

FINAL REPORT:

# Ryan Corner Wind Farm Pest Animal Management Plan

January 2010

Ecology Partners Pty Ltd

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## SUMMARY

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### Introduction

Ecology Partners Pty. Ltd. was commissioned by Ryan Corner Development Pty Ltd to undertake a pre-construction pest animal survey and prepare a Pest Animal Management Plan (PAMP) for the Ryan Corner Wind Farm.

This Pest Animal Management Plan has been prepared in response to the requirements to the conditions of Planning Permit # 20060222 Section 13g, from the Victorian Minister for Planning.

### Study Area

The Ryan Corner Wind Farm is located in south west Victoria, approximately 12 km northwest of Port Fairy. It covers an area of 3,600 ha and comprises 12 land holdings (ERM 2006). The Study Area is bound by Private Property to the north, Hamilton-Port Fairy Road to the east, Fingerboard Road to the south and Youls Road to the West and is bisected by Riverside Road and Harris Road.

### Methods

A pest animal survey was undertaken during daylight hours on 20, 21 and 22 October, 2009 to identify the presence and/or habitat for pest animals. The survey involved active searching for habitat (i.e. burrows), scats and tracks, signs of predation on livestock and prey.

The survey focused on the areas where wind turbines and access tracks are proposed for construction, as well as property access points. The majority of properties were traversed on foot, due to the nature of the terrain. Incidental records were also made of habitat and/or sightings of pest animals in other parts of the Study Area.

### Results

The survey identified a number of pest species on the Study Area. The control and management of the following pest animal species are considered to be most important, due to their potential threat to on site values:

- European Rabbit *Oryctolagus cuniculus*; and
- European Red Fox *Vulpes vulpes*.

### Conclusion

Specific issues and mitigation measures relating to pest animal management have been detailed for each project phase (pre-construction, construction and post-construction).

A regular monitoring program will be undertaken for pest animals throughout the construction area for two years post-construction as part of an integrated pest management approach within the locality.

# 1 INTRODUCTION

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## 1.1 Background

Ecology Partners Pty. Ltd. was commissioned by Ryan Corner Development Pty Ltd to undertake a pre-construction pest animal survey and prepare a Pest Animal Management Plan (PAMP) for the Ryan Corner Wind Farm.

This PAMP has been prepared in response to the requirements to the conditions of Planning Permit # 20060222 Section 13g, from the Victorian Minister for Planning.

## 1.2 Study Area

The Ryan Corner Wind Farm (Study Area) is located in south west Victoria, approximately 12 km northwest of Port Fairy. It covers an area of 3,600 ha and comprises 12 land holdings (ERM 2006). The Study Area is bound by Private Property to the north, Hamilton-Port Fairy Road to the east, Fingerboard Road to the south and Youls Road to the West and is bisected by Riverside Road and Harris Road (Figure 1).

The majority of native vegetation throughout the Study Area has been cleared, with remnant vegetation generally restricted to roadside reserves. The main land use within the Study Area is agricultural (mostly grazing and cropping), and typically comprises areas of improved and unimproved pasture. The Study Area comprises mostly undulating topography with numerous stony rocky rises. A number of ephemeral creeklines and waterbodies are also present. The Study Area occurs within the Victorian Volcanic Plain Bioregion, the Glenelg Hopkins Catchment Management Authority and the Shire of Moyne.

## 1.3 Objectives

The objectives of the PAMP are to:

- Identify potential pest animals within the study area and outline the relevant National and State Legislation requirements for their control;
- Ensure that the activities of the project do not exacerbate existing pest animal impacts so as to cause economic or environmental impacts to landholders; and
- Outline mitigation and monitoring measures to be implemented throughout each phase (pre-construction, construction and post-construction) of the project to prevent the increase of pest animal populations.

## 1.4 Other Relevant Programs

Other management plans are considered to be related to the PAMP are outlined below:

- Bat and Avifauna Management Program;
- Weed Management Program; and
- Vegetation Offset Management Plan.



## 2 LEGISLATION AND GUIDELINES

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### 2.1 Commonwealth and State Legislation

Commonwealth and State government legislation and policy relevant to the PAMP include:

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- *Flora and Fauna Guarantee Act 1988* (FFG Act).
- *Catchment and Land Protection Act 1994* (CaLP Act).

#### 2.1.1 Environment Protection and Biodiversity Conservation Act

The Commonwealth EPBC Act deals with actions that have, or are likely to have, a significant impact on a matter of national environmental significance. The key threatening processes listed under the EPBC Act relevant to the PAMP are:

- Competition and land degradation by European Rabbits *Oryctolagus cuniculus*; and
- Predation by the European Red Fox *Vulpes vulpes*.

### 2.2 Catchment and Land Protection Act

The CaLP Act is the main state legislation relating to the control of pest animal species (DSE 2002a). Classification of pest animals according to the CaLP Act falls into four categories.

1. Prohibited Pest Animals – declared prohibited pest animals are those that:
  - Do not occur naturally in the wild in Australia before European settlement;
  - Either:
    - Are a serious threat to primary production, Crown land, the environment or community health in a place outside Victoria; or
    - For which its potential to threaten primary production, Crown land, the environment or community health in Victoria is unknown; and
    - The importation, keeping and sale should be banned.
2. Controlled Pest Animals – declared controlled pest animals are those that:
  - Did not occur naturally in the wild in Australia before European settlement;
  - Have a high potential to become a serious threat to primary production, Crown land, the environment or community health in Victoria; and

- Should only be kept in high security collections approved by the Minister.
3. Regulated Pest Animal – declared regulated pest animals are those that:
- Did not occur naturally in the wild in Australia before European settlement;
  - Is, or has the potential to become, a serious threat to primary production, Crown land, the environment or community health in Victoria; and
  - Should only be kept in collections or at premises approved by the Minister.
4. Established Pest Animal – declared established pest animals are those that:
- Are established in the wild in Victoria;
  - Are a serious threat to primary production, Crown land, the environment or community health in Victoria; and
  - Should be eradicated or controlled or its spread in the wild should be prevented (DPI 2009).

## 2.3 Flora and Fauna Guarantee Act

The FFG Act provides the listing of taxa and communities of flora and fauna which are threatened, and potentially threatening processes. The listed potentially threatening processes under the FFG Act that consider pest animals and are relevant to the Study Area are:

- Predation of native wildlife by the European Red Fox;
- Reduction in biomass and biodiversity of native vegetation through grazing by the European Rabbit;

## 2.4 Literature Review

The following documents have been reviewed in developing the PAMP:

- Victorian Pest Management – A Framework for Action (DNRE 2002a);
- Victorian Pest Management – A Framework for Action: Rabbit Management Strategy (DNRE 2002b);
- Victorian Pest Management – A Framework for Action: Fox Management Strategy (DNRE 2002c);
- EPBC Act 1999, Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits (draft) (DEWR 2007);

- FFG Act 1988, Action Statement No. 44, Predation of native wildlife by the introduced Red Fox (DSE, 2002a); and
- EPBC Act, Threat Abatement Plan for Predation by the Red Fox (National Heritage Trust, 1999).

## 2.5 Definition of a Pest Animal

Under the CaLP Act the definition of a pest animal is:

*‘exotic (or introduced) animals (excluding any that cannot be declared under the CaLP Act) that threatens, or has the potential to threaten, the existence or well being of valued environmental, agricultural, social or personal resources or assets’ (DPI 2009).*

Native animal species that are considered by some as pest species are not considered in this report, as all native animals are protected under the FFG Act and the Wildlife Act 1975.

### **3 METHODS**

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#### **3.1 Desktop Assessment**

A desktop assessment of the Atlas of Victorian Wildlife database (AVW 2007) was undertaken to identify the pest animal species known to occur on and/or within 10 km of Study Area. The search identified a number of pest species, including several listed under the CaLP Act (see Appendix 1).

