONS

### 3.3.1 Credits Generated

Replacing earlier desktop predictions, the following credits were estimated to be generated based on the BAM plots and other field work conducted to date, as shown in Figure 3-2. See BAM calculator credit reports are provided in Appendix C for the two scenarios presented in Table 3-1.

1. Credits generated from only required management actions
2. Credits generated from additional active management (including planting), aiming to achieve benchmark condition for each PCT over time.

Table 3-1 Ecosystem credits generated by the proposed stewardship site; 2 scenarios

PCT	Credits generated (required management) <sup>1</sup>	Credits generated (active management) <sup>2</sup>
PCT 1303 White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion	216	377
PCT 281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	741	1517
PCT 1610 White Box - Black Cypress Pine shrubby woodland of the Western Slopes	511	620
<b>TOTAL</b>	<b>1468</b>	<b>2514</b>

Table 3-2 Species credits generated by the proposed offset site

Species Credit Species	Credits (required management) <sup>3</sup>	Credits (active management)
Koala*	962	1028

*\*all woodland directly connected to contiguous forest adjacent to the stewardship site was assumed to be Koala habitat. Food tree species for Koala were present in all three PCTs and Koala were observed using PCT 281 woodland low condition adjacent BAM Plot 8 as shown on Figure 3-2.*

<sup>1</sup> Credits generated under required management actions represent the minimum number of credits that can be generated without active management actions.

<sup>2</sup> Credits generated under active management actions represent the maximum number of credits that can be generated with additional planting, assuming the vegetation will meet the benchmark following additional plantings.

<sup>3</sup> Credit range based on required vs active management actions as habitat for Koala is improved with active management actions such as planting and therefore generates more credits.

### 3.3.3 Credit Assessment

PCT 1303 and PCT 281 are interchangeable and can be used to meet credit requirements for each other as they both belong to the offset trading group “White Box Yellow Box Blakely’s Red Gum Woodland”. The following Table 3-3 is a reconciliation of the total credits for each PCT and any that are additional or deficit to requirements under the BC Act and EPBC Act.

Table 3-3 Credit assessment to determine if sufficient credits are generated

PCT	Max credits generated <sup>4</sup>	Required Credits BC Act	Estimated Credits EPBC Act	Total Deficit or Surplus
PCT 1303 White Box - Grey Gum - Kurrajong grassy woodland	377	479	481	-583
PCT 281 Rough-Barked Apple - red gum - Yellow Box	1517	242	612	663
<b>PCT 281/1303 White Box Yellow Box Blakely’s Red Gum Woodland additional credits</b>				<b>80</b>
PCT 1610 White Box - Black Cypress Pine shrubby woodland	620	2	0	618
<b>PCT 1610 additional credits</b>				<b>618</b>
Koala	1028	34	0	994
<b>Koala additional credits</b>				<b>994</b>

Table 3-3 indicates that if active management actions (such as planting) are undertaken, with the aim of meeting benchmark, that suitable numbers of credits and even additional credits, may be generated. PCT 281 and PCT 1303 are both from the same “offset trading group” of “White Box Yellow Box Blakely’s Red Gum Woodland” which means that although there is a deficit of PCT 1303 credits, the additional PCT 281 credits make up for the PCT 1303 deficit. The total of PCT 281 and PCT 1303 generate additional credits above that which is required. PCT 1610 and Koala generate credits above that which are required, assuming the maximum active management actions.

Additional surveys in Autumn, Step 2 of the NSW Offset Strategy, are proposed for Wollar Solar Farm. Additional surveys will be conducted in PCT 1303 and PCT 281 derived grassland areas. These areas were assessed as being CEEC under the EPBC Act but did not generate credits using the BAM calculator. Surveys will define the CEEC extent, with additional plot data, to delineate the CEEC more accurately. This aims to reduce the estimated EPBC credits as shown in column three of Table 3-3 above which were generated using precautionary mapping and are expected to be an overestimate. Thus, it is likely that the proposed stewardship site is of suitable size and condition to meet the ecosystems credit requirements under both the BC Act and EPBC Act.

<sup>4</sup> Based on maximum credits generated using active management actions with the goal of meeting the PCT benchmark.



### 3.4 CONCLUSION

A total of 27 BAM Plots were conducted during November-December 2020 field work. An additional 4-8 plots are expected to be needed to meet the BAM requirements. In addition, it is advised that an Anabat unit be placed out for an additional 2-3 nights in January. The December 2020 Anabat survey only provided one night of data for call analysis. The initial Anabat data has been sent for analysis by an external consultant. Results are expected in early 2021 to determine the presence of threatened microbats such as Large-eared Pied Bat.

Further survey works could be conducted to confirm the extent of Koala presence across the stewardship site. This would confirm the accuracy of the hectare areas detailed in the BAM calculator and hence confirm the number of Koala credits generated, these works could be done in January or March 2021.

Delineation of CEEC is proposed for Autumn 2021 (March). These works aim to delineate the CEEC area within the Wollar Solar Farm development footprint, as the EPBC credit requirements detailed in this report are likely to be an overestimate.

No additional stewardship site is likely to be needed to meet ecosystem credit requirements. Wollar Solar Development will continue to work with Santos / Hunter Gas Pty Ltd in relation to the exploration lease to continue progression towards Biodiversity Stewardship for this site.

Works towards Biodiversity Stewardship are considered to be on track with the timeframe established in the Offset Strategy provided in Appendix E.

# APPENDIX A NSW APPROVAL

# Development Consent

## Section 4.38 of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning and Public Spaces, I approve the development application referred to in Schedule 1, subject to the conditions in Schedules 2 to 4.

These conditions are required to:

- prevent and/or minimise any adverse environmental impacts of the development;
- set standards and performance measures for acceptable environmental performance; and
- provide for the ongoing environmental management of the development.

**Mike Young**  
**Executive Director**  
**Energy, Resources and Compliance**

Sydney

2020

### SCHEDULE 1

<b>Application Number:</b>	SSD 9254
<b>Applicant:</b>	Wollar Solar Development Pty Ltd
<b>Consent Authority:</b>	Minister for Planning and Public Spaces
<b>Land:</b>	See Appendix 2
<b>Development:</b>	Wollar Solar Farm

**Red type represents Modification 2 – 12 November 2020**

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## DEFINITIONS

Aboriginal stakeholders	Aboriginal stakeholders registered for cultural heritage consultation for the development
Ancillary infrastructure	All project infrastructure with the exception of solar panels, including but not limited to collector substations, switching stations, permanent offices, battery storage and site compounds, electricity transmission lines and internal roads
Applicant	Wollar Solar Development Pty Ltd, or any person who seeks to carry out the development approved under this consent
AV/B-Double	An articulated vehicle that has a combined Gross Vehicle Mass or Aggregate Trailer Mass of up to 42.5 tonnes
Battery storage	Large scale energy storage system
BCD	Biodiversity and Conservation Division
Cessation of operations	Operation of the development has ceased for a continuous period of 12 months
Conditions of this consent	Conditions contained in Schedules 1 to 4 inclusive
Construction	The construction of the development, including but not limited to, the carrying out of any earthworks on site and the construction of solar panels and any ancillary infrastructure (but excludes road upgrades or maintenance works to the public road network and associated temporary construction facilities, building/road dilapidation surveys, installation of fencing, artefact survey and/or salvage, overhead line safety marking and geotechnical drilling and/or surveying)
Council	Mid-Western Regional Council
Decommissioning	The removal of solar panels and ancillary infrastructure and/or rehabilitation of the site
Department	Department of Planning, Industry and Environment
Development	The development as described in the EIS
Development footprint	The area within the site on which the components of the project will be constructed (shown in Appendix 1)
DAWE	Commonwealth Department of Agriculture, Water and the Environment administering the EPBC Act (formerly Department of Environment and Energy)
DPIE Water	Water Group within the Department
EIS	<p>The <b>Environmental Impact Statement for Wollar Solar Farm</b> dated March 2019 as modified by:</p> <ul style="list-style-type: none"> <li>the Submissions Report dated October 2019 and, the Amendment Report dated October 2019, email titled Voluntary Contribution from Wollar Solar Development Pty Ltd for local road network maintenance, dated 11 October 2019 and additional information memorandum dated 22 January 2020; and</li> <li><b>Wollar Solar Farm Modification Application Report</b> dated August 2020.</li> </ul>
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
Feasible	Feasible relates to engineering considerations and what is practical to build or implement
FRNSW	Fire and Rescue NSW
Heritage NSW	<b>Heritage NSW within Department of Premier and Cabinet</b>
Heritage item	An item as defined under the <i>Heritage Act 1977</i> and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i>
Incident	A set of circumstances that causes or threatens to cause material harm to the environment
Material harm	<p>Is harm that:</p> <ul style="list-style-type: none"> <li>involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial; or</li> <li>results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)</li> </ul>
Medium and/or heavy rigid vehicle	A vehicle that has a combined Gross Vehicle Mass or Aggregate Trailer Mass of up to 30.0 tonnes and a maximum length of up to 12.5 metres
Minister	Minister for Planning and Public Spaces, or delegate
Minimise	Implement all reasonable and feasible mitigation measures to reduce the impacts of the development

Non-compliance	An occurrence, set of circumstances or development that is a breach of this consent but is not an incident
Operation	The operation of the development, but does not include commissioning, trials of equipment or the use of temporary facilities
Over-dimensional vehicle	Over-mass and/or over-size/length vehicles
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Public infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, irrigation channels, drainage channels
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition, to ensure it is safe, stable and non-polluting
RFS	Rural Fire Service
Secretary	Secretary of the Department, or nominee
Site	As shown in Appendix 1 and listed in Appendix 2
Temporary facilities	Temporary facilities used for the construction, upgrading and/or decommissioning of the development, including but not limited to temporary site offices and compounds, materials storage compounds, maintenance workshops, material stockpiles, laydown areas and parking spaces
<b>TfNSW</b>	<b>Transport for NSW</b>
Upgrading	The augmentation and/or replacement of solar panels and ancillary infrastructure on site (excluding maintenance)
Vehicle movement	One vehicle entering and leaving the site

## **SCHEDULE 2 ADMINISTRATIVE CONDITIONS**

### **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

1. In meeting the specific environmental performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, upgrading or decommissioning of the development.

### **TERMS OF CONSENT**

2. The Applicant must carry out the development:
  - (a) generally in accordance with the EIS; and
  - (b) in accordance with the conditions of this consent.

*Note: The general layout of the development is shown in Appendix 1.*

3. If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent must prevail to the extent of any inconsistency.
4. The Applicant must comply with any requirement/s of the Secretary arising from the Department's assessment of:
  - (a) any strategies, plans or correspondence that are submitted in accordance with this consent;
  - (b) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and
  - (c) the implementation of any actions or measures contained in these documents.

### **UPGRADING OF SOLAR PANELS AND ANCILLARY INFRASTRUCTURE**

5. The Applicant may upgrade the solar panels and ancillary infrastructure on site provided these upgrades remain within the approved development footprint of the site and in accordance with the conditions of this consent. Prior to carrying out any such upgrades, the Applicant must provide revised layout plans and project details of the development to the Secretary incorporating the proposed upgrades.

### **STRUCTURAL ADEQUACY**

6. The Applicant must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the *Building Code of Australia*.

*Notes:*

- Under Part 6 of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the development.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the development.

### **DEMOLITION**

7. The Applicant must ensure that all demolition work on site is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

### **PROTECTION OF PUBLIC INFRASTRUCTURE**

8. Unless the Applicant and the applicable authority agree otherwise, the Applicant must:
  - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

This condition does not apply to the upgrade and maintenance of the road network, which is expressly provided for in the conditions of this consent.

#### **OPERATION OF PLANT AND EQUIPMENT**

9. The Applicant must ensure that all plant and equipment used on site, or in connection with the development, is:
- (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

#### **SUBDIVISION**

10. The Applicant may subdivide the site to create one new allotment, as identified in the figure in Appendix 6 and in accordance with the requirements of the EP&A Act and EP&A Regulation.

*Notes:*

- *Under Part 6 of the EP&A Act, the Applicant is required to obtain a subdivision certificate for a plan of subdivision.*
- *Division 4 of Part 8 of the EP&A Regulation sets out the application requirements for subdivision certificates.*



## **SCHEDULE 3 ENVIRONMENTAL CONDITIONS – GENERAL**

### **TRANSPORT**

#### **Over-Dimensional and Heavy Vehicle Restrictions**

1. The Applicant must ensure that the:
  - (a) development does not generate more than:
    - 26 AV/B-double vehicle movements a day during construction, upgrading and decommissioning;
    - 46 medium and/or heavy rigid vehicle movements a day during construction, upgrading and decommissioning;
    - 5 over-dimensional vehicle movements during construction, upgrading and decommissioning; and;
    - 7 AV/B-Double, medium and/or heavy rigid vehicle movements a day during operations; on the public road network;
  - (b) length of any vehicles (excluding over-dimensional vehicles) used for the development does not exceed 19 metres, unless the Secretary agrees otherwise in writing.
2. The Applicant must keep accurate records of the number of over-dimensional vehicles, AV/B-Double vehicles, medium and/or heavy entering or leaving the site each day for the duration of the project.

#### **Access Routes**

3. All over-dimensional and AV/B-Double vehicles associated with the development must travel to and from the site via:
  - (a) Golden Highway, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road; and/or
  - (b) Castlereagh Highway, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road;as identified in the figure in Appendix 3.

