





Biosis offices

NEW SOUTH WALES

Newcastle

Phone: (02) 4911 4040 Email: newcastle@biosis.com.au

Sydney

Phone: (02) 9101 8700 Email: sydney@biosis.com.au

Wollongong

Phone: (02) 4201 1090 Email: wollongong@biosis.com.au

Albury

Phone: (02) 6069 9200 Email: <u>albury@biosis.com.au</u>

VICTORIA

Melbourne

Phone: (03) 8686 4800 Email: melbourne@biosis.com.au

Ballarat

Phone: (03) 5304 4250 Email: ballarat@biosis.com.au

Wangaratta

Phone: (03) 5718 6900 Email: wangaratta@biosis.com.au

Document information

Report to: DeNova Group Pty Ltd

Prepared by: Imogen Merlo
Tim Dredge

Biosis project no.: 28666

File name: 28666.Fauna.CMP.Furlong.FIN.20190919

Citation: Biosis 2019. 181 Furlong Rd, St Albans: Fauna Conservation Management Plan. Report for DeNova Group Pty Ltd. Authors: I Merlo & T Dredge, Biosis Pty Ltd, Melbourne. 28666

Document control

Version	Internal reviewer	Date issued
Draft version 01	KS	27.05.2019
Final version 01	TD	19/09/2019

Acknowledgements

Biosis acknowledges the contribution of the following people and organisations in undertaking this study:

- DeNova Group: Ben Tzirkas and Lisa Tzirkas
- Brimbank City Council: Mel McGregor

Biosis staff involved in this project were:

- Lucy Wilson and Julian Turner (mapping)
- Katrina Sofo (quality assurance)

© Biosis Pty Ltd

This document is and shall remain the property of Biosis Pty Ltd. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of the Engagement for the commission. Unauthorised use of this document in any form whatsoever is prohibited.

Disclaimer

Biosis Pty Ltd has completed this assessment in accordance with the relevant federal, state and local legislation and current industry best practice. The company accepts no liability for any damages or loss incurred as a result of reliance placed upon the report content or for any purpose other than that for which it was intended.



Contents

1	Intr	oduction	1
	1.1	Background	1
	1.2	Objectives of the fauna CMP	
	1.3	Site description	2
		1.3.1 Extent of works	2
		1.3.2 Key fauna values	2
		1.3.3 Habitat Removal and Salvage areas	
		1.3.4 Fauna relocation/protection zone	
	1.4	How to use this CMP	3
2	Pre-	clearing tasks	6
	2.1	Planning activities	6
	2.2	Contractor site induction	6
	2.3	Daily pre-clearing process	6
	2.4	On site preparation	7
		2.4.1 Fencing	7
3	Hab	itat removal	8
	3.1	Habitat removal method	8
		Recommended fauna sensitive vegetation removal method	8
	3.2	Equipment	9
4	Fau	na salvage protocols	11
	4.1	Habitat removal salvage process	11
	4.2	Relocation and release protocols	12
5	Salv	age protocols for fauna groups	13
	5.1	Ground-dwelling mammals	13
	5.2	Reptiles	14
		5.2.1 Additional salvage protocols for Striped Legless Lizard	14
	5.3	Frogs	14
6	Post	-habitat clearing actions	16
		6.1.1 Fauna in the works area post-habitat clearing	16
		6.1.2 Management of the relocation site during and post fauna salvage	16
7	Data	a collection and reporting	17
8	Refe	rences	18
Appe	endice	25	19
Appe	endix	1 Striped Legless Lizard information sheet for contractors	20
Арре	endix	2 Wildlife care facilities	21



Appendix	3 Fauna handler daily record sheet22
Figures	
Figures	
Figure 1	Fauna Conservation Management Plan5



1 Introduction

1.1 Background

Biosis Pty Ltd was commissioned by DeNova Group Pty Ltd on behalf of Fronditha Care to prepare a fauna conservation management plan (CMP) for the scheduled development works at 181 Furlong Rd, St Albans (the study area). DeNova has commissioned the works, however the CMP will ultimately apply to whoever is managing the works at the time.

The project has been issued with an amended planning permit (P622/2011) by Brimbank City Council for the development of buildings and works as part of an existing nursing home located on the study area. As part of the permit conditions a fauna conservation management plan is required to outline operational requirements for fauna protection and salvage for the associated works.