#### **3.2 Survey Method**

A pest animal survey was undertaken during daylight hours across the Study Area on 20, 21 and 22 October, 2009 to identify the presence and/or habitat for pest animals. The survey involved active searching for habitat (i.e. burrows, harbour), scats and tracks, predation on livestock and prey, and sightings.

The survey focused on the areas where wind turbines and access tracks are proposed for construction, as well as property access points. The majority of properties were traversed on foot, due to the nature of the terrain. Incidental records were also made of habitat and/or sightings of pest animals in other parts of the Study Area.

## 4 PEST ANIMAL ASSESSMENT

### 4.1 Site Assessment

The survey identified the Study Area contains several pest species; including species listed under the CaLP Act (Table 1). In general, the Study Area has been subject to historical land uses (land clearing, grazing, cropping, fertilising) and consists of highly modified vegetation, dominated by exotic species either as improved pasture or agricultural crops. The majority of native vegetation within the Study Area has been removed, and is restricted to roadsides. The history of disturbance and surrounding agricultural landscape, are key factors in facilitating the presence and abundance of pest animals within the Study Area. Survey results for individual properties are outlined in Table 2. Locations of pest animals and/or habitats recorded during the survey are shown in Figure 2.

**Table 1.** List of Pest Animals Recorded during the Survey.

Scientific Name	Common Name	Pest Animal Category
<i>Alauda arvensis</i>	Skylark	-
<i>Turdus merula</i>	Common Blackbird	-
<i>Turdus philomelos</i>	Song Thrush	-
<i>Passer domesticus</i>	House Sparrow	-
<i>Acridotheres tristis</i>	Common Myna	-
<i>Sturnus vulgaris</i>	Common Starling	-
<i>Oryctolagus cuniculus</i>	European Rabbit	Category 4
<i>Lepus europeaus</i>	European Hare	Category 4
<i>Vulpes vulpes</i>	European Red Fox	Category 4

**Key to table:** Pest animal categories: 1. Prohibited Pest Animals; 2. Controlled Pest Animals; 3. Regulated Pest Animal; 4. Established Pest Animal.

**Table 2.** Survey Results at Individual Properties.

Property	Site Description	Pest Species Recorded during Survey	Habitat
Dumseny	Unimproved pasture. Large weed infestations towards Riverside road	Skylark, Common Myna	Gorse, Boxthorn and Sweet Briar provides harbour for rabbits
Dumseny (Harlock)	Unimproved pasture. Several areas impacted by weeds	Common Starling, Blackbird	Rockpiles provides harbour for rabbits
McDonald (Hogan)	Unimproved pasture. Several areas impacted by weeds	European Hare, Blackbird	Rabbit warrens recorded near Riverside road; rockpiles on property provides harbour for rabbits
McNamara	Unimproved pasture. Several areas impacted by weeds	None recorded	Rockpiles on property provides harbour for rabbits

Property	Site Description	Pest Species Recorded during Survey	Habitat
Moore	Unimproved pasture. Several areas impacted by weeds	European Rabbit, European Red Fox	Rabbit warrens recorded near Riverside road; rockpiles on property provides harbour for rabbits
Homan	Unimproved pasture. Several areas impacted by weeds	Skylark	Boxthorn on rocky outcrops provides harbour for rabbits; Boxthorn provides harbour for rabbits
Wright	Improved pasture towards Youls road	European Rabbit	Gorse (recently sprayed) and Boxthorn on rocky outcrops provides harbour for rabbits.
Hocking	Improved pasture towards Youls road	European Hare	Boxthorn on rocky outcrops provides harbour for rabbits
Forest	Improved pasture	European Red Fox	Boxthorn on rocky outcrops provides harbour for rabbits
Winter	Improved pasture towards Youls road; unimproved pasture and rocky areas towards Riverside road	Skylark, Common House Sparrow	Boxthorn on rocky outcrops provides harbour for rabbits. Rabbit warrens recorded near Riverside road.
Youl	Improved pasture towards Youls road. Unimproved pasture and rocky areas towards Riverside road	European Rabbit (dead)	Rabbit warrens recorded near Riverside road
Porter	Improved pasture towards Youls road. Unimproved pasture and rocky areas towards Riverside road	Skylark, Common Starling	Rockpiles on property provides harbour for rabbits

## 4.2 Target Pest Animals

The survey identified a number of pest species on the Study Area. Of these species, the control and management of the following pest animal species are considered to be most important, due to their potential threat to Study Area values:

- European Rabbit (Rabbit); and,
- European Red Fox (Red Fox).

Rabbits and foxes have been identified by the Glenelg Hopkins CMA (GHCMA 2009) as the most significant pest animals in the southwest region.

The majority of landowners were contacted during the survey to discuss pest animal issues relevant to their property. All landowners reported that rabbits and foxes were present on their property, however, they were not considered to be a serious issue at present. The current abundance/distribution of rabbits and foxes on the Study Area has not been established as this was beyond the project scope. However, the impact of rabbits and foxes was evident throughout the Study Area through the presence of burrows, and predation on livestock, and both pests should be considered as being present at all properties within the Study Area.

The surrounding agricultural landscape provides ideal conditions for rabbits and foxes to proliferate, therefore control of these species throughout the Study Area will be required.

Eradication of these species is considered unlikely due the large area of suitable habitat and difficulty of control.

Although this PAMP does not directly address the remaining pest animal species identified in Table 1, general mitigation measures are provided in Section 4 to avoid or reduce the likelihood of other pest animal species (i.e. European Hare) becoming a threat to values within the Study Area.

#### **4.2.1 Impacts of the European Rabbit**

Rabbits are the most serious vertebrate pest animals in Victoria, causing major economic and environmental damage (DNRE 2002b). The major component of the economic impact comes from reduced agricultural production, principally in the sheep and cattle industries. The effect of grazing on native species and agricultural pasture can be significant.

The direct impacts of rabbits on native flora and fauna include: grazing on native flora and preventing regeneration; and competition with fauna for food and shelter. Indirect effects include such as supporting populations of foxes, and digging and browsing leading to a loss of vegetation cover and consequent slope instability and soil erosion (DEWHA 2008).

Rabbit populations may also sustain predators such as foxes, subsequently increasing pressure on native animals (DPI 1999). Rabbits have been found to have a significant impact on remnant native vegetation across southeast Australia (IACRC 2007). Ongoing management is therefore required by land managers to control rabbit numbers (IACRC 2007). The Rabbit is declared as an established pest animal throughout Victoria under the CaLP Act (DPI 2007).

#### **4.2.2 Impacts of the European Red Fox**

The Red Fox is an adaptable and elusive predator and scavenger. Despite management efforts, the fox is now common throughout Victoria and are a major threat to the survival of native fauna (DNRE 2002c). They are Australia's number one predator, and there are reports of them taking up to 30% of lambs in some areas. The combined economic and environmental impact of the red fox is greater than for any other introduced vertebrate, totalling around \$227.5m per year (IACRC 2007). The Red Fox is declared as an established pest animal throughout Victoria under the CaLP Act (DPI 2007).

### **4.3 Study Area Values**

The Study Area contains a number of environmental and agricultural values that need to be protected from the direct (i.e. predation on native fauna) or indirect impacts (i.e. loss of productivity through grazing) of pest animals.

#### 4.3.1 Environmental Values

While the majority of the Study Area has been modified by agricultural landuse, several areas contain important environmental values. These values include stony rocky knolls, rocky ridges, ephemeral wetlands and creeklines, remnant grassland and grassy wetland, and scattered indigenous trees.