*Note: The Applicant is required to obtain relevant permits under the Heavy Vehicle National Law (NSW) for the use of over-dimensional vehicles on the road network.*

4. All medium and/or heavy rigid vehicles and shuttle buses associated with the development must travel to and from the site via the routes detailed in condition 3 of Schedule 3 to this consent, and/or via:
  - (a) Cope Road, Ulan Road, Ulan-Wollar Road, Barigan Street, Maitland Street, Wollar Road and Barigan Road; and/or
  - (b) Castlereagh Highway, Ulan Road, Wollar Road, Phillip Street, Maitland Street, Wollar Road and Barigan Road;as identified in the figure in Appendix 3.

#### **Preferred Site Access Points**

5. All over-dimensional, AV/B-Double, medium and/or heavy rigid vehicles and shuttle buses associated with the development must enter and exit the site via the approved northern site access point on Barigan Road, as identified in the figure in Appendix 1.
6. All light vehicles associated with the development must enter and exit the site via the approved northern site access point and/or southern site access option 1 on Barigan Road, as identified in the figure in Appendix 1.

#### **Alternate Site Access Point**

7. If the Applicant cannot secure access to the preferred site access points detailed in conditions 5 and 6 of Schedule 3 to this consent, all vehicles associated with the development must enter and exit the site via the approved site access point on Maree Road (southern access option 2), as identified in the figure in Appendix 1.

#### **Road Upgrades**

8. Prior to commencing construction, the Applicant must implement the road upgrades identified in Appendix 4, unless the Secretary agrees otherwise in writing. These upgrades must be carried out to the satisfaction of the relevant roads authority.

## Operating Conditions

9. The Applicant must ensure:
- (a) the internal roads are constructed as all-weather roads;
  - (b) there is sufficient parking on site for all vehicles, and no parking occurs on the public road network in the vicinity of the site;
  - (c) the capacity of the existing roadside drainage network is not reduced;
  - (d) all vehicles are loaded and unloaded on site, and enter and leave the site in a forward direction; and
  - (e) development-related vehicles leaving the site are in a clean condition to minimise dirt being tracked onto the sealed public road network.

## Traffic Management Plan

10. Prior to commencing the development, the Applicant must prepare a Traffic Management Plan for the development in consultation with TfNSW, Council, Ulan, Moolarben and Wilpinjong mines and to the satisfaction of the Secretary in writing. This plan must include:
- (a) details of the transport route to be used for all development-related traffic;
  - (b) details of the road upgrade works required by condition 8 of Schedule 3 to this consent;
  - (c) a protocol for undertaking independent dilapidation surveys to assess the:
    - existing condition of Ulan-Wollar Road, Wollar Road, Phillip Street, Barigan Street, Maitland Street, Barigan Road and Maree Road prior to construction, upgrading or decommissioning activities; and
    - condition of Ulan-Wollar Road, Wollar Road, Phillip Street, Barigan Street, Maitland Street, Barigan Road and Maree Road following construction, upgrading or decommissioning activities;
  - (d) a protocol for the repair of Ulan-Wollar Road, Wollar Road, Phillip Street, Barigan Street, Maitland Street, Barigan Road and Maree Road if dilapidation surveys identify these roads to be damaged during construction, upgrading or decommissioning works;
  - (e) details of the measures that would be implemented to minimise traffic impacts during construction, upgrading or decommissioning works, including:
    - temporary traffic controls, including detours and signage;
    - notifying the local community about project-related traffic impacts;
    - procedures for receiving and addressing complaints from the community about development-related traffic;
    - minimising potential cumulative traffic impacts with other projects in the area, including the Ulan Coal Mine, Moolarben Coal Mine and Wilpinjong Coal Mine during construction, upgrading or decommissioning works ;
    - minimising potential for conflict with school buses, other road users and rail services as far as practicable (measures also required during operation of the project);
    - minimising dirt tracked onto the public road network from development-related traffic;
    - details of the employee shuttle bus service, including pick-up and drop-off points and associated parking arrangements for construction workers, and measures to ensure employee use of this service;
    - scheduling of haulage vehicle movements to minimise convoy length or platoons;
    - responding to local climate conditions that may affect road safety such as fog, dust and wet weather;
    - responding to any emergency repair or maintenance requirements; and
    - a traffic management system for managing over-dimensional vehicles;
  - (f) a driver's code of conduct that addresses:
    - travelling speeds;
    - driver fatigue;
    - procedures to ensure that drivers adhere to the designated transport routes; and
    - procedures to ensure that drivers implement safe driving practices;
  - (g) a program to ensure drivers working on the development receive suitable training on the code of conduct and any other relevant obligations under the Traffic Management Plan; and
  - (h) a flood response plan detailing procedures and options for safe access to and from the site in the event of flooding.

Following the Secretary's approval, the Applicant must implement the Traffic Management Plan.

## LAND MANAGEMENT

11. The Applicant must maintain the agricultural land capability of the site, including:
- (a) establishing the ground cover of the site within 3 months following completion of any construction or upgrading;
  - (b) properly maintaining the ground cover with appropriate perennial species and weed management; and
  - (c) maintaining grazing within the development footprint, where practicable, unless the Secretary agrees otherwise in writing.

## BIODIVERSITY

### Vegetation Clearance

12. The Applicant must not clear any native vegetation or fauna habitat located outside the approved disturbance areas described in the EIS.

### Biodiversity Offsets

13. Prior to commencing development under this consent, the Applicant must retire biodiversity credits of a number and class specified in Table 1 and Table 2 below, to the satisfaction of BCD, unless the Secretary agrees otherwise in writing.

The retirement of these credits must be carried out in accordance with the *NSW Biodiversity Offsets Scheme* and can be achieved by:

- acquiring or retiring 'biodiversity credits' within the meaning of the *Biodiversity Conservation Act 2016*;
- making payments into an offset fund that has been developed by the NSW Government; or
- funding a biodiversity conservation action that benefits the entity impacted and is listed in the ancillary rules of the biodiversity offset scheme.

**Table 1: Ecosystem Credit Requirements**

Vegetation Community	PCT ID	Credits Required
White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion	1303	479
Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	281	242
White Box - Black Cypress Pine shrubby woodland of the Western Slopes	1610	2

**Table 2: Species Credit Requirements**

Species Credit Species	Credits Required
Austfeld's Wattle ( <i>Acacia ausfeldii</i> )	34
Bush Stone-curlew ( <i>Burhinus grallarius</i> )	34
Gang-gang Cockatoo ( <i>Callocephalon fimbriatum</i> )	67
Large-eared Pied Bat ( <i>Chalinolobus dwyeri</i> )	50
<i>Commersonia procumbens</i>	2
Large-leafed Monotaxis ( <i>Monotaxis macrophylla</i> )	34
Barking Owl ( <i>Ninox connivens</i> )	16
Powerful Owl ( <i>Ninox strenua</i> )	16
Squirrel Glider ( <i>Petaurus norfolcensis</i> )	34
Brush-tailed Phascogale ( <i>Phascogale tapoatafa</i> )	13
Koala ( <i>Phascolarctos cinereus</i> )	34
Masked Owl ( <i>Tyto novaehollandiae</i> )	16

Note: Any residual impact on EPBC Act listed threatened species and ecological communities must be offset in accordance with an offset process endorsed by DAWE.

### Biodiversity Management Plan

14. Prior to commencing the development, the Applicant must prepare a Biodiversity Management Plan for the development in consultation with BCD, and to the satisfaction of the Secretary in writing. This plan must:
- include a description of the measures that would be implemented for:
    - protecting vegetation and fauna habitat outside the approved disturbance areas;
    - managing the remnant vegetation and fauna habitat on site;
    - minimising clearing and avoiding unnecessary disturbance of vegetation that is associated with the construction and operation of the development;
    - minimising the impacts to fauna on site and implementing fauna management protocols;
    - avoiding the removal of hollow-bearing trees during spring to avoid the main breeding period for hollow-dependent fauna;
    - rehabilitating and revegetating temporary disturbance areas with species that are endemic to the area;
    - maximising the salvage of vegetative and soil resources within the approved disturbance area for beneficial reuse in the enhancement or the rehabilitation of the site; and
    - controlling weeds, feral pests and pathogens; and
  - include details of who would be responsible for monitoring, reviewing and implementing the plan, and timeframes for completion of actions.

Following the Secretary's approval, the Applicant must implement the Biodiversity Management Plan.

*Note: If the biodiversity credits are retired via a Biodiversity Stewardship Agreement, then the Biodiversity Management Plan does not need to include any of the matters that are covered under the Biodiversity Stewardship Agreement.*

## **AMENITY**

### **Construction, Upgrading and Decommissioning Hours**

15. Unless the Secretary agrees otherwise in writing, the Applicant may only undertake construction, upgrading or decommissioning activities on site between:
- 7 am to 6 pm Monday to Friday;
  - 8 am to 1 pm Saturdays; and
  - at no time on Sundays and NSW public holidays.

The following construction, upgrading or decommissioning activities may be undertaken outside these hours without the approval of the Secretary:

- activities that are inaudible at non-associated receivers;
- the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons; or
- emergency work to avoid the loss of life, property and/or material harm to the environment.

### **Noise**

16. The Applicant must minimise the noise generated by any construction, upgrading or decommissioning activities on site in accordance with the best practice requirements outlined in the *Interim Construction Noise Guideline* (DECC, 2009), or its latest version.

### **Dust**

17. The Applicant must minimise the dust generated by the development.

### **Visual**

18. The Applicant must:
- minimise the off-site visual impacts of the development, including the potential for any glare or reflection;
  - ensure the visual appearance of all ancillary infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and
  - not mount any advertising signs or logos on site, except where this is required for identification or safety purposes.

### **Lighting**

19. The Applicant must:
- minimise the off-site lighting impacts of the development; and
  - ensure that any external lighting associated with the development:
    - is installed as low intensity lighting (except where required for safety or emergency purposes);
    - does not shine above the horizontal; and
    - complies with *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*, or its latest version.



## HERITAGE

### Protection of Heritage Items

20. The Applicant must ensure the development does not cause any direct or indirect impacts on the Aboriginal heritage items identified in Table 1 of Appendix 5 or located outside the approved development footprint.

Prior to carrying out any development that could directly or indirectly impact the heritage items identified in Table 2 of Appendix 5, the Applicant must salvage and relocate the item/s that would be impacted to a suitable alternative location, in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010), or its latest version.

*Note: The location of the Aboriginal heritage items referred to in this condition are shown in the figure in Appendix 5.*

### Heritage Management Plan

21. Prior to commencing construction, the Applicant must prepare a Heritage Management Plan for the development to the satisfaction of the Secretary in writing. This plan must:
- be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary in writing;
  - be prepared in consultation with **Heritage NSW** and Aboriginal Stakeholders;
  - include a description of the measures that would be implemented for:
    - protecting the Aboriginal heritage items identified in Table 1 of Appendix 5 or outside the approved development footprint, including fencing off the Aboriginal heritage items prior to commencing construction;
    - salvaging and relocating the Aboriginal heritage items located within the approved development footprint, as identified in Table 2 of Appendix 5;
    - a contingency plan and reporting procedure if:
      - previously unidentified heritage items are found; or
      - Aboriginal skeletal material is discovered;
    - ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions; and
    - ongoing consultation with Aboriginal stakeholders during the implementation of the plan; and
  - include a program to monitor and report on the effectiveness of these measures and any heritage impacts of the project.

Following the Secretary's approval, the Applicant must implement the Heritage Management Plan.

## SOIL AND WATER

### Water Supply

22. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply.

*Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Applicant is required to obtain the necessary water licences for the development.*

### Water Pollution

23. The Applicant must ensure that the development does not cause any water pollution, as defined under Section 120 of the POEO Act.

### Operating Conditions

24. The Applicant must:
- ensure the solar panels and ancillary infrastructure (including security fencing) are designed, constructed and maintained to reduce impacts on localised flooding and groundwater at the site;
  - minimise any soil erosion associated with the construction, upgrading or decommissioning of the development in accordance with the relevant requirements in the *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004) manual, or its latest version;
  - ensure the solar panels and ancillary infrastructure are designed, constructed and maintained to avoid causing any erosion on site; and
  - ensure all works are undertaken in accordance with the following, unless DPIE Water agrees otherwise:
    - Guidelines for Controlled Activities on Waterfront Land* (NRAR, 2018), or its latest version; and
    - Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (2004), or its latest version.

## HAZARDS

### Fire Safety Study

25. Prior to commencing construction of the battery storage facility, unless the Secretary agrees otherwise in writing, the Applicant must prepare a Fire Safety Study for the development in consultation with FRNSW and RFS, and to the satisfaction of the Secretary in writing. The study must:
- be consistent with the:
    - Department's *Hazardous Industry Planning Advisory Paper No. 2 'Fire Safety Study'* guideline; and
    - NSW Government's *Best Practice Guidelines for Contaminated Water Retention and Treatment Systems*; and
  - describe the final design of the battery storage facility.

Following the Secretary's approval, the Applicant must implement the measures described in the Fire Safety Study.

### Storage and Handling of Dangerous Goods

26. The Applicant must store and handle all chemicals, fuels and oils used on-site in accordance with:
- the requirements of all relevant Australian Standards; and
  - the NSW EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Handbook* if the chemicals are liquids.

In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency.

