NRM SOUTH
NATURAL RESOURCE MANAGEMENT

WEDGE-TAILED EAGLE RESEARCH FUND

2020 ANNUAL REPORT

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GLOSSARY

DAWE	Commonwealth Department of Agriculture, Water and the Environment
DPIPWE	State Department of Primary Industry, Parks, Water and Environment
EMOP	Eagle Mortality Offset Plan
TAC	Technical Advisory Committee
WTE	Wedge-tailed Eagle, *Aquila audax fleayi*

INTRODUCTION

This is the 2020 Annual Report for the Wedge-tailed Eagle (WTE) Research Fund ('The Fund'). The Fund has been operating in accordance with requirements and is enabling the support of high-quality research on Tasmanian Wedge-tailed Eagles. It is unlikely this research would have been supported without The Fund. The projects being supported will provide valuable advances in the understanding of the WTE population in Tasmania, which will assist with achieving the conservation outcomes for the subspecies.

BACKGROUND

The Cattle Hill Wind Farm was approved by Tasmanian State Regulator in 2012 and by the Commonwealth Department of Environment and Energy (now the Department of Agriculture, Water and the Environment) in December 2014. A requirement of the approval of the Cattle Hill Wind Farm (as described in the relevant permit conditions) was to develop an offset plan for wedge-tailed eagles (*Aquila audax fleayi*, WTE).

An Eagle Mortality Offset Management Plan (EMOP) was developed and subsequently approved to satisfy these requirements. The EMOP comprises two components, with the second component describing the Tasmanian WTE Research Fund. The EMOP required that the Fund needed to be established and administered by an independent organisation. NRM South was selected as the administering body for the Fund and a Services Agreement was signed between NRM South and Wild Cattle Hill Pty Ltd on 23rd August 2019.

OBJECTIVE OF THE FUND

The Fund is designed to offset the impact of WTE mortalities (or injured WTE that cannot be released into the wild) due to collisions with wind turbines at the Cattle Hill Wind Farm. The Fund will only support research relating to the Tasmanian sub-species of WTE and projects based in Tasmania.

The primary purpose of the Fund is to support high quality ecological or other relevant scientific research on Tasmanian WTE, the results of which will assist with the management and protection of the sub-species. The intention is that the Fund continues for the medium term (at least 10 years), hence not all funds will be expended each year. Research will be supported that is scientifically rigorous, conducted by high quality scientists, and which is in accordance with the objectives of the Threatened Tasmanian Eagles Recovery Plan 2006-2010 or any subsequent eagle Recovery Plan.

PRIORITIES FOR THE FUND

Research supported by the Fund will be consistent with the published recovery objectives of the "Threatened Tasmanian Eagles Recovery Plan 2006-2010" or a subsequently approved version of the Recovery Plan. The EMOP notes that DoEE (now DAWE) have indicated they require the fund to support key scientific research on the sub-species and not other activities, although the State component of the Fund may support education activities

Suitably qualified researchers[1] will be eligible to apply for funds to support relevant research on WTE

[1]Must hold a postgraduate degree in science and evidence of the successful publication of relevant, high quality research in peer-reviewed scientific journals or experience and qualifications deemed by the panel to be evidence of equivalent merit. However, proposals to support high quality Honours research will also be considered.

consistent with the below priorities. Critical research that can demonstrate a sound experimental design and statistical rigour will be viewed most favourably.

The initial priorities for funding support are:

- Demography of the WTE. This could include studies into the size of the state population (such as an evidence-based population census), fecundity, survival of different age classes, and immigration and emigration intra- and inter-state. Such ecological data could be used to update a Population Viability Analysis.
- The collection of data that will allow an evaluation of the sub-species conservation status against IUCN criteria.
- Quantification of anthropogenic impacts to WTE, such as collisions with vehicles, powerlines, shooting or poisoning, and the development of mitigation measures to reduce these impacts. Disturbance to nesting WTE. This includes studies into determining the anthropogenic factors that impact on breeding, and quantification of these such as the distance, duration and types of factors that result in impacts to breeding success.
- Strategies to monitor nesting behaviour of WTE. Nests are currently very difficult to monitor due to the need to limit disturbance to breeding birds, hence automated strategies to monitor nests without disturbing eagles will be supported.
- Studies into why WTE collide with wind turbines and strategies to reduce collision rates. Published studies indicate WTE actively respond to and avoid wind turbines, but occasionally collide. Any insights into why they occasionally collide may assist with strategies to minimise collisions.
- Other scientific studies where it can be demonstrated that the research will provide a demonstrable benefit to the sub-species.

The priorities for funding support may be revised by the panel following any reviews of the EMOP.

Studies on WTEs required for commercial developments (i.e. conditions of a permit, outside offsets) or studies that are the responsibility of Local, State (including Government Business Enterprises) or Commonwealth Government will not be supported

ADMINISTRATION OF THE FUND

NRM South's role is ensure that The Fund is established and administered as described in the Eagle Mortality Offset Plan (EMOP).

Specifically, NRM South's role is to:

- Be responsible for receipt, management and audit of WTE Research Fund.
- Assist with the identification and selection of panel members. The Panel members selected will be agreed by the Tasmanian EPA and delegate of the Commonwealth Department of Environment. Host, recruit and administer/support a panel, as prescribed by the EMOP, to prioritise, assess and distribute research funds – approximately two meetings per year.
- Administer reimbursement of panel members reasonable travel costs and hourly payment for attendance at annual meetings.
- Advertise, administer and coordinate research applications, and in conjunction with the panel develop and maintain the assessment process.
- Contract and administer the research funds on behalf of the research panel, including coordination of progress and final reports.
- Provide panel advice and reports to Wild Cattle Hill Pty Ltd and any other contributors to the Fund for preparation and submission to the Regulator (if required).