This fauna conservation management plan addresses permit conditions 8(c), 10 and 11, and provides guidelines for the management of any ground-dwelling fauna that may be present within the study area during the construction works.

Planning permit P622/2011 conditions addressed within this report include:

- 8) (c) Show location & details of temporary fencing must be constructed to prevent ground dwelling fauna from entering the demolition footprint.
- 10) Prior to any works commencing and to the removal of native vegetation and identified habitat, a fauna conservation management plan must be developed and submitted to and approved by the Responsible Authority. When approved this plan will form part of this permit and must detail measures for the survey, protection, salvage and relocation of striped legless lizard/ground dwelling indigenous fauna, particularly native reptiles and amphibians likely to be present within habitat supporting embedded rock or native grass.

The Plan must be undertaken to the satisfaction of the Responsible Authority and include measures to protect ground dwelling fauna, particularly native reptiles and amphibians likely to be present within habitat supporting embedded rock or native grass. Protection measures include targeted surveys for the species using a recognised survey methodology to determine presence and inform any salvage and relocation and physical infrastructure.

- (a) The plan must be developed and undertaken by a qualified and experienced zoologist with appropriate permits.
- (b) The fauna management plan must be developed and implemented to the satisfaction of the Responsible Authority. Any non-compliance identified by the Responsible Authority must be rectified immediately at no cost to Council.
- (c) Relocation of Striped Legless Lizard must be undertaken to the satisfaction of the Responsible Authority. Any non-compliance identified by the Responsible Authority must be rectified immediately at no cost to Council.
- (d) Alternatively, other commensurate measures to those required by this condition (as above) must be achieved to the satisfaction of the Responsible Authority.
- 11) All habitat for Striped Legless Lizard and Golden Sun Moth must be protected from any disturbance until survey and relocation is undertaken in accordance with relevant guidelines, protocols and requirements to the satisfaction of the Responsible Authority.



1.2 Objectives of the fauna CMP

The fauna salvage and release protocols outlined within this document have been developed to provide assistance and guidance to DeNova Group Pty Ltd and associated contractors during the removal of vegetation within the works footprint at 181 Furlong Rd, St Albans.

Wildlife is often overlooked and incidentally harmed during construction works, and the implementation of a well-planned fauna salvage program will ensure many of the resident animals can be rescued and relocated adjacent to the site. Relocation is aimed to protect the resident fauna from potential negative impacts of construction activities.

The measures outlined within this fauna CMP have been developed to where possible, avoid harm to fauna residing within the vegetation and identified habitat to be removed during clearing works, particularly ground-dwelling fauna such as reptiles and amphibians.

When implemented, this fauna CMP will address the planning permit conditions 8(c), 10 and 11 outlined above.

1.3 Site description

1.3.1 Extent of works

The planned works involve the extension of a nursing home within the works footprint (Figure 1). As part of the amended permit conditions, DeNova Group is also required to remove a levy which exists along the boundary of the study area and the council reserve adjacent to the site. The protocols outlined within this fauna management plan relates to all works.

1.3.2 Key fauna values

A biodiversity assessment was undertaken for the project area on 7 February and 30 April 2018 (Biosis 2018). The flora and fauna values of the site were recorded. This fauna CMP incorporates information taken from the biodiversity assessment. Fauna habitat within the works area is mapped in Figure 1.

Following the biodiversity assessment, targeted surveys were recommended for the following significant species:

- Golden Sun Moth *Synemon plana* Habitat identified in areas mapped as Plains Grassland. Survey is recommended to be undertaken during the local flying season for the species (late October to early January) in accordance with the Significant impact guidelines for the critically endangered Golden Sun Moth (*Synemon plana*) (Commonwealth of Australia 2009).
- Striped Legless Lizard Delma impar- Habitat identified in areas of dense tussock grasses. Survey to be
 undertaken in accordance with Environment Protection and Biodiversity Conservation Act 1999
 referral guidelines for the vulnerable striped legless lizard (Commonwealth of Australia 2011a)

Targeted surveys were subsequently undertaken for each of these species and are each discussed in Section 1.4.

Brimbank City Council has also outlined that ground-dwelling indigenous fauna such as reptiles and amphibians must be considered within this fauna management plan due to the presence of suitable potential habitat for those species, such as native and introduced grasses and occasional rock.



