



MELBOURNE:292 Mt Alexander Road Ascot Vale VIC 3032GEELONG:PO Box 8048 Newtown VIC 3220BRISBANE:Level 22, 127 Creek Street Brisbane QLD 4000ADELAIDE:22 Greenhill Road Wayville SA 5034CANBERRA:Level 6, 39 London Circuit, Canberra ACT 2601SYDNEY: Level 5, 616 Harris Street, Ultimo, NSW, 2007www.ehpartners.com.au| 1300 839 325



DOCUMENT HISTORY

Revision	Comments	Comments updated by	Date submitted
А	-	-	20/01/2017
В	Updated in response to input from CATCON	Richard Sharp	22/02/2017
С	Updated to incorporate the civil works staging plan and aspects of Silverton Wind Farm Lease	Richard Sharp	5/03/2017
D	Updated in response to comments received from Jacobs and following consultation with OEH and DI Lands	Richard Sharp	26/03/2017
E	Updated in response to comments received from Jacobs	Richard Sharp	28/03/2017
F	Updated following a meeting with the Department of Planning and Environment	Richard Sharp	13/04/2017
G	Updated in response to comments received from the Department of Planning and Environment	Richard Sharp	23/04/2017
Н	Updated in response to further comments received from the Department of Planning and Environment	Richard Sharp	2/05/2017
0	Receipt of letter of approval	Richard Sharp	5/05/2017
1	Updated following confirmation that the Department of Planning and Environment is satisfied that construction can commence in Area 7	Richard Sharp	20/02/2018

DOCUMENT APPROVAL

Revision	Approving Authority	Name	Date Approved
0	As nominee of the Secretary, Department of Planning and Environment	David Kitto	5/05/2017
1	As nominee of the Secretary, Department of Planning and Environment	<mark>[insert]</mark>	<mark>[insert]</mark>

Copyright © Ecology and Heritage Partners Pty Ltd

This document is subject to copyright and may only be used for the purposes for which it was commissioned. The use or copying of this document in whole or part without the permission of Ecology and Heritage Partners Pty Ltd is an infringement of copyright.

Disclaimer

Although Ecology and Heritage Partners Pty Ltd have taken all the necessary steps to ensure that an accurate document has been prepared, the company accepts no liability for any damages or loss incurred as a result of reliance placed upon the report and its contents.



CONTENTS

1		INT	RODUCTION	5
	1.1	1	Silverton Wind Farm Works	5
	1.2	2	Requirement for this Biodiversity Management Plan	5
	1.3	3	Scope of this Biodiversity Management Plan	5
2		CON	NSULTATION	7
	2.2	1	Office of Environment and Heritage	7
	2.2	2	Department of Industry – Lands	7
	2.3	3	Local leaseholders	7
3		VEG	GETATION COMMUNITIES AND KEY FAUNA HABITAT	8
	3.2	1	Vegetation communities	8
	3.2	2	Key fauna habitat	8
4		ARE	AS ON SITE TO BE DISTURBED	9
	4.2	1	Disturbance from roads	9
	4.2	2	Prior to disturbance	0
5		ME	ASURES FOR BIODIVERSITY1	2
	5.2	1	Minimising the amount of clearing 1	3
	5.2	2	Minimising the loss of key fauna habitat1	3
	5.3	3	Minimising the impacts on fauna on site1	6
	5.4	4	Rehabilitating and revegetating temporary disturbance areas1	7
	5.5	5	Protecting vegetation and fauna habitat outside1	7
	5.6	6	Maximising the salvage of resources1	8
	5.7	7	Collecting and propagating seed1	9
	5.8	8	Controlling weeds and feral pests1	9
	5.9	9	Controlling erosion 2	0
	5.2	10	Controlling access 2	1
	5.2	11	Bushfire management 2	2
6		POR	CUPINE GRASS SPARSE WOODLAND23	3
7		BAR	RIER RANGE DRAGON	4
8		GOA	ATS2	5



9 VEGETATION	26
10 MONITORING AND REPORTING	27
10.1 Monitoring the management of biodiversity	27
10.2 Reporting on the management of biodiversity	
11 REFERENCES	32
APPENDIX A: MAP OF VEGETATION COMMUNITIES	33
APPENDIX B: MAP OF KEY FAUNA HABITAT	34
APPENDIX C: ROAD MASTER PLAN	35
APPENDIX D: BARRIER RANGE DRAGON MANAGEMENT PLAN	36
Figure 1: Ground Disturbance Permit Process Flowchart	
Table 1: Condition 18 of schedule 3 of the MOD 3 project approval	6
Table 2: Measures to minimise the amount of clearing	
Table 3: Measures to minimise the loss of key fauna habitat	15
Table 4: Measures to minimise the impacts on fauna on site	
Table 5: Measures for rehabilitating and revegetating temporary disturbance areas	17
Table 6: Measures for protecting vegetation and fauna habitat outside the disturbance area	
Table 7: Measures for maximising the re-use of resources for fauna habitat	19
Table 8: Measures for collecting and propagating seed	
Table 9: Measures for controlling weeds and feral pests	20
Table 10: Measures for controlling erosion	21
Table 11: Measures for controlling access	22
Table 12: Measures for bushfire management	22

 Table 13: Program for monitoring and reporting on biodiversity measures
 27





1 INTRODUCTION

1.1 Silverton Wind Farm Works

Silverton Wind Farm Works involves the construction of 58 GE 3.43-130 wind turbines, access roads, 33kV electrical reticulation, 33kV substation and associated infrastructure on a site located on the Barrier Ranges of western New South Wales (NSW) approximately 5km north of the Silverton township and 25km northwest of Broken Hill. The works is to be delivered by GE-CATCON, a joint venture providing engineering, procurement and construction services to the Silverton Wind Farm project.

1.2 Requirement for this Biodiversity Management Plan

This Biodiversity Management Plan (BMP) for the Silverton Wind Farm Works has been prepared in response to condition 18 of schedule 3 of the third modification of the project approval (hereafter referred to as MOD 3) which was issued by the Planning Assessment Commission of NSW on the 22 December 2016. The details of condition 18 of schedule 3 of the MOD 3 project approval are presented in Table 1. This BMP should be read in conjunction with the Construction Environmental Management plan (CEMP).