### Operating Conditions

27. The Applicant must:
- minimise the fire risks of the development, including managing vegetation fuel loads on-site;
  - ensure that the development:
    - includes at least a 10 metre defendable space around the perimeter of the solar array area and battery storage facility that permits unobstructed vehicle access;
    - manages the defendable space and solar array areas as an Asset Protection Zone;
    - complies with the relevant asset protection requirements in the RFS's *Planning for Bushfire Protection 2006 (or equivalent)* and *Standards for Asset Protection Zones*;
    - includes an Asset Protection Zone that is wholly contained within the development footprint;
    - is suitably equipped to respond to any fires on site including provision of a 20,000 litre water supply tank fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection located adjacent to the internal access road;
  - assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and
  - notify the relevant local emergency management committee following construction of the development, and prior to commencing operations.

### Emergency Plan

28. Prior to commissioning operations, the Applicant must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development, to the satisfaction of FRNSW and the RFS. The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry points at all times. The plan must:
- be consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'*;
  - identify the fire risks and controls of the development; and
  - include procedures that would be implemented if there is a fire on-site or in the vicinity of the site.

Following approval, the Applicant must implement the Emergency Plan.

## WASTE

29. The Applicant must:
- minimise the waste generated by the development;
  - classify all waste generated on site in accordance with the EPA's *Waste Classification Guidelines 2014* (or its latest version);
  - store and handle all waste on site in accordance with its classification;
  - not receive or dispose of any waste on site; and

- (e) remove all waste from the site as soon as practicable, and ensure it is sent to an appropriately licensed waste facility for disposal.

#### ACCOMMODATION AND EMPLOYMENT STRATEGY

30. Prior to commencing construction, the Applicant must prepare an Accommodation and Employment Strategy for the development in consultation with Council, and to the satisfaction of the Secretary in writing. This strategy must:
- (a) propose measures to ensure there is sufficient accommodation for the workforce associated with the development;
  - (b) consider the cumulative impacts associated with other State significant development projects in the area, including nearby mines;
  - (c) investigate options for prioritising the employment of local workers for the construction and operation of the development, where feasible; and
  - (d) include a program to monitor and review the effectiveness of the strategy over the life of the development, including regular monitoring and review during construction.

Following the Secretary's approval, the Applicant must implement the Accommodation and Employment Strategy.

#### DECOMMISSIONING AND REHABILITATION

31. Within 18 months of the cessation of operations, unless the Secretary agrees otherwise in writing, the Applicant must rehabilitate the site to the satisfaction of the Secretary in writing. This rehabilitation must comply with the objectives in Table 3.

*Table 3: Rehabilitation Objectives*

<b>Feature</b>	<b>Objective</b>
Site	<ul style="list-style-type: none"><li>• Safe, stable and non-polluting</li><li>• Minimise the visual impact of any above ground ancillary infrastructure agreed to be retained for an alternative use</li></ul>
Solar farm infrastructure	<ul style="list-style-type: none"><li>• To be decommissioned and removed, unless the Secretary agrees otherwise</li></ul>
Land use	<ul style="list-style-type: none"><li>• Restore land capability to pre-existing use</li></ul>
Community	<ul style="list-style-type: none"><li>• Ensure public safety</li></ul>

## **SCHEDULE 4 ENVIRONMENTAL MANAGEMENT AND REPORTING**

### **ENVIRONMENTAL MANAGEMENT**

#### **Environmental Management Strategy**

1. Prior to commencing the development, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary in writing. This strategy must:
  - (a) provide the strategic framework for environmental management of the development;
  - (b) identify the statutory approvals that apply to the development;
  - (c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
  - (d) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
    - receive, handle, respond to, and record complaints;
    - resolve any disputes that may arise;
    - respond to any non-compliance;
    - respond to emergencies; and
  - (e) include:
    - references to any plans approved under the conditions of this consent; and
    - a clear plan depicting all the monitoring to be carried out in relation to the development.

Following the Secretary's approval, the Applicant must implement the Environmental Management Strategy.

#### **Revision of Strategies, Plans and Programs**

2. The Applicant must:
  - (a) update the strategies, plans or programs required under this consent to the satisfaction of the Secretary prior to carrying out any upgrading or decommissioning activities on site; and
  - (b) review and, if necessary, revise the strategies, plans or programs required under this consent to the satisfaction of the Secretary within 1 month of the:
    - submission of an incident report under condition 7 of Schedule 4;
    - submission of an audit report under condition 9 of Schedule 4; or
    - any modification to the conditions of this consent.

#### **Updating and Staging of Strategies, Plans or Programs**

3. With the approval of the Secretary in writing, the Applicant may submit any strategy, plan or program required by this consent on a progressive basis.

To ensure the strategies, plans or programs under the conditions of this consent are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.

With the agreement of the Secretary in writing, the Applicant may prepare any revised strategy, plan or program without undertaking consultation with all the parties referred to under the relevant condition of this consent.

#### *Notes:*

- *While any strategy, plan or program may be submitted on a progressive basis, the Applicant must ensure that all development being carried out on site is covered by suitable strategies, plans or programs at all times.*
- *If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program must clearly describe the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.*

### **NOTIFICATIONS**

#### **Notification of Department**

4. Prior to commencing the construction, operations, upgrading or decommissioning of the development or the cessation of operations, the Applicant must notify the Department in writing via the Major Projects website portal of the date of commencement, or cessation, of the relevant phase.



If any of these phases of the development are to be staged, then the Applicant must notify the Department in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.

#### **Final Layout Plans**

5. Prior to commencing construction, the Applicant must submit detailed plans of the final layout of the development to the Secretary, including details on the siting of solar panels and ancillary infrastructure, via the Major Projects website.

#### **Work as Executed Plans**

6. Prior to commencing operations, or following the upgrades of any solar panels or ancillary infrastructure, the Applicant must submit work as executed plans of the development to the Secretary, via the Major Projects website.

#### **Incident Notification**

7. The Department must be notified in writing via the Major Projects website portal immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the development application number and the name of the development if it has one), and set out the location and nature of the incident.

#### **Non-Compliance Notification**

8. The Department must be notified in writing via the Major Projects website portal within 7 days after the Applicant becomes aware of any non-compliance with the conditions of this consent. The notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been done, or will be, undertaken to address the non-compliance.

#### **INDEPENDENT ENVIRONMENTAL AUDIT**

9. The Applicant must commission and pay the full cost of Independent Environmental Audits of the development. The audits must:
  - (a) be prepared in accordance with the relevant *Independent Audit Post Approval* requirements (DPE 2018);
  - (b) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary in writing;
  - (c) be prepared, unless otherwise agreed with the Secretary in writing:
    - within 3 months of commencing construction;
    - within 3 months of commencement of operations; and
    - as directed by the Secretary;
  - (d) be carried out in consultation with the relevant agencies;
  - (e) assess whether the development complies with the relevant requirements in this consent, and any strategy, plan or program required under this consent; and
  - (f) recommend appropriate measures or actions to improve the environmental performance of the development and any strategy, plan or program required under this consent.

Within 3 months of commencing an Independent Environmental Audit, or unless otherwise agreed by the Secretary in writing, a copy of the audit report must be submitted to the Secretary, and any other NSW agency that requests it, together with a response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations.

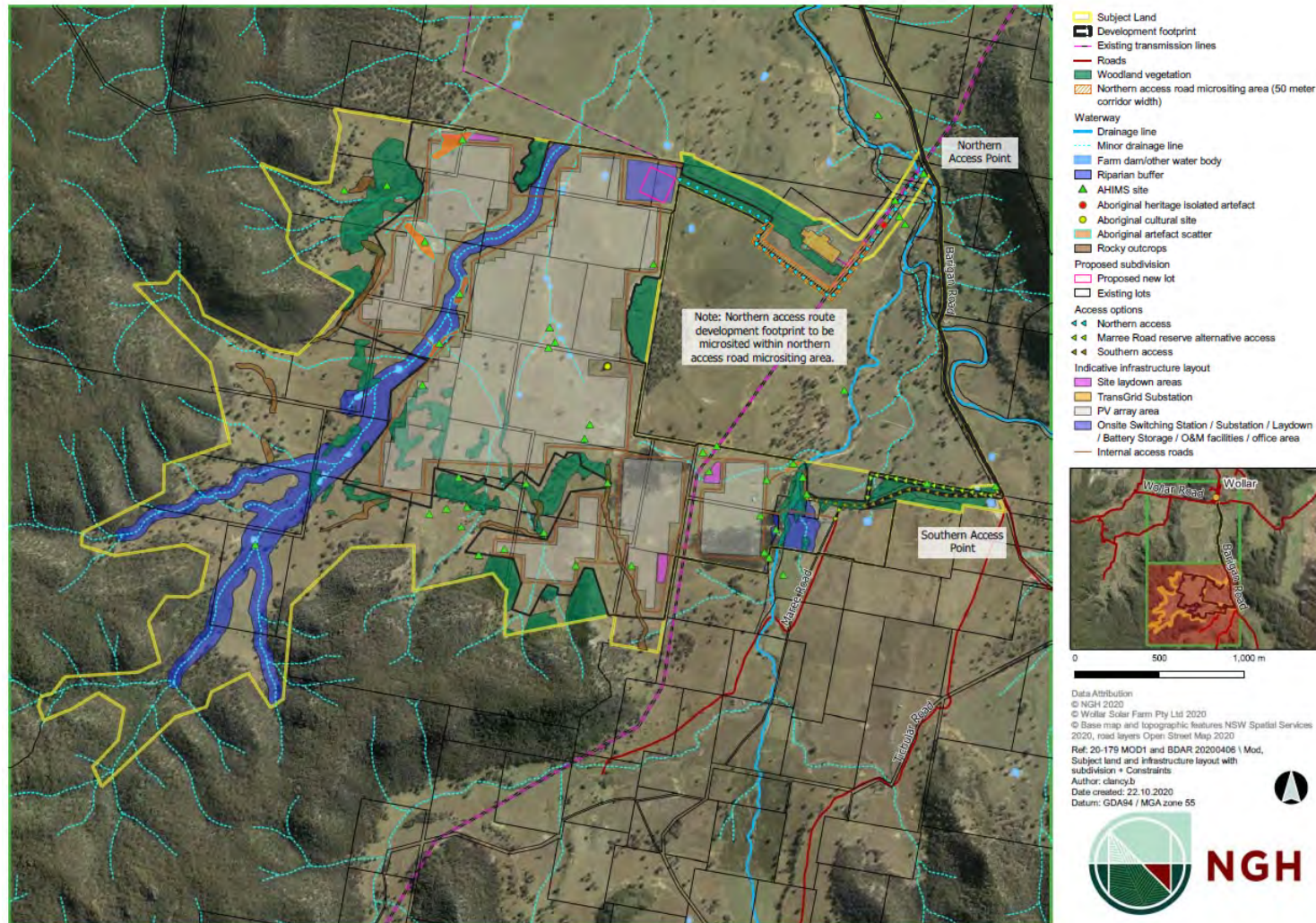
The recommendations of the Independent Environmental Audit must be implemented to the satisfaction of the Secretary, confirmed in writing.

#### **ACCESS TO INFORMATION**

10. The Applicant must:
  - (a) make the following information publicly available on its website as relevant to the stage of the development:
    - the EIS;
    - the final layout plans for the development;
    - current statutory approvals for the development;

- approved strategies, plans or programs required under the conditions of this consent;
  - the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;
  - how complaints about the development can be made;
  - a complaints register;
  - compliance reports;
  - any independent environmental audit, and the Applicant's response to the recommendations in any audit; and
  - any other matter required by the Secretary; and
- (b) keep this information up to date.

