STRIPED LEGLESS LIZARD (*DELMA IMPAR*) OFFSET MANAGEMENT PLAN – EPBC 2021/8908

HEATHCOTE – REDESDALE ROAD, MIA MIA VICTORIA

LIVING RURAL

CENTRAL VICTORIA

Bushfire & biodiversity assessments

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DOCUMENT VERSION CONTROL

Document version	Date	Revisions/comments	Prepared by
202225.1	18/05/2022	First draft for internal discussion	Mal Wright
202225.1	15/06/2022	Second draft following internal comments – total habitat impact area 10.56 ha	Mal Wright
202225.2	15/05/2023	Third draft following impact area change – total habitat impact area 12.64 hectares	Mal Wright
202225.3	29/06/2023	Fourth draft following offset area change – total offset area 33.2 hectares	Mal Wright

1. INTRODUCTION

MREH Pty Ltd, as trustee of the MREH Asset Trust, engaged Living Rural to prepare an Offset Management Plan to account for the anticipated residual loss of 12.64 hectares of habitat for Striped Legless Lizard (*Delma impar*), a Matter of National Environmental Significance (MNES), for the proposed Melton Renewable Energy Hub in Plumpton, Victoria. The Melton Renewable Energy Hub (MREH) has been declared a 'controlled action' by the Department of Agriculture, Water and the Environment (DAWE) following a referral of the proposal under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC 2021/8908).

Impacts to Striped Legless Lizard habitat associated with the MREH proposal will occur on two properties under separate ownership:

- The site of the proposed facility on MREH Pty Ltd land at 77-347 Holden Road, Plumpton, and
- A proposed transmission easement on an adjoining property to the south – 27 Highwood Drive, Hillside.

Impacts to Striped Legless Lizard habitat on both properties have been determined by Ecolink Consulting (Ecolink 2023). Impacts in the Highwood Drive property drew from a biodiversity assessment and targeted surveys undertaken by Ecology and Heritage Partners (EHP 2020 & EHP 2022).

The Ecolink report details how impacts to biodiversity were avoided and minimised to the greatest degree possible – such as the minimisation of impacts to patches of native vegetation, and the avoidance of a small patch of the MNES *Natural Temperate Grassland of the Victorian Volcanic Plain*, in the Holden Road property.

Striped Legless Lizard (*Delma impar*) was recorded on the Holden Road property by way of tile grid surveys undertaken by Ecolink Consulting. Tile grids were placed in an area of rocky knolls dominated by introduced tussock grasses such as Serrated Tussock (*Nassella trichotoma*) and Chilean Needle-grass (*Nassella neesiana*) and a variety of other weeds, with only a low cover of native grasses. An area of 26.85 hectares of suitable habitat for the species was identified on the Holden Road property. With avoidance and minimisation, it has been identified that the project will have a *residual* impact on an area of 12.184 hectares of habitat for the species on the Holden Road property (Ecolink 2023).

An assessment of impacts to suitable habitat for the species in the Highwood Drive property, undertaken by Ecolink (Ecolink 2023), identified that the proposed transmission easement would result in the loss of a further 0.459 hectares of suitable habitat for the species.

Therefore, the total area of anticipated impacts to habitat for the species is 12.64 hectares.

This Offset Management Plan has been prepared to meet the anticipated EPBC Act offset requirements for impacts to the Striped Legless Lizard. It contains:

- A summary of the impacts to Striped Legless Lizard habitat at the impact sites
- Details of the offset site, including the locations of Striped Legless Lizard records and the extent of suitable habitat
- Details of how the proposed offset addresses the EPBC Act offset policy
- The proposed means of offset security
- Management actions required at the offset site, and
- Responsible parties and timeframes for implementing the plan.

It has been prepared by Mal Wright of Living Rural based on the following assessments:

- Biodiversity assessments of the impact sites, including the outcomes of Striped Legless Lizard targeted surveys, undertaken by Ecolink Consulting Pty Ltd and Ecology & Heritage Partners
- Targeted surveys for Striped Legless Lizard in the offset site, undertaken by Vegetation Link Pty Ltd and Cassinia Environmental Pty Ltd (see report in Appendix 5), and
- Habitat assessments of the offset site undertaken by Mal Wright in April 2022.

This Offset Management Plan is guided by the *Environment Protection and Biodiversity Conservation Act 1999 – Environmental Offsets Policy*, dated October 2012.

2. OFFSET SITE SUITABILITY

Impacts on the Striped Legless Lizard

Impact sites details	
Location and address of clearing sites	**Main facility:** 77-347 Holden Road, Plumpton VIC 3335 **Transmission easement:** 27 Highwood Drive, Hillside, VIC 3037
Proposed project	Melton Renewable Energy Hub (MREH)
Quantity of MNES impact	12.64 hectares of habitat removal

Offset site details

Landowner of offset site	Mia Mia Conservation Pty Ltd
Location and address of offset site	Heathcote-Redesdale Road Mia Mia VIC 3444
Area of offset site	33.2 hectares
Volume/Folio	Two titles: 03737/391 & 02916/023
Local Government Area	Greater Bendigo
Victorian Bioregion	Goldfields

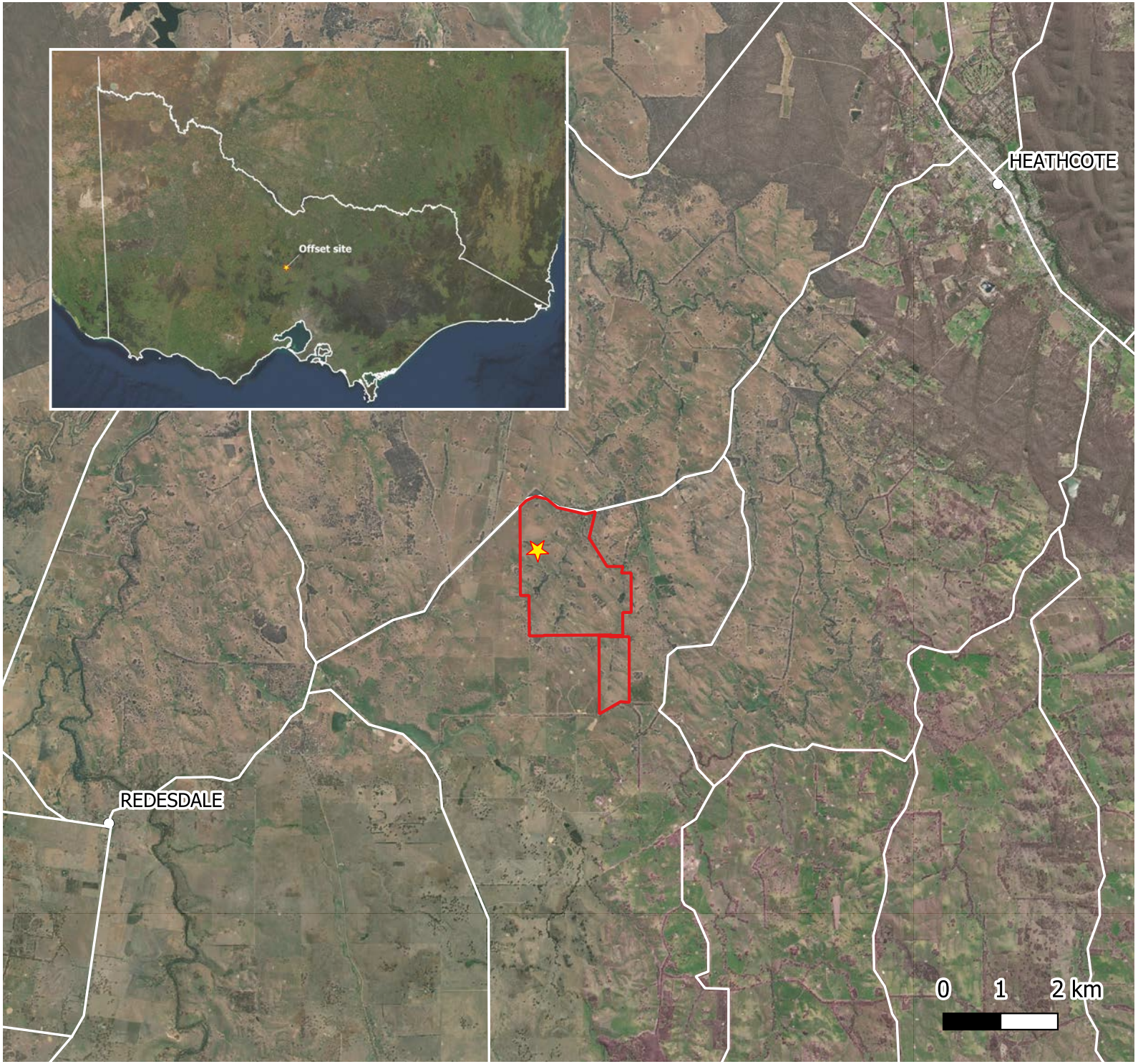
The EPBC Act offset requirement for impacts to Striped Legless Lizard habitat will be achieved at a 415-hectare property located on the Heathcote-Redesdale Road in Mia Mia, Victoria (Figure 1). The property is zoned Farming Zone in the Greater Bendigo Planning Scheme.