A desktop assessment undertaken by ERM (2006) found that nine flora species listed under the EPBC Act and seven flora species listed under the FFG Act may occur on, or within the vicinity of the Study Area. Also 21 bird species, 6 mammal species, two fish species, three reptile species and three frog species classified as rare or threatened may occur on, or within the vicinity of the Study Area. Of the 35 threatened species, 17 are listed on the EPBC Act and 20 are listed under the FFG Act (ERM 2006). Two threatened species was recorded during the survey alongside Riverside Road (Figure 2):

- Clover Glycine *Glycine latrobeana* listed as Vulnerable under the EPBC Act and Threatened under the FFG Act; and,
- Golden Cowslips *Diuris behrii* listed as Vulnerable in Victoria (DSE 2005).

No threatened fauna species were recorded during the survey.

The majority of native vegetation has been cleared from the Study Area and is restricted to roadside reserves adjacent to each property (Figure 2). Ecological Vegetation Class (EVC) communities previously identified on the Study Area include Stony Knoll Shrubland (EVC 649); Aquatic Hermland (EVC 653); and Plains Grassy Woodland (EVC 55\_61) (ERM 2006).

Potential impacts from pest animals to environmental values include:

- Grazing of EVC communities and threatened flora species from Rabbits; and,
- Predation of native fauna (particularly birds and mammals) species from the Red Fox

#### 4.3.2 Agricultural Values

The main land use within the Study Area is agricultural, which includes livestock grazing, crops and improved and unimproved pasture. Areas of improved pasture mostly comprise of Perennial Ryegrass *Lolium perenne* and Clover *Trifolium* sp., whereas unimproved pasture contains a higher component of common pasture weeds such as Sweet Vernal Grass *Anthoxanthum odoratum*, Great Brome *Bromus diandrus*, Yorkshire Fog *Holcus lanatus*, Rough Dogstail *Cynosurus echinatus* and Cape Weed *Arctotheca calendula*. Potential impacts from pest animals to agricultural values include:

- Grazing of crops and pasture from Rabbits;
- Predation of livestock from the Red Fox.



## **5 PEST MANAGEMENT AND MITIGATION MEASURES**

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Specific issues and mitigation measures relating to pest animal management have been detailed for each project phase (pre-construction, construction and post-construction). Mitigation measures should be incorporated into the site Construction Environment Management Plan.

Mitigation measures have been developed to comply with regulations outlined in the CALP Act for pest animals. Proper implementation of mitigation measures for pest animal control will enable compliance with responsibilities under the CALP Act.

### **5.1 Pre-Construction**

#### **5.1.1 Threats**

It is possible that Rabbit and Red Fox numbers on the site may increase during the pre-construction phase of the project, particularly if no control or monitoring is being undertaken during lead up times to construction. Increased rabbit numbers may also act as attractants to foxes, potentially bringing more foxes into an area, which may increase the risk to livestock and native fauna (DPI 2007).

#### **5.1.2 Mitigation Measures**

In order to be successful, the control of pest animals on the site must be part of an integrated pest management approach within the locality. The various groups (including landowners) and organisations required to work together include the Department of Primary Industries (DPI), the Department of Sustainability and Environment (DSE), Landcare and Glenelg Hopkins CMA. To ensure that an integrated management approach is adopted, liaison with these groups is required. Further, it is essential to consult with these groups and local authorities in order to work within existing management strategies for the control of pest animals in the Study Area.

### **5.2 Construction**

#### **5.2.1 Threats**

##### **European Rabbit**

Rabbit management will be of specific importance during the revegetation and/or reinstatement phase of post-construction. Rabbits have the potential to destroy revegetated areas if control measures are not implemented to or prevent access to these areas.

The construction phase could create additional opportunities for harbour and/or burrows for the European Rabbit within the site and surrounding areas. The prevention of any harbour should be a priority.

Construction activity during the project and lack of rabbit control/prevention during the post-construction phase has the potential to increase impacts already being caused by the existing rabbit populations in the local area. The potential impacts may include:

- Increased grazing pressure on native flora (including threatened flora species);
- Increased resource competition for native fauna;
- Increased burrowing opportunities from soil disturbed during construction; and,
- Increased area of potential habitat from harbour resulting from debris on the site.

### European Red Fox

Red Fox numbers are generally controlled by actions undertaken at a broad scale. If no Red Fox control measures were to be undertaken in the construction area, then Red Fox numbers could potentially increase within the site and surrounding area. Any increase in Red Fox numbers has the potential to increase the existing ecological and agricultural impacts caused by the Red Fox (e.g. predation on native fauna and livestock). Therefore, control actions undertaken would contribute to overall Red Fox control within in the local area.

### 5.2.2 Mitigation Measures

Mitigation measures identified during the construction phase of the project are outlined in Table 3.

**Table 3.** Mitigation Measures during the Construction Phase.

Mitigation Measure	Action	Location	Responsibility
Harbour for rabbits	Store construction materials, machinery and equipment in designated areas	Areas impacted by construction activities	Site/Project Environmental Officer
Harbour for rabbits	Avoid stock piling soil, weeds (i.e. Boxthorn) and rubbish within construction areas	Areas impacted by construction activities	Site/Project Environmental Officer
Harbour for rabbits	Do not remove or modify any vegetation (native or non-native) identified as harbour until approval has been granted by a qualified Ecologist.	Areas impacted by construction activities	Site/Project Environmental Officer
Harbour for rabbits	Revegetate disturbed areas as soon as practicable to minimise the area of exposed soil as potential for burrows	Areas impacted by construction activities	Site/Project Environmental Officer
Fox abundance	Undertake fox control measures (i.e. baiting, shooting, den fumigation) with a qualified pest controller in an integrated manner in conjunction with existing management strategies in the local area.	All areas	Site/Project Environmental Officer
Fox abundance	Report all live sightings and fox corpses to the local DPI/DSE.	All areas	Site/Project Environmental Officer

## 5.3 Post Construction

### 5.3.1 Threats

#### European Rabbit

Rabbit are likely to pose a threat through grazing to areas re-seeded as improved pasture. Also, revegetation of access points with native trees, shrubs revegetation after construction will also be required to protect against grazing.

Areas on or immediately adjacent to the construction zone where soil has been disturbed are likely to provide potential for burrows. All above ground harbour, including construction materials left on the site will also provide potential habitat.

#### European Red Fox

The main threat caused by foxes post-construction is the potential to increase their presence and abundance, through a lack of rabbit control on the site, which in turn increases the potential for ecological and agricultural impacts on the site and in surrounding areas.

### 5.3.2 Mitigation Measures

Mitigation measures identified during the post-construction phase of the project are outlined in Table 4.

**Table 4.** Mitigation Measures during the Post-Construction Phase.

Mitigation Measure	Action	Location	Responsibility
Harbour for rabbits	Remove all above ground surface harbour for rabbits (particularly weeds such as Boxthorn, Blackberry, Gorse and Sweet Briar), as well as discarded construction materials.	Areas impacted by construction activities	Site/Project Environmental Officer
Impacts to revegetation	Use rabbit proof fencing around revegetated areas; as well as plastic guards around each plant	Areas impacted by construction activities	Site/Project Environmental Officer
Fox abundance	Report all live sightings and fox corpses to the local DPI/DSE.	All areas	Site/Project Environmental Officer
Fox and rabbit abundance	Contribute to local pest animal control programs for 2 years following completion of construction	All areas	Site/Project Environmental Officer

## 5.4 Management Approach

Depending on the desired outcome the main approach to management will either be eradication or control of pest animals.

The concept of total rabbit eradication is a worthwhile aim and is achievable at a local scale when using integrated rabbit control methods (DPI 2007a). However, total eradication within the Study Area is considered unlikely within the designated management timeframe (two years following completion of construction). The approach should be to alleviate the impact of rabbits on agricultural and natural environments; this is achievable through integrated rabbit control techniques (DPI 2007a).