## APPENDIX 1 GENERAL LAYOUT OF DEVELOPMENT



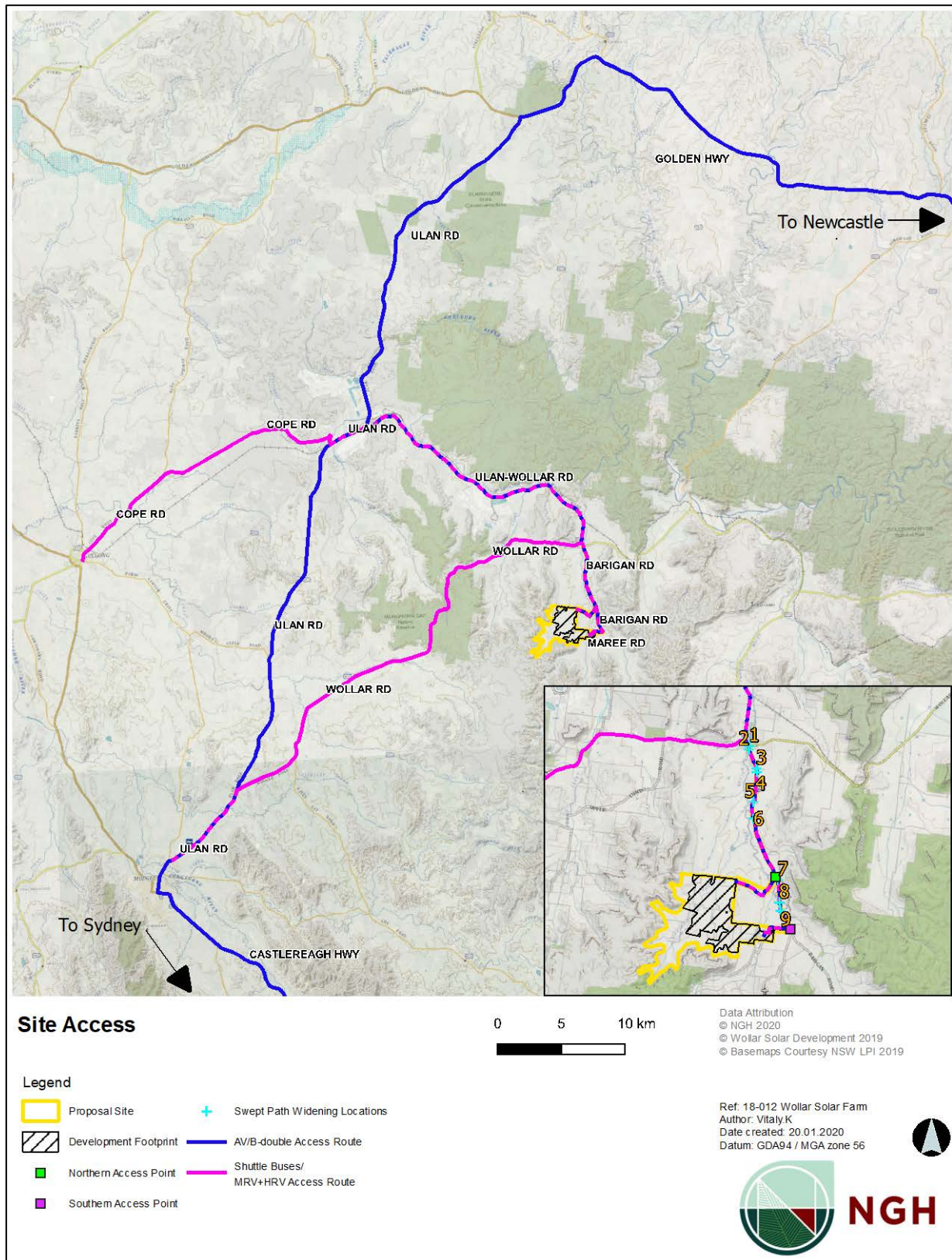
## APPENDIX 2 SCHEDULE OF LAND

Project Site			
Lot	Deposited Plan	Lot	Deposited Plan
1	650653	76	755430
22	755430	77	755430
23	755430	78	755430
24	755430	79	755430
25	755430	80	755430
27	755430	84	755430
30	755430	92	755430
45	755430	105	755430
46	755430	106	755430
49	755430	107	755430
50	755430	119	755430
51	755430	152	755430
60	755430	153	755430
61	755430	154	755430
62	755430	1	1090027
63	755430	2	1090027
69	755430	4	1090027
70	755430	6	1090027
71	755430	7	1090027
72	755430	8	1090027
73	755430	10	1090027
74	755430	11	1090027
75	755430	7303	1139558
Barigan Road			
Lot	Deposited Plan	Lot	Deposited Plan
6	131083	34	755455
8	131083	35	755455
11	131083	40	755455
13	131083	41	755455
31	755430	62	755455
33	755430	65	755455
34	755430	87	755455
41	755430	131	755455
84	755430	136	755455
134	755430	61A	755455
137	755430	7006	1024130
29	755455	7001	1055786
30	755455	9	1090027
31	755455	11	1090027
32	755455	7011	1116440
33	755455	-	-

Note: The project site will also be taken to include any Crown land and road reserves contained within the project site



## APPENDIX 3 SITE ACCESS



## APPENDIX 4 ROAD UPGRADES

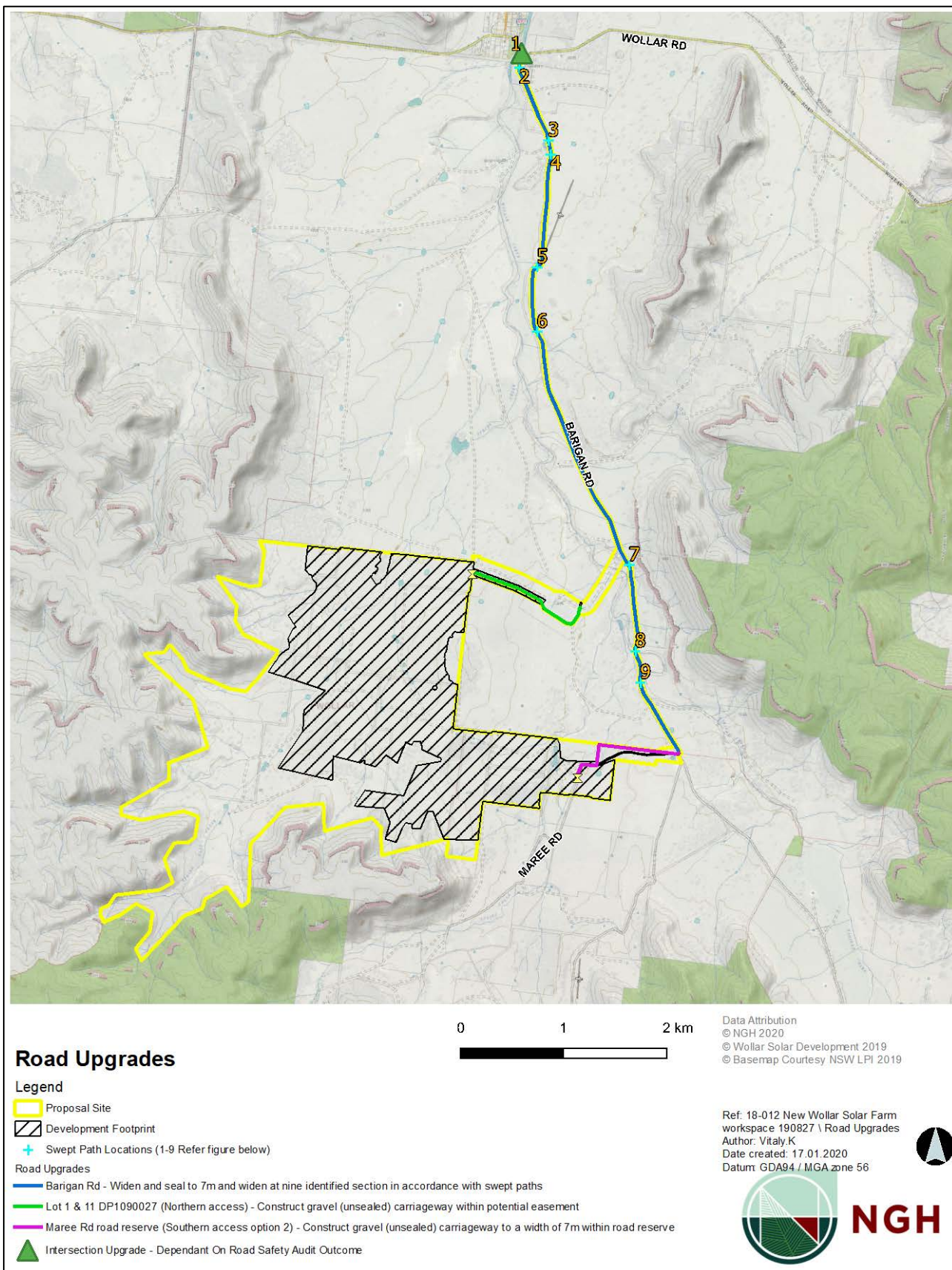
Road	Location <sup>1</sup>	Upgrade Requirements <sup>1</sup>	Timing
Wollar Road and Barigan Road	Intersection	Basic Right (BAR) turn and Basic Left (BAL) turn treatments for the largest vehicle accessing the site (excluding over-dimensional vehicles)	Prior to construction
Barigan Road	Between Wollar Road and the northern site access point	Seal to a width of 7 m with 1 m unsealed shoulders (total carriageway 9 m), with the exception of locations 1 to 6 which require upgrading in accordance with the figures below	
	Between the northern site access point and southern site access point	Seal to a width of 7 m with 1 m unsealed shoulders (total carriageway 9 m, with the exception of locations 7 to 9 which require upgrading in accordance with the figures below <sup>2</sup>	
	Northern site access point <sup>3</sup>	Rural Property Access Type	
	Southern site access point		
Southern access option 2 (Maree Road road reserve)	From its intersection with Barigan Road, for a distance of approximately 1.2 km	Gravel (unsealed) to a width of 7 m <sup>2</sup>	

<sup>1</sup> Refer to the figures in Appendix 4 for the location and further details of the road upgrades.

<sup>2</sup> These upgrades are only required if the alternate site access option detailed in condition 7 of Schedule 3 of this consent is used.

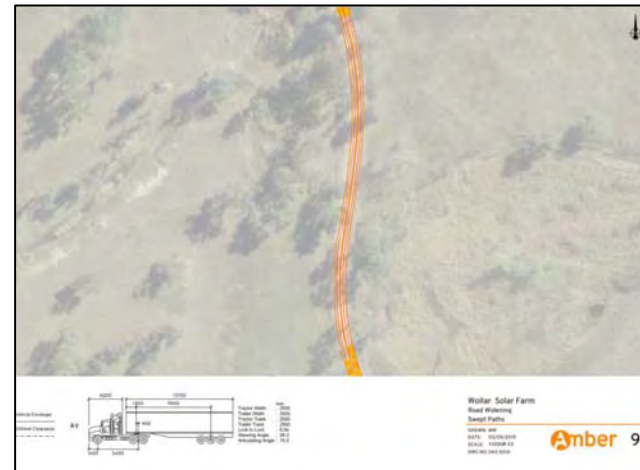
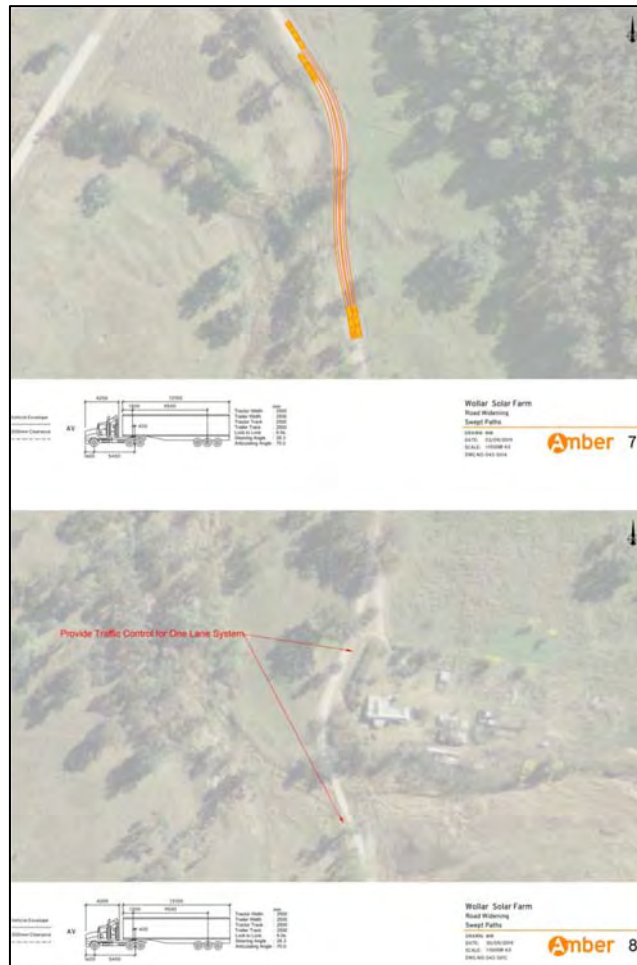
<sup>3</sup> A rural property access treatment is only required if the preferred site access option detailed in conditions 5 and 6 of Schedule 3 of this consent is used.











## APPENDIX 5 ABORIGINAL HERITAGE ITEMS

*Table 1: Aboriginal heritage items – avoid impacts*

<i>Item*</i>	
Wollar SF AFT 6	Wollar SF IF25
Wollar SF IF8	Wollar SF GDG 1
Wollar SF IF9	Wollar SF ST 1
Wollar SF IF10	Wollar SF ST 2
Wollar SF IF11	Wollar SF Cultural Site 1
Wollar SF IF12	Wollar Creek 1
Wollar SF IF14	Wollar Creek 2
Wollar SF IF21	-