The property was considered to potentially support Striped Legless Lizard due to the widespread presence of derived native grassland and both surface and embedded rock.

Subsequent targeted surveys were undertaken according to EPBC Act survey guidelines (DSEWPC 2011) by Vegetation Link and Cassinia Environmental Pty Ltd within the broad section of the property now proposed to house the offset. Targeted surveys across ten (10) tile-grid arrays, monitored over a 6-month period between late September 2021 and late March 2022; Striped Legless Lizard was detected at eight (8) out of the ten survey locations, with the highest number of four (4) Striped Legless Lizard recorded at a tile grid in the offset site at any one inspection (Vegetation Link 2022).

The 33.2-hectare offset site that is the subject of this Offset Management Plan will comprise four (4) zones, separated by a minor watercourse and two access track laneways (Figure 2). The offset site will be managed for conservation, with the creation of smaller paddocks for strategic grazing to promote the control of annual grassy weeds and overall biomass (see Section 4). Striped Legless Lizard were detected during the 2021-22 survey at four tile grids located in the proposed offset site.

Figure 1: Location of offset site



Legend

- Subject property
- Offset site

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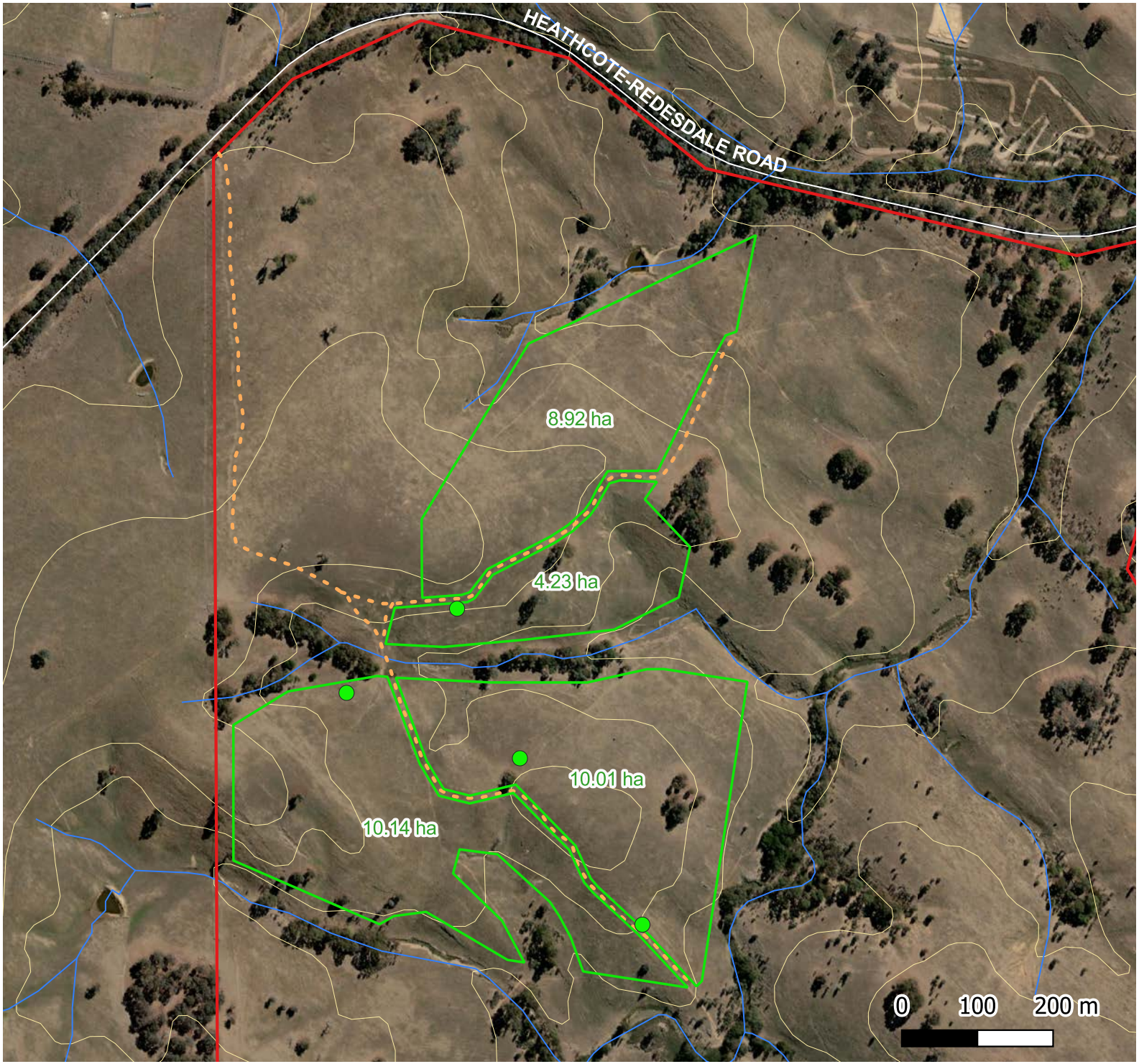

Figure 2: Offset site and Striped Legless Lizard detections

Legend

- Property boundary
- Vehicle tracks
- Striped Legless Lizard detections - tile grid surveys
- Offset site (4 zones)
- Creek/drainage line

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Striped Legless Lizard known habitats

The following is taken from the National Recovery Plan for the species (Smith & Robertson 1999):