As for rabbits, total eradication of foxes within the Study Area is considered unlikely, however, the approach to fox control needs to be undertaken in the same manner to successfully control rabbits (DPI 2007b). Fox populations are very resilient to conventional methods of control, and rapid re-colonisation of areas occurs after control measures are applied. This suggests that control is either rarely achieved or not achieved, particularly when applying a once-off management technique. The approach should be to alleviate the impact of foxes on agricultural and natural environments through integrated control techniques (DPI 2007b).

## 5.5 Performance Indicators

Key performance indicators for pest animal management include:

- Control the population of rabbits and foxes within the Study Area to meet the requirements under the CALP Act for established pest animals.
- No net increase in the impacts of foxes and rabbits on agricultural and environmental values within the Study Area.

## 5.6 Monitoring and Reporting

### European Rabbit

A regular monitoring program will be undertaken for rabbits throughout the construction area for two years post-construction. Monitoring of the area for the presence (e.g. rabbit warrens, sightings) and/or damage caused by rabbits (overgrazing) will be undertaken four times annually (early spring, late spring, summer, autumn) for two years, as part of an integrated pest management approach within the locality.

Important stakeholders in managing rabbits include: DPI, DSE, Parks Victoria, GHCA, local government and private landholders (DNRE 2002b).

The impact of rabbits varies in different situations. Low populations may be tolerable some situations (i.e. grazing), but not tolerable where they are a particular threat to specific

ecological values (grazing threatened flora). The emphasis of management will focus on long-term habitat modification, i.e. warren removal (DNRE 2002b).

The rabbit control program needs to be evaluated to ensure it meets appropriate best practice pest management. The program should be appropriately planned and coordinated using the most effective, safe and humane methods available, which are aimed at long-term management. (DNRE 2002b).

Integration of rabbit management programs is required between other pest species (i.e. rabbit and foxes), so a reduction in one pest species does not lead to an increase in another, or adversely impact on native prey species (DNRE 2002b).

Monitoring and annual reporting of rabbit management will also follow established processes such as bioregional planning to ensure that relevant information is recorded on appropriate monitoring systems, including the Integrated Pest Management System and the Environmental Information System of Parks Victoria (DNRE 2002b).

### **European Red Fox**

A regular monitoring program will be undertaken for foxes throughout the construction area for two years post-construction. Monitoring of the area for the presence (e.g. sightings) or evidence (predation of livestock and native fauna; scats) will be undertaken as part of an integrated pest management approach within the locality.

Important stakeholders in managing foxes include: DPI, DSE, Parks Victoria, GHCMA, local government and private landholders (DNRE 2002c).

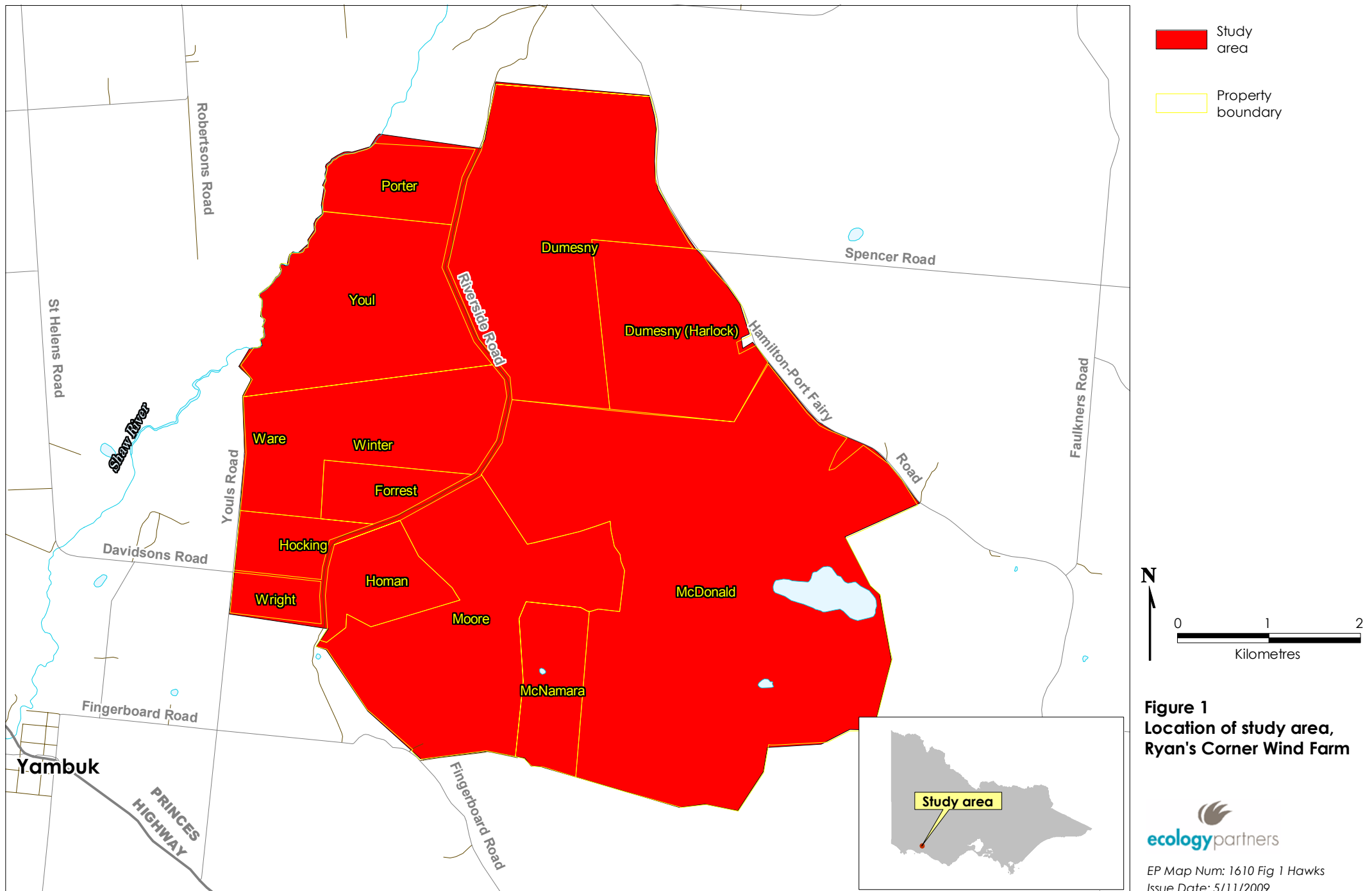
The fox control program needs to be evaluated to ensure it meets appropriate best practice pest management. The program should be appropriately planned and coordinated using the most effective, safe and humane methods available, which are aimed at long-term management (DNRE 2002c).

Best practice fox management should focus on limiting the damage to biodiversity and livestock by foxes. To achieve this, the emphasis of the program will be on reducing damage on environmental (i.e. native fauna) and agricultural values (i.e. livestock), rather than eradication of foxes. Integration of fox management programs with those of other pest species (such as rabbits) is also required so that a reduction in one pest species does not lead to an increase in another, or adversely impact on native prey species (DNRE 2002c).

Monitoring and annual reporting of fox management will also follow established processes such as bioregional planning to ensure that relevant information is recorded on appropriate monitoring systems, including the Integrated Pest Management System and the Environmental Information System of Parks Victoria (DNRE 2002c).