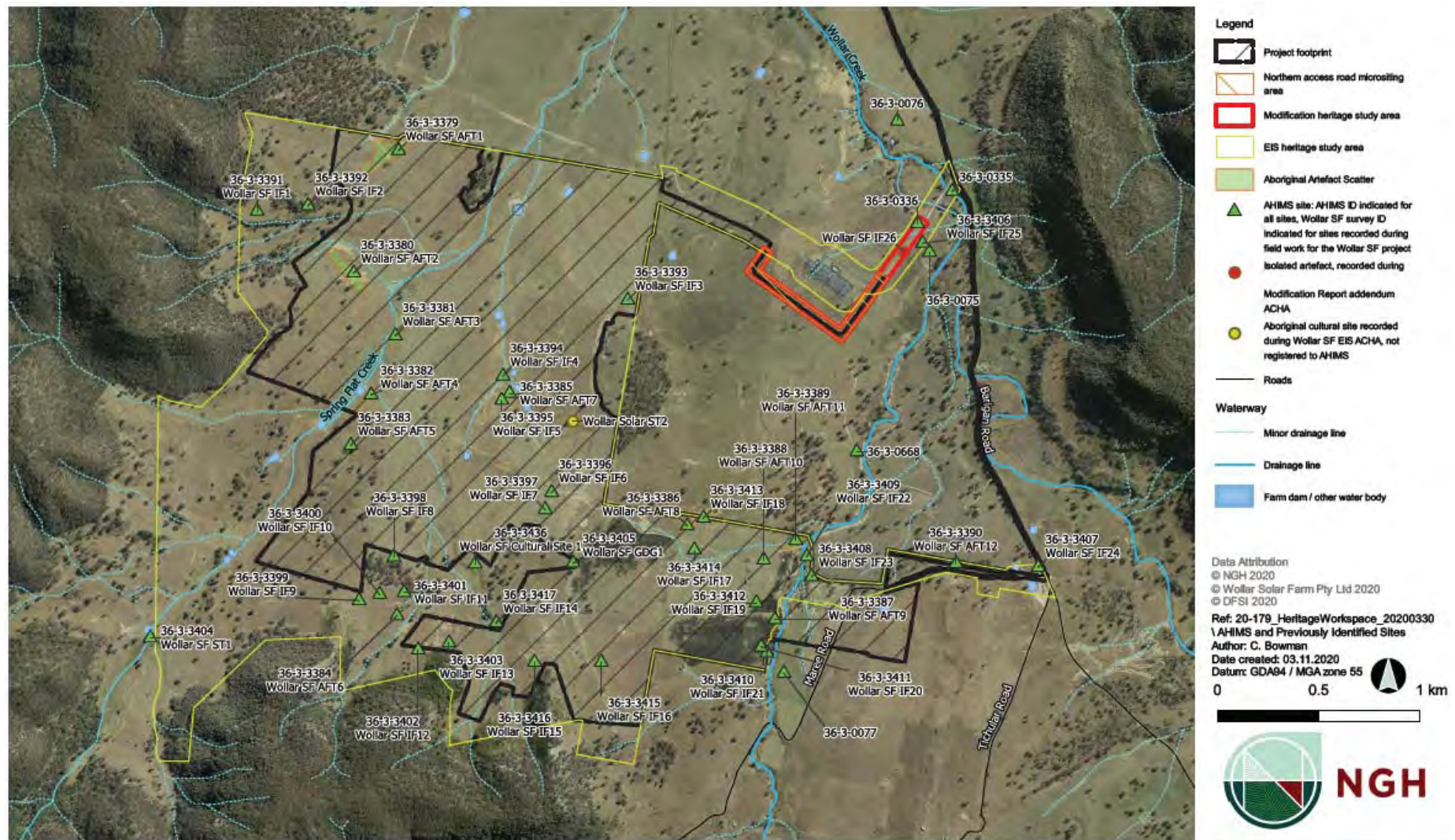
*\* Refer to the Figure in this Appendix to identify items*

*Table 2: Aboriginal heritage items – surface collection salvage*

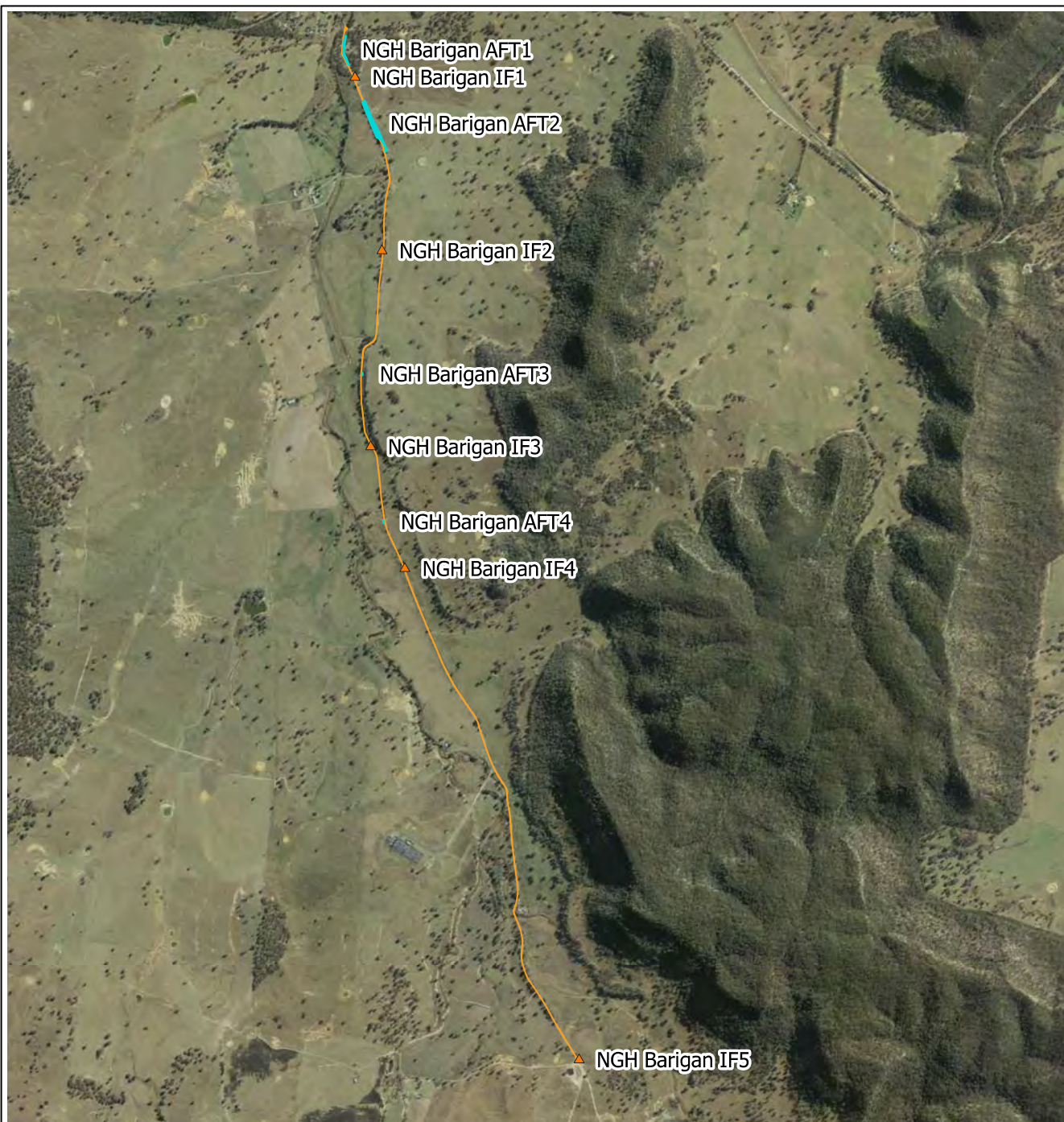
<i>Item</i>	
Wollar SF AFT 1	Wollar SF IF15
Wollar SF AFT 2	Wollar SF IF16
Wollar SF AFT 3	Wollar SF IF17
Wollar SF AFT 4	Wollar SF IF18
Wollar SF AFT 5	Wollar SF IF19
Wollar SF AFT 7	Wollar SF IF20
Wollar SF AFT 8	Wollar SF IF22
Wollar SF AFT 9	Wollar SF IF23
Wollar SF AFT 10	Wollar SF IF24
Wollar SF AFT 11	Wollar SF IF26
Wollar SF AFT 12	NGH Barigan AFT 1
Wollar SF IF1	NGH Barigan AFT 2
Wollar SF IF2	NGH Barigan AFT 3
Wollar SF IF3	NGH Barigan AFT 4
Wollar SF IF4	NGH Barigan IF 1
Wollar SF IF5	NGH Barigan IF 2
Wollar SF IF6	NGH Barigan IF 3
Wollar SF IF7	NGH Barigan IF 4
Wollar SF IF13	NGH Barigan IF 5

*\* Only items located within the development footprint are to be salvaged (refer to the Figure in this Appendix to identify it).*









## Barigan Road Field Results

### Legend

- Barigan Road Study Area
- Isolated Artefacts
- Artefact Scatter

0 0.5 1 km



Data Attribution  
 © NGH 2020  
 © Wollar Solar Development 2020  
 © Basemaps Courtesy NSW LPI 2020

Ref: 18-012 Wollar All maps combined  
 190912 \ Barigan Rd Field Results  
 Author: lewis.t  
 Date created: 15.01.2020  
 Datum: GDA94 / MGA zone 56



**NGH**

## APPENDIX 6 SUBDIVISION PLAN



## **APPENDIX B   EPBC ACT APPROVAL**





## APPROVAL

### Wollar Solar Farm, 7km South of Wollar, NSW (EPBC 2018/8258)

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*. Note that section 134(1A) of the **EPBC Act** applies to this approval, which provides in general terms that if the approval holder authorises another person to undertake any part of the action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

#### Details

<b>Person to whom the approval is granted (approval holder)</b>	Wollar Solar Development Pty Ltd
<b>ACN or ABN of approval holder</b>	88 621 969 266
<b>Action</b>	To construct a solar farm in Wollar, NSW [See EPBC Act referral 2018/8258], subject to the variation of the action accepted by the Minister under section 156B on 23 December 2019.

#### Approval decision

My decisions on whether or not to approve the taking of the action for the purposes of each controlling provision for the action are as follows.

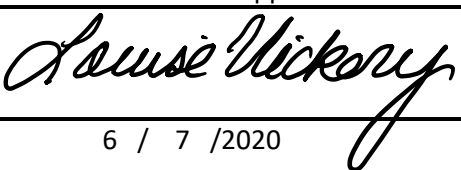
#### Controlling Provisions

Listed Threatened Species and Communities	
Section 18	Approve
Section 18A	Approve

#### Period for which the approval has effect

This approval has effect until 31 December 2038

#### Decision-maker

<b>Name and position</b>	Louise Vickery Assistant Secretary Environment Approvals and Wildlife Trade Branch
<b>Signature</b>	
<b>Date of decision</b>	6 / 7 /2020

#### Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

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## ANNEXURE A – CONDITIONS OF APPROVAL

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### Part A – Conditions specific to the action

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1. The approval holder must not **clear** outside of the area identified as 'development footprint' on the map 'General Layout of Development' at Appendix 1 of the NSW **Development Consent**.
2. The approval holder must not **clear** more than:
  - a. 229.6 ha of **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland** (critically endangered), comprising of:
    - i. 24.5 ha occurring as woodland;
    - ii. 205.1 ha occurring as **Derived Native Grassland**
  - b. 24.6 ha of foraging habitat for the **Regent Honeyeater** (*Anthochaera phrygia*) (critically endangered) corresponding to 2a.i and 0.1 ha of White Box – Black Cypress Pine shrubby woodland;

within the area identified as as 'development footprint' on the map 'General Layout of Development' at Appendix 1 of the NSW **Development Consent**.

3. To compensate for impacts to **protected matters**, the approval holder must comply with Condition 13 of Schedule 3 of the NSW **Development Consent** to **retire** biodiversity credits of the specified number and class for the following vegetation communities that relate to the **protected matters (Box Gum Grassy Woodland and Regent Honeyeater habitat)**:

Vegetation community	PCT
White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion	1303
Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	281
White Box - Black Cypress Pine shrubby woodland of the Western Slopes	1601

4. To compensate for impacts to the **Derived Native Grassland** that are not covered by the NSW **Development Consent**, the approval holder must, within 6 months of **commencement of the action**, submit an **offset strategy** for approval by the **Minister**. If approved, the **offset strategy** must be implemented.

The **offset strategy** must include details of:

- a. The proposed offset package, including **offset site(s)** to compensate for the loss of up to 205.1 ha of **Derived Native Grassland**;
- b. Measures for the long term management and improvement of **Box Grassy Gum Woodland** on the **offset site(s)**; the current quality of **protected matters** on the **offset site**, and time- bound completion criteria and performance targets.
- c. How the **offset** package either:
  - i. Meets the requisite **like-for-like ecosystem credit** requirement, where the **like- for-like ecosystem credits** generated at the **offset site** are calculated

using the **BAM**, and the number of **like-for-like ecosystem credits** required is calculated using **Equation 1 of the BAM**; or

- ii. Provides a suitable gain calculated using the **EPBC offsets assessment guide**.
  - d. The timeframe and legal mechanism for securing the **offset site(s)**. This may include a plan for staging the delivery of **offsets sites** corresponding to the actual quantity and timing of impacts the action.
5. The **offset strategy** may include provisions for:
- a. The impacts of the action on **Derived Native Grassland** to be re-quantified after three years of operation, based on the results of monitoring data. The monitoring data must be collected in accordance with a monitoring methodology and monitoring criteria set out in a Biodiversity Management Plan approved by the **Minister**.
  - b. The offset package to be adjusted based on the re-quantification of impacts, subject to further written approval from the **Minister**, if the monitoring data shows that the action has not adversely impacts on the overall condition and persistence of the Derived Native Grassland.
6. The approval holder must comply with Condition 14 of Schedule 3 the NSW **Development Consent**, for the preparation and implementation of a Biodiversity Management Plan, as it relates to the avoidance and mitigation of impacts to **protected matters**.
7. Within 20 **business days** of completing the requirements of Condition 3, the approval holder must provide the **Department** with **evidence** of when and how the **like-for-like ecosystem credits** were **retired**.
- 

## **Part B – Standard administrative conditions**

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### **Notification of date of commencement of the action**

- 8. The approval holder must notify the **Department** in writing of the date of **commencement of the action** within 10 **business days** after the date of **commencement of the action**.
- 9. If the **commencement of the action** does not occur within 5 years from the date of this approval, then the approval holder must not **commence the action** without the prior written agreement of the **Minister**.

### **Compliance records**

- 10. The approval holder must maintain accurate and complete **compliance records**.
- 11. If the **Department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

**Note:** **Compliance records** may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's** website or through the general media.

### **Annual compliance reporting**

- 12. The approval holder must prepare a **compliance report** for each 12 month period following the date of **commencement of the action**, or otherwise in accordance with an annual date that has been agreed to in writing by the **Minister**. The approval holder must:

- a. publish each **compliance report** on the **website** within 60 **business days** following the relevant 12 month period;
- b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the weblink for the **compliance report** within five **business days** of the date of publication;
- c. keep all **compliance reports** publicly available on the **website** until this approval expires;
- d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**; and
- e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within 5 **business days** of publication.