Until recently, D. impar *was thought to inhabit only native grasslands dominated by species such as* Stipa bigeniculata *(Spear Grass) and* Themeda triandra *(Kangaroo Grass). In recent years, surveys have revealed* D. impar *in many sites dominated by exotic grasses such as* Phalaris aquatica [Toowoomba Canary-grass], Nasella trichotoma [Serrated Tussock] *and* Hypochaeris radicata [Flatweed] *(Corrigan et al. 1996, O'Shea 1996, Kukolic et al. 1994, Rauhala et al. 1995, Rauhala 1996, Hadden 1995, Coulson 1990). They have also been found in several secondary grassland sites (i.e., sites which were not historically grassland, but which have been cleared for grazing or agriculture). The presence of a relatively dense and continuous structure, rather than the floristic composition of the grasslands, may be important in influencing the persistence of D. impar.*

It appears that while D. impar are restricted to grasslands and may occur in woodland, they are not restricted to native or primary grassland. The key to their survival in rural areas may be the availability of shelter during disturbance events (such as heavy grazing or perhaps even ploughing), from which they may be able to recolonise disturbed sites after the cessation of the disturbance (Dorrough 1995). This shelter may take the form of plant species which are relatively unpalatable to stock, such as Serrated Tussock or Juncus sp., road easements, less disturbed neighbouring land or even soil cracks and arthropod burrows in the short-term. It is not known if grassland dominated by introduced species can support D. impar populations in the long-term, but there is evidence that they do reproduce in these habitats (Rauhala et al. 1995, Corrigan et al. 1996).

The Conservation Advice for the species in the Australian Government's Species Profile and Threats Database (Threatened Species Scientific Committee 2016) cites the following:

[…] *habitat critical to the survival of the striped legless lizard is likely to include sites that possess* […]

- *complex grass structures including areas of tussocks with high biomass, surface rocks or invertebrate burrows necessary as sites for oviposition and which provide protection for eggs from disturbance. This may include sites with exotic grasses.*
- *foraging habitat* [and]
- *refuge from disturbance events [including] surface rocks, arthropod burrows or suitable cracks in the soil where lizards can escape trampling by livestock or fire*.

Biodiversity values of the offset site

The property in which the offset site is to be located supports sedimentary soils on an undulating landscape. It has been historically cleared of trees across most of its extent and utilised for stock grazing using large paddock sizes due to the relatively low number of watering sources available.

The proposed offset site is situated in areas of derived native grassland in which Striped Legless Lizard was detected during the 2021-22 tile grid survey (Figure 2). This grassland is likely to have derived from the Victorian Ecological Vegetation Class *Low Rises* Grassy Woodland (EVC 175_61).

This derived native grassland is dominated by a number of tussocking native grass species, including spear grasses (*Austrostipa* spp.), tussock grasses (*Poa* spp.) and Kangaroo Grass (Themeda triandra), with a moderate to high cover of surface and embedded rock (Photo 1). It also supports a distinctive cover of Wattle Mat-rush – an indicator of its pre-clearance woodland vegetation type – that occurs in clumps that resemble large tussocks (Photo 2). Juncus also occurs at lower levels throughout with a similar clumping habit. This complex and often dense structure of tussocking and clumping grasses and graminoids is likely to contribute to the utilisation of the site by Striped Legless Lizard.

Photo 1: Typical grassland structure within the offset site

Photo 2: Clumps of Wattle Mat-rush (darker) amongst areas dominated by spear grass (lighter tussocks)

Introduced annual grasses occur at varying levels within the site amongst native grasses, and in some locations Toowoomba Canary-grass occurs at low cover. It is anticipated that more intensive management of areas of higher introduced grasses (Photo 3) to decrease the cover of introduced grasses and increase the cover of native grasses (Section 4).

Photo 3: Area of higher introduced annual grass cover requiring higher level of management

Scattered trees and small stands of trees occur within the offset site – consisting of Red Stringybark, Grey Box and Red Box – many of which are senescing (Photo 4).

Minor watercourses, drainage lines, and gullies were excluded from the offset site, given the relatively low cover of tussocking native grasses and surface rock, as well as the fact that higher soil-moisture content for these areas would lead to fewer cracks and arthropod burrows that provide habitat for the target species (Photo 5).

Photo 4: Scattered Red Stringybark in the offset site

Photo 5: Woodland in minor watercourse – excluded from the offset site

A vegetation quality assessment of the offset site was undertaken using the Victorian *habitat hectare* method to obtain a *habitat score* against the published benchmark for the pre-existing *Low Rises* Grassy Woodland (EVC 175_61) modelled to have occurred there. The habitat score was found to be 0.41 out of 1.

Note: vegetation quality assessment guidelines in Victoria require that the habitat is assessed against the benchmark for the pre-existing woodland EVC – resulting in a lower habitat score given the historic removal of tree canopy.

A full list of flora species recorded in the offset site, including botanical names, is provided in Appendix 1.

Threats to be managed in the offset site

Previous land management

The large size and lack of control mechanisms between paddocks on the property indicates that the site has been subject to uncontrolled, set-stock grazing, allowing livestock to graze flowering stems of native grasses and herbs and reducing seed set for these native species. Irregular stocking rates may have also contributed to a higher cover of introduced annual grasses. It is also likely that oversowing of these annual grasses has occurred previously.

It is anticipated that more intensive management of areas of higher introduced grasses using strategic grazing will decrease the cover of introduced grasses and increase the cover of native grasses in the offset site (Section 4).

Pest plants (weeds)

In addition to the introduced annual grasses observed during the habitat assessment undertaken for this Plan, the derived native grassland making up the offset site was also found to include a low to moderate cover of other herbaceous weed species that pose a threat to the quality of habitat if left untreated. These include oats, St Johns Wort, Toowoomba Canary-grass, Capeweed, Yorkshire Fog and, to a lesser extent, thistles such as Spear Thistle, Artichoke Thistle and Variegated Thistle.

A full list of weed species recorded in the offset site, including botanical names, is provided in Appendix 1.

Pest animals

European Rabbits were recorded in low numbers during the habitat assessment. This species can pose a threat to the survival of indigenous groundcover plants and can exacerbate erosion.

Meeting EPBC Act offset requirements

The EPBC Act Environmental Offset Policy (DSEWPC 2012) states that suitable offsets must meet the following requirements:

- Deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action
- Be built around direct offsets but may include other compensatory measures
- Be in proportion to the level of statutory protection that applies to the protected matter
- Be of a size and scale proportionate to the residual impacts on the protected matter
- Effectively account for and manage the risks of the offset not succeeding
- Be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs

- Be efficient, effective, timely, transparent, scientifically robust and reasonable
- Have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.
- Be informed by scientifically robust information and incorporate the precautionary principle in the absence of scientific certainty
- Be conducted in a consistent and transparent manner.

The proposed offset site has been assessed against the requirements of the Commonwealth Offset Policy in Table 1.

Table 1: Meeting the EPBC Act offset requirements

EPBC Act offset policy requirement	Proposed Offset Site
Deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action	The offset site contains confirmed records of Striped Legless Lizard and significant areas of habitat suitable for the species
Be built around direct offsets but may include other compensatory measures	The offset is a direct offset involving the security and management of existing threatened species and species habitat
Be in proportion to the level of statutory protection that applies to the protected matter	The level of statutory protection is in proportion to the matter being impacted
Be of a size and scale proportionate to the residual impacts on the protected matter	The area of suitable habitat proposed for offset is more than twice the size of the area being impacted
Effectively account for and manage the risks of the offset not succeeding	Risks have been accounted for in the offset calculations (see Appendix 2 & Appendix 3)
Be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs	The offset is situated on land zoned Farming, with no current restrictions in terms of the type of stock that can be farmed – i.e., intensive farming with higher-impact livestock such as cattle or goats is not disallowed. Environmental Significance Overlays covering the site relate only to proposed buildings or works; these overlays aim to protect waterways, groundwater recharge and water catchments.

