

Sapphire Wind Farm Swift Parrot and Regent Honeyeater Project ANU Fenner School of Environment and Society

Background – ANU involvement in Swift Parrot and Regent Honeyeater Research

The Fenner School of Environment and Society has been working on research and contributing to the development of national actions plans for both the Swift Parrot and Regent Honeyeater over the last 13 years.

Specific activities have included:

- Habitat modelling
- Field surveys
- Addressing landscape conservation issues
- Community engagement
- Development of specific management actions and plans

The ANU Fenner School team contributing to this effort include the key personnel below.

Prof Rob Heinsohn is the Swift Parrot and Regent Honeyeater research team leader. He has over 25 years' experience conducting field based research on endangered bird species. He currently leads a team of three post-doctoral researchers, a research officer and a PhD student (see below) with projects aimed at addressing landscape scale conservation issues affecting both species. Funding for these projects comes from two ARC grants, two mining offset grants, an SOS (NSW Govt) grant, and multiple small grants.

Dr Debbie Saunders is a post-doctoral researcher with 15 years' experience managing, developing and implementing threatened species recovery plan projects, with particular expertise on the critically endangered Swift Parrot. This includes building strong partnerships; securing threatened species program funding; providing expert threatened species' advice; delivering community engagement programs; populating and managing databases; and conducting threatened species research incorporating novel technologies.

Mr. Ross Crates is a PhD student investigating improved methods for detection of Regent Honeyeaters and the ecology of their breeding and large scale movements. He has recently led development on a breakthrough survey technique for detecting elusive Regent Honeyeaters across SE Australia. He located over 30 Regent Honeyeater nesting attempts in 2015, and recently found a number of birds in non-breeding habitat in early 2016.

Proposed Project approach

To ensure the project is implemented in a timely and professional manner, and explicitly addresses the Minister's approval requirements, we propose that the project be implemented and managed by Dr Saunders and Mr Crates. Prof. Heinsohn and other team members would provide significant in-kind contributions in relation to additional technical expertise on both the target species, in-depth statistical analysis and preparation of regular project reports and scientific publications.

Swift Parrot research

The specific elements of Swift Parrots research, with the leadership of Dr Saunders, will focus on:

- Identification of winter habitat use across the landscape by examining eight years of data on Swift Parrot habitat use throughout the species' winter range, including the Glen Innes region. This information would be analysed and evaluated by experts in the context of the Sapphire Wind Farm (provided by CWP Asset management), habitat/vegetation mapping (where available) and bioclimatic modelling for the species' winter range.
- Identify behavioural characteristics of swift parrots and corresponding risk factors in relation to potential collision hazards from windfarm structures and sites. Relevant data on bird strikes of co-occurring species from the Bird and Bat Adaptive Monitoring Program would also be considered when evaluating potential strike risk behaviours.
- This project would directly contribute to implementing each of the following recovery actions from the **Swift Parrot National Recovery Plan** as summarised below.
 - ✓ Action 1 - Identify the extent and quality of habitat – evaluation of swift parrot winter habitat in relation to the Sapphire Wind Farm
 - ✓ Action 2 - Manage and protect Swift Parrot habitat at the landscape scale – provide land managers with unique insights on the potential collision risks posed by windfarm structures and sites throughout the species' winter range
 - ✓ Action 3 - Monitor and manage the impact of collisions – identification of areas where collision risk from windfarms may be greatest to enable strategic planning and targeted monitoring

Regent Honeyeater research

Due to low levels of previous field survey effort, current ecological knowledge of the Regent Honeyeater in the northern tablelands is poor. Therefore, the Regent Honeyeater research, implemented by Mr Crates, will focus on:

- Expert analysis of the suitability of habitat for Regent Honeyeaters in proximity to the Sapphire Wind Farm. This will be achieved using a combination of bioclimatic habitat modelling, vegetation mapping (where available) and an initial detailed field

assessment of suitable habitat at the Sapphire Windfarm site and surrounding Glen Innes region.