**Note:** **Compliance reports** may be published on the **Department's** website.

### **Reporting non-compliance**

13. The approval holder must notify the **Department** in writing of any: **incident**; non-compliance with the conditions; or non-compliance with the commitments made in **plans**. The notification must be given as soon as practicable, and no later than two **business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
  - a. any condition which is or may be in breach;
  - b. a short description of the **incident** and/or non-compliance; and
  - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
14. The approval holder must provide to the **Department** the details of any **incident** or non-compliance with the conditions or commitments made in **plans** as soon as practicable and no later than 10 **business days** after becoming aware of the **incident** or non-compliance, specifying:
  - a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future;
  - b. the potential impacts of the **incident** or non-compliance; and
  - c. the method and timing of any remedial action that will be undertaken by the approval holder.

### **Completion of the action**

15. Within 30 days after the **completion of the action**, the approval holder must notify the **Department** in writing and provide **completion data**.

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## Part C - Definitions

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In these conditions, except where contrary intention is expressed, the following definitions are used:

**BAM (Biodiversity Assessment Method)** means the biodiversity assessment method established under the *Biodiversity Conservation Act 2016* (NSW) for the purpose of assessing the impact of actions on threatened species and threatened ecological communities, and their habitats.

**BAM Equation 1** means Equation 1 as specified in the **BAM** to determine the number of **like-for-like ecosystem? credits** required for the impact on vegetation that is a Threatened Ecological Community or contains listed threatened species habitat.

**Biodiversity Conservation Fund** has the meaning given under the *Biodiversity Conservation Act 2016* (NSW).

**Box Gum Grassy Woodland** means the **White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland** ecological community listed as critically endangered under the *EPBC Act*.

**Business day** means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the action.

**Clearing/clearance/clear** means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of vegetation (but not including weeds – see the *Australian weeds strategy 2017 to 2027* for further guidance).

**Commencement of the action** means the first instance of any specified activity associated with the action including **clearance** and **construction**. **Commencement of the action** does not include minor physical disturbance necessary to:

- i. undertake pre-clearance surveys or monitoring programs;
- ii. install signage and /or temporary fencing to prevent unapproved use of the project area;
- iii. protect environmental and property assets from fire, weeds and pests, including use of existing surface access tracks; and
- iv. install temporary site facilities for persons undertaking pre-commencement activities so long as these are located where they have no impact on the **protected matters**.

**Completion data** means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

**Completion of the action** means the time at which all approval conditions (except condition 12) have been fully met.

**Compliance records** means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the approval holder's possession or that are within the approval holder's power to obtain lawfully.

**Compliance reports** means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions;
- ii. consistent with the **Department's Annual Compliance Report Guidelines** (2014); and
- iii. include a **shapefile** of any **clearance** of any **protected matters**, or their habitat, undertaken within the relevant 12 month period.

**Construction** means the erection of a building or structure that is or is to be fixed to the ground and wholly or partially fabricated on-site; the alteration, maintenance, repair or demolition of any building or structure; preliminary site preparation work which involves breaking of the ground

(including pile driving); the laying of pipes and other prefabricated materials in the ground, and any associated excavation work; road and intersection work or other services work, but excluding the installation of temporary fences and signage.

**Department** means the Australian Government agency responsible for administering the **EPBC Act**.

**Derived Native Grassland** means the grassy component of the **Box Gum Grassy Woodland** within the ecological community as a single intermixed entity (PCT's involved in this project: 1303 and 281);

**Development consent** means the document recording the approval for the Wollar Solar Farm (SSD 9254) under the *NSW Environmental Planning and Assessment Act 1979*, approved by the delegate of the NSW Minister for Planning and Public Spaces on 24 February 2020, as modified from time to time.

**Environmental Offsets Policy** means the **EPBC Act Environmental Offsets Policy** (2012, or subsequent published revisions).

**EPBC Act** means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

**EPBC offsets assessment guide** is a tool that has been developed for expert users in the department to assess the suitability of offset proposals. The guide is also available to proponents to assist with planning and estimating future offset requirements.

**Evidence** means documentation from the relevant authority showing that the **like-for-like credits** have been **retired**.

**Incident** means any event which has the potential to, or does, impact on one or more **protected matter(s)**.

**Like-for-like ecosystem credits** has the meaning given under the *Biodiversity Conservation Act 2016* (NSW).

**Minister** means the Australian Government Minister administering the **EPBC Act** including any delegate thereof.

**Offset information** means the information requirements specified in Attachments B.

**Offset site** means an area of land protected and managed to improve its habitat quality to compensate for unavoidable impacts on **protected matters** as a result of the action.

**Offset strategy** means a detailed proposal for providing one or more offset sites or other offsets in accordance with the **Environmental Offsets Policy**.

**Plans** refer to any method of thinking out acts and purposes beforehand in regards to the proposed action or any activities involved.

**Protected matter(s)** means: **Box Gum Grassy Woodland** and the **Regent Honeyeater**, listed under the **EPBC Act**.

**Regent Honeyeater** means the species *Anthochaera phrygia* listed as critically endangered under the **EPBC Act**.

**Regent Honeyeater habitat** means woodland and forest containing the key eucalypt species preferred by **Regent Honeyeaters** where the species may occur, and any known **Regent Honeyeater** foraging habitat. A list of key eucalypt species is given in the *National Recovery Plan for the Regent Honeyeater (Anthochaera phrygia)*, which is available on the **Department's** website. (PCT's involved in this project: 1303, 281 and 1610);

**Retire/retired/retirement** – means to change the status of a credit such that the credit can no longer be bought or sold (*Biodiversity Conservation Act 2016* (NSW)).

**Sensitive ecological data** means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy*.

**Shapefile** means location and attribute information of the action provided in an Esri shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

**Website** means a set of related web pages located under a single domain name attributed to the approval holder and available to the public.



## APPENDIX C CREDIT REPORTS

# BAM Credit Summary Report - Stewardship Agreement

## Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00019858/BAAS17086/20/00019859	Wollar Solarfarm Stewardship Investigation	21/12/2020
Assessor Name	Report Created	BAM Data version *
	22/12/2020	36
Assessor Number	BAM Case Status	Date Finalised
	Open	To be finalised
Assessment Revision	Assessment Type	
2	Stewardship (for offset sites)	

\* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

## Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Zone	Vegetation zone name	TEC name	Percent Cleared Value	Area (ha)	Current Vegetation integrity score	Future Vegetation integrity score without management	Future Vegetation integrity score with management	Security benefit score	Total gain in Vegetation integrity	BC Act listing status	EPBC Act listing status	Total number of ecosystem credits
<b>Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion</b>												
1	281_grassl and_low	White Box Yellow Box Blakely's Red Gum Woodland	67	93	4.1	3.7	12.6	0	8.9	Endangered Ecological Community	Critically Endangered	208

# BAM Credit Summary Report - Stewardship Agreement

2	281_woodl and_low	White Box Yellow Box Blakely's Red Gum Woodland	67	50.2	24.4	22.8	28	0	5.2	Endangered Ecological Community	Critically Endangered	65
3	281_woodl and_mode rate	White Box Yellow Box Blakely's Red Gum Woodland	67	78.4	68.5	65.2	86.4	2.7	23.9	Endangered Ecological Community	Critically Endangered	468
											<b>Subtotal</b>	<b>741</b>
<b>White Box - Black Cypress Pine shrubby woodland of the Western Slopes</b>												
6	1610_grass land_low	Not a TEC	67	24.4	15.2	14.3	17.2	0	2.8			17
7	1610_woodland_mod erate	Not a TEC	67	67.1	47	45	74.5	0	29.4			494
											<b>Subtotal</b>	<b>511</b>
<b>White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion</b>												
4	1303_grass land_low	White Box Yellow Box Blakely's Red Gum Woodland	75	30.2	13.1	11.9	26.7	0	14.8	Endangered Ecological Community	Critically Endangered	112
5	1303_woodland_mod erate	White Box Yellow Box Blakely's Red Gum Woodland	75	16.4	52	50.4	75.8	0	25.4	Endangered Ecological Community	Critically Endangered	104
											<b>Subtotal</b>	<b>216</b>
											<b>Total</b>	<b>1468</b>

## Species credits for threatened species

Vegetation zone name	Total gain in Habitat condition (HC)	Area (ha) / Count (no. individuals)	Constant	BC Act listing status	EPBC Act listing status	Total number of species credits
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## BAM Credit Summary Report - Stewardship Agreement

<i>Phascolarctos cinereus / Koala ( Fauna )</i>							
281_woodland_moderate	23.9	73.2	0.25	Vulnerable	Vulnerable		437
281_woodland_low	5.2	7.5	0.25	Vulnerable	Vulnerable		10
1303_woodland_moderate	25.4	3.3	0.25	Vulnerable	Vulnerable		21
1610_woodland_moderate	29.4	67.1	0.25	Vulnerable	Vulnerable		494
					<b>Subtotal</b>		<b>962</b>

# BAM Credit Summary Report - Stewardship Agreement

## Proposal Details

Assessment Id	Proposal Name	BAM data last updated *
00019858/BAAS17086/20/00019859	Wollar Solarfarm Stewardship Investigation	21/12/2020
Assessor Name	Report Created	BAM Data version *
	22/12/2020	36
Assessor Number	BAM Case Status	Date Finalised
	Open	To be finalised
Assessment Revision	Assessment Type	
3	Stewardship (for offset sites)	

\* Disclaimer: BAM data last updated may indicate either complete or partial update of the BAM calculator database. BAM calculator database may not be completely aligned with Bionet.

## Ecosystem credits for plant communities types (PCT), ecological communities & threatened species habitat

Zone	Vegetation zone name	TEC name	Percent Cleared Value	Area (ha)	Current Vegetation integrity score	Future Vegetation integrity score without management	Future Vegetation integrity score with management	Security benefit score	Total gain in Vegetation integrity	BC Act listing status	EPBC Act listing status	Total number of ecosystem credits
<b>Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion</b>												
1	281_grassl and_low	White Box Yellow Box Blakely's Red Gum Woodland	67	93	4.1	3.7	35.6	0	31.9	Endangered Ecological Community	Critically Endangered	742

# BAM Credit Summary Report - Stewardship Agreement

2	281_woodl and_low	White Box Yellow Box Blakely's Red Gum Woodland	67	50.2	24.4	22.8	44.6	0	21.9	Endangered Ecological Community	Critically Endangered	274
3	281_woodl and_mode rate	White Box Yellow Box Blakely's Red Gum Woodland	67	78.4	68.5	65.2	88.1	2.7	25.5	Endangered Ecological Community	Critically Endangered	501
											<b>Subtotal</b>	<b>1517</b>
<b>White Box - Black Cypress Pine shrubby woodland of the Western Slopes</b>												
6	1610_grass land_low	Not a TEC	67	24.4	15.2	14.3	34.9	0	20.6			126
7	1610_woodland_mod erate	Not a TEC	67	67.1	47	45	74.5	0	29.4			494
											<b>Subtotal</b>	<b>620</b>
<b>White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion</b>												
4	1303_grass land_low	White Box Yellow Box Blakely's Red Gum Woodland	75	30.2	13.1	11.9	44.7	0	32.9	Endangered Ecological Community	Critically Endangered	248
5	1303_woodland_mod erate	White Box Yellow Box Blakely's Red Gum Woodland	75	16.4	52	50.4	81.8	0	31.4	Endangered Ecological Community	Critically Endangered	129
											<b>Subtotal</b>	<b>377</b>
											<b>Total</b>	<b>2514</b>

## Species credits for threatened species

Vegetation zone name	Total gain in Habitat condition (HC)	Area (ha) / Count (no. individuals)	Constant	BC Act listing status	EPBC Act listing status	Total number of species credits
----------------------	--------------------------------------	-------------------------------------	----------	-----------------------	-------------------------	---------------------------------

## BAM Credit Summary Report - Stewardship Agreement

<i>Phascolarctos cinereus / Koala ( Fauna )</i>							
281_woodland_moderate	25.5	73.2	0.25	Vulnerable	Vulnerable		467
281_woodland_low	21.9	7.5	0.25	Vulnerable	Vulnerable		41
1303_woodland_moderate	31.4	3.3	0.25	Vulnerable	Vulnerable		26
1610_woodland_moderate	29.4	67.1	0.25	Vulnerable	Vulnerable		494
					<b>Subtotal</b>		<b>1028</b>



## **APPENDIX D    EXTENSION REQUEST APPROVAL**

Beth Noël  
Senior Environmental Consultant (Ecology)  
NGH Pty Ltd  
By email [ngh@nghconsulting.com.au](mailto:ngh@nghconsulting.com.au)

31/07/2020

Dear Ms Noël

**Wollar Solar Farm (SSD 9254)  
Biodiversity Offsets**

I refer to your request dated 25 June 2020 seeking the Planning Secretary's approval to vary the timing of the retirement of biodiversity credits beyond the commencement of the development under condition 13 of Schedule 3 of the development consent for the Wollar Solar Farm (SSD 9254) and attached Biodiversity Offset Strategy.

The Department has carefully reviewed your request for additional time to meet the offset obligation under the development consent in order to:

- maximise the use of residual areas within the property boundary to secure all ecosystem credits in a Stewardship Agreement under the *Biodiversity Conservation Act 2016*; and
- negotiate a trade via the credit market or pay into the Biodiversity Conservation Fund for the remaining species credits.

The Department notes that:

- you have undertaken desktop investigations and you believe that ecosystem credits could be generated by the stewardship agreement to meet NSW and Commonwealth offset obligations;
- you have prepared a detailed time frame incorporating seasonal and project objectives to meet all offset obligations by the end of December 2021; and
- retiring credits before construction begins on the project will drive the need to secure credits via the Biodiversity Conservation Fund, which is less desirable than creating a stewardship agreement over residual areas of the project site.