EPBC Act offset policy requirement	Proposed Offset Site
Be efficient, effective, timely, transparent, scientifically robust and reasonable	The offset site will be secured on title by way of a Trust for Nature Covenant under the *Victorian Conservation Trust Act 1972*. This OMP provides the scientific rationale for the offset, including the quantum of the offset.
Have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.	This OMP provides the means of measuring improvement to the quality of the offset, including auditing. The offset will be enforceable under the EPBC Act.
Be informed by scientifically robust information and incorporate the precautionary principle in the absence of scientific certainty	Information of the clearing site and offset site has been compiled by experienced ecologists.
Be conducted in a consistent and transparent manner.	All details of the offset site have been provided to allow for transparency. Documentation has been consistent throughout.

3. CALCULATING EPBC ACT OFFSET REQUIREMENTS

Calculations were undertaken for each of the two properties that would be subject to the proposed impacts, using the calculator from the Offsets Assessment Guide (the 'Calculator') (DSEWPC 2012). These calculations were made to assist in the determination of whether the offsets proposed for the development would satisfy the Commonwealth offset requirements (Appendix 2).

Justification of the input values to the Calculators is provided in Appendix 3. Striped Legless Lizard habitat quality values are based on a methodology devised by Biosis Pty Ltd (Biosis 2020) as described in Appendix 4.

Holden Road property

Striped Legless Lizard habitat on the Holden Road property was determined by Ecolink Consulting to include areas characterised by embedded rock and cracking soils, a low cover and diversity of native grasses and herbs, and a high cover of weeds, including tussock-forming Serrated Tussock (*Nassella trichotoma*) and Chilean Needle-grass (*Nassella neesiana*) (Ecolink Consulting 2023).

The dominance of introduced tussock grasses in the area of Striped Legless Lizard at this impact site, considered in conjunction with the degraded and fragmented nature of the habitat, and the low number of records from targeted surveys, result in a quality score of 4 out 10 (Table 2).

Table 2: Habitat quality at the Holden Road impact site

Striped Legless Lizard Habitat Quality Assessment		Impact site quality
	max.	
Site condition	*3*	1
Site context	*4*	2
Species stocking rate	*3*	1
Habitat quality	**10**	**4**

Highwood Drive property

Striped Legless Lizard habitat on the approximately 42-hectare property at Highwood Drive was determined by Ecology & Heritage Partners (EHP 2020) to coincide with areas mapped as Plains Grassland. An area of approximately two-thirds of the 42-hectare property was found to support Plains Grassland – including a minor subset of areas within the mapped Plains Grassland that was assessed as conforming to the MNES *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP).

Targeted surveys for Striped Legless Lizard undertaken in this area of suitable habitat involved the placement of ten (10) tile-grid arrays, monitored over a 3-month period between mid-October and mid-December 2021; Striped Legless Lizard was detected at four (4) out of the ten survey locations, with the highest number of two (2) Striped Legless Lizard recorded at a tile grid in this impact site at any one inspection (EHP 2022).

The vegetation quality assessment habitat scores at this impact site, considered in conjunction with a larger, more connected area of habitat and a higher species detection rate, result in a quality score of 7 out 10 (Table 2).

Table 3: Habitat quality at the Highwood Drive impact site

Striped Legless Lizard Habitat Quality Assessment		Impact site quality
	max.	
Site condition	*3*	2
Site context	*4*	3
Species stocking rate	*3*	2
Habitat quality	**10**	**7**

Mia Mia offset site

The Mia Mia offset site was found to have, *on average,* 'satisfactory' structural complexity, albeit with a reduced diversity and cover of native herbs, reflecting previous continuous grazing methods. These parameters would be likely to worsen if a future landholder was to implement highly intensive stocking rates; however, these parameters are anticipated to improve with the introduction of targeted management associated with the offset.

The effects of these anticipated changes to habitat quality with the offset compared to a future quality without the offset are shown in Table 3. The 'time until ecological benefit' is expected to be **10 years** as outlined in the EPBC Act Offset Guide calculator (Appendix 2).

Table 4: Habitat quality and projected gains at the offset site

Striped Legless Lizard habitat quality assessment		Offset site quality	Projected quality without offset	Projected quality with offset
	max.			
Site condition	*3*	2	1	3
Site context	*4*	3	3	3
Species stocking rate	*3*	3	3	3
Habitat quality	**10**	**8**	**7**	**9**

4. OFFSET IMPLEMENTATION

Strategy for offset site

The offset site is to be secured and managed for the purposes of conservation in perpetuity, to be secured on title by way of a Trust for Nature Covenant under the *Victorian Conservation Trust Act 1972*. This Offset Plan will be implemented for a period of **10 years** from commencement, with ongoing land-use commitments and management actions to be implemented as described below.

Ongoing land-use commitments & management actions

The landowner commits to the following in perpetuity:

- Retain all native vegetation and logs/rocks
- Implement a biomass management strategy through grazing to promote an improvement in grassland structural complexity
- Control rabbits and foxes
- Ensure the cover of high threat weeds does not increase beyond the level it was at the inception of the Offset Management Plan
- Eliminate any new and emerging woody environmental weeds
- Maintain the improvements achieved at completion of this Offset Management Plan.

Baseline surveys

A baseline weed cover survey will be undertaken by an ecologist in all offset zones at the commencement of this Plan (see *Monitoring and reporting*). This baseline data will be used as a benchmark against which management actions are measured.

Management actions to be undertaken

Management actions to be undertaken within the offset site are described below with target outcomes. A management schedule is provided in Table 5.

Fencing

The offset zones will be located across two paddocks dedicated to strategic grazing with sheep for the control of annual grassy weeds (see 'Strategic grazing' below). These paddocks will be fenced using post-and-wire stock-proof fencing with gated access to prevent uncontrolled stock access and to facilitate strategic grazing.

Fencing Target: no uncontrolled stock access

Weed control

Methods such as grazing, burning and herbicide application are appropriate means to achieve the weed control targets. The means by which weed control targets are met will be ultimately determined by the landowner.

Weed control methods can include:

- Strategic grazing (described in more detail below), and/or
- The targeted use of appropriate herbicides – i.e., spot-spraying.

Care must be taken to ensure that off-target damage is kept to a minimum when using herbicides.

Weed control Target 1: reduction in cover of annual grassy weeds

Weed control Target 2: no increase in cover of other weeds

Weed control Target 3: elimination of new and emerging *woody* weeds

A list of weed species to be controlled in the offset site is provided in Table 4.