1.3 Scope of this Biodiversity Management Plan

This BMP applies to the works phase of the wind farm which will be from May 2017 to July 2018. Originally, this BMP did not cover Area 7 which included the proposed wind turbines (T28 to T35), the underground and overhead electricity transmission lines and the internal roads in the Porcupine Grass Sparse Woodland. This portion of the works was put on hold. Access to this locality (Area 7) was temporarily restricted to ensure that the ground was not unnecessarily disturbed to allow a detailed site investigation to be undertaken prior to preparing the final design for the wind farm infrastructure. The final design for Area 7 needed to be precise in order to comply with the project approval requirement that that no more than 0.81 hectares of Porcupine Grass Sparse Woodland was to be cleared during the construction of the wind farm. As a result of a detailed site investigation of Area 7 however, the Secretary of the Department of Planning and Environment (DPE) has now agreed that the total area of Porcupine Grass Sparse Woodland that can be cleared is to be 6.81 hectares.



Table 1: Condition 18 of schedule 3 of the MOD 3 project approval

Condition Description	ВМР
Prior to the commencement of construction, the Proponent must prepare a Biodiversity Management Plan for the project in consultation with OEH, DI Lands and local leaseholders on site, and to the satisfaction of the Secretary. This plan must:	Refer to Section 2
(a) include updated baseline mapping of the vegetation communities and key fauna habitat onsite;	Refer to Section 3
(b) clearly identify the areas on site that would be disturbed;	Refer to Section 4
(c) include a:	
• description of the measures that would be implemented for:	
- minimising the amount of clearing within the approved project footprint;	
- minimising the loss of key fauna habitat;	
- minimising the impacts on fauna on site, including undertaking pre-clearance surveys;	
 rehabilitating and revegetating temporary disturbance areas; 	
- protecting vegetation and fauna habitat outside the approved disturbance area;	
 maximising the salvage of resources within the approved disturbance area - including rocks, vegetation and soil resources - for beneficial reuse (including revegetation and fauna habitat enhancement) on site; 	
 collecting and propagating seed (where relevant); 	
 controlling weeds and feral pests; 	
- controlling erosion;	Refer to Section 5
- controlling access; and	
- bushfire management;	
• Recovery Plan for enhancing the conservation value of the Porcupine Grass Sparse Woodland CEEC on site, that includes:	
- baseline data on the vegetation and fauna habitat within the community; and	
 detailed performance and completion criteria for evaluating the performance of the enhancement activities; 	
• Barrier Range Dragon Management Plan for minimising any impacts on the species on site and enhancing the potential habitat for this species;	
Goat Management Plan for the site;	
• Vegetation Management Plan for restoring vegetation and habitat in the temporary disturbance areas and clearing vegetation for transmission line maintenance; and	
• include a detailed program to monitor and report on the performance of these measures.	
Following the Secretary's approval, the Proponent must implement the Biodiversity Management Plan.	Refer to Page 2



2 CONSULTATION

2.1 Office of Environment and Heritage

In accordance with the requirements of condition 18 of schedule 3 of the MOD 3 project approval, the Office of Environment and Heritage (OEH) were consulted about this BMP on the 8 March 2017. As a result of this consultation, OEH provided GE-CATCON with a letter dated the 24 March 2017. Relevant aspects of this letter have been taken into consideration when preparing this BMP.

2.2 Department of Industry – Lands

In accordance with the requirements of condition 18 of schedule 3 of the MOD 3 project approval, the Department of Industry – Lands (DI Lands) was consulted about this BMP. As a result of this consultation, DI Lands provided GE-CATCON with a letter dated 17 March 2017. Relevant aspects of this letter have been taken into consideration when preparing this BMP.

2.3 Local leaseholders

In accordance with the requirements of condition 18 of schedule 3 of the MOD 3 project approval, local leaseholders were consulted about this BMP.



3 VEGETATION COMMUNITIES AND KEY FAUNA HABITAT

3.1 Vegetation communities

In accordance with the requirements of condition 18(a) of schedule 3 of the MOD 3 project approval, a baseline map of the vegetation communities on site has been included in this BMP at Appendix A. Although this map contains comprehensive detailed vegetation of the entire site and consequently was appended to the MOD 3 project approval, GE-CATCON intends to update this map as part of ongoing revisions to this BMP.

3.2 Key fauna habitat

In accordance with the requirements of condition 18(a) of schedule 3 of the MOD 3 project approval, a baseline map of key fauna habitat on site has been included in this BMP at Appendix B. Although this map contains comprehensive detailed threatened species habitat information of the entire site and consequently was appended to the MOD 3 project approval, GE-CATCON intends to update this map as part of ongoing revisions to this BMP.

Further updates to this key fauna habitat map will focus on nest sites and other habitat resources of at-risk bird and bat species. This baseline information is currently being compiled by the Principal on the basis that it is needed for the Bird and Bat Adaptive Management Plan (BBAMP). A final version of BBAMP was submitted to the Secretary of the DPE, prior to the erection of any wind turbines.





4 AREAS ON SITE TO BE DISTURBED

4.1 Disturbance from roads

Condition 18(b) of schedule 3 of the MOD 3 project approval requires that the BMP clearly identify the areas on site that would be disturbed. Provided at Appendix C is a Road Master Plan which clearly identifies the roads as being the largest component of the disturbance on the site. Other elements shown on the Road Master Plan which involve smaller amounts of disturbance include the following:

- Turbine locations
- Operations and maintenance building
- Substation
- Meteorological masts.
- Underground cable
- Overhead cable
- Power poles
- Concrete batch plant
- Construction compound

As part of managing biodiversity across the site, engineers who are designing the works will incorporate the biodiversity constraints into the final design. The design engineers will ensure that:

- No more than 6.81 hectares of Porcupine Grass Sparse Woodland Critically Endangered Ecological Community will be disturbed according to the design;¹
- No more than 0.54 hectares of the Mulga/Red Mallee Shrubland and Chenopod Red Mallee Woodland/Shrubland will be disturbed according to the design, unless the Secretary of the DPE agrees otherwise;
- The design location of the wind turbines are as far as possible, but at least 200 metres, from raptor nests unless the Secretary of the DPE agrees otherwise;
- No works are designed to occur in the mapped Barrier Range Dragon habitat hotspots;
- The design location of the wind turbines are as far as practicable away from treed vegetation, rocky outcrops, caves or disused mine shafts/sites;
- The design for the works minimises the impacts on the Barrier Range Dragon by avoiding, where possible, potential dragon habitat;

¹ The total amount of Porcupine Grass Sparse Woodland that could be cleared under the MOD 3 project approval issued in December 2016 was 0.81 hectares. In December 2017, the Secretary of the Department of Planning and Environment agreed to increase this total amount to 6.81 hectares.