The Department is satisfied with the proposed approach to your offset obligations on the condition that you strictly adhere to your proposed timetable.

Accordingly, the Planning Secretary approves the commencement of development prior to the retirement of biodiversity credits required under condition 13 of Schedule 3 of the development consent, subject to the following conditions:

- provide a status report to the Department on the outcome of your field work and a preliminary analysis of the stewardship agreement by 31 December 2020;
- apply for a Biodiversity Stewardship Agreement and upload all relevant supporting documents to the Biodiversity Offsets and Agreement Management System by 30 April 2021; and
- retire any residual credits negotiated through the market and/or pay residual obligations to the Biodiversity Conservation Fund by 31 December 2021.

If you wish to discuss the matter further, please contact May Patterson on 02 8275 1190.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'Nicole Brewer', with a long horizontal stroke extending to the right.

Nicole Brewer  
Director  
Energy Assessments  
As nominee of the Planning Secretary

25 June 2020

Nicole Brewer

Director | Energy  
Assessments | Planning and  
Assessment  
4 Parramatta Square, 12 Darcy Street  
Parramatta NSW 2150  
Locked Bag 5022, Parramatta NSW  
2124  
T 02 9274 6374 E  
nicole.brewer@planning.nsw.gov.au



Dear Nicole

**Re: Wollar Solar Farm – NSW Biodiversity Offset Strategy (NGH ref. 20-070)**

Regarding our meeting on 14 May 2020 in relation to Wollar Solar Farm's request for additional time to meet the offset obligation under State Significant Development SSD approval 9254 (Schedule 3 condition 13), NGH have prepared the attached NSW Biodiversity Offset Strategy. The attached strategy demonstrates how the Wollar Solar Development Pty Ltd (WSD) will meet the NSW BC Act credit obligations. In summary, WSFPL will :

1. Maximise the use of the residual areas within the Wollar Solar Farm property boundary to secure all **ecosystem credits** in a Stewardship Agreement, pursuant to the *Biodiversity Conservation Act 2016*. Limited species credits will also be secured in this agreement.
2. Negotiate a trade via the credit market or pay into the Biodiversity Conservation Fund for the remaining **species credits**.

In order to maximise the credits that can be retired via a physical Stewardship Agreement, Secretary's Discretion is sought regarding Schedule 3 condition 13 which stipulates the retirement of credits must be completed *prior to development*. An extended time frame is required to establish a Stewardship site. Also, as there is limited activity on the credit market, the extension will allow longer for the proponent to seek expressions of interest in relation to negotiating a trade of species credits, rather than paying the surcharge applied when credits are retired via the Biodiversity Conservation Fund (BCF).

It is noted that an Offset Strategy is also required to meet Commonwealth conditions of approval. It is intended to adapt the attached strategy to also satisfy Commonwealth matters, facilitating a streamlined implementation of the finalised approach. This will occur after the Commonwealth approval is received.

The attached Offset Strategy provides assurance that onsite physical offsets are achievable but that an extension to the consented time to retire the credits is required; an aggressive timeline to secure the credits is included in the strategy. Stage 1 (road upgrades) of this project is now shovel-ready and delays will:

- Delay the project, at a time when construction projects are highly important for boosting the economy during Covid restrictions.
- Delay the benefits the project will bring in the transition from fossil fuel generated electricity to renewable emission-free energy.
- Drive the proponent toward securing the credits via the BCF, a quicker but more expensive option and one this is not as preferable, under the BC Act.



**CANBERRA**

Unit 8, 27 Yallourn Street (PO Box 62) Fyshwick ACT 2609

T. (02) 6280 5053 E. [ng@nghconsulting.com.au](mailto:ng@nghconsulting.com.au) W. [www.nghconsulting.com.au](http://www.nghconsulting.com.au)

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ABN 31 124 444 622 ACN 124 444 622

- Disincentivise reductions that may be possible to the development footprint during construction of Stage 1 and further detailed design of successive stages, which may reduce biodiversity impacts and therefore offsets.

Please find attached the Offset Strategy to satisfy the NSW offset obligation for the project. If you require any further information in support of the request for additional time (18 months extension is requested based on the time line presented), please contact me directly.

This project is now shovel-ready, with Stage 1 road works scheduled for early July 2020 and the current consent does not allow commencement of construction prior to credit retirement.

If you have any questions, please contact me, on 0410 349 284. I would be pleased to discuss this project with you further. Yours sincerely,



**Beth Noël**

Senior Environmental Consultant (Ecology)

0410 349 284

NGH Pty Ltd

ABN: 31 124 444 622

ACN: 124 444 622

## **APPENDIX E   NSW OFFSET STRATEGY**

# Wollar Solar Farm: NSW Biodiversity Offset Strategy

## Background

The Wollar Solar Farm NSW Development Consent (SSD approval 9254) specifies offsets required to be retired using the Biodiversity Offset Scheme. It stipulates the retirement of credits must be completed *prior to development*. A Modification Application is currently being assessed by the NSW Department of Planning Infrastructure and Environment (DPIE) that seeks to modify that offset requirement. Additional offsets will also be required under the Commonwealth approval (pending).

Wollar Solar Development Pty Ltd (WSD) wish to maximise the use of the project site to generate and retire biodiversity offsets to meet their offset requirement. A Stewardship Agreement, submitted in accordance with the BC Act, is expected to be sufficient to account for all ecosystem credits generated under the NSW Biodiversity Offset Scheme (BOS). Additionally, after a limited survey program to verify which species credits cannot be secured within the same site, residual species credits will be purchased either from the credit market or by paying into the BCF.

NGH has undertaken preliminary investigations to inform this Offset Strategy. Key source information is drawn from:

- Preparation of a BDAR (NGH 2019 v2), which includes:
  - The calculation of credits contained in the existing NSW Development Consent
  - The calculation of areas required to meet Commonwealth offset requirements using the Commonwealth offset tool
  - An estimation of the local extent of NSW and Commonwealth Threatened Ecological Communities on site and in the locality
- Preparation of a Modification Application and updated BDAR (NGH 2020a V3<sup>1</sup>). The application:
  - Generates additional credits for the relocation of a short section of access track
  - Corrects species credit errors, reducing the overall species credit requirement
  - Accurately separates the credit requirement into the four stages in which the project will be constructed.
- Provision of a Commonwealth Offset Strategy outline (NGH 2020b v2) provided to Dept. Agriculture, Water and Environment (DAWE) to show how offsets could be conditioned, using the NSW BAM methodology.
- Preparation of internal advice provided to WSF (NGH 2020c), to investigate the ability of the residual areas of the Wollar Solar Farm development site to generate credits to satisfy the project's offset obligation (consented for NSW and estimated for the Commonwealth).

## Credit requirements

As of 25 June 2020, the applicable credit requirement is from Schedule 3 condition 13 of the NSW Development Consent, set out below. The NSW Modification Application and the Commonwealth approval are pending and are not considered in detail at this time.

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<sup>1</sup> Not approved as of 25/06/20.



Table 1 Consented ecosystem credits obligation

PCT	Credits
PCT 1303 White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion	469
PCT 281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	242
PCT 1610 White Box - Black Cypress Pine shrubby woodland of the Western Slopes	2

Table 2 Consented species credit obligation

Species Credit Species	Credits Required
Austfeld's Wattle ( <i>Acacia ausfeldii</i> )	34
Bush Stone-curlew ( <i>Burhinus grallarius</i> )	34
Gang-gang Cockatoo ( <i>Callocephalon fimbriatum</i> )	182
Large-eared Pied Bat ( <i>Chalinolobus dwyeri</i> )	50
<i>Commersonia procumbens</i>	2
Large-leafed Monotaxis ( <i>Monotaxis macrophylla</i> )	34
Barking Owl ( <i>Ninox connivens</i> )	36
Powerful Owl ( <i>Ninox strenua</i> )	36
Squirrel Glider ( <i>Petaurus norfolcensis</i> )	34
Brush-tailed Phascogale ( <i>Phascogale tapoatafa</i> )	32
Koala ( <i>Phascolarctos cinereus</i> )	34
Masked Owl ( <i>Tyto novaehollandiae</i> )	36

## Aims

The aims of this Offset Strategy are to set out a method to provide:

1. Certainty to the DPIE that suitable physical offset site/s exist to secure the majority of the project's ecosystem offset obligation.
2. Set out a process and timeline to meet the NSW credit obligation in full.

Further updates are likely to be made to the strategy at a later date to reflect the NSW Modification Application and Commonwealth matters, pending these approvals.

# Methodology

## Overview

The full process anticipated to satisfy the NSW and Commonwealth offset obligations for the Wollar Solar Farm would include four steps:

1. NSW Offset Strategy - Initial desktop estimate of proposed stewardship site/s credit generation to meet NSW conditions of consent. Establish an expected timeframe for securing offset sites. Justify the need for Secretary's Discretion to alter the Development Consented time frame for retirement

**This document meets Step 1.**

2. Commonwealth Offset Strategy - Calculation of Commonwealth credit requirements using the BAM. This would include field work to delineate CEEC and set out the additional means to secure Commonwealth offsets.
3. NSW Stewardship Assessment - Preparation of a Biodiversity Stewardship Site Assessment Report and associated documentation including Total Fund Deposit and Management Plan, in accordance with the NSW Biodiversity Conservation Act but including the Commonwealth requirements where practical.
4. Purchase remaining credits - Assess the need for retirement of any remaining credits (expected to include only species credits). Assist the client to meet these obligations by purchasing from the credit market or by paying into the BCF.

## Task Breakdown

The detailed breakdown of these steps is as follows:

1. NSW Offset Strategy - Desktop assessment using existing plot data to establish the ability for the proposed stewardship site/s to meet the credit requirements. Including:
  - Review of the following internal reports to establish the ability of the proposed stewardship areas to meet the NSW credit requirements:
    - i. Commonwealth Biodiversity Offsets Strategy V2; and
    - ii. Onsite Offsets Investigation.

On confirmation that the offsets areas are suitable, confirm the timeframe for site assessment, calculations, securing offset sites and retiring credits.
2. Commonwealth Offset Strategy - Quantify Commonwealth credit requirements. This would involve further field work to delineate CEEC areas onsite with the aim of reducing the Commonwealth credit requirements. This could be done in conjunction with stewardship field surveys (Step 3).
3. NSW Stewardship Assessment - Prepare stewardship documentation to support stewardship (NSW) and conservation agreement (Commonwealth) to meet credits requirements for NSW consent and Commonwealth calculated credits (calculated in Step 2). Works include:
  - A search of the MinView database would be undertaken to determine if there are any known mineral occurrences, mining titles or exploration licences that may be relevant to the offset sites. If any relevant entries are identified, we would liaise with NSW Department of Planning and Environment – Resources and Energy to obtain additional details regarding the implications they may have for establishing the sites as offsets. The results would be communicated to WSF in an email. No consultation with relevant leaseholders is included.
  - Land Titles search will be conducted to establish the areas of crown land and other possible exclusions required for land within the chosen areas.
  - Field plots conducted in order to meet the required number of vegetation integrity plots (as per the BAM). It is estimated that around 30-35 plots would be required.

- In addition, habitat for selected species credit species would be assessed to determine the possibility of meeting any of the species credit species requirements including surveying for Large Bent-winged Bat (*Miniopterus orianae oceanensis*) which is likely to occur within the proposed offset site.
  - Updated BAM calculations, based on the results of the field assessment, to estimate the credits able to be generated onsite to meet both NSW and Commonwealth offset requirements (using the BAM). Confirm the stewardship site boundaries and Commonwealth offset site with the client.
  - Development of appropriate management plans and costing of these. Costs of management actions would be determined following finalisation of the Management Plan for the initial 20-year period to which management actions apply. This would then be translated into a Total Fund Deposit that would be payable by the proponent to the Biodiversity Conservation Trust (BCT) as a minimum to retire the credits generated by the project.. Complete BSSAR ready for lodgement with NSW Biodiversity Conservation Trust.
4. Purchase remaining credits - Identify deficits in credits (if applicable) and make recommendations.
- Research the availability and price of deficit credits and liaise with the client regarding the potential options including provision of a brief letter report including costs of credits.
  - Further works for one or more of the following:
    - i. Targeted surveys, where species were assumed in lieu of surveys
    - ii. Establishing additional stewardship sites (highly unlikely)
    - iii. Negotiated trades through the credit market
    - iv. Paying into the fund.

## Predicted Timeframe

The following 18 month expedited timeframe is proposed to meet the seasonal and project objectives. Time will also be required for agency input and administration.

Table 3 Timeline for credit retirement

Steps	Tasks	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
<b>Preparation of Offset Strategy 1 - NSW offsets desktop</b>	Review of internal reports																		
	Background searches																		
	Reporting																		
<b>Update of Offset Strategy 2 - Commonwealth CEEC delineation</b>	Field work																		
	Consultation with DAWE																		
	Update of report to include CW Matters																		
<b>Stewardship Assessment - NSW and Commonwealth</b>	Field work																		
	Data analysis and BAM calculations																		
	Consultation with BCT and DAWE																		
	BSSAR																		
	Management Plan																		
	Total Fund Deposit																		
	Appendix - Commonwealth credits explanation																		
<b>Credit deficit retirement recommendations</b>	Register searches, expression of interest																		

Steps	Tasks	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec
	Negotiated trades through the market																		
	Pay residual obligations to the fund.																		