Table 5: Weeds recorded in the offset site including control methods and timing

Scientific name	Common name	High threat	Method of control if required	Timing
Arctotheca calendula	Cape Weed	Yes	Spot-spray with appropriate herbicide Apply selective broadleaf herbicide to outbreaks Strategic grazing	Herbicide application prior to or during flowering period
Cirsium vulgare	Spear Thistle	Yes	Spot spray with appropriate herbicide or chip out	Spot spray in winter/spring Chip-out year-round
Cynara cardunculus	Artichoke Thistle	Yes	Spot spray with appropriate herbicide or chip out Manually remove seed heads	Spot spray in winter/spring Prior to flowering
*Disa bracteata^*	South African Orchid	Yes	Manually remove where possible	Prior to October flowering
Hypericum perforatum	St John's Wort	Yes	Spot spray with appropriate herbicide or chip out	Prior to spring flowering
Marrubium vulgare	Horehound	Yes	Spot spray with appropriate herbicide or chip out	Prior to September flowering
Phalaris aquatica	Toowoomba Canary-grass	Yes	Strategic grazing Spot spray with appropriate herbicide	Year-round as appropriate
Silybum marianum	Variegated Thistle	Yes	Spot spray with appropriate herbicide or chip out	Spot spray in winter/spring Chip-out year-round
Acetosella vulgaris	Sheep Sorrel	No	Spot spray outbreaks with appropriate herbicide	Prior to September flowering

Scientific name	Common name	High threat	Method of control if required	Timing
Avena spp.	Oat	No	Strategic grazing Ecological burning	Grazing: predominantly August-September Ecological burning: autumn or spring
Briza maxima	Large Quaking-grass	No		
Bromus hordeaceus	Soft Brome	No		
Lolium spp.	Rye Grass	No		
Unknown*	Other annual grasses	No		
Vulpia spp.	Fescue	No		
Trifolium spp.	Clover	No		
Erodium cicutarium	Common Heron's-bill	No	Spot spray outbreaks with appropriate herbicide	Prior to September flowering
Hypochaeris radicata	Flatweed	No	Spot spray outbreaks with appropriate herbicide	Year-round
Romulea rosea	Onion Grass	No	Spot spray outbreaks with appropriate herbicide	Winter

*** Surveys for this Plan were conducted in late autumn when flowering material was not present**
^ Reported by landowner to occur on the broader property

Biomass management/annual grassy weed control

Inter-tussock spaces at the offset site were observed to be largely occupied by introduced annual grasses and introduced herbs such as clovers (*Trifolium* spp.). Reducing the cover of these introduced annual grasses and herbs will increase the cover of bare ground and leaf litter, therefore promoting the germination of native herbs and grasses – therefore maintaining and increasing the structural diversity of this derived grassland that is important for Striped Legless Lizard habitat (TSSC 2016).

Biomass/annual grass control Target 1: reduction in cover of annual grassy weeds

Biomass/annual grass control Target 2: 20–40% inter-tussock spacing by late October

Strategic grazing

Strategic grazing with sheep will be the primary means of reducing the cover of annual grassy weed species. Grazing for this purpose is usually undertaken in August to September when introduced annual grasses and clovers are most palatable to stock and have not yet set seed. Conditions vary from year to year – therefore, decisions as to the appropriate timing of strategic grazing will be made by the landowner in consultation with Trust for Nature.

The stocking rate will be determined using an established grazing chart based on rainfall and available grass feed and adapted over time if stocking rates are found to reduce the quality of Striped Legless Lizard habitat.

Ecological burns

Ecological burns may be implemented periodically for biomass control to promote inter-tussock spacing if this is not being achieved by strategic grazing. The most appropriate time for burning is the

end of autumn to early winter (February through May) or in early spring (September) as the weather is cooler and will result in a low intensity burn.

Ecological burns will be undertaken in consultation with Trust for Nature. Patch burns only may be conducted, with no more than one third of the total offset site burnt in any one year so that unburnt areas provide areas of refuge for fauna. Burns will only be undertaken at a low frequency – i.e., every 3 to 5 years.

To maintain and improve the condition of the offset site, ecological burns will be followed by targeted spot spraying of weeds as required.

Pest animal control

All pest animals are to be monitored within the offset site for the life of the Plan (see *Monitoring and reporting*).

Suitable methods for the control of pest animals include:

- Shooting
- Baiting (rabbits/hares)
- Fumigating and hand collapsing of warrens, and
- Removal of harbour.

Shooting (year-round) is a suitable fox control method and is suitable for rabbit control method where populations are low. Baiting is an effective method for reducing pest rabbit populations and should be undertaken when their food source is low (February through May).

Fumigating when combined with hand collapsing of warrens is an effective control method. Warrens will be destroyed using a shovel, mattock or pick to avoid damage to native vegetation. Ripping of warrens using machinery is not permitted within the offset sites.

The removal of harbour such as rubbish and woody weeds will also reduce the habitat for pest animals and assist in their control. All logs, fallen branches, leaf litter and rocks must be retained.

Pest animal control target: pest animals monitored and controlled

Monitoring and reporting

Monitoring of grassland structure, weed cover and pest animals will be undertaken to ensure the successful implementation of this Plan and to inform adaptive management of the offset site.

The Approval Holder is responsible for engaging a suitably qualified ecologist to conduct baseline monitoring of habitat condition within 3 months of the commencement of the in Year 1 and annual monitoring thereafter for the 10-year period of this Plan. Monitoring of habitat condition will be undertaken across eight (8) 20 x 20 metre quadrats – two (2) in each offset zone – to determine the following[1]:

- The percentage cover and abundance of high threat weeds
- The combined percentage cover of annual grassy weeds, and
- Inter-tussock spacing – i.e., the percentage cover of bare ground/litter/native herbs between native grass tussocks.

Photopoints will be established at each of the eight (8) quadrats during baseline surveys and photographic evidence of monitoring included in annual reporting.

The Approval Holder is responsible for engaging a suitably qualified ecologist to monitor for Striped Legless Lizard populations in Years 2, 4, 7 and 10. Monitoring will be undertaken across four (4) tile grids[2] according to the EPBC Act survey guidelines (DSEWPC 2011) – one (1) in each offset zone – and the results from this monitoring included in the landowner annual report.

Regular monitoring for pest animals by the landowner should include:

- Quarterly inspections for burrows and other harbour, and
- Annual spotlight surveys of established transects.

Ongoing monitoring of fencing erected to facilitate strategic grazing will be undertaken by the landowner.

The landowner will submit annual reports to Trust for Nature **two (2) months prior** to each anniversary of registration of the offset covenant, over the 10-year period of this Plan. Annual reports will also be provided to DAWE and MREH.

Trust for Nature stewardship

Periodic site visits will be undertaken by Trust for Nature (approximately every 3 years during the initial 10 years) to determine whether the management actions are suitable to achieve the outcomes outlined in this Plan and offer technical assistance and advice.

Adaptive management

Adaptive management in the form of minor changes in management approach (e.g., grazing strategy) may occur in consultation with Trust for Nature.

[1] The use of the Victorian *habitat hectare* vegetation quality assessment method is not proposed, as this method is based on coarse-scale parameter scores and would be required to be made against a woodland benchmark in this derived grassland setting

[2] It is considered that the higher number of tile grids per hectare required under the EPBC Act survey guidelines (DSEWPC 2011) used to determine *presence or absence* is not warranted given that the species has been detected at 3 locations in the offset site

Table 6: Management actions schedule

Year 1					
Management Action	**Timing**	**Target to be achieved**	**Responsible person**	**Completed (Yes/No)**	**Month and Year Completed**
Ensure paddock fencing to facilitate strategic grazing is in place and effectual Ongoing monitoring of fencing & gates	Within 3 months of the commencement of plan	No uncontrolled stock access	Landowner/fencing contractor		
Undertake baseline habitat condition survey of the offset site across eight (8) quadrats to determine: ▪ The percentage cover and abundance of high threat weeds ▪ The combined percentage cover of annual grassy weeds, and ▪ Inter-tussock spacing – i.e., the percentage cover of bare ground/litter/native herbs between native grass tussocks.	Within 3 months of the commencement of plan **Aim for October/November**	Habitat condition assessed and documented	Ecologist engaged by the Approval Holder		
Establish photopoints	In conjunction with quadrat survey	Eight (8) photopoints established – one for each quadrat	Ecologist engaged by the Approval Holder		
Monitor for pest animals and control if required	Quarterly inspection for burrows/harbour Annual spotlight transect surveys	Pest animals monitored and controlled as required	Monitoring: Ecologist engaged by the Approval Holder Control: landowner or nominated contractor		