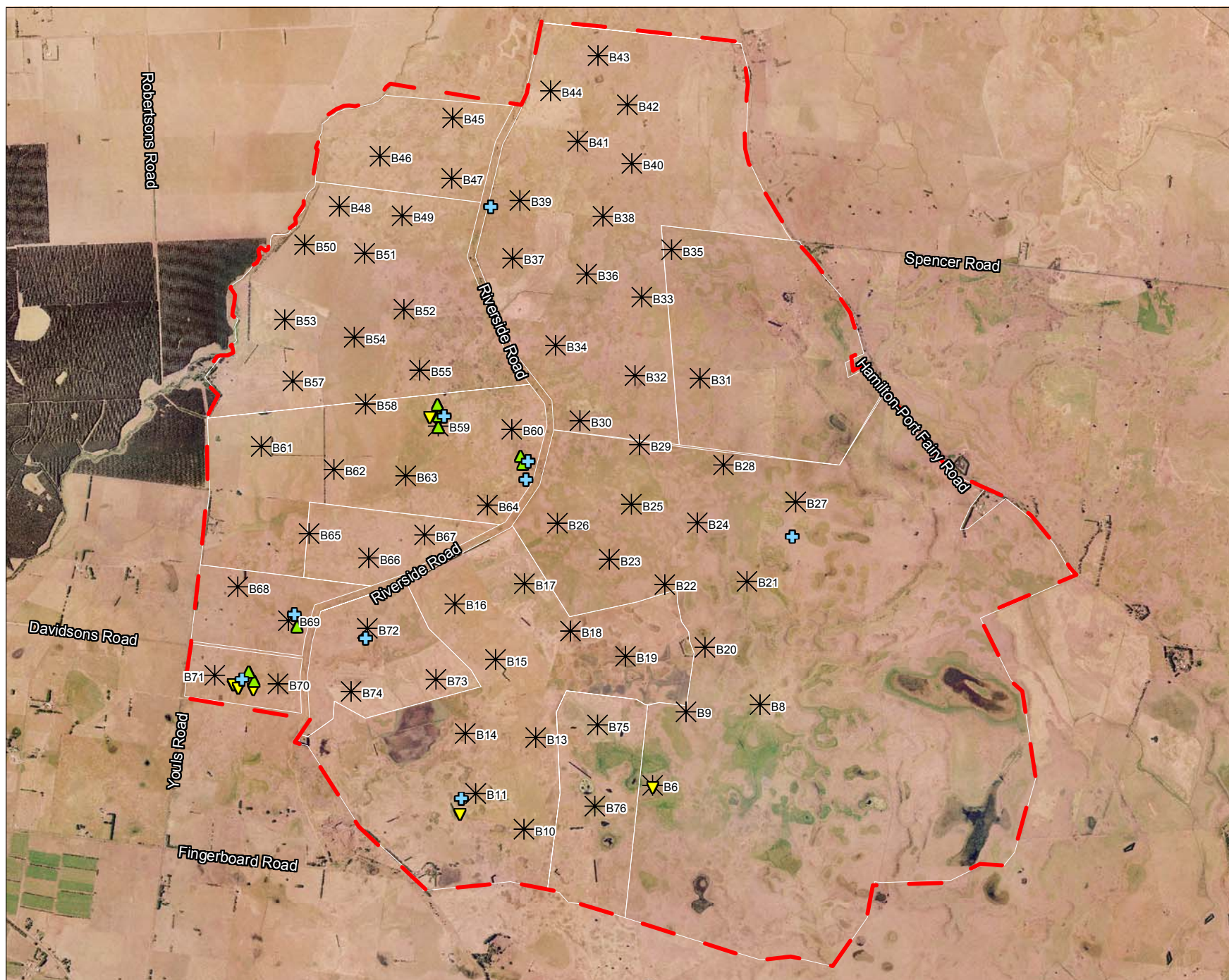
## FIGURES

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**Figure 1**  
**Location of study area,**  
**Ryan's Corner Wind Farm**





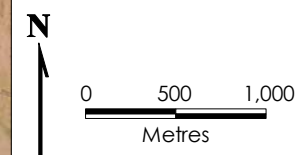
# Pest plan

- Boxthorn
- Gorse
- Rabbit burrows

Proposed turbine

Study area

Note: An area of 25 x 40 metres was surveyed around each turbine.



**Figure 5**  
Pest plan,  
Ryan Corner Wind Farm



## **APPENDICES**

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## Appendix 1 – Fauna Results

**Table A1.** Fauna species previously recorded within 10 kilometres of the study area.

Type of Record:	Mi	Migratory (EPBC Act)
H – Heard	Ma	Marine (EPBC Act)
S – Seen		
I – Incidental (identified from feathers, bones or scats, etc)		
T – Trapped / Handheld		
* Introduced species		

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
MAMMALS						
Platypus	<i>Ornithorhynchus anatinus</i>	2002	1	-	-	-
Short-beaked Echidna	<i>Tachyglossus aculeatus</i>	2006	8	-	-	-
Ginkgo-toothed Whale	<i>Mesoplodon ginkgodens</i>	1983	1	-	Ma	-
Fat-tailed Dunnart	<i>Sminthopsis crassicaudata</i>	2003	2	-	-	-
Southern Brown Bandicoot	<i>Isodon obesulus obesulus</i>	2001	1	-	-	-
Eastern Barred Bandicoot	<i>Perameles gunnii</i>	1972	3	-	-	-
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	1997	7	Total	-	-
Common Ringtail Possum	<i>Pseudocheirus peregrinus</i>	1994	4	Partial	-	-
Sugar Glider	<i>Petaurus breviceps</i>	1993	1	Total	-	-
Feathertail Glider	<i>Acrobates pygmaeus</i>	1888	2	Total	-	-
Koala	<i>Phascolarctos cinereus</i>	1994	3	-	-	-
Black Wallaby	<i>Wallabia bicolor</i>	2006	4	-	-	-
Red-necked Wallaby	<i>Macropus rufogriseus</i>	1994	4	-	-	-
Eastern Grey Kangaroo	<i>Macropus giganteus</i>	2002	2	-	-	-
Lesser Long-eared Bat	<i>Nyctophilus geoffroyi</i>	1985	1	Total	-	-
Swamp Rat	<i>Rattus lutreolus</i>	2005	4	-	-	-

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
*Black Rat	<i>Rattus rattus</i>	2000	2	-	-	-
*House Mouse	<i>Mus musculus</i>	2002	4	-	-	-
Water Rat	<i>Hydromys chrysogaster</i>	2006	2	-	-	-
*European Rabbit	<i>Oryctolagus cuniculus</i>	2006	8	-	-	S
*European Hare	<i>Lepus europeus</i>	1992	2	-	-	S
*Red Fox	<i>Vulpes vulpes</i>	2006	10	-	-	S
*Cat	<i>Felis catus</i>	2006	5	-	-	-
Australian Fur Seal	<i>Arctocephalus pusillus</i>	2005	2	-	Ma	-
Southern Elephant Seal	<i>Mirounga leonina</i>	1978	2	-	Ma	-
Leopard Seal	<i>Hydrurga leptonyx</i>	1968	1	-	Ma	-
Southern Right Whale	<i>Eubalaena australis</i>	2002	7	-	Mi/Ma	-
Blue Whale	<i>Balaenoptera musculus</i>	1999	1	-	Mi/Ma	-
Sperm Whale	<i>Physeter macrocephalus</i>	1989	1	-	Mi/Ma	-
Pygmy Sperm Whale	<i>Kogia breviceps</i>	1990	1	-	Ma	-
Long-finned Pilot Whale	<i>Globicephala melas</i>	1955	1	-	Ma	-
Bottlenose Dolphin	<i>Tursiops truncatus</i>	2004	1	-	Ma	-
Subantarctic Fur Seal	<i>Arctocephalus tropicalis</i>	2006	4	-	Ma	-
<b>BIRDS</b>						
Stubble Quail	<i>Coturnix pectoralis</i>	2005	2	-	Ma	-
Brown Quail	<i>Coturnix ypsilophora</i>	1999	1	-	-	-
King Quail	<i>Coturnix chinensis</i>	2001	2	-	-	-
Lewin's Rail	<i>Lewinia pectoralis</i>	1992	1	-	Mi	-
Australian Spotted Crake	<i>Porzana fluminea</i>	1992	3	-	-	-
Baillon's Crake	<i>Porzana pusilla</i>	2006	2	-	Ma	-
Black-tailed Native-hen	<i>Gallinula ventralis</i>	2004	18	-	-	-
Dusky Moorhen	<i>Gallinula tenebrosa</i>	2006	7	-	-	-
Purple Swampphen	<i>Porphyrio porphyrio</i>	2006	84	-	Ma	-
Eurasian Coot	<i>Fulica atra</i>	2006	55	-	-	-