- The design for the works minimises impacts on threatened bird and bat populations, by avoiding where possible, treed vegetation, rocky outcrops, caves or disused mine shafts/sites;
- The design for the works minimises the clearing of native woodland vegetation and fauna habitat, in particular spinifex habitat, standing dead trees and woody habitat and high biodiversity value vegetation communities; and
- The works enhance the Porcupine Grass Sparse Woodland Critically Endangered Ecological Community through the careful positioning by design of the access roads, power poles and underground cables.

The final design is reviewed by the Project Manager, in consultation with the Design Consultants, to ensure that those areas which cannot be avoided, the impacts are minimised. The final design is then issued to the Principal's Representative for review and approval. Once approval from the Principal is obtained, a set of Issued for Construction (IFC) drawings, incorporating the biodiversity constraints, will be issued to the workforce for construction.

4.2 Prior to disturbance

Prior to any ground disturbance on site, works staff are required to obtain a Ground Disturbance Permit (GDP) (Form EF-10) from CATCON. A GDP applies to any ground disturbance that will occur during the works and is meant to ensure the following:

- There is no clearing beyond the approved disturbance area;
- There is no loss of key fauna habitat beyond the approved disturbance area;
- The presence of any Porcupine Grass Sparse Woodland in the approved disturbance area is known;
- No Barrier Range Dragon habitat hotspots are present in the approved disturbance area;
- The boundary of the disturbance area is identifiable before the works commence; and
- Erosion and sediment controls are installed in the disturbance area before the works commence.

There are six key elements to the GDP process as outlined in the following questions and the following flowchart:

- 1. Does the work within the defined locality require a GDP?
- 2. Has the Site Manager, Works Engineer or Works Supervisor prepared a GDP request?
- 3. Has the Project Manager or HSE Manager/Advisor approved the GDP request?
- 4. Has the Works Supervisor briefed relevant site staff on the conditions of the GDP including the control measures that needs to be implemented prior to the commencement of the works?
- 5. Has the disturbance area to which the GDP applies been checked as part of the weekly/monthly environmental inspections?
- 6. Has the Site Manager, Works Engineer or Works Supervisor returned the GDP to either the Project Manager or HSE Manager/Advisor at the completion of the works?





Figure 1: Ground Disturbance Permit Process Flowchart



5 MEASURES FOR BIODIVERSITY

In accordance with the requirements of condition 18(c) of schedule 3 of the MOD 3 project approval, the BMP must include descriptions of measures that are to be implemented for each of the following matters:

- Minimising the amount of clearing within the approved project footprint;
- Minimising the loss of key fauna habitat;
- Minimising the impacts on fauna on site, including undertaking pre-clearance surveys;
- Rehabilitating and revegetating temporary disturbance areas;
- Protecting vegetation and fauna habitat outside the approved disturbance area;
- Maximising the salvage of resources within the approved disturbance area including rocks, vegetation and soil resources for beneficial reuse (including revegetation and fauna habitat enhancement) on site;
- Collecting and propagating seed (where relevant);
- Controlling weeds and feral pests;
- Controlling erosion;
- Controlling access; and
- Bushfire management.

Descriptions of measures for each of these matters are presented in Tables 2 to 9. These measures are of two types.

- 1. Measures chosen by GE-CATCON in response to Statement of Commitments (SOC) that was issued on the 17 March 2009 for the Silverton Wind Farm.
- 2. Measures chosen by GE-CATCON which are considered standard construction practice for a wind farm project.



5.1 Minimising the amount of clearing

GE-CATCON intends to minimise the amount of clearing in a manner which accords with the following principals:

- Have the road layout that follows existing tracks, where possible
- Position temporary facilities on already cleared areas, where possible
- Only clear areas approved for disturbance

5.2 Minimising the loss of key fauna habitat

GE-CATCON intends to minimise the loss of key fauna habitat in a manner which accords with the following principals:

- Avoid, where possible, potential dragon habitat (significant rocky outcrops)
- Position temporary facilities on already cleared areas, not on potential dragon habitat
- Only remove potential dragon habitat if disturbance is approved



Table 2: Measures to minimise the amount of clearing

ID	Туре	Measure	Responsibility
1	SOC17 Design infrastructure layout to minimise clearing.	Where possible, the new wind farm roads and cable routes will be designed to be along existing vehicle tracks or fence lines to minimise clearing of native woodland vegetation and fauna habitat, in particular spinifex habitat, standing dead trees and woody habitat and high biodiversity value vegetation communities.	Design Consultant
2	SOC17 Confine works wherever practical to cleared or sparsely vegetated areas.	Where possible, the construction compound, the batch plant, the substation, the O&M building and the power poles for the overhead cable will be deigned to be located in cleared or sparsely vegetated areas.	Design Consultant
3	Standard Construction Practice	Prior to any disturbance works, the disturbance area boundary will be pegged every 50 - 100 metres (including on both sides of the road alignment); the distance between pegs maybe extended in areas of extended lines of sight (i.e. approx. 200 metres between pegs). Previously identified State sensitive areas located within 20 metres of the construction activities will be have appropriate demarcation and signage Once the footprint of the disturbance area is established, an Ecologist (or delegate) will walk the alignment to inspect all construction areas prior to the works commencing to review potential habitats. During the undertaking of the clearing works, a Spotter will work with the Plant Operator to ensure that the plant remains within the clearing zone. When undertaking construction activities in Area 7, works will be supervised by an ecologist from Biosis and there will also be full demarcation of the disturbance footprint	Site Construction Manager
4	Standard Construction Practice	Prior to any clearing, staff will be required to obtain a Ground Disturbance Permit.	Site Construction Manager
5	SOC18 (mod) Use existing clearings wherever practical for materials lay down, stockpiling and the deposition and retrieval of spoil. Stockpiles would be located appropriately, to minimise impacts on native vegetation, soils and land forms and drainage lines. They would preferentially be placed in existing areas of disturbance or poor quality vegetation and would be stabilised.	Only disturbed areas will be used for materials lay-down and spoil stockpiles.	Site Construction Manager