Year 1					
Management Action	**Timing**	**Target to be achieved**	**Responsible person**	**Completed (Yes/No)**	**Month and Year Completed**
Strategic grazing to control of annual grassy weeds/biomass	During August–September (or extended period in consultation with Trust for Nature)	Reduction in annual grassy weed cover 20–40% inter-tussock spacing by October/November	Landowner		
Control of other weeds through herbicide use or manual removal as required	See Table 4	Weed cover does not exceed initial baseline cover Any woody weeds eliminated	Landowner or landowner nominated contractor		
Annual report to be prepared documenting management actions undertaken and monitoring results	Report due no later than three months after end of Year 1	Report delivered to Trust for Nature 2 months prior to the anniversary of this Plan. Annual reports also provided to MREH and DAWE.	Landowner		

Years 2–10					
Management Action	**Timing**	**Target to be achieved**	**Responsible person**	**Completed (Yes/No)**	**Month and Year Completed**
Monitoring of fencing & gates Repairs carried out as required	Ongoing	No uncontrolled stock access	Landowner/fencing contractor		
Undertake habitat condition survey of the offset site across eight (8) quadrats to determine: ▪ The percentage cover and abundance of high threat weeds ▪ The combined percentage cover of annual grassy weeds, and ▪ Inter-tussock spacing – i.e., the percentage cover of bare ground/litter/native herbs between native grass tussocks.	Annually – **aim for October/November**	Habitat condition assessed and documented	Ecologist engaged by the Approval Holder		
Undertake Striped Legless Lizard tile grid population monitoring over eight (8) tile grids – two in each zone	**Years 2, 4, 6, 8 & 10** Tile grids established in June Tiles checked weekly September to December (or March for the presence of sloughed skin)	Striped Legless Lizard population monitored according to the EPBC Act survey guidelines (DSEWPC 2011) and the results documented	Ecologist engaged by the Approval Holder		
Monitor photopoints	In conjunction with quadrat survey	Photos taken at each of eight (8) photopoints established	Ecologist engaged by the Approval Holder		

Years 2–10					
Management Action	**Timing**	**Target to be achieved**	**Responsible person**	**Completed (Yes/No)**	**Month and Year Completed**
Monitor for pest animals and control if required	Quarterly inspection for burrows/harbour Annual spotlight transect surveys	Pest animals monitored and controlled as required	Monitoring: Ecologist engaged by the Approval Holder Control: landowner or nominated contractor		
Strategic grazing to control of annual grassy weeds/biomass	During August–September (or extended period in consultation with Trust for Nature)	Reduction in annual grassy weed cover 20–40% inter-tussock spacing by October/November	Landowner		
Control of other weeds through herbicide use or manual removal as required	See Table 4	Weed cover does not exceed initial baseline cover Any woody weeds eliminated	Landowner or landowner nominated contractor		
Annual report to be prepared documenting management actions undertaken and monitoring results	Report due no later than three months after end of Year 1	Report delivered to Trust for Nature 2 months prior to the anniversary of this Plan. Annual reports also provided to MREH and DAWE.	Landowner		

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Appendix 1: Flora species recorded in the offset site

Origin	Scientific Name	Common Name
*	*Acetosella vulgaris*	Sheep Sorrel
	Anthosachne scabra s.l.	Common Wheat-grass
*	*Arctotheca calendula*	Cape Weed
	Aristida behriana	Brush Wire-grass
	Austrostipa spp.	Spear Grass^
*	*Avena* spp.	Oat^
*	*Briza maxima*	Large Quaking-grass
*	*Bromus hordeaceus*	Soft Brome
	Bromus spp.	Brome^
*	*Cirsium vulgare*	Spear Thistle
*	*Cynara cardunculus* subsp. *flavescens*	Artichoke Thistle
*	*Erodium cicutarium*	Common Heron's-bill
	Eucalyptus macrorhyncha	Red Stringybark
	Eucalyptus microcarpa	Grey Box
	Eucalyptus polyanthemos	Red Box
	Gonocarpus tetragynus	Common Raspwort
	Hydrocotyle spp.	Pennywort
*	*Hypericum perforatum* subsp. *veronense*	St John's Wort
*	*Hypochaeris radicata*	Flatweed
	Juncus spp.	Rush
*	*Lolium* spp.	Rye Grass^
	Lomandra filiformis	Wattle Mat-rush
*	*Marrubium vulgare*	Horehound
	Melicytus dentatus s.l.	Tree Violet
	Microlaena stipoides var. *stipoides*	Weeping Grass
	Oxalis exilis	Shade Wood-sorrel
	Pelargonium rodneyanum	Magenta Stork's-bill
*	*Phalaris aquatica*	Toowoomba Canary-grass
	Poa sieberiana	Grey Tussock-grass
*	*Romulea rosea*	Onion Grass
	Rumex brownii	Slender Dock
	Rytidosperma spp.	Wallaby Grass^
*	*Silybum marianum*	Variegated Thistle
	Themeda triandra	Kangaroo Grass
*	*Trifolium* spp.	Clover
*	*Vulpia* spp.	Fescue^
	Wahlenbergia gracilis	Sprawling Bluebell

*** introduced species**

^ Surveys for this Plan were conducted in late autumn when flowering material was not present and some genera could not be identified to species level

Appendix 2: EPBC Act Offset Guide calculators – Holden Road impact site & Highwood Drive impact site

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Striped Legless Lizard
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Proposed removal for the MREH - Holden Rd property	**Area**	12.18	Hectares	Ecolink Consulting SLL Survey Report (Dec 2020)
			Quality	**4**	Scale 0-10	
			Total quantum of impact	4.87	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**									
Threatened species habitat																				
Area of habitat	Yes	4.87	Adjusted hectares	Heathcote-Redesdale Road, Mia Mia VIC	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	31.1	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	0.00	80%	0.00	0.00	4.88	100.08%	Yes	
									Future area without offset (adjusted hectares)	31.1	**Future area with offset (adjusted hectares)**	31.1								
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**8**	**Future quality without offset (scale of 0-10)**	**7**	**Future quality with offset (scale of 0-10)**	**9**	2.00	80%	1.60	1.57				
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**	**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																			
Condition of habitat Change in habitat condition, but no change in extent	No																			
Threatened species																				
Birth rate e.g. Change in nest success	No																			
Mortality rate e.g Change in number of road kills per year	No																			
Number of individuals e.g. Individual plants/animals	No																			

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	4.8736	4.88	100.08%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**

Offsets Assessment Guide

For use in determining offsets under the *Environment Protection and Biodiversity Conservation Act 1999*
2 October 2012

This guide relies on Macros being enabled in your browser.