## Preliminary Results of Step 1

NGH undertook preliminary desktop investigations for WSFPL in April this year (NGH 2020c), to investigate the ability of the residual areas of the Wollar Solar Farm development site to generate credits to satisfy the project's offset obligation (consented for NSW and estimated for the Commonwealth). This was done using existing plot data that was estimated to represent PCTs and vegetation zones within the proposed stewardship site.

The key results are presented below to demonstrate the suitability of the site to retire the majority of the Wollar Solar Farm's offset obligation. The assumption is that the proposed stewardship area would be assessed and formalised as a Stewardship Agreement through the NSW Biodiversity Conservation Trust (BCT).

### Proposed Stewardship Area

The following Figure 1 shows the proposed stewardship site boundary, adjacent to the Wollar Solar Farm's development footprint. It excludes some peripheral areas we do not believe could be effectively managed for biodiversity improvements.



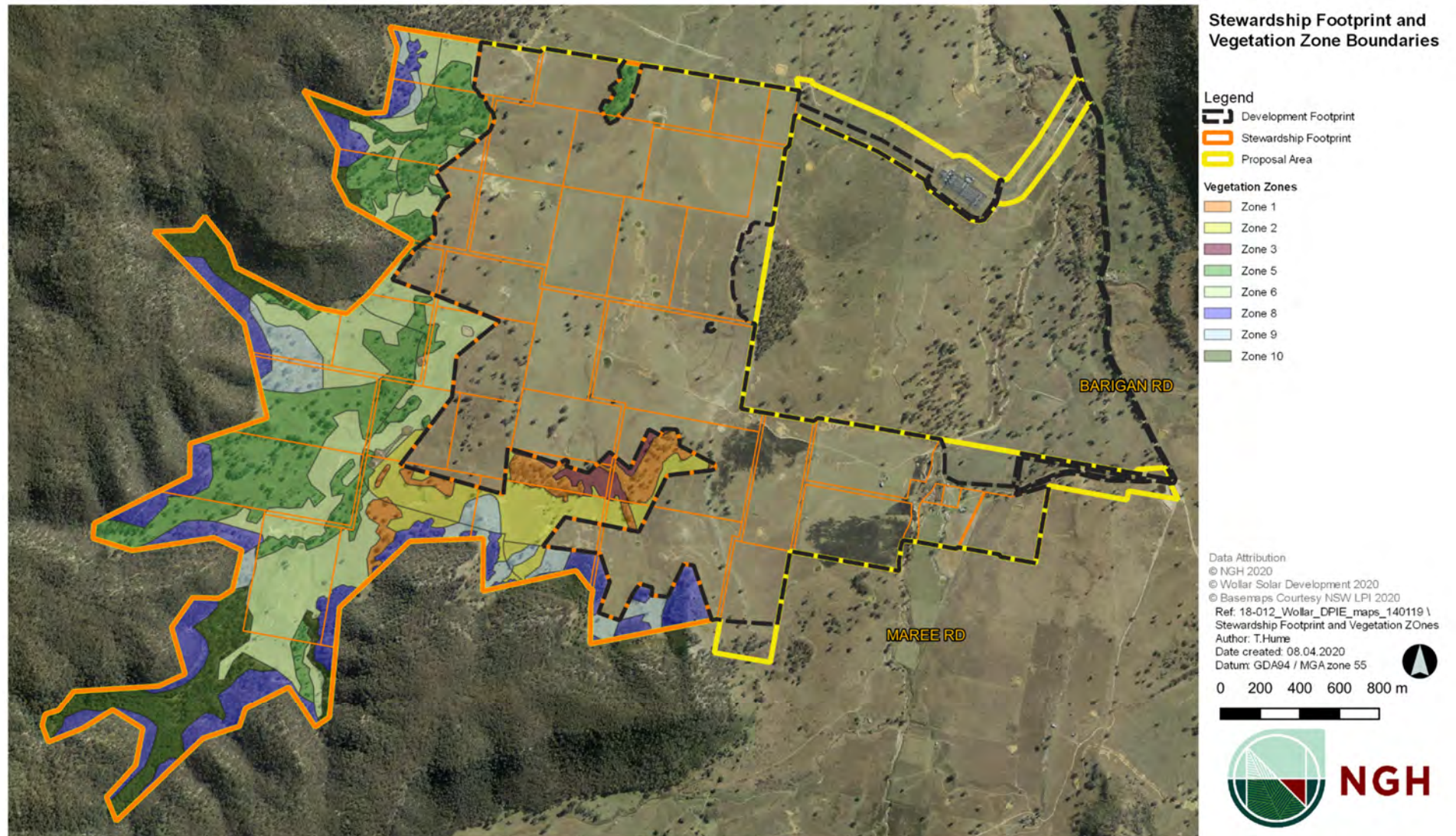


Figure 1 Areas investigated for stewardship site, outside the development footprint.



## Desktop Assessment

The ability of the residual areas of the Wollar Solar Farm site to generate the credits above was investigated through a preliminary desktop study (Step 1) by:

1. Defining areas suitable for biodiversity management within the residual areas of the nominated lots. Smaller, fragmented areas were excluded. Refer to Figure 1.
2. 'Predictive' vegetation stratification was carried for suitable areas using best available knowledge including; aerial photo interpretation, topography and onsite experience. Note these areas were not subject to detailed assessment so the results are an 'extrapolation' at this stage from the onsite survey work undertaken within and adjacent to the development footprint using existing plot data. Refer to Appendix A for an illustration of the vegetation zones assumed to occur. One additional vegetation zone was created for PCT 281 (PCT 281\_ForestZone10) because this PCT was observed to contain significantly more tree and shrub cover beyond what exists already inside the development footprint.
3. Plot data from the development site were manipulated for use in the Stewardship assessment. Specifically,
  - a. Existing Vegetation Integrity plot data for vegetation zones 1, 2, 3, 5, 6, 8, 9 (collected and presented in the latest BDAR V2) were used as a surrogate for vegetation zones inside the Stewardship footprint.
  - b. No vegetation zone plot data was available for vegetation zone 10 as this is a new vegetation zone inside the stewardship footprint (not found inside the development site). Zone 5 (PCT 281-WL) was used (in part) with PCT benchmark scores used to enter values for tree/shrub composition and structure as well as benchmark values for an increase in leaf litter and large woody debris expected inside this zone.
  - c. Manipulation of vegetation zone VI scores (in accordance with 15.5.1.2 (a) and table 8 of the BAM) was undertaken to account for assumed invasion of high threat exotic weeds throughout the Offset footprint. This includes assumed presence of Saffron Thistle and St Johns Wort. This meant a higher loss in biodiversity value within the offset area which is expected when high threat exotic plant species are established already onsite in suppressing regeneration of these vegetation zones back to benchmark condition.
  - d. Vegetation zone VI scores were also manipulated (in accordance with section 13.6.1.2 of the BAM) to account for gains in VI scores as a result of 'active restoration management'. Benchmark values were entered into the calculator to simulate management actions that will have a target to achieve maximum gain for generating ecosystem credits.
4. Consideration of habitat suitability inside the stewardship footprint for species credit species; only one of the candidate species, the Large-eared Pied Bat, is assumed likely to be found and generate credits. This species was found inside the development site during targeted surveys. To generate credits for any candidate species, confirmation of presence through targeted survey work or species experts would be required in order to generate any species credits for other candidates within suitable habitat.
5. Preliminary estimations of ecosystem credits for PCTs 281, 1303 & 1610 (as stipulated in Table 1-1 above), was conducted using the BAM online calculator.

It is noted that:

- Confirmation of Stewardship site vegetation zone boundaries and collection of field plot data and targeted surveys will be required to proceed with a stewardship site assessment.
- The BAM calculator is regularly updated and credits generated would not be considered final until the Biodiversity Stewardship Site Assessment Report is lodged and accepted by the BCT.

Credits may be overestimated due to our methodology as follows:

- To maximise the credits generated per hectare, we have assumed maximum management of the site to improve biodiversity values; assuming the objective of the management is to bring each zone to

benchmark values. All active restoration management actions (see table 7 BAM) to improve biodiversity values will need to be approved through the consent authority (BCD) and will require greater costs of establishment (the Total Fund Deposit paid at the time of establishment to account for in perpetuity management of the offset site).

- The credits generated by each zone reflect the zone's ability to improve. Hence if actual plot data shows zones are in better condition than assumed by this assessment, less credits may be generated.

## Credits Predicted to be Generated

The proposed stewardship site (370 ha in total) is predicted to generate the following ecosystem credits;

- PCT 1303 is generating 378 credits
- PCT 281 is generating 1446 credits
- PCT 1610 is generating 495 credits
- The Large-bent wing Bat is predicted to generate 984 credits

A summary of the preliminary results from the BAM calculator are presented in Table 4 below:

Table 4 Credits generated for Wollar Solar Farm residual areas

Entity	Offset Area (ha)	Credits
<b>PCT 1303 White Box - Grey Gum - Kurrajong grassy woodland on slopes of the northern Capertee Valley, Sydney Basin Bioregion</b>	<b>51.8</b>	<b>378</b>
<b>PCT 281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion</b>	<b>226.5</b>	<b>1446</b>
<b>PCT 1610 White Box - Black Cypress Pine shrubby woodland of the Western Slopes</b>	<b>91.5</b>	<b>495</b>
<b>Large Bent-wing Bat (assumed to occur in Vegetation Zones 1, 5, 9 &amp; 10).</b>	<b>175.6</b>	<b>984</b>

In comparison to the offset requirement, a surplus is expected for all PCTs and one species:

Table 5 Credit comparison showing a credit surplus (net credits)

Entity	Required credits	Estimated credits generated	Net credits
PCT 1303 or 281	711	1824	+ 1113
PCT 1610	2	495	+ 493
Large-eared Pied Bat	50	984	+ 934
Other Species credits (3 flora species, 8 fauna species)	494	0	- 494

Table 6 Predicted deficit for the following species credits

Species Credit Species	Deficit Credits; must be purchased
Austfeld's Wattle ( <i>Acacia ausfeldii</i> )	34
Bush Stone-curlew ( <i>Burhinus grallarius</i> )	34
Gang-gang Cockatoo ( <i>Callocephalon fimbriatum</i> )	182
<i>Commersonia procumbens</i>	2
Large-leafed Monotaxis ( <i>Monotaxis macrophylla</i> )	34
Barking Owl ( <i>Ninox connivens</i> )	36
Powerful Owl ( <i>Ninox strenua</i> )	36
Squirrel Glider ( <i>Petaurus norfolcensis</i> )	34
Brush-tailed Phascogale ( <i>Phascogale tapoatafa</i> )	32
Koala ( <i>Phascolarctos cinereus</i> )	34
Masked Owl ( <i>Tyto novaehollandiae</i> )	36

## Discussion

Surplus ecosystem credits are predicted. If field validated data confirms the predicted surplus there is potential to either:

- Reduce the size of the offset site, to meet the credit requirement exactly.
- Offer surplus credits for sale on the credit register. This relies on demand for the credits to be a viable financial proposition.

The Stewardship site boundaries will be refined based on further surveys and in consultation with the landowner.

Intensive management of the stewardship site (to improve its vegetation integrity scores) has been assumed during the preliminary desktop assessment (Step 1) to increase the biodiversity gains for all vegetation zones onsite. If a stewardship site agreement was completed, then additional management actions beyond what is a 'required management action' (in accordance with table 6 of the BAM) would need to be described and justified to result in the generation of more credits supported by a suitable 'management plan' detailing active management actions. The proposed management actions would need to be endorsed by the BCT and funded within the Total Fund Deposit for the approval of the stewardship site.

Species credits were only considered for Large-eared Pied Bat (and not other species credits) because it was the only candidate species (outlined in BDAR Ver 2) confirmed to be present during past targeted surveys. There is some potential to detect large forest owls using targeted surveys (or expert reports). This would be investigated further in the BSSAR.

The estimation of credits (in Table 5) is based on entering existing data into the BAM calculator. Confirmation of Stewardship site vegetation zone boundaries and collection of field plot data and targeted surveys will be required for a stewardship site assessment and is proposed as part of Step 3. It is

acknowledged that the BAM calculator is regularly updated and credits generated would not be considered final until the Biodiversity Stewardship Site Assessment Report is lodged and accepted by with the BCT.

Regarding species credits, further work is required to investigate one or more of the following in order to meet deficits in species credits ( shown in Table 6):

- i. Establishing additional stewardship sites to meet deficit credit requirements (considered highly unlikely, given time-frames and significant number of species credits required)
- ii. Negotiated trades through the credit market (preferred)
- iii. Paying into the fund (fall back option as this is most expensive and does not support local biodiversity outcomes).

## Conclusion

It is believed that the results from the Step 1 Desktop study confirm a very high likelihood that sufficient ecosystem credits could be generated by the proposed stewardship site to meet NSW and Commonwealth offset obligations.

Further works would need to be conducted, including Steps 2, Step 3 and Step 4, in order to establish a stewardship agreement and retire of any deficit credits, either via a negotiated trade on the credit market or paying into the BCF.

This process relies on an estimated timeframe of 18 months.

## References

NGH 2019 v2, Wollar Solar Farm BDAR, prepared for WSFPL, October 2019.

NGH 2020a v3, Wollar Solar Farm BDAR, prepared for WSFPL, May 2020.

NGH 2020b. Wollar Solar Farm Commonwealth Offset Strategy Outline, prepared for WSFPL, 26 March, 2020.

NGH 2020c. Wollar Solar Farm Onsite Offsets Potential, prepared for WSFPL, 9 April, 2020.