1.3.3 Habitat Removal and Salvage areas

The extent of works is identified in Figure 1. This includes areas of habitat for which removal and salvage has been approved in accordance with planning permit P622/2011 subject to the conditions detailed in Section 1.1 and addressed within this report.

Works will impact areas of grassy/rocky terrestrial habitat as described above in Section 1.3.1 and depicted in Figure 1. Protocols for pre-clearance checks, habitat removal and salvage are detailed in Sections 2-5 of this report.

1.3.4 Fauna relocation/protection zone

A suitable fauna release area is identified within Figure 1 (identified as relocation zone). There is suitable rocky/ grassland habitat present for the relocation of terrestrial fauna. The release area excludes the works footprint and comprises the suitable identified alternative habitat within the study area.

The relocation site will be protected by fauna exclusion temporary fencing lining the works footprint, and must remain undisturbed from construction as outlined in Section 2.4.

Potential Striped Legless Lizard habitat

Areas of grassy terrestrial habitat recorded during the assessment (Biosis 2018) resulted in recommendations for targeted surveys to determine presence/absence for the nationally significant, *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed Striped Legless Lizard. Any proposed action that is likely to result in a significant impact to a population of Striped Legless Lizard requires referral to the Australian Government Minister for the Environment to determine if further assessment is required.

Targeted surveys for Striped Legless Lizard were conducted over the spring/summer season of 2018. No Striped Legless Lizards were found in the study area, indicating that a population is unlikely to be present.

Habitat removal protocols relating to the mapped habitat contained in Section 3 provide a suitable methodology for the salvage of Striped Legless Lizard in the unlikely event that they are found on the site during habitat removal works. If this species is detected during habitat removal, works are to cease and a representative from the Department of Environment, Land, Water and Planning (DELWP) and Council must be contacted for further information and guidance given the significance of this species.

An information sheet for Striped Legless Lizard is provided in Appendix 1.

1.4 How to use this CMP

The fauna CMP has been broken down into several sections to reflect the timing of tasks required within this plan. This includes:

- Section 2 relating to pre-clearance tasks.
- Section 3 relating to habitat removal.
- Section 4 relating to general fauna salvage protocols.
- Section 5 relating to fauna group specific salvage protocols.
- Section 6 relating to post habitat clearing actions.
- Section 7 relating to data collection and reporting.

All sections of this plan are to be implemented in the sequence they are presented with the following qualifications:



- Section 2 (pre-clearance) is to be implemented prior to the commencement of construction works.
- Sections 3-5 (habitat removal and salvage) are to be implemented concurrently after the implementation of Section 2.
- Section 6 (post habitat clearing) is to be implemented after the completion of Sections 2-5.
- Section 7 (data collection and reporting) is to be implemented from the commencement of Section 2 ongoing until the completion of works.





2 Pre-clearing tasks

Prior to any fauna salvage works occurring on site, a number of preparatory requirements must be completed, as outlined below.

2.1 Planning activities

- Qualified, experienced and authorised zoologists will be engaged under this protocol to assess fauna habitat removal and undertake fauna salvage and release as required. The zoologist must hold a current Research Permit/Management Authorisation under the Wildlife Act 1975, issued by DELWP.
- Suitable habitat for the release of salvaged animals has been identified (Figure 1) and is within the designated fauna relocation/protection zone. This area is described further in Section 4.2.
- Local veterinarians must be contacted and arrangements made to ensure a qualified veterinarian is available during the salvage works to treat or euthanise injured wildlife. A list of local veterinarians and wildlife carers is provided in Appendix 2.
- An appropriately qualified snake handler should be identified prior to salvage and called if required for the capture and release of any snakes that cannot be managed on site (see Section 5.2).

2.2 Contractor site induction

- A site induction must be provided to all contractors and is to include relevant sections of this protocol, along with other fauna management issues and obligations under the project specific Environmental Management Plans, the Wildlife Act and/or as required by DELWP, to not interfere with or harm fauna.
- Zoologist to provide Striped Legless Lizard fact sheets to all contractors undertaking vegetation removal and habitat disturbance activities (Appendix 1).

2.3 Daily pre-clearing process

Prior to habitat clearing works commencing each day the section to be cleared must be subject to a preremoval inspection by the zoologist to identify any fauna or fauna habitat. All captured fauna is to be relocated to the designated fauna protection/relocation zone outside the works footprint.