Matter of National Environmental Significance	
Name	Striped Legless Lizard
EPBC Act status	Vulnerable
Annual probability of extinction Based on IUCN category definitions	**0.2%**

Key to Cell Colours
User input required
Drop-down list
Calculated output
Not applicable to attribute

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community	No		**Area**			
			Quality			
			Total quantum of impact	0.00		
Threatened species habitat						
Area of habitat	Yes	Proposed removal for the MREH transmission line - Highwood Dve property	**Area**	0.459	Hectares	EHP reports (2020 & 2022)
			Quality	**7**	Scale 0-10	
			Total quantum of impact	0.32	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No					
Condition of habitat Change in habitat condition, but no change in extent	No					
Threatened species						
Birth rate e.g. Change in nest success	No					
Mortality rate e.g Change in number of road kills per year	No					
Number of individuals e.g. Individual plants/animals	No					

Offset calculator

Protected matter attributes	Attribute relevant to case?	Total quantum of impact	Units	Proposed offset	Time horizon (years)		Start area and quality		Future area and quality without offset		Future area and quality with offset		Raw gain	Confidence in result (%)	Adjusted gain	Net present value (adjusted hectares)	% of impact offset	Minimum (90%) direct offset requirement met?	Cost ($ total)	Information source
Ecological Communities																				
Area of community	No				**Risk-related time horizon (max. 20 years)**		**Start area (hectares)**		**Risk of loss (%) without offset**		**Risk of loss (%) with offset**									
									Future area without offset (adjusted hectares)	0.0	**Future area with offset (adjusted hectares)**	0.0								
					Time until ecological benefit		**Start quality (scale of 0-10)**		**Future quality without offset (scale of 0-10)**		**Future quality with offset (scale of 0-10)**									
Threatened species habitat																				
Area of habitat	Yes	0.32	Adjusted hectares	Heathcote-Redesdale Road, Mia Mia VIC	**Time over which loss is averted (max. 20 years)**	20	**Start area (hectares)**	2.1	**Risk of loss (%) without offset**	0%	**Risk of loss (%) with offset**	0%	0.00	80%	0.00	0.00	0.33	102.51%	Yes	
									Future area without offset (adjusted hectares)	2.1	**Future area with offset (adjusted hectares)**	2.1								
					Time until ecological benefit	10	**Start quality (scale of 0-10)**	**8**	**Future quality without offset (scale of 0-10)**	**7**	**Future quality with offset (scale of 0-10)**	**9**	2.00	80%	1.60	1.57				
Protected matter attributes	**Attribute relevant to case?**	**Total quantum of impact**	**Units**	**Proposed offset**	**Time horizon (years)**		**Start value**		**Future value without offset**		**Future value with offset**		**Raw gain**	**Confidence in result (%)**	**Adjusted gain**	**Net present value**	**% of impact offset**	**Minimum (90%) direct offset requirement met?**	**Cost ($ total)**	**Information source**
Number of features e.g. Nest hollows, habitat trees	No																			
Condition of habitat Change in habitat condition, but no change in extent	No																			
Threatened species																				
Birth rate e.g. Change in nest success	No																			
Mortality rate e.g Change in number of road kills per year	No																			
Number of individuals e.g. Individual plants/animals	No																			

Summary

Protected matter attributes	Quantum of impact	Net present value of offset	% of impact offset	Direct offset adequate?	Cost ($)		
					Direct offset ($)	Other compensatory measures ($)	Total ($)
Birth rate	0				$0.00		$0.00
Mortality rate	0				$0.00		$0.00
Number of individuals	0				$0.00		$0.00
Number of features	0				$0.00		$0.00
Condition of habitat	0				$0.00		$0.00
Area of habitat	0.3213	0.33	102.51%	**Yes**	$0.00	N/A	$0.00
Area of community	0				$0.00		$0.00
					$0.00	**$0.00**	**$0.00**

Appendix 3: EPBC Act Offset Guide calculator justification of values

Holden Road impact site

<table>
<tr><th>Offset guide attribute</th><th>Value applied</th><th>Justification</th></tr>
<tr><td>Area of habitat removed</td><td>12.18 hectares</td><td>Based on the area determined by Ecolink Consulting (Ecolink Consulting 2023)</td></tr>
<tr><td>Quality of habitat removed as per Biosis (2020)</td><td>4</td><td>
<table>
<tr><th colspan="2">Habitat Quality Assessment</th><th>Impact site quality</th><th>Justification</th></tr>
<tr><th></th><th>max.</th><th></th><th></th></tr>
<tr><td>Site condition</td><td>3</td><td>1</td><td>Poor site quality: species-poor ground flora; dominated by a few native or predominantly introduced tussock-forming grasses with no or very few native forbs</td></tr>
<tr><td>Site context</td><td>4</td><td>2</td><td>> 0.5 hectares contiguous habitat; subject to 5 or more threats impacting MNES</td></tr>
<tr><td>Species stocking rate</td><td>3</td><td>1</td><td>A maximum of one individual encountered under a tile grid during any one of seven monitoring events</td></tr>
<tr><td>Habitat quality</td><td>10</td><td>4</td><td></td></tr>
</table>
</td></tr>
<tr><td>Quality of habitat in offset (as per Biosis [2020])</td><td>8</td><td>
<table>
<tr><th colspan="2">Habitat Quality Assessment</th><th>Impact site quality</th><th>Justification</th></tr>
<tr><th></th><th>max.</th><th></th><th></th></tr>
<tr><td>Site condition</td><td>3</td><td>2</td><td>Satisfactory site quality: supports a moderately diverse ground flora; dominated by an average diversity of native tussock forming grasses and average diversity of native forbs</td></tr>
<tr><td>Site context</td><td>4</td><td>3</td><td>> 0.5 hectares; habitat subject to only 1 threat impacting MNES (not currently subject to an appropriate biomass reduction)</td></tr>
<tr><td>Species stocking rate</td><td>3</td><td>3</td><td>Three or more individuals or sloughs encountered under a tile grid during any one of seven monitoring events</td></tr>
<tr><td>Habitat quality</td><td>10</td><td>8</td><td></td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Offset guide attribute</th><th>Value applied</th><th>Justification</th></tr>
<tr><td>Time over which loss is averted</td><td>20 years</td><td>The offset site will be protected with a Trust for Nature Covenant which will result in perpetual protection of the offset site for the purpose of conservation; the maximum value of 20 years has been applied</td></tr>
<tr><td>Area of offset</td><td>26.5 hectares</td><td>This offset area has been determined based on the other parameters in the calculator</td></tr>
<tr><td>Risk of loss (%) without offset</td><td>0%</td><td>The offset is situated on land zoned Farming, with no current restrictions in terms of the type of stock that can be farmed; intensive, set-stocked grazing with higher-impact livestock such as cattle or goats is not disallowed and could result in degradation of habitat through over-grazing. Nevertheless, using a conservative approach, this value is set at zero.</td></tr>
<tr><td>Risk of loss (%) with the offset</td><td>0%</td><td>The residual risk of protecting the property in perpetuity and managing for conservation is considered to be zero</td></tr>
<tr><td>Time until ecological benefit</td><td>10 years</td><td>It is expected that within ten years management actions such as strategic grazing and weed control would have resulted in a measurable improvement to quality</td></tr>
<tr><td>Comparison of ‘site condition’ – <u>without</u> and <u>with</u> the offset</td><td>2</td><td>
<table>
<tr><th colspan="2">Striped Legless Lizard habitat quality assessment</th><th rowspan="2">Offset site quality</th><th rowspan="2">Projected quality without offset</th><th rowspan="2">Projected quality with offset</th></tr>
<tr><th></th><th>max.</th></tr>
<tr><td>Site condition</td><td>3</td><td>2</td><td>1</td><td>3</td></tr>
</table>
Projected quality without offset: An intensive set-stocked grazing regime in the absence of the offset would be likely to reduce the condition to <u>poor</u> – with low structural complexity with no or very few native forbs
Projected quality with offset: The introduction of strategic grazing is expected to increase structural complexity of the habitat through the reduction of competition from annual introduced grasses, increasing the condition to <u>good</u> – supporting a species-rich and structurally complex ground flora dominated by an above average diversity of native tussock-forming grasses and above average native forbs
</td></tr>
</table>