Table 3: Measures to minimise the loss of key fauna habitat

ID	Туре	Measure	Responsibility
6	Standard Construction Practice	The final design will show where there is a need to remove key fauna habitat (i.e. Potential Dragon Habitat).	Design Consultant
7	SOC19 (mod) Implement weed and sediment erosion controls to minimise onsite habitat degradation resulting from the proposed works. This would include a weed hygiene process.	No earthmoving equipment is permitted on the site unless it has been inspected and confirmed to be free of dirt and mud which may contains weed seeds and vegetative material such as bulbs, root fragments, tubers or rhizomes.	Site Construction Manager
8	Standard Construction Practice	Prior to any disturbance works, the disturbance area boundary will be pegged every 50 - 100 metres (including on both sides of the road alignment); the distance between pegs maybe extended in areas of extended lines of sight (i.e. approx. 200 metres between pegs). Previously identified State sensitive areas located within 20 metres of the construction activities will be have appropriate demarcation and signage Once the footprint of the disturbance area is established, an Ecologist (or delegate) will walk the alignment to inspect all construction areas prior to the works commencing to review potential habitats. During the undertaking of the clearing works, a Spotter will work with the Plant Operator to ensure that the plant remains within the clearing zone. When undertaking construction activities in Area 7, works will be supervised by an ecologist from Biosis and there will also be full demarcation of the disturbance footprint.	Site Construction Manager
9	Standard Construction Practice	Prior to any works, erosion and sediment controls will be installed to minimise the loss of any nearby key fauna habitat (i.e. Barrier Range Dragon Habitat Hotspots & Potential Dragon Habitat).	Site Construction Manager
10	Standard Construction Practice	Prior to any removal of significant rock outcrops, staff will be required to obtain a Ground Disturbance Permit.	Site Construction Manager



5.3 Minimising the impacts on fauna on site

GE-CATCON intends to minimise the impacts on fauna on site in a manner which accords with the following principals:

- Stop work momentarily should vertebrate fauna be observed within the disturbance area and allow the fauna sufficient time to move out of the disturbance area
- Only undertake works in areas approved for disturbance

Table 4: Measures to minimise the impacts on fauna on site

ID	Туре	Measure	Responsibility
11	SOC49 (SOC40) Avoid significant clusters of rocks and boulders where these provide shelter to threatened fauna. Where rocks and boulders cannot be avoided, they should be placed directly adjacent to the works area to preserve the availability of refuge.	The final design will show significant rock outcrops and where the works will impact such outcrops.	Design Consultant
12	Standard Construction Practice	Work will stop should vertebrate fauna be observed within the disturbance area to allow the vertebrate fauna to move out of the disturbance area.	Site Construction Manager
13	Standard Construction Practice	The speed limit on the site entrance road will be limited to 40 km/h to minimise collisions between construction traffic and vertebrate fauna.	Site Construction Manager
14	Standard Construction Practice	The speed limit on the wind farm roads within the site will be limited to 20 km/h to minimise collisions between construction traffic and vertebrate fauna.	Site Construction Manager
15	Standard Construction Practice	Road Management Zones (RMZ) will be implemented as directed by the GE-CATCON Ecologist (or delegate) between 1 Oct 17 – 31 Mar 18 in areas effecting/impacting on the Tawny Rock Dragon	Site Construction Manager
16	Standard Construction Practice	No workers will be permitted to bring dogs onto the site since dogs can cause harm to fauna.	Site Construction Manager
17	Standard Construction Practice	All food waste will be disposed of in covered waste bins since food waste can cause harm to fauna.	Site Construction Manager
18	SOC51 (SOC42) Open trenches required for the installation of cabling for the minimal period practical. Check trenches at first light and remove any trapped fauna.	Any cable trenches left open overnight will be checked after 7 am the following day for any trapped vertebrate fauna.	CPP HSE Manager



5.4 Rehabilitating and revegetating temporary disturbance areas

GE-CATCON intends to rehabilitate and revegetate temporary disturbance areas in a manner which accords with the following principals:

- Rehabilitate temporary disturbance areas as soon as possible
- Revegetate temporary disturbance areas with locally endemic plant species

Table 5: Measures for rehabilitating and revegetating temporary disturbance areas

ID	Туре	Measure	Responsibility
19	Standard Construction Practice	Progressive rehabilitation will occur, as soon as reasonably practicable.	Site Construction Manager
20	Standard Construction Practice	Checks will be made to ensure that minimal dust is being generated, soil is being eroded and declared weeds are invading those parts of the site that cannot yet be permanently rehabilitated.	Site Construction Manager

5.5 Protecting vegetation and fauna habitat outside

GE-CATCON intends to protect vegetation and fauna habitat outside the disturbance area in a manner which accords with the following principal:

• Works will only be undertaken in areas approved for disturbance



ID	Туре	Measure	Responsibility
21	Standard Construction Practice	Prior to any disturbance works, the disturbance area boundary will be pegged every 50 - 100 metres (including on both sides of the road alignment); the distance between pegs maybe extended in areas of extended lines of sight (i.e. approx. 200 metres between pegs). Previously identified State sensitive areas located within 20 metres of the construction activities will be have appropriate demarcation and signage	Site Construction Manager
		Once the footprint of the disturbance area is established, an Ecologist (or delegate) will walk the alignment to inspect all construction areas prior to the works commencing to review potential habitats.	
		During the undertaking of the clearing works, a Spotter will work with the Plant Operator to ensure that the plant remains within the clearing zone.	
		When undertaking construction activities in Area 7, works will be supervised by an ecologist from Biosis and there will also be full demarcation of the disturbance footprint.	
22	Standard Construction Practice	Prior to any works, staff will be required to obtain a Ground Disturbance Permit.	Site Construction Manager

Table 6: Measures for protecting vegetation and fauna habitat outside the disturbance area

5.6 Maximising the salvage of resources

GE-CATCON intends to maximise the salvage of resources for fauna habitat in a manner which accords with the following principals:

- Excess soil should not be removed from site and should be melded back into the landscape
- Excess rock should not be removed from site and should be melded back into the landscape



Table 7: Measures for maximising the re-use of resources for fauna habitat

ID	Туре	Measure	Responsibility
23	SOC27 (add) Habitat creation would be undertaken when excavating turbine footings and vehicular tracks by utilising any excess rock (rock not utilised during construction). In order of priority, suitably sized excess rock waste should be placed into rock piles in the vicinity of: Turbines Hotspots (not within the hotspot, but adjacent to) Vehicular tracks As a general guide, rock piles should be between 0.5 – 1 metres in height and cover an area as large as 4 x 4 meters in area. Multiple rock piles can be provided if excess rock waste allows. Soil should not be mixed in with or placed onto these rock piles.	If there is suitably sized waste rock from the excavated turbine footings and wind farm roads, then consideration will be given to creating habitat. Habitat creation will only occur if there is space within the disturbance area in the vicinity of the turbines and alongside the wind farm access roads and that this work does not impede the future operations of the wind farm.	Site Construction Manager
24	Standard Construction Practice	Any excess soil and rock will be re-distributed within the disturbance area as part of the rehabilitation process.	Site Construction Manager

5.7 Collecting and propagating seed

GE-CATCON intends to collect and propagate seed in a manner which accords with the following principals:

- Local is best
- Seed variety means species balance

Table 8: Measures for collecting and propagating seed

ID	Туре	Measure	Responsibility
25	Standard Construction Practice	When appropriate and if practical, seed will be collected from native woodland vegetation that is cleared in the disturbance area and used for rehabilitation purposes.	Environmental Consultant

5.8 Controlling weeds and feral pests

GE-CATCON intends to control weeds and feral pests in a manner which accords with the following principals:

- Declared weeds are priority weeds
- Pest animals with control orders are the most important



Table 9: Measures for controlling weeds and feral pests

ID	Туре	Measure	Responsibility
26	SOC19 (mod) Implement weed controls to minimise onsite habitat degradation resulting from the proposed works. This would include a weed hygiene process.	No earthmoving equipment is permitted on the site unless it has been inspected and confirmed to be free of dirt and mud which may contains weed seeds and vegetative material such as bulbs, root fragments, tubers or rhizomes.	Site Construction Manager
27	SOC21 (add) Laydown sites for excavated spoil, equipment and construction materials would be selected as being weed free sites or treated for weeds if required, prior to their use.	Only use disturbed areas, as designated by the 'construction issue' drawings, will be used for materials lay down and spoil stockpiles.	Site Construction Manager
28	SOC33 (SOC24) (mod) Source imported materials such as sand and gravel from certified sources, free from noxious weeds and Phytophthora infection.	Weed free certificates will be obtained from suppliers of imported materials such as sand and gravel.	Site Construction Manager
29	SOC34 (SOC25) Undertake post-construction weed monitoring after the first significant rainfall event to ensure that no weed infestations have resulted from the works.	Post-construction weed monitoring after the first significant rainfall event will be undertaken to verify if declared weeds have invaded the rehabilitated areas.	Site Construction Manager
30	Standard Construction Practice	If required, a licenced contractor will be engaged to control declared weeds that are a significant problem on the site.	Site Construction Manager
31	Standard Construction Practice	If required, a licensed contractor will be engaged to control pests for which a state control order exists, and that the pest is a significant problem on the site.	Site Construction Manager

5.9 Controlling erosion

GE-CATCON intends to control erosion in a manner which accords with the following principals:

- Soil means life
- Soil is invaluable



Table 10: Measures for controlling erosion

ID	Туре	Measure	Responsibility
32	Standard Construction Practice	Soil and water management practices will be complaint with the Blue Book - Soils and Construction, Vol 2C (Landcom 2004).	Site Construction Manager
33	Standard Construction Practice	No impacts caused by soil erosion and sedimentation onto adjoining land, drainage systems and receiving waters such as creeks, rivers and waterways will be permitted.	Site Construction Manager
34	Standard Construction Practice	Erosion and sediment control measures to divert uncontaminated run off from outside the work and clear of the work will be undertaken.	Site Construction Manager
35	Standard Construction Practice	Erosion and sediment control measures to pass uncontaminated water through the work without mixing with contaminated runoff from the work will be permitted.	Site Construction Manager
36	Standard Construction Practice	Erosion and sediment control measures to prevent contaminated water leaving the site will be implemented.	Site Construction Manager
37	Standard Construction Practice	Erosion and sediment control measures will be undertaken on re-vegetated disturbed areas.	Site Construction Manager
38	Standard Construction Practice	Erosion and sediment control measures will be undertaken to minimise scouring and loss of road surface material.	Site Construction Manager
39	Standard Construction Practice	Erosion and sediment control measures to prevent the removal of fines from the road base will be implemented.	Site Construction Manager
40	Standard Construction Practice	Temporary erosion and sediment controls will be installed at the locations as identified in the Erosion and Sediment Control Plans.	Site Construction Manager
41	Standard Construction Practice	Regular evaluation and update of the Erosion and Sediment Control Plans will occur.	Site Construction Manager
42	Standard Construction Practice	Regular maintenance or replacement of temporary erosion and sediment controls to minimise potential harm to the environment in the form of water pollution will occur.	Site Construction Manager

5.10 Controlling access

GE-CATCON intends to control access in a manner which accords with the following principals:

- Controlled access means controlled safety
- Minimal vehicle movements means minimal impacts



Table 11: Measures for controlling access

ID	Type Measure		Responsibility
43	Standard Construction Practice	Signage will be erected to inform workers and the public about where the site can be accessed.	Site Construction Manager
44	Standard Construction Practice	Signage will be erected which indicates that all persons visiting the site must register at the site office.	Site Construction Manager

5.11 Bushfire management

GE-CATCON intends to manage bushfires in a manner which accords with the following principals:

- Know the risk
- Be prepared

Table 12: Measures for bushfire management

ID	Туре	Measure	Responsibility
45	Standard Construction Practice	Provisions for asset protection in accordance with the Rural Fire Service's (RFS) Planning for Bushfire Protection 2006 will be installed and suitable equipment to respond to any fires on site will be provided.	Site Construction Manager
46	Standard Construction Practice	Procedures will be developed to manage potential fires on site, in consultation with the RFS	Site Construction Manager
47	Standard Construction Practice	Assistance will be provided to the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site	Site Construction Manager
48	Standard Construction Practice	No construction activities will occur on days when the fire danger rating for the far western fire area of NSW is 'catastrophic'	Site Construction Manager
49	Standard Construction Practice	No earthworks involving blasting, drilling, hammering, dozing or grading will occur on days declared a 'Total Fire Ban'	Site Construction Manager
50	Standard Construction Practice	Construction vehicles and mobile plant will carry a fire extinguisher which is in a good and efficient working condition	Site Construction Manager



6 PORCUPINE GRASS SPARSE WOODLAND

According to the Statement of Commitments issued on the 17 March 2009 for the Silverton Wind Farm, a recovery plan for the Porcupine Grass - Red Mallee - Gum Coolibah hummock grassland vegetation community is required for the operational phase of the project. Consequently, there is no recovery plan included with this BMP which only applies to the works phase associated with the construction of 58 wind turbines.

To ensure compliance with condition 18 of schedule 3 of the MOD 3 project approval however, a recovery plan for the Porcupine Grass - Red Mallee - Gum Coolibah hummock grassland vegetation community must be prepared in consultation with OEH, the DI Lands and local leaseholders on site. In December 2017, a draft version of the recovery plan was submitted to the Secretary of the DPE.



7 BARRIER RANGE DRAGON

In accordance with the requirements of condition 18(c) of schedule 3 of the MOD 3 project approval, a Barrier Range Dragon Management Plan (BRDMP) for minimising any impacts on the species on the wind farm site and enhancing the potential habitat for this species is to be included with the BMP. A BRDMP for the works phase of the project is provided at Appendix D and describes the activities to minimise any impacts on the Barrier Range Dragon and to enhance the potential habitat for the Barrier Range Dragon during the construction of 58 wind turbines.