Prior to habitat clearing works commencing each day, a pre-start meeting and/or toolbox talk should be undertaken. This ensures clear communication of areas to be cleared, who will be operating machinery and who will be on-ground. The meeting also allows clear rules and lines of communication to be established between the machine operator and the zoologist. Clear signals of when to start/stop works when an animal is found must be in place prior to works commencing. In addition, the following must be undertaken:

- Relevant JSAs and/or SWEMS to be read and signed by all contractors working on site.
- Zoologist to inspect the area for any fauna that may be impacted, and to mark any fauna habitat features for attention during the clearing process.
- Confirm the location of the release site for any salvaged fauna encountered on site, and instruct the contractors to keep works clear of this zone.



• Determine the sequence/state of clearing to be undertaken.

2.4 On site preparation

2.4.1 Fencing

Prior to construction, fauna exclusion temporary fencing must be erected around the works footprint which abuts the fauna relocation zone, as shown in Figure 1. This fence may also form a part of the 'No-Go' zone fencing to delineate where construction works are approved so long as the functionality of the fauna exclusion fencing remains intact.

The protection fence must remain in place at least until all works are completed to the satisfaction of the Responsible Authority.

During the construction period, fences are to be checked prior to the commencement of work each day to ensure integrity. Where any fencing damage is identified, works must stop immediately until the fence is repaired/replaced.



3 Habitat removal

3.1 Habitat removal method

Once the pre-clearing process has been completed, and prior to the commencement of civil works, habitat identified for salvage within Figure 1 will be removed following the methods outlined below. Any fauna encountered will be captured and relocated where possible.

Salvage protocols for fauna listed in Section 4 and Section 5 are to be followed during all habitat removal works.

Recommended fauna sensitive vegetation removal method

To reduce the risk posed to wildlife during habitat removal Biosis recommends the following procedures as the most fauna sensitive method for removal of the vegetation.

Grassland/Rocky areas within salvage zone

- Areas identified within the salvage zone in Figure 1 contain potential reptile and amphibian habitat.
 Salvage within this area should be undertaken prior to civil works commencing to remove suitable habitat from the site, reducing the chance of fauna recolonising the area post-salvage.
- Habitat removal within this zone can be undertaken in the following ways:
 - Backhoe with rippers mounted on the rear to rip the soil to a maximum depth of 300 millimetres.
 Backhoe to traverse over entire site, zoologist to follow behind and capture fauna (preferred method).
 - An excavator with the largest toothed bucket to scrape the earth surface to 300 millimetres deep and shake out contents next to the zoologist (this method is only recommended if threatened fauna species are discovered).
 - The use of a grader with tines to rip through the soil across the site, zoologist to follow behind and capture fauna.
- Rocks to be hand turned by zoologist and fauna captured where possible.
- Zoologist to be present when rock is moved by earth working equipment to capture any fauna residing within.

Shrub thickets

- Contractor is to clear fell shrubs/branches identified as fauna habitat with chainsaws in a direction away from connecting vegetation onto clear ground in small increments.
- Zoologist is to inspect vegetation and salvage fauna where required prior to the felling of additional vegetation.
- Vegetation felled is to be removed with bobcat or similar and chipped on the same day, ideally shortly after being inspected by the zoologist. Vegetation is not to be stockpiled and chipped at a later time.

Trees

• Where possible, identified hollows will be inspected from an elevated work platform by the Arborist. If it is determined there is fauna present the zoologist will attempt extraction from the elevated work



platform. If extraction is not possible, the section of the tree with the hollow is to be lowered to the ground with the hollow plugged, if possible.

- For large trees that show evidence of potential occupancy by fauna (i.e. presence of hollows, wearing at hollow entrance, nests, etc.), it is recommended that trees are felled in a staged manner from an elevated work platform and sections of the tree lowered carefully to the ground and inspected.
- For small trees that show evidence of potential occupancy it may be appropriate to hold the tree with
 a large clawed bucket excavator, chainsaw through the base of the tree and gently lower the tree to
 the ground with the excavator.
- For trees without clear signs of occupancy, the tree can be removed using the 'knock and drop' method. This involves the use of an excavator with a bucket to knock the tree to see if any animals emerge. After several minutes, the tree is knocked again. If no animals emerge, the base of the tree is dug up and the tree is pushed over using the excavator or clear felled by a chainsaw operator. The zoologist will carefully observe any fauna habitat features present during this process for signs of fauna emerging. Once on the ground, the zoologist will inspect the tree, including all areas of the crown and any hollows present.
- Large branches/trunks should be retained for habitat purposes where there are identified safe places available for placement and shrubbery mulched as soon as possible after removal.