- Based on the results of this initial habitat assessment, surveys for both Swift Parrots and Regent Honeyeaters will be planned according to the habitat present and its suitability for wintering and/or breeding.
- Identify behavioural characteristics of regent honeyeaters and corresponding risk factors in relation to potential collision hazards from windfarm structures and sites. Relevant data on bird strikes of co-occurring species from the Bird and Bat Adaptive Monitoring Program would also be considered when evaluating potential strike risk behaviours.
- This project would directly contribute to implementing the following recovery strategies identified in the ***Regent Honeyeater National Recovery Plan***:
 - ✓ Strategy 1: Improve the extent and quality of regent honeyeater habitat – identification of potentially suitable sites and surveys conducted over three years within the poorly surveyed region around the Sapphire Wind Farm.
 - ✓ Strategy 3: Increase understanding of the size, structure and population trends of the wild population of Regent Honeyeaters – targeted surveys provide complementary population data for informing and adapting range-wide monitoring programs.

Addressing Recovery Plan Performance Criteria - Swift Parrot

Action 1.2a: Identify and map foraging habitat

We will provide GIS mapping of foraging habitats, windfarm locations and bioclimatic modelling.

Action 2.1a: Encourage and support the protection, conservation management and restoration of Swift Parrot foraging habitat through conservation or management agreements.

This project is part of a larger offset application that protects 766.09 ha of habitat, in addition to undertaking this research project.

Action 3.1a: Establish and maintain a database for all reported injuries and deaths.

As part of the BBAMP a collision database will be established and maintained. From this database, the number and type of collisions can be reported to the Fenner School in the event of a collision, and reported to the National Recovery Team annually.

Action 3.1c: Develop and distribute guidelines on collision risk management to relevant planning authorities.

The information gathered in the project will be used to develop a fact sheet including guidelines on collision risk management in relation to windfarms.

Addressing Recovery Plan Performance Criteria - Regent Honeyeater

Strategy 1: Improve the extent and quality of regent honeyeater habitat

We will identify suitable sites and conduct surveys at these sites over three years within the poorly surveyed region around the Sapphire Wind Farm.

Strategy 3: Increase understanding of the size, structure and population trends of the wild population of regent honeyeaters

We will conduct targeted surveys providing complementary population data for informing and adapting range-wide monitoring programs.

Bird and Bat Adaptive Monitoring Program integration

The monitoring for the BBAMP implementation will be provided to the ANU / Fenner School, with a focus on any recording of the RH or SP. Any flight height data recorded from bird utilisation surveys for these species will inform the risk assessment outlined above. Additionally, if the species are recorded on or around the wind farm, the habitat will be recorded and provided to the Fenner School for inclusion in the habitat monitoring.

Project dates

Commencement date: July 2018

Completion date: July 2021

Project milestones and deliverables

The following milestones for this project will provide unique insights on the target species' behaviours and habitats, within the vicinity of the Sapphire Windfarm site, as well as more broadly. This will fill a significant knowledge gap in relation to how these species may interact with, or be impacted by, wind farms. The project will also provide a sound basis upon which future strategic windfarm management decisions can be made to improve the conservation of these species in regions impacted by wind farms.

That is, the project will provide a sound basis for future management of interaction between these two species and wind farms by undertaking habitat mapping to provide clear guidance on the potential for the overlap between habitats of these species and proposed wind farm developments in their range. This will assist in the planning process for wind farms to identify suitable measures to investigate the occurrence of these species and to develop suitable mitigation measures. It will also incorporate the first compilation of information on flight behaviour of both SP and RH to determine when, and if, these species are exhibiting "risk behaviour" that increase the possibility of potential interaction with wind turbines. This will seek to identify if these species are at risk during breeding, migrating, feeding or other activities. Minimising potential risks in from this risk behaviour can be incorporated into on-going mitigation measures of wind farms.