GOVERNANCE OF THE FUND

The Fund is overseen by an independent Technical Advisory Committee (TAC, referred to in The EMOP as a "Panel").
As described in the EMOP, the TAC comprises:

- A representative of the Department of Primary Industries, Parks, Water and Environment (to which Cindy Ong has been appointed);
- A representative from the administering body, NRM South (Dr Cindy Hull);
- A representative of the Commonwealth Department of Agriculture, Water and the Environment (as an observer, Dr Ivan Lawler); and
- At least two scientists experienced in wildlife ecology, with a strong background in research and publishing (Dr Phil Bell and Dr Sarah Munks). These roles were filled following advertising and a competitive selection process.

The role of the Technical Advisory Committee (TAC) is to:

- Review funding applications and select those to be supported;
- Monitor the progress of grant recipients; and
- Determine whether to accept research reports (i.e. whether they fulfill the requirements of support).

Individual members of the Technical Advisory Committee are expected to:

- Actively participate in the review, monitoring and reporting of the Research Fund;
- Attend, either in person or by teleconference, twice annual meetings, and additional meetings, if required;
- Provide reliable, relevant, technical and contemporary advice;
- Comply with relevant NRM South Policies and Procedures, including the Code of Conduct, and any specific requirements of the Fund including Confidentiality; and
- Be an advocate for the research Fund's outcomes.

ACHIEVEMENTS DURING 2020

The first year of the Fund focussed on its establishment and development of governance and other processes. The first round of grants was also advertised and one project was selected for support.
Details of the achievements:

1. Service Agreement signed between NRM South and Wild Cattle Hill Pty Ltd August 2019.
2. The Fund was formally established in September 2019.
3. First deposit to the Fund was made by Wild Cattle Hill on 23rd October 2019.
4. A formal request was submitted to both DPIPWE (State Department of Primary Industry, Parks, Water and Environment) and DAWE for nomination of representatives to the TAC.
5. The two independent positions on the TAC were advertised in February 2020. Advertisements were placed in NRM Jobs, Ecological Society of Australia and relevant University Departments and organisations were notified.
6. Two independent researchers were appointed to the TAC in March 2020, following a competitive selection process.
7. NRM South developed the following documents for the members of the TAC:
   a. Terms of Reference
   b. Code of Conduct
   c. WHS Plan
   d. Confidentiality and Conflict of Interest Agreement
   e. Relevant sections of the NRM South Employee Policy and Procedures
   f. Contracts for paid members.

8. The TAC formally commenced in March 2020 and all members were provided with the above documents.
9. NRM South drafted the process and selection criteria for the first round of grants.
10. Three TAC meetings were held during 2020 (online due to COVID-19 restrictions). The first in May reviewed and finalised the selection criteria for grant applications and the details of the first round of grants on offer. The second two meetings in August reviewed the grant applications.
11. First round of grants was advertised in July 2020. Five applications were received.
12. The TAC reviewed and selected the successful project.
13. A funding agreement was prepared and submitted to the successful recipient of the first grant round.

PROJECT SUPPORTED IN 2020

Five applications were received to the Fund, and the TAC unanimously supported one project:

"Investigating the spatial ecology and habitat use of the Tasmanian wedge-tailed eagle in unmodified landscapes using high-frequency GPS telemetry" from Professor Cameron (University of Tasmania), Dr James Pay (UTas), Jason Wiersma (Forest Practices Authority), Dr Todd Katzner (US Geological Society), Dr Amelia Koch (FPA).

The aim of this research is to investigate how adult Tasmanian wedge-tailed eagles use reserved land and wilderness areas (land managed under the Nature Conservation Act 2002; State Government of Tasmania, 2002) in Tasmania using high-frequency GPS-tracking technology. They will consider the spatial ecology of the birds at two scales. First, they will investigate habitat use at the home-range scale, considering the size and characteristics of areas used. Second, they will model how Tasmanian wedge-tailed eagles select for different habitats depending on the behaviour they are exhibiting. Figure 1 shows the devices attached to an eagle and Figure 2 demonstrates the type of data obtained.

As stated in their application, this project will provide information on the spatial ecology and resource use of adult Tasmanian wedge-tailed eagles in reserved areas. Furthermore, the data from this project will be combined with data from other GPS-tracked eagles across Tasmania to provide a state-wide understanding of how the species uses the landscape. The insight into the importance of different habitats and the spatial modelling of this information will address two research priorities identified in the Tasmanian wedge-tailed eagle recovery plan (Threatened Species Section, 2006) and by the Technical Advisory Committee.

Figure 1: An adult male Tasmanian wedge-tailed eagle with the CTT ES-400 GPS transmitter fitted. Image credit: Dr James Pay.

Figure 2: Visualisation of a single 40-minute flight carried out by an adult wedge-tailed eagle in northeast Tasmania. The GPS transmitter collected a GPS fix every 6 seconds to clearly record the different types of flight behaviour and the corresponding locations and altitudes.

This project was allocated the full amount of money on offer ($74,420 inclusive GST) during this first year, but will be paid in three instalments. The first instalment will be paid upon signing of the Funding Agreement (expected during October 2020). A second instalment will be paid mid-way through the project on completion of a mid-point report. The final payment will be made on completion of the final project report.

NEXT STAGE IN THE FUND

The Funding Agreement with the University of Tasmania will be finalised in the next few weeks and payment commenced in accordance with it.
It is anticipated that the next round of grants will be advertised in early 2021 (approximately March 2021). The documents relevant to this next round will be reviewed prior to the next funding round.