8 GOATS

According to the Statement of Commitments issued on the 17 March 2009 for the Silverton Wind Farm, a Goat Management Plan (GMP) is required for the operational phase of the project. Consequently, there is no GMP included with this BMP which only applies to the works phase associated with the construction of 58 wind turbines.

To ensure compliance with condition 18 of schedule 3 of the MOD 3 project approval however, a GMP must be prepared in consultation with OEH, DI Lands and local leaseholders. In December 2017, a draft version of the GMP was submitted to the Secretary of the DPE.



9 VEGETATION

According to the Statement of Commitments issued on the 17 March 2009 for the Silverton Wind Farm, a Vegetation Management Plan (VMP) is required for the operational phase of the project. Consequently, there is no VMP included with this BMP which only applies to the works phase associated with the construction of 58 wind turbines.

To ensure compliance with condition 18 of schedule 3 of the MOD 3 project approval however, the VMP will be prepared in consultation with OEH, DI Lands and local leaseholders on site. The VMP will be submitted to the Secretary of the DPE, before the wind farm is operational.



10 MONITORING AND REPORTING

10.1 Monitoring the management of biodiversity

In accordance with the requirements of condition 18(c) of schedule 3 of the MOD 3 project approval, presented in Table 13 is a program for monitoring the performance of the measures.

The baseline monitoring conducted as part of the EA will be continued during the operational phase of the project with further details of the baseline monitoring program included in the BMP developed for the operations. In December 2017, a draft version of the BMP for operations was submitted to the Secretary of the DPE.

IdDie	213: 1100	Janniorin	onitoring	and report	ing on bic	alversity in	easures

Table 4.3. Brogram for monitoring and reporting on biodiversity measures

ID	Monitoring Method	Frequency	Responsibility	Performance Criteria
1	Audit	As scheduled	QSE Manager	Final design approved
2	Audit	As scheduled	QSE Manager	Final design approved
3	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant Turbine Supplier EHS Manager	Pegs inserted, Ecologist inspection report of area, no works outside of clearing zone
4	Audit	As scheduled	QSE Manager	Ground Disturbance Permits
5	Inspections	Inspections Weekly/Monthly HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consulta		Materials/stockpiles within disturbance areas
6	Audit	As scheduled	QSE Manager	Final design approved
7	Audit	As scheduled	QSE Manager	Earthmoving equipment inspection register up-to-date
8	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Pegs inserted, Ecologist inspection report of area, no works outside of clearing zone
9	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Erosion and sediment controls installed
10	Audit	As scheduled	QSE Manager	Ground Disturbance Permits
11	Audit	As scheduled	QSE Manager	Final design approved
12	Audit	As scheduled	QSE Manager	Work stoppage records
13	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Signs erected



ID	Monitoring Method	Frequency	Responsibility	Performance Criteria
14	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Signs erected
15	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Signs erected
16	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No dogs observed
17	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No discarded food waste observed
18	Audit	As scheduled	QSE Manager	Trench inspection records
19	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Area rehabilitated
20	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No dust, soil erosion or weeds observed
21	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Pegs inserted, Ecologist inspection report of area, no works outside of clearing zone
22	Audit	As scheduled	QSE Manager	Ground Disturbance Permits
23	Audit	End of works	QSE Manager	Works 'as executed' drawings
24	Audit	End of works	QSE Manager	Works 'as executed' drawings
25	Audit	As scheduled	QSE Manager	Seed collection and usage records
26	Audit	As scheduled	QSE Manager	Earthmoving equipment inspection register
27	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant Turbine Supplier EHS Manager	Materials/stockpiles within disturbance areas
28	Audit	As scheduled	QSE Manager	Materials import register
29	Audit	Post-construction	QSE Manager	Documentary evidence of monitoring after the first significant posy-construction rainfall event
30	Audit	As scheduled	QSE Manager	Weed contractors records
31	Audit	As scheduled	QSE Manager	Pest contractors records



ID	Monitoring Method	Frequency	Responsibility	Performance Criteria
32	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Practices compliant with the Blue Book
33	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No soil erosion or sedimentation in waterways
34	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No unnecessary surface flows entering the site
35	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No unnecessary mixing and clean and sediment-laden water
36	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No sediment-laden water leaving the site
37	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Revegetated areas contain erosion and sediment controls
38	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No scouring
39	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No fines being emitted from the road base.
40	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Erosion and Sediment Control Plans illustrate situation on the site
41	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	Erosion and Sediment Control Plans regularly updated.
42	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Electrical HSE Advisor Environmental Consultant	No evidence of water pollution from soil erosion.
43	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Environmental Consultant	Signs erected
44	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Environmental Consultant	Signs erected
45	Inspections	Weekly/Monthly	HSE Advisor (CATCON) Environmental Consultant	Suitable equipment available to respond to any fires
46	Audit	As scheduled	QSE Manager	Procedures in place
47	Audit	As scheduled	QSE Manager	Records of assistance provided



ID	Monitoring Method	Frequency	Responsibility	Performance Criteria
48	Audit	As scheduled	QSE Manager	Pre-start Records
49	Audit	As scheduled	QSE Manager	Pre-start Records
50	Audit	As scheduled	QSE Manager	Plant and machinery records



10.2 Reporting on the management of biodiversity

GE-CATCON will report regularly to the Principal on aspects which are covered by this BMP. The arrangements for reporting are as follows:

- In the weekly site progress reports submitted to the Principal every Tuesday during site works covering the previous calendar week (being Monday to Sunday) provide:
 - Commentary on progress during the week which includes any biodiversity matters;
 - A risk and issues list including interfaces and list of key activities to be completed in the week ahead which includes any biodiversity matters;
 - A summary, on an exceptions reporting basis as required, of major issues occurring in the preceding week, in particular but not limited to environmental and regulatory compliance which includes and biodiversity matters; and
 - Design changes resulting from any biodiversity matters
- In the monthly progress reports submitted to the Principal 5 Business Days after every calendar month end covering that calendar month, submit a HSE report on the works which contains an incident register of actual and potential HSE incidents including:
 - Factual details of incidents (both actual and potential) which includes any biodiversity related incidents;
 - The corrective actions register (including actions from biodiversity related incident investigations, HSE audits and workplace inspections); and
 - A summary of all key correspondence with regulators, including any notices or directions issued by a regulator related to any biodiversity matter.