Highwood Drive impact site

<table>
<tr><th>Offset guide attribute</th><th>Value applied</th><th>Justification</th></tr>
<tr><td>Areas of habitat removed</td><td>0.459 hectares</td><td>Based on the areas determined by Ecolink Consulting (Ecolink Consulting 2023)</td></tr>
<tr><td>Quality of habitat removed as per Biosis (2020)</td><td>7</td><td>
<table>
<tr><th colspan="2">Habitat Quality Assessment</th><th>Impact site quality</th><th>Justification</th></tr>
<tr><th></th><th>max.</th><th></th><th></th></tr>
<tr><td>Site condition</td><td>3</td><td>2</td><td>Moderate site quality dominated by native grasses: moderate herb diversity; weeds < 25%</td></tr>
<tr><td>Site context</td><td>4</td><td>3</td><td>> 0.5 hectares contiguous habitat; subject to between 1 than 4 threats impacting MNES</td></tr>
<tr><td>Species stocking rate</td><td>3</td><td>2</td><td>A maximum of two individuals encountered under a tile grid during any one of seven monitoring events</td></tr>
<tr><td>Habitat quality</td><td>10</td><td>7</td><td></td></tr>
</table>
</td></tr>
<tr><td>Quality of habitat in offset (as per Biosis [2020])</td><td>8</td><td>
<table>
<tr><th colspan="2">Habitat Quality Assessment</th><th>Impact site quality</th><th>Justification</th></tr>
<tr><th></th><th>max.</th><th></th><th></th></tr>
<tr><td>Site condition</td><td>3</td><td>2</td><td>Satisfactory site quality: supports a moderately diverse ground flora; dominated by an average diversity of native tussock forming grasses and average diversity of native forbs</td></tr>
<tr><td>Site context</td><td>4</td><td>3</td><td>> 0.5 hectares; habitat subject to only 1 threat impacting MNES (not currently subject to an appropriate biomass reduction)</td></tr>
<tr><td>Species stocking rate</td><td>3</td><td>3</td><td>Three or more individuals or sloughs encountered under a tile grid during any one of seven monitoring events</td></tr>
<tr><td>Habitat quality</td><td>10</td><td>8</td><td></td></tr>
</table>
</td></tr>
<tr><td>Time over which loss is averted</td><td>20 years</td><td>The offset site will be protected with a Trust for Nature Covenant which will result in perpetual protection of the offset site for the purpose of conservation; the maximum value of 20 years has been applied</td></tr>
</table>

<table>
<tr><th>Offset guide attribute</th><th>Value applied</th><th>Justification</th></tr>
<tr><td>Area of offset</td><td>26.5 hectares</td><td>This offset area has been determined based on the other parameters in the calculator</td></tr>
<tr><td>Risk of loss (%) without offset</td><td>0%</td><td>The offset is situated on land zoned Farming, with no current restrictions in terms of the type of stock that can be farmed; intensive, set-stocked grazing with higher-impact livestock such as cattle or goats is not disallowed and could result in degradation of habitat through over-grazing. Nevertheless, using a conservative approach, this value is set at zero.</td></tr>
<tr><td>Risk of loss (%) with the offset</td><td>0%</td><td>The residual risk of protecting the property in perpetuity and managing for conservation is considered to be zero</td></tr>
<tr><td>Time until ecological benefit</td><td>10 years</td><td>It is expected that within ten years management actions such as strategic grazing and weed control would have resulted in a measurable improvement to quality</td></tr>
<tr><td>Comparison of ‘site condition’ – <u>without</u> and <u>with</u> the offset</td><td>2</td><td>
<table>
<tr><th colspan="2">Striped Legless Lizard habitat quality assessment</th><th rowspan="2">Offset site quality</th><th rowspan="2">Projected quality without offset</th><th rowspan="2">Projected quality with offset</th></tr>
<tr><th></th><th>max.</th></tr>
<tr><td>Site condition</td><td>3</td><td>2</td><td>1</td><td>3</td></tr>
</table>
Projected quality without offset: An intensive set-stocked grazing regime in the absence of the offset would be likely to reduce the condition to <u>poor</u> – with low structural complexity with no or very few native forbs
Projected quality with offset: The introduction of strategic grazing is expected to increase structural complexity of the habitat through the reduction of competition from annual introduced grasses, increasing the condition to <u>good</u> – supporting a species-rich and structurally complex ground flora dominated by an above average diversity of native tussock-forming grasses and above average native forbs
</td></tr>
</table>

Appendix 4: Striped Legless Lizard Habitat Quality Assessment Method (Biosis 2020)

<table>
<tr><th colspan="2">Site Condition – out of 3</th></tr>
<tr><td colspan="2">An assessment of the condition of the threatened species habitat within the project in relation to the ecological requirements of the threatened species. Based on vegetation structure, native plant cover, species richness and presence of habitat resources.</td></tr>
<tr><td colspan="2">3 = Good - Site (on average) supports a species-rich and structurally complex ground flora (reflecting appropriate biomass management). Dominated by an above average diversity of native tussock-forming grasses and above average native forbs, together with embedded and/or surface rock.</td></tr>
<tr><td colspan="2">2 = Satisfactory - Site (on average) supports a moderately diverse ground flora with good structural complexity (reflecting some biomass management). Dominated by an average diversity of native tussock forming grasses and average diversity of native forbs with or without embedded and/or surface rock.</td></tr>
<tr><td colspan="2">1 = Poor - Site (on average) supports a species-poor ground flora with low structural complexity (reflecting inadequate biomass management). Dominated by a few native or predominantly introduced tussock-forming grasses with no or very few native forbs with or without embedded and/or surface rock.</td></tr>
<tr><th colspan="2">Site Context – out of 4</th></tr>
<tr><td colspan="2">An assessment of the relative importance of the patches of the threatened species habitat in terms of its position in the landscape based on patch size, connectivity and proximity to threats.</td></tr>
<tr><th>Threats Score out of 2</th><th>Connectivity Score out of 2</th></tr>
<tr><td>Threats that may impact upon Striped Legless Lizards:
Site currently subject to continuous, intensive grazing by livestock or kangaroos, thereby reducing the floristic and structural complexity of the habitat
Site subject to frequent, widespread and intense fires, including deliberate burns that are not sympathetic to the maintenance of Striped Legless Lizard habitat
Site subject to historical or ongoing ploughing, pasture improvement and agricultural intensification Site subject to historical or ongoing removal of surface and/or embedded or rock
Site subject to frequent slashing thereby reducing the structural complexity of the habitat
Site dominated by exotic grasses to the extent that the majority of the site is no longer defined as native vegetation
Site currently not subject to any form of appropriate biomass reduction (e.g. low-moderate intensity grazing or sympathetic ecological burns to maintain structural and floristic diversity of the habitat)</td><td rowspan="2">1 = Site is < 0.5 ha
2 = Site is equal to > 0.5 ha</td></tr>
<tr><td>2 = Site subject to none of the above threats
1 = Site subject to between one and four of the above threats
0 = Site subject to five or more of the above threats</td></tr>
</table>

Species Stocking Rate – out of 3
An assessment of the density of the species across the area of suitable habitat. The method proposed by Biosis (2020b