The project is proposed to be implemented over three years instead of five to ensure adequate resources are available to conduct the required field surveys and complex scientific analyses each year. That is, the funds allocated to this project over a 3 year timeframe provide sufficient resources for employing a postdoctoral researcher 2 days/week plus one month of targeted field work by a species expert. Should this funding be distributed over 5 years the full range of deliverables would not be possible given it would provide for only 1.5 days/wk employment (untenable) and would not allow for any field work to be undertaken.

Furthermore, the three-year timetable provides for linking with the initial field surveys and mortality monitoring for the Sapphire Wind Farm. A comprehensive review of the BBAMP will be undertaken and potentially updating the BBAMP will occur in year three, thus the lesson learnt from this field research can be incorporated into ongoing monitoring.

All milestones will be reported on within project update and annual reports, as detailed in the deliverables table below.

	Milestone	Delivery date
1	Initial field habitat assessment and survey site identification of the Sapphire Wind Farm and surrounds	Year 1
2	Surveys designed for target species based on above habitat assessment	Year 1
3	Compilation of available habitat mapping and modelling data for target species (winter habitat for swift parrots and winter/breeding habitat for regent honeyeaters)	Years 1-2
4	Surveys for target species implemented within the Glen Innes region	Years 1-3
5	Behavioural characteristics of target species identified and risk evaluation undertaken	Year 2
6	Analysis and evaluation of all project data in regards to the potential risk of windfarms to the target species	Year 3

Deliverables	Delivery format	Delivered to	Reporting frequency	Responsibility
Project update reports (1 page)	PDF via email	CWP Asset Management	Every 6 months, Years 1-3	ANU
Annual project reports, including financial reports	PDF via email	CWP Asset Management	Annually, Years 1-3	ANU
Annual project reports	PDF via email	Government agencies (NSW & C'wealth)	Annually, Years 1-3	CWP Asset Management
Annual project reports	Available on CWP web page	Public	Annually, Years 1-3	CWP Asset Management
Scientific publications in peer reviewed journals	PDF via email, Journal web page	CWP Asset Management, public	Year 3	ANU

Project budget

Description	Yr 1	Yr 2	Yr 3	TOTAL \$ (excl. GST)
	2018-19	2019-20	2020-21	
INCOME				
Offset funding	83,000	83,000	84,000	250,000
Total Income	83,000	83,000	84,000	250,000
EXPENSES				
Personnel (including on-costs)	69,729	71,821	73,976	215,526
Travel field expenses	11,491	11,491	11,491	34,474
Other project expenses	2,741	2,741	2,741	8,224
Total Expenses \$ (excl. GST)	81,220	83,312	85,467	250,000

Payment schedule

Payment type	Payment amount (excl. GST)	Payment schedule
Initial project payment	\$83,000	Signing of project agreement July 2018
Progress payment	\$83,000	Upon provision of annual project report July 2019
Final payment	\$84,000	Upon provision of annual project report July 2020
Total	\$250,000	

Project governance

A small working group would be established to oversee the delivery of the outputs to meet the requirement of the EPBC provisions. This would include:

- Fenner School, ANU
- Department of Environment, EPBC Unit
- CWP Asset Management
- Nominated expert for BBAMP implementation (as advised to DG).

This working group would meet on an annual basis, either in person or via phone, prior to delivery of each annual project report. The role of the working group would include:

- Agree on scope of project and detailed activities for each year
- Review and provide comments on annual project reports
- Ensure lessons learnt from the implementation of the BBAMP of the Sapphire Wind Farm are incorporated into risk assessment evaluations.

Project management

Our ANU team has a wealth of experience successfully processing and delivering on environmental offset contracts and has well-established administrative processes for project management.

This project would utilise ANU's Research Office which manages and facilitates professional contract services, project reporting against milestones at agreed intervals (e.g. every 6-12 months) and delivery of project outcomes on time and to budget. The Research Office also has a dedicated Finance Team who provide professional and auditable financial services, including monthly account reports to actively keep track of expenditure and ensure all financial processing is done in an efficient and timely manner.