It should be noted that the exact method of removing trees and other woody vegetation will vary depending on the machinery available and the specific constraints of the site.

3.2 Equipment

To assist with locating and salvaging fauna, DeNova Group Ltd should ensure that appropriate equipment and machinery is used during the habitat removal works. To a large extent, this is guided by the tree removal contractor.

Requirements for grassland/rocky area habitat removal may include:

- Large excavator with claw and bucket or;
- Bobcat with rear mounted rippers or;
- Grader with rear mounted tines.

Requirements for tree/shrub removal may include:

- Large excavator with claw and bucket.
- Bobcat.
- A chain saw operator.
- Elevated Work Platform (EWP) for large trees.
- Wood chipper.
- Skilled and licenced equipment operators.

Requirement and equipment for zoologists include:

- Experience in identifying and handling native fauna.
- Experience in fauna salvage.



- Listed to work under a valid Research Permit/Management Authorisation.
- Personal Protective Equipment including gloves, steel-capped boots, hard hat, long-sleeve shirt, long pants, safety eyewear and ear plugs.
- Appropriate immunisation against zoonosis (e.g. Australian Bat Lyssavirus).
- Personal first aid kits.
- Appropriate fauna capture and handling tools/equipment, including soft rimmed nets, capture poles, blankets, towels, endoscope (see-snake), head torch and a hand-held torch.
- Containers or baskets for attaching to trees and collected birds' nests placed within.
- Fauna storage containers and transport materials such as carry cages, plastic tubs, insulated tubs, plastic bags, cloth bags and pillow cases, towels and heat pads.



4 Fauna salvage protocols

4.1 Habitat removal salvage process

Salvage associated with habitat removal should follow the general salvage protocols outlined below. Additional details on the salvage protocols for individual fauna groups are specified in Section 5. These should be implemented in conjunction with the general methods detailed here.

- During habitat removal the zoologist will determine if capture and release is warranted based on the
 best interests of the animal concerned. This determination will be based on the health of the animal,
 the likelihood of survival or successful translocation, or whether the animal is native or introduced.
- If the zoologist determines that clearing works are to cease so that fauna may be safely captured and relocated, the zoologist is to liaise with the site manager and/or the appropriate contractor(s).
- Fauna is to be captured by the zoologist either by hand, with nets, capture poles, capture bags, blankets or towels. Captured fauna must immediately be covered and/or placed into a suitable container, to reduce stress and the risk of escape.
- Once a tree/section of tree is on the ground or boulder removed, all machinery must cease operating while the zoologist inspects hollows, cracks, loose bark, fissures and nests for fauna.
- If nocturnal fauna is required to be kept during the day, they will be kept in secure cloth bags in either standard pet carrying cages or nest boxes. Captive fauna will be kept at ambient temperature and in the shade to avoid any heat stress, in a dark and quiet location. Water will be provided if necessary. The zoologist is to undertake an initial health check on the animal and to occasionally monitor captive fauna for signs of distress (this would include checking the storage area to determine if the animal is resting or causing injury to itself, fauna is not to be removed and handled further, unless necessary).
- In the event that juvenile fauna is displaced and cannot be re-united with the parent(s), orphaned fauna must be deposited with an authorised wildlife carer as soon as possible. In the interim pouch young should be placed in a small artificial pouch/capture bag, on a heat pad, kept quiet and in the dark until transport to an authorised wildlife carer.
- In the event that fauna is injured during clearing works, the animal should initially be assessed and immediately taken to a veterinarian for further assessment and treatment, and if necessary euthanasia.
- Should the zoologist need to leave site to transport any injured wildlife to a veterinarian for
 immediate care, work must cease while the injured animal is taken to the veterinarian. Transporters
 are to keep vehicles quiet with no radios on, no loud talking or phone calls, keep the vehicles cool and
 drive gently. Smoking in a vehicle with fauna is prohibited.
- After consultation with the veterinarian, injured fauna that requires recuperation and thus is unable
 to be immediately released must be transferred to an authorised wildlife carer. Upon successful
 recuperation and rehabilitation, the animal is to be released into suitable habitat within the release
 site.
- At all times, the welfare of individual animals must be of utmost concern to all involved in this
 protocol.
- A severely injured animal (for example, deep cut with exposed organs, bone fracture, protruding bone, etc.) may require euthanasia. It is preferable to take animals to a veterinarian for euthanasia