11 REFERENCES

- NGH Environmental, 20 July 2016, Silverton Wind Farm Modification 3 Report, Final V1 –, Prepared for AGL Energy Limited
- NSW Government, 22 December 2016, Notice of Modification Issued under Section 75W of the Environmental Planning and Assessment Act 1979 for the Silverton Wind Farm Project, Planning and Assessment Commission, Sydney

Silverton Wind Farm, Final Revised Statement of Commitments, 17 March 2009

Young, Mike. (DPE) 'to' Davorin, Jelaca. (GE) 22 December 2017. 'In' Letter titled: Silverton Wind Farm (08-0022) - Construction Activities in Area 7



APPENDIX A: MAP OF VEGETATION COMMUNITIES





VEGETATION TYPES - SOUTH

Silverton Wind Farm Mod 3

- Turbine locations for Mod 3 Vegetation types
- Access tracks
- Project area CEEC NSW TSC
- Black Bluebush Shrubland (ID153)
 - Bluebush Shrubland (ID155)
 - Chenopod Chenopod – Red Mallee Woodland/Shrubland (VEG2) River Red Gum woodland (ID41)
 - Mulga Dead finish (ID123)

- Mulga/Red Mallee Shrubland (VEG1)
- Porcupine Grass sparse woodland (ID359) (CEEC)
- Prickly wattle Shrubland (ID136)
- River Red Gum on rocky creeks
- - Notes: - Data collected by NGH Environmental (2012)
 - Client data courtesy of Client, received 2013 and 20





APPENDIX B: MAP OF KEY FAUNA HABITAT





FAUNA FEATURES - SOUTH

Silverton Wind Farm Mod 3

Turbine locations for Mod 3

Barrier Range Dragon habitat hotspots

Access tracks

Project area

Spinifex (Porcupine CEEC)

Significant rock outcrop (potential dragon habitat)

0 0.5 1 2 Kilometres A3 @ 1:46000 Ref: 5395 2b 190716 v2 Author: JB Inch environmental

Notes: - Data collected by NGH Environmental (2012) - Client data courtesy of Client, received 2013 and 201



APPENDIX C: ROAD MASTER PLAN



					SIVERTON	RÓAD			Image: Non-optimized state Image: Non-optimized state Image: Non-optized state Image: Non-optized
									© Copyright 2011
1 ISSUED FOR CONSTRUCTION (MICROSITING INCLUDED)	BJH RB RB	PB 13.11.17						DRAWN BJH	12.12.16 PROJECT SII VERTON WIND FARM
0 ISSUED FOR CONSTRUCTION (MICROSITING INCLUDED)	BJH RB RB	PB 10.10.17			VV(-jΔ		-	CHECKED	
G UPDATED ROAD LAYOUT	BJH RB RB	22.06.17				0.0	Acatoon	RB	
F UPDATED ROAD LAYOUT	BJH RB RB	24.04.17			WALLBRIDGE GILBERT Aztec	101		APPROVED D	
E NAMING CONVENTION UPDATED	BJH RB RB	24.03.17			60 Wyatt Street, Adelaide		aivil 8 allied technical construction	RB	12.12.16 ROAD MASTER PLAN & CONSTRAINTS
	BJH RB	16.03.17			South Australia 5000 Telephone 08 8223 7433			CONTRACTOR PROJ. No.	
REV DETAIL OF REVISION	RVD CHKD APP'D C		REFERENCE DRAWING	DRAWING No.	Email adelaide@wga.com.au			<u> </u>	2 AS SHOWN AUSIWF-CRI-CI-SK UUU2 1
				· · · · ·					DO NOT SCALE DRAWINGS FOR WORKING DIMENSIONS



APPENDIX D: BARRIER RANGE DRAGON MANAGEMENT PLAN



Silverton Wind Farm Works Barrier Range Dragon Management Plan GE-CATCON February 2018

Ecology and Heritage Partners Pty Ltd

MELBOURNE: 292 Mt Alexander Road Ascot Vale VIC 3032 GEELONG: PO Box 8048 Newtown VIC 3220 BRISBANE: Level 22, 127 Creek Street Brisbane QLD 4000 ADELAIDE: 22 Greenhill Road Wayville SA 5034 CANBERRA: Level 6, 39 London Circuit, Canberra ACT 2601 SYDNEY: Level 5, 616 Harris Street, Ultimo, NSW, 2007 www.ehpartners.com.au | 1300 839 325



DOCUMENT HISTORY

Revision	Comments	Comments updated by	Date submitted
А	-	-	10/02/2017
В	Updated to incorporate aspects of Silverton Wind Farm Lease	Richard Sharp	5/03/2017
С	Updated in response to comments received from Jacobs and following consultation with OEH and DI Lands	Richard Sharp	26/03/2017
D	Updated in response to comments received from Jacobs	Richard Sharp	28/03/2017
E	Updated following a meeting with the Department of Planning and Environment	Richard Sharp	13/04/2017
F	Updated in response to comments received from the Department of Planning and Environment	Richard Sharp	23/04/2017
0	Approved by the Department of Planning and Environment	Richard Sharp	5/05/2017
1	Updated in response to the change to the completion date for the works	Richard Sharp	20/02/2017

Copyright © Ecology and Heritage Partners Pty Ltd

This document is subject to copyright and may only be used for the purposes for which it was commissioned. The use or copying of this document in whole or part without the permission of Ecology and Heritage Partners Pty Ltd is an infringement of copyright.

Disclaimer

Although Ecology and Heritage Partners Pty Ltd have taken all the necessary steps to ensure that an accurate document has been prepared, the company accepts no liability for any damages or loss incurred as a result of reliance placed upon the report and its contents.



CONTENTS

1	INT	RODUCTION	4
	1.1	Silverton Wind Farm Works	. 4
	1.2	Requirement for this Barrier Range Dragon Management Plan	. 4
	1.3	Scope of this Barrier Range Dragon Management Plan	. 4
2	WН	AT IS THE BARRIER RANGE DRAGON?	5
	2.1	Description	. 5
	2.2	Conservation status	. 5
	2.3	Known locations	. 5
	2.4	Specific habitat	. 5
3	MIN	NIMISING IMPACTS	6
4	ENH	IANCING HABITAT	8
5	REF	ERENCES	9

Table 1: Measures for minimising impacts to the Barrier Range Dragon	6
Table 2: Measure for enhancing potential habitat for the Barrier Range Dragon	8



1 INTRODUCTION

1.1 Silverton Wind Farm Works

Silverton Wind Farm Works involves the construction of 58 GE 3.43-130 wind turbines, access roads, 33kV electrical reticulation, 33kV substation and associated infrastructure on a site located on the Barrier Ranges of western New South Wales (NSW) approximately 5km north of the Silverton township and 25km northwest of Broken Hill. The works is to be delivered by GE-CATCON, a joint venture providing engineering, procurement and construction services to the Silverton Wind Farm project.