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
Great Crested Grebe	<i>Podiceps cristatus</i>	2006	25	-	-	-
Australasian Grebe	<i>Tachybaptus novaehollandiae</i>	2006	16	-	-	-
Hoary-headed Grebe	<i>Poliiocephalus poliocephalus</i>	2006	77	-	-	-
Grey-backed Storm-Petrel	<i>Garrodia nereis</i>	1976	1	-	Ma	-
White-faced Storm-Petrel	<i>Pelagodroma marina</i>	1997	2	-	Ma	-
Fluttering Shearwater	<i>Puffinus gavia</i>	2001	2	-	Ma	-
Short-tailed Shearwater	<i>Ardenna tenuirostris</i>	2003	9	-	Mi/Ma	-
Flesh-footed Shearwater	<i>Ardenna carneipes</i>	2001	1	-	Mi/Ma	-
Southern Fulmar	<i>Fulmarus glacialisoides</i>	1986	2	-	Ma	-
Great-winged Petrel	<i>Pterodroma macroptera</i>	1959	1	-	Ma	-
Fairy Prion	<i>Pachyptila turtur</i>	1993	1	-	Ma	-
Antarctic Prion	<i>Pachyptila desolata</i>	1993	2	-	Ma	-
Common Diving-Petrel	<i>Pelecanoides urinatrix</i>	1982	1	-	Ma	-
Wandering Albatross	<i>Diomedea exulans</i>	1992	1	-	Mi/Ma	-
Black-browed Albatross	<i>Thalassarche melanophris</i>	2005	5	-	Mi/Ma	-
Yellow-nosed Albatross	<i>Thalassarche chlororhynchus</i>	2000	2	-	Mi/Ma	-
Shy Albatross	<i>Thalassarche cauta</i>	2005	5	-	Mi/Ma	-
Great Cormorant	<i>Phalacrocorax carbo</i>	2006	46	-	-	-
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>	2006	31	-	-	-
Black-faced Cormorant	<i>Phalacrocorax fuscescens</i>	2006	7	-	Ma	-
Pied Cormorant	<i>Phalacrocorax varius</i>	2006	10	-	-	-
Little Pied Cormorant	<i>Microcarbo melanoleucos</i>	2006	77	-	-	-
Darter	<i>Anhinga novaehollandiae</i>	2006	4	-	-	-
Australasian Gannet	<i>Morus serrator</i>	2005	17	-	Ma	-
Australian Pelican	<i>Pelecanus conspicillatus</i>	2006	51	-	Ma	-
Whiskered Tern	<i>Chlidonias hybridus</i>	2006	20	-	Ma	-
Gull-billed Tern	<i>Gelochelidon nilotica</i>	2006	2	-	Ma	-
Caspian Tern	<i>Hydroprogne caspia</i>	2006	12	-	Mi/Ma	-

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
White-fronted Tern	<i>Sterna striata</i>	1985	1	-	Ma	-
Crested Tern	<i>Thalaseus bergii</i>	2006	26	-	Ma	-
Fairy Tern	<i>Sternula nereis</i>	1991	1	-	Ma	-
Silver Gull	<i>Chroicocephalus novaehollandiae</i>	2006	130	-	Ma	-
Pacific Gull	<i>Larus pacificus pacificus</i>	2006	28	-	Ma	-
Ruddy Turnstone	<i>Arenaria interpres</i>	2006	22	-	Mi/Ma	-
Pied Oystercatcher	<i>Haematopus longirostris</i>	2006	43	-	Ma	-
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>	2004	7	-	Ma	-
Red-kneed Dotterel	<i>Erythronyx cinctus</i>	2003	6	-	-	-
Masked Lapwing	<i>Vanellus miles</i>	2006	204	-	-	-
Banded Lapwing	<i>Vanellus tricolor</i>	1986	2	-	-	-
Grey Plover	<i>Pluvialis squatarola</i>	2000	2	-	Mi/Ma	-
Pacific Golden Plover	<i>Pluvialis fulva</i>	2006	6	-	Mi/Ma	-
Hooded Plover	<i>Thinornis rubricollis</i>	2006	68	-	Ma	-
Double-banded Plover	<i>Charadrius bicinctus</i>	2003	11	-	Mi/Ma	-
Red-capped Plover	<i>Charadrius ruficapillus</i>	2006	26	-	Ma	-
Black-fronted Dotterel	<i>Elseya melanops</i>	2006	15	-	-	-
Black-winged Stilt	<i>Himantopus himantopus</i>	2006	62	-	Ma	-
Banded Stilt	<i>Cladorhynchus leucocephalus</i>	2005	3	-	-	-
Bar-tailed Godwit	<i>Limosa lapponica</i>	2005	4	-	Mi/Ma	-
Common Sandpiper	<i>Actitis hypoleucos</i>	1998	6	-	Mi/Ma	-
Common Greenshank	<i>Tringa nebularia</i>	2006	27	-	Mi/Ma	-
Marsh Sandpiper	<i>Tringa stagnatilis</i>	2006	3	-	Mi/Ma	-
Curlew Sandpiper	<i>Calidris ferruginea</i>	2006	9	-	Mi/Ma	-
Red-necked Stint	<i>Calidris ruficollis</i>	2006	28	-	Mi/Ma	-
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	2006	30	-	Mi/Ma	-
Great Knot	<i>Calidris tenuirostris</i>	1984	1	-	Mi/Ma	-
Sanderling	<i>Calidris alba</i>	2006	12	-	Mi/Ma	-

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
Latham's Snipe	<i>Gallinago hardwickii</i>	2006	52	-	Mi/Ma	-
Australian Painted Snipe	<i>Rostratula australis</i>	2000	1	-	Mi/Ma	-
Beach Stone-curlew	<i>Esacus neglectus</i>	2006	1	-	Ma	-
Brolga	<i>Grus rubicunda</i>	2005	12	-	-	-
Glossy Ibis	<i>Plegadis falcinellus</i>	2006	3	-	Mi/Ma	-
Australian White Ibis	<i>Threskiornis molucca</i>	2006	137	-	Ma	S
Straw-necked Ibis	<i>Threskiornis spinicollis</i>	2006	71	-	Ma	-
Royal Spoonbill	<i>Platalea regia</i>	2006	67	-	-	-
Yellow-billed Spoonbill	<i>Platalea flavipes</i>	2006	29	-	-	-
Little Egret	<i>Egretta garzetta</i>	2006	8	-	Ma	-
Intermediate Egret	<i>Ardea intermedia</i>	1990	1	-	Ma	-
Eastern Great Egret	<i>Ardea modesta</i>	2006	129	-	Mi/Ma	-
White-faced Heron	<i>Egretta novaehollandiae</i>	2006	133	-	-	-
White-necked Heron	<i>Ardea pacifica</i>	2005	17	-	-	-
Nankeen Night Heron	<i>Nycticorax caledonicus</i>	2006	4	-	Ma	-
Australasian Bittern	<i>Botaurus poiciloptilus</i>	2006	8	-	-	-
Magpie Goose	<i>Anseranas semipalmata</i>	2006	23	-	Ma	-
Australian Wood Duck	<i>Chenonetta jubata</i>	2006	6	Total	-	-
Black Swan	<i>Cygnus atratus</i>	2006	314	-	-	-
Australian Shelduck	<i>Tadorna tadornoides</i>	2006	82	Total	-	-
Pacific Black Duck	<i>Anas superciliosa</i>	2006	164	-	-	-
Chestnut Teal	<i>Anas castanea</i>	2006	42	Total	-	-
Grey Teal	<i>Anas gracilis</i>	2006	92	Total	-	-
Australasian Shoveler	<i>Anas rhynchotis</i>	2006	50	-	-	-
Pink-eared Duck	<i>Malacorhynchus membranaceus</i>	2003	6	Partial	-	-
Freckled Duck	<i>Stictonetta naevosa</i>	2003	1	-	-	-
Hardhead	<i>Aythya australis</i>	2006	23	-	-	-
Blue-billed Duck	<i>Oxyura australis</i>	2005	13	-	-	-