however, at times this may not be possible, practical or in the best interests of the animal (i.e. due to prolonged suffering). In these cases it may be necessary to undertake humane euthanasia in the field. The method of euthanasia should be suited to the size of the animal. In general, a sharp and forceful blow to the head with a blunt object (e.g. hammer) to cause instantaneous death via spinal separation is considered to be humane. The head should be covered lightly with a cloth to prevent the animal from observing this action. Only experienced and authorised zoologists are to perform euthanasia in the field. Euthanised specimens will be offered to the Museum of Victoria in accordance with the relevant DELWP Research Permit.

Hollow section of trees to be retained where possible for installation within remaining habitat.

4.2 Relocation and release protocols

A suitable release area is identified within Figure 1. The relocation site will be protected by fauna exclusion fencing and must remain undisturbed from construction as outlined in Section 2.4.

The following general protocols for releasing animals will be conducted.

- Where possible, all uninjured animals will be released as soon as practicable after capture.
- Nocturnal animals will either be kept in suitable containers during the day and released after dark on
 the day of capture or released into temporary nest boxes erected in retained habitat during the day.
 Entrances to nest boxes will be plugged during the day and removed upon dusk. Nest boxes can be
 removed a week after the release of the animal if they are not in use.
- Release of animals will be within the nearest suitable habitat for the species (generally within 50 150 metres of the capture location).
- Animals will be released into favourable habitat for the species (e.g. under rocks or dense vegetation for frogs).
- The zoologist will record all relevant details for each animal released.
- Fauna that has been taken to a wildlife carer is to be released with its nest box and the nest box is to remain in place.



5 Salvage protocols for fauna groups

Salvage of all fauna should follow the clearing and release protocols as outlined above. Additional salvage protocols relevant to the different fauna groups likely to be encountered within the clearance site are provided below.

5.1 Ground-dwelling mammals

Ground dwelling mammals are unlikely to be encountered during the clearing, nonetheless if encountered the following procedures must apply.

Species: Echidnas, rodents, antechinuses, dunnarts.

Salvage approach:

- Echidnas can be found foraging during the day and when disturbed they are known to "dig in". They will partly bury themselves in the soil, exposing their spines. This defence mechanism can make them difficult to locate, particularly in sandy soils, as they can completely bury themselves. The process of capture will require the zoologist to dig by hand around the side and under the echidna. The aim is to get a hand(s) beneath the echidna and to grasp a hind leg(s) and lift the echidna from the soil, supporting the Echidna underneath as well as grasping the feet. Care should be taken as to not damage the fragile beak of the Echidna, if damage to the beak occurs, Echidna must be euthanised.
- Uninjured echidnas should be released into suitable habitat outside the clearing site as soon as
 possible after capture. This is particularly important for adult female echidnas found between
 September and April as they may have dependent young in burrows. Zoologist to consider releasing
 female Echidna's within the clearing area upon completion of clearing for the day so she can make
 her way back to the burrow unharmed.
- If injured, captured echidnas should be placed in a dig-proof container, such as a ventilated plastic box or garbage bin. Captive echidnas should be kept in a cool, well ventilated location, out of direct sun and taken to a veterinarian as soon as possible.
- During habitat removal works, native rodents may be disturbed. The zoologist should determine if capture and relocation is warranted, based on the best interests (animal welfare interests) of the animal.
- Capture of rodents will be best achieved with the use of a hand net.
- Once captured, rodents should be placed into a cloth capture bag and assessed for injuries. If not
 injured, the animals will be retained until dusk and then released into appropriate habitat. Cloth bags
 containing rats should be placed in a suitable container such as a pet carry cage or ventilated plastic
 container to prevent them escaping in the event that they chew through the bag. Water and food can
 be provided if required. Standard bait mix (rolled oats, peanut butter and honey) can be used for
 most species.