1.2 Requirement for this Barrier Range Dragon Management Plan

This Barrier Range Dragon Management Plan (BRDMP) for the Silverton Wind Farm Works has been prepared in response to condition 18 of schedule 3 of the third modification of the project approval (hereafter referred to as MOD 3) which was issued by the Planning Assessment Commission of NSW on the 22 December 2016. According to condition 18(c) of schedule 3 of the MOD 3 project approval, a BRDMP for minimising any impacts on the species on site and enhancing the potential habitat for this species must be included with the Biodiversity Management Plan for the project.

1.3 Scope of this Barrier Range Dragon Management Plan

This BRDMP applies to the works phase of the wind farm which will be from May 2017 to July 2018.



2 WHAT IS THE BARRIER RANGE DRAGON?

2.1 Description

During the original environmental assessment for the Silverton Wind Farm, the dragon lizard that was discovered on the project site was thought to be the Tawny Rock Dragon (*Ctenophorus decresii*) which at the time was listed as an endangered species under then *Threatened Species Conservation Act 1995* (NSW). In 2013, the dragon lizard on the project site was recognised as being a separate species namely, the Barrier Range Dragon (*Ctenophorus mirrityana*).

According to the NSW Scientific Committee, the Barrier Range Dragon is a moderately-sized dragon lizard that is known to grow up to 266 mm in total length. Adult males vary in colour from grey-blue to very pale blue which appears bluer when the lizard is warm. Their head is usually orange around the eyes, nostrils and along the upper jaw to the neck. Females are white to cream with grey stripes on the throat and have orange flushes on the belly during the breeding season.

2.2 Conservation status

The Barrier Range Dragon is listed as endangered under the *Biodiversity Conservation Act 2016* (NSW).

2.3 Known locations

The Barrier Range Dragon occurs at the following locations which are all situated far western NSW:

- Mutawintji National Park
- Silverton Wind Farm project site
- Broken Hill
- Koonenberry Mountain

2.4 Specific habitat

The Barrier Range Dragon is believed to only inhabit rocky outcrops and can be observed during the day, basking on rocks. A map showing Barrier Range Dragon habitat hotspots and significant rock outcrops (potential dragon habitat) is provided in the *Silverton Wind Farm Works Biodiversity Management Plan*.



3 MINIMISING IMPACTS

To minimise the impact on the current population of the Barrier Range Dragon that inhabits the site, a series of measures will be implemented during the works and these are presented in Table 1.

These measures are of two types.

- 1. Measures chosen by GE-CATCON in response to Statement of Commitments (SOC) that was issued on the 17 March 2009 for the Silverton Wind Farm.
- 2. Measures chosen by GE-CATCON which are considered standard construction practice for a wind farm project.

ID	Туре	Measure	Responsibility
1	SOC25 (add) (new mod) All construction works and associated infrastructure must avoid identified Tawny Rock Dragon hotspots. People, equipment, infrastructure or materials should not impact directly or indirectly on any mapped hotspots (Map 3-4 & 3-5) of the Tawny Rock Dragon Report. For example, where track construction flanks hotspots, no spoil or sedimentation from these activities are permitted to enter the hotspot.	Relevant 'construction issue' drawings are to show mapped Barrier Range Dragon habitat hotspots and potential dragon habitat and that habitat hotspots have been avoided.	Design Consultant
2	SOC26 (add) Road management zones (RMZ) would be included in the final design and enforced during construction and maintenance activities between 1 October and 30 March inclusive when Tawny Rock Dragons are most active. Recommended maximum speed limits would also be applied.	Relevant 'construction issue' drawings are to factor into the design road management zones where proposed wind farm roads are close to a Barrier Range Dragon habitat hotspot.	Design Consultant
3	SOC29 (add) All pre, during and post construction staff should be made aware of the significance of the Tawny Rock Dragon in the study area, through education and awareness and their obligations in regard to hotspots and road management zones.	The site induction will include specific details about the significance of the Barrier Range Dragon, their habitat hotspots and the future road management zones.	QSE Manager

Table 1: Measures for minimising impacts to the Barrier Range Dragon



4	SOC53 (SOC44) Apply an appropriate buffer (50 meters) to the identified Tawny Rock Dragon habitat to ensure that it is not adversely affected.	Where appropriate and practical, a 50 metre buffer will be incorporated into the design for mapped Barrier Range Dragon habitat hotspots to safeguard the habitat hotspot from the disturbance area.	Design Consultant
5	Standard Construction Practice	Relevant 'construction issue' drawings are to show what works will result in the impact of potential dragon habitat.	Design Consultant
6	Standard Construction Practice	Prior to any ground disturbance, erosion and sediment controls are to be installed to minimise the loss of any nearby Barrier Range Dragon habitat.	Site Construction Manager
7	Standard Construction Practice	Ground Disturbance Permits to be obtained by works staff to confirm what, if any, potential dragon habitat is to be removed.	Site Construction Manager
8	Standard Construction Practice	Survey pegs will be used to identify the disturbance area so that no unnecessary impact to Barrier Range Dragon habitat occurs.	Site Construction Manager
9	Standard Construction Practice	No workers will be permitted to bring dogs onto the site since dogs can cause harm to the Barrier Range Dragon.	Site Construction Manager



4 ENHANCING HABITAT

To enhance potential habitat and therefore entice the current population of the Barrier Range Dragon to expand across the site, there is one measure that will be implemented during the works and this is presented in Table 2. This measure was chosen by GE-CATCON and is considered standard construction practice for a wind farm project.

Table 2: Measure for enhancing potential habitat for the Barrier Range Dragon

ID	Туре	Measure	Responsibility
10	Standard Construction Practice	Rocks and boulders that cannot be used as part of the works will be placed within the disturbance area at the locations where they are adjacent potential dragon habitat.	Site Construction Manager



5 REFERENCES

NSW Government, 22 December 2016, Notice of Modification – Issued under Section 75W of the Environmental Planning and Assessment Act 1979 for the Silverton Wind Farm Project, Planning and Assessment Commission, Sydney

NSW Government, Barrier Range Dragon - profile,

http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10188 accessed on the 10 February 2017

NSW Scientific Committee, Barrier Range Dragon – Determination to make a minor amendment to Schedule 1 of the Threatened Species Conservation Act, <u>http://www.environment.nsw.gov.au/resources/threatenedspecies/determinations/S36aCtenMirrDet.p</u>

df accessed on the 9 February 2017

Silverton Wind Farm, Final Revised Statement of Commitments, 17 March 2009