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
Musk Duck	<i>Biziura lobata</i>	2006	49	-	Ma	-
Spotted Harrier	<i>Circus assimilis</i>	2001	3	-	-	-
Swamp Harrier	<i>Circus approximans</i>	2006	61	-	Ma	-
Brown Goshawk	<i>Accipiter fasciatus</i>	1992	1	-	Ma	-
Collared Sparrowhawk	<i>Accipiter cirrhocephalus</i>	2000	2	-	-	-
Wedge-tailed Eagle	<i>Aquila audax</i>	2005	7	-	-	-
Little Eagle	<i>Hieraaetus morphnoides</i>	2005	9	-	-	-
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	2004	2	-	Mi/Ma	-
Whistling Kite	<i>Haliastur sphenurus</i>	2006	21	-	Ma	-
Black-shouldered Kite	<i>Elanus axillaris</i>	2006	18	-	-	-
Australian Hobby	<i>Falco longipennis</i>	2005	3	-	-	-
Peregrine Falcon	<i>Falco peregrinus</i>	2005	3	Partial	-	-
Brown Falcon	<i>Falco berigora</i>	2005	20	-	-	S
Nankeen Kestrel	<i>Falco cenchroides</i>	2005	24	Partial	Ma	-
Southern Boobook	<i>Ninox novaeseelandiae</i>	1994	3	Total	Ma	-
Pacific Barn Owl	<i>Tyto javanica</i>	1998	3	Partial	-	-
Eastern Grass Owl	<i>Tyto longimembris</i>	2002	1	-	-	-
Musk Lorikeet	<i>Glossopsitta concinna</i>	1998	1	Total	-	-
Purple-crowned Lorikeet	<i>Glossopsitta porphyrocephala</i>	1998	3	Total	-	-
Yellow-tailed Black-Cockatoo	<i>Calyptrorhynchus funereus</i>	2000	2	Total	-	-
Sulphur-crested Cockatoo	<i>Cacatua galerita</i>	2005	4	Total	-	-
Long-billed Corella	<i>Cacatua tenuirostris</i>	2005	6	Total	-	-
Galah	<i>Eolophus roseicapilla</i>	2006	9	Total	-	-
Crimson Rosella	<i>Platycercus elegans elegans</i>	2005	12	Total	-	-
Eastern Rosella	<i>Platycercus eximius</i>	2002	3	Total	-	-
Red-rumped Parrot	<i>Psephotus haematonotus</i>	2005	2	Total	-	-
Orange-bellied Parrot	<i>Neophema chrysogaster</i>	2006	16	-	Mi/Ma	-
Blue-winged Parrot	<i>Neophema chrysostoma</i>	2006	9	Partial	Ma	-

Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
Tawny Frogmouth	<i>Podargus strigoides</i>	1994	2	-	-	-
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	2005	5	Total	-	-
Sacred Kingfisher	<i>Todiramphus sanctus</i>	2000	1	Partial	Ma	-
White-throated Needletail	<i>Hirundapus caudacutus</i>	2003	2	-	Mi/Ma	-
Fork-tailed Swift	<i>Apus pacificus</i>	1987	1	-	Mi/Ma	-
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>	2000	2	-	Ma	-
Black-eared Cuckoo	<i>Chrysococcyx osculans</i>	2000	1	-	Ma	-
Horsfield's Bronze-Cuckoo	<i>Chrysococcyx basalis</i>	1999	1	-	Ma	-
Shining Bronze-Cuckoo	<i>Chrysococcyx lucidus</i>	2005	2	-	Ma	-
Welcome Swallow	<i>Hirundo neoxena</i>	2006	46	Partial	Ma	-
Tree Martin	<i>Hirundo nigricans</i>	2000	4	Total	Ma	-
Grey Fantail	<i>Rhipidura albiscarpa</i>	2001	5	-	-	-
Willie Wagtail	<i>Rhipidura leucophrys</i>	2006	42	-	-	S
Restless Flycatcher	<i>Myiagra inquieta</i>	2001	1	-	-	-
Jacky Winter	<i>Microeca fascinans</i>	1999	1	-	-	-
Eastern Yellow Robin	<i>Eopsaltria australis</i>	2001	1	-	-	-
Golden Whistler	<i>Pachycephala pectoralis</i>	2001	2	-	-	-
Rufous Whistler	<i>Pachycephala rufiventris</i>	2001	1	-	-	-
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	2001	4	Partial	-	-
Magpie-lark	<i>Grallina cyanoleuca</i>	2006	41	-	Ma	S
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	2005	3	-	Ma	-
White-fronted Chat	<i>Epthianura albifrons</i>	2006	41	-	-	-
Striated Thornbill	<i>Acanthiza lineata</i>	2001	1	-	-	-
Brown Thornbill	<i>Acanthiza pusilla</i>	2005	3	-	-	-
Yellow-rumped Thornbill	<i>Acanthiza chrysorrhoa</i>	2005	11	-	-	-
White-browed Scrubwren	<i>Sericornis frontalis</i>	2005	6	-	-	-
Striated Fieldwren	<i>Calamanthus fuliginosus</i>	2001	16	-	-	-
Brown Songlark	<i>Cincloramphus cruralis</i>	2001	7	-	-	-



Common Name	Scientific Name	Last Documented Record (AVW)	Total # of Documented Records (AVW)	Hollow Use	Mi/ Ma	Present Survey
Little Grassbird	<i>Megalurus gramineus</i>	2006	12	-	-	-
Clamorous Reed Warbler	<i>Acrocephalus stentoreus</i>	2005	7	-	Mi/Ma	-
Golden-headed Cisticola	<i>Cisticola exilis</i>	2006	19	-	-	-
Southern Emu-wren	<i>Stipiturus malachurus</i>	2000	1	-	-	-
Superb Fairy-wren	<i>Malurus cyaneus</i>	2005	17	-	-	-
Dusky Woodswallow	<i>Artamus cyanopterus</i>	2001	3	Partial	-	-
White-throated Treecreeper	<i>Cormobates leucophaeus</i>	1999	4	Total	-	-
Silvereye	<i>Zosterops lateralis</i>	2005	20	-	Ma	-
White-naped Honeyeater	<i>Melithreptus lunatus</i>	2001	3	-	-	-
Scarlet Honeyeater	<i>Myzomela sanguinolenta</i>	1985	1	-	-	-
Singing Honeyeater	<i>Lichenostomus virescens</i>	2006	29	-	-	-
Yellow-faced Honeyeater	<i>Lichenostomus chrysops</i>	1999	2	-	-	-
White-eared Honeyeater	<i>Lichenostomus leucotis</i>	2001	1	-	-	-
White-plumed Honeyeater	<i>Lichenostomus penicillatus</i>	2002	4	-	-	-
New Holland Honeyeater	<i>Phylidonyris novaehollandiae</i>	2006	17	-	-	-
Noisy Miner	<i>Manorina melanocephala</i>	2001	5	-	-	S
Little Wattlebird	<i>Anthochaera chrysoptera</i>	1998	1	-	-	-
Red Wattlebird	<i>Anthochaera carunculata</i>	2005	13	-	-	-
Australasian Pipit	<i>Anthus novaeseelandiae</i>	2003	19	-	Ma	-
Australian Magpie	<i>Gymnorhina tibicen</i>	2006	74	-	-	S
*Domestic Goose	<i>Anser anser (domestic)</i>	2006	3	-	-	-
Unknown Raven	<i>Corvus sp.</i>	2001	10	-	-	-
Forest Raven	<i>Corvus tasmanicus</i>	2001	2	-	Ma	-
Hutton's Shearwater	<i>Puffinus huttoni</i>	2001	1	-	Ma	-
Mottled Petrel	<i>Pterodroma inexpectata</i>	1984	1	-	Ma	-
Southern Giant-Petrel	<i>Macronectes giganteus</i>	2006	4	-	Mi/Ma	-
Australian Raven	<i>Corvus coronoides</i>	2006	7	-	-	-
Kerguelen Petrel	<i>Lugensa brevirostris</i>	1986	1	-	Ma	-