5.2 Reptiles

Species: Snakes, lizards

Salvage approach:

- Snakes will not be handled by the zoologist.
- Any snakes disturbed by the clearing works should only be captured and relocated if they are injured, present a potential threat to site personnel or are likely to be harmed by the works. If capture is required, snakes <u>must only be handled by an experienced and licenced snake handler</u>. All snakes are protected and are not to be harmed or interfered with.
- If snakes are not immediately released they should be placed in a clearly marked bag in a secure location, such as a plastic storage box, where they cannot be accidently/unintentionally handled.
- Reptiles can be captured either by hand or with nets.
- Captured reptiles other than snakes can be placed into cloth capture bags or ventilated plastic containers until released.
- Reptiles should be released as soon as possible after capture into suitable habitat outside of the
 construction zone. Where release is to be delayed, all reptiles should be stored in the shade in
 summer to avoid overheating, or in a warm location during the cooler months.

5.2.1 Additional salvage protocols for Striped Legless Lizard

- The habitat removal protocols listed above provides a suitable method for the salvage of Striped Legless Lizard in the unlikely event that they are present on the site.
- If Striped Legless Lizard are detected during habitat removal, works are to cease and DELWP/ Council
 contacted for further information given the significance of this species and the limited available
 habitat for release.

5.3 Frogs

Species: All species.

Salvage approach:

- The zoologist should ensure that habitat under rocks, logs and leaf litter is searched before and during clearing works to maximise salvage of frogs.
- The capture and relocation of frogs require specific attention to avoid disease transmission. The
 following hygiene protocols have been developed in accordance with the Hygiene protocols for the
 control of diseases in Australian Frogs (Commonwealth of Australia 2011b).
 - Un-powdered non-latex (e.g. nitrile or vinyl) surgical gloves should be worn at all times when handling frogs.
 - Gloves need to be changed for each frog handled, and all gloves should be disposed of appropriately at the end of each day.
 - Each frog must be housed individually in a plastic take away container with ventilation holes and a small amount of water.
 - Captured frogs must be kept in a cool quiet location out of direct sunlight and released into suitable habitat at the earliest opportunity.



- Unless a container can be suitably disinfected and rinsed, storage containers should not be used more than once.
- Frogs will be released into the nearest suitable habitat for the species outside the works footprint.



6 Post-habitat clearing actions

Upon completion of removal of all suitable habitat the zoologist will no longer be required to attend the site and undertake salvage. The fauna exclusion fence is to be kept in place until construction activities have ceased. Contractors are to be aware that fauna may be present during works and if any fauna is detected within the works footprint after all habitat is removed and the zoologist is no longer present the following protocols should be followed.

6.1.1 Fauna in the works area post-habitat clearing

- Stop works in the vicinity of the animal encountered and allow it to move off site at its own accord if possible.
- Notify the site foreman of the animal present.
- If the animal does not relocate on its own and works must continue in the area the foreman should call the nominated zoologist for further advice.

6.1.2 Management of the relocation site during and post fauna salvage

The fauna exclusion fencing erected to separate the works footprint from the relocation site is to remain in place for the duration of the construction phase.

Fencing should be checked daily as detailed in Section 2.4.1.

Where any fencing damage occurs, works must stop immediately until the fence is repaired.



7 Data collection and reporting

All fauna encountered as a result of the clearing works will be recorded by the zoologist. Relevant details to be documented will include:

- Species
- Age class of animal (i.e. adult, juvenile)
- Sex of animal (if known)
- Date/time of salvage
- Location of animal when encountered (description and coordinates)
- Method of capture (if applicable)
- Any injuries noted
- Number of eggs destroyed and species
- Method of euthanasia (if applicable)
- Details of any veterinary care required
- Date/time of release
- Details of the wildlife carer (if applicable)
- Location of release site (description and coordinates).

Information is to be recorded on the daily habitat removal fauna salvage data sheet provided in Appendix 3.

A brief report will be prepared by the zoologist and submitted to DeNova Group Ltd at the end of the project. The report will summarise the fauna salvage and release operation and provide the details as documented above. If requested, the report will be made available to DELWP within seven working days.

The data recorded during the project will be entered into the Victorian Biodiversity Atlas, in accordance with the requirements of the Research Permit/Management Authorisation.

Any rare or threatened species encountered during the salvage works that is listed under the *EPBC Act*, or the *Flora and Fauna Guarantee Act* 1988, or listed on the DELWP Advisory List will be reported to DELWP at the earliest convenience.



8 References

Biosis 2018. Biodiversity assessment: 181 Furlong Road, St Albans, Victoria. Report for De Nova Group. Authors: White, D. & Dredge, T., Biosis Pty Ltd, Melbourne. Project no. 26838.