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Northern Giant-Petrel	<i>Macronectes halli</i>	1991	1	-	Mi/Ma	-
Pomarine Jaeger	<i>Stercorarius pomarinus</i>	1982	1	-	Mi/Ma	-
*Northern Mallard	<i>Anas platyrhynchos</i>	1999	2	-	-	-
Antarctic Petrel	<i>Thalassoica antarctica</i>	1999	1	-	Ma	-
Little Raven	<i>Corvus mellori</i>	2006	44	-	Ma	-
Royal Albatross	<i>Diomedea epomophora</i>	1986	1	-	Mi/Ma	-
Striated Pardalote	<i>Pardalotus striatus</i>	2001	4	Partial	-	-
Cattle Egret	<i>Ardea ibis</i>	2006	44	-	Mi/Ma	-
Kelp Gull	<i>Larus dominicanus</i>	2001	13	-	Ma	-
*Common Blackbird	<i>Turdus merula</i>	2006	19	-	-	S
*European Skylark	<i>Alauda arvensis</i>	2005	30	-	-	S
*House Sparrow	<i>Passer domesticus</i>	2006	23	-	-	S
*European Goldfinch	<i>Carduelis carduelis</i>	2006	39	-	-	-
*European Greenfinch	<i>Carduelis chloris</i>	2001	4	-	-	-
*Common Starling	<i>Sturnus vulgaris</i>	2006	37	Partial	-	S
Common Quail	<i>Coturnix coturnix</i>	0	1	-	-	-
*Domestic duck	<i>Anatidae sp. (domestic)</i>	0	1	-	-	-
<b>REPTILES</b>						
Common Long-necked Turtle	<i>Chelodina longicollis</i>	2000	1	-	-	-
White's Skink	<i>Egernia whitii (group)</i>	2005	50	-	-	-
McCoy's Skink	<i>Nannoscincus maccoyi</i>	2005	6	-	-	-
Garden Skink	<i>Lampropholis guichenoti</i>	2002	1	-	-	-
Blotched Blue-tongued Lizard	<i>Tiliqua nigrolutea</i>	2001	2	-	-	-
Common Blue-tongued Lizard	<i>Tiliqua scincoides</i>	1998	3	-	-	-
Stumpy-tailed Lizard	<i>Tiliqua rugosa</i>	2000	1	-	-	-
White-lipped Snake	<i>Drysdalia coronoides</i>	2005	12	-	-	-
Tiger Snake	<i>Notechis scutatus</i>	2005	4	-	-	-
Eastern Three-lined Skink	<i>Bassiana duperreyi</i>	2005	9	-	-	-

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Glossy Grass Skink	<i>Pseudemoia rawlinsoni</i>	2005	4	-	-	-
Southern Water Skink	<i>Eulamprus tympanum tympanum</i>	2005	4	-	-	-
Lowland Copperhead	<i>Austrelaps superbus</i>	2006	10	-	-	-
Unidentified copperhead	<i>Austrelaps sp.</i>	1997	1	-	-	-
Southern Grass Skink	<i>Pseudemoia entrecasteauxii</i>	2005	28	-	-	-
Unidentified grass skink	<i>Pseudemoia sp.</i>	1976	2	-	-	-
<b>FROGS</b>						
Southern Bullfrog	<i>Limnodynastes dumerilii</i>	2006	2	-	-	-
Striped Marsh Frog	<i>Limnodynastes peronii</i>	2006	41	-	-	-
Spotted Marsh Frog	<i>Limnodynastes tasmaniensis</i>	2005	21	-	-	-
Brown Toadlet	<i>Pseudophryne bibronii</i>	1976	2	-	-	-
Southern Toadlet	<i>Pseudophryne semimarmorata</i>	2005	1	-	-	-
Common Froglet	<i>Crinia signifera</i>	2005	26	-	-	-
Southern Brown Tree Frog	<i>Litoria ewingii</i>	2005	50	-	-	-
Growling Grass Frog	<i>Litoria raniformis</i>	1962	3	-	-	-

Source: DSE Atlas of Victorian Wildlife (2007)

## REFERENCES

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DEH 2006. *Experimental Trial to Determine Effective Feral Cat and Fox Exclusion Fence Designs*. <http://www.environment.gov.au/biodiversity/invasive/publications/pubs/cat-fox-fence.pdf>

DEWHA 2008. *Competition and land degradation by rabbits; Threat abatement plan*. Department of the Environment, Water, Heritage and the Arts <http://www.environment.gov.au/biodiversity/threatened/publications/tap/rabbits08.html>

DPI 2007a. *Rabbits and their Impact*. Landcare Notes. Department of Primary Industries.

DPI 2007b. *Foxes and their Impact*. Landcare Notes. Department of Primary Industries.

DPI 2009. *A Guide for the Control over the Possession, Trade and Movement of Declared Pest Animals*. Department of Primary Industries. <http://new.dpi.vic.gov.au/notes/agg/lc0303-a-guide-for-the-control-over-the-possession,-trade-and-movement-of-declared-pest-animals>

DSE 2002a. *Flora and Fauna Guarantee Act 1988, Action Statement No. 44, Predation of native wildlife by the introduced Red Fox *Vulpes vulpes**. [http://www.dse.vic.gov.au/CA256F310024B628/0/D57F21E0DB90BCC1CA25709200233CD7/\\$File/044+predation+by+red+fox+\\_revised\\_+2002.pdf](http://www.dse.vic.gov.au/CA256F310024B628/0/D57F21E0DB90BCC1CA25709200233CD7/$File/044+predation+by+red+fox+_revised_+2002.pdf);

DSE 2002b. *Victorian Pest Management: A Framework for Action*. The State of Victoria, Department of Natural Resources and Environment.

DSE 2002c. *Victorian Pest Management: A Framework for Action. Fox Management Strategy*. The State of Victoria, Department of Natural Resources and Environment.

DSE 2002d. *Victorian Pest Management: A Framework for Action. Rabbit Management Strategy*. The State of Victoria, Department of Natural Resources and Environment.

DSE 2005. *Advisory List of Rare or Threatened Plants in Victoria*. Department of Sustainability and Environment.

ERM 2006. *Ryan Corner Wind Farm Environmental Effects Statement and Application for Planning Permit*. Environmental Resource Management Australia.

IACRC 2007. *Invasive Animals Cooperative Research Centre*. <http://www.invasiveanimals.com/invasive-animals>

National Heritage Trust 1999. *Environment Protection and Biodiversity Conservation Act 1999, Threat Abatement Plan for Predation by the European Red Fox*. <http://www.environment.gov.au/biodiversity/threatened/publications/tap/foxes/index.html>.