Commonwealth of Australia 2009. *Significant impact guidelines for the critically endangered golden sun moth* (Synemon plana). Nationally threatened species and ecological communities EPBC Act policy statement 3.12, Department of the Environment, Water, Heritage & the Arts. Australian Government, Canberra.

Commonwealth of Australia 2011a. *Environment Protection and Biodiversity Conservation Act 1999 referral guidelines for the vulnerable striped legless lizard* Delma impar. Australian Government Department of Sustainability, Environment, Water, Population & Communities. Canberra.

Commonwealth of Australia 2011b. *Hygiene protocols for the control of diseases in Australian Frogs*. Authors: Murray, K., Skerratt, L., Marantelli, G., Berger, L., Hunter, D., Mahony, M. and Hines, H. 2011. A report for the Australian Government Department of Sustainability, Environment, Water, Population and Communities, Canberra.



Appendices



Appendix 1 Striped Legless Lizard information sheet for contractors



Striped Legless Lizard (Delma impar) Fact Sheet

The Striped Legless Lizard is a nationally threatened species. It is listed as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* and as endangered in Victoria under the Department of Environment, Land, Water and Planning (DELWP) Advisory list of threatened vertebrate fauna. The species is also listed as threatened under the *Victorian Flora and Fauna Guarantee Act 1988*.





Copyright © 2016 Ian Smales (Biosis Pty. Ltd.)

Copyright © 2016 Ian Smales (Biosis Pty. Ltd.)

General Appearance

Striped Legless Lizards grow up to 30 centimetres in length and are generally tan in colour, with a dark head and yellow throat. They usually have numerous stripes along the length of the body, although these can be indistinct in some individuals. Often mistaken for a snake, Striped Legless Lizards can be distinguished by the presence of ear openings and a fleshy, rounded tongue (i.e. not forked like a snake's tongue).

Habitat

Striped Legless Lizards inhabit grasslands and grassy woodlands where they are generally encountered under rocks, in deep cracks in soil and in grass tussocks.

What should you do if a Striped Legless Lizard is found?

Stop works and contact Biosis on (03) 8686 4800.



Appendix 2 Wildlife care facilities

Wildlife shelters and wildlife rescuers around St Albans are listed below.

The following are wildlife shelters that Biosis recommends (listed in order based on both location and capacity considerations):

Name	Location	Number
Wildlife Rescuers	Melbourne and surrounds	0417 506 941
The Snake Catcher Victoria	Melbourne and surrounds	0408 806 7062 or 03 597 504 81
Wildlife Victoria	Victoria	13 000 945 35

Vets located around St Albans are listed below.

Vets should be contacted, by DeNova Group or Biosis, prior to clearing, to make arrangements with them receiving sick, injured or orphaned wildlife. It is important that the vets keep records of which animals have been received from the clearing of the 181 Furlong Rd works footprint and which wildlife shelter they have been passed onto. The injured wildlife transporter is to leave their details and contact details of project ecologist with the vet.

Name	Location	Number	Additional details
St Albans Veterinary Clinic https://www.stalbansvet.com/	St Albans 263 Main Rd W, St Albans VIC 3021	(03) 9364 3777	Mon-Fri 8am-8pm, Sat- Sun 9am-5pm
Sunshine Veterinary Clinic http://sunshinevet.com.au/	Sunshine 98 Anderson Rd, Sunshine VIC 3020	(03) 9312 2500	Mon-Fri 8:30am-7pm, Sat 9am-12pm, Sun closed



Appendix 3 Fauna handler daily record sheet



181 Furlong Rd Fauna Habitat Removal - Fauna handler daily record sheet

Fauna Handler D	etails								
Name:									
Company:									
Qualifications:									
Date of clearing:									
Phone:									
Inspection Detail	ls								
Area inspected:									
Habitat observed	1:								
Fauna encounter	ed details								
Species	Age class	Sex	Time	Location (description and coordinates)	Method of capture	Details of Veterinary care	Details of wildlife carer	Follow up details from vet/ carer	Location of release site (description and coordinates)
								carer	



Fauna encountered details									
Species	Age class	Sex	Time	Location (description and coordinates)	Method of capture	Details of Veterinary care	Details of wildlife carer	Follow up details from vet/ carer	Location of release site (description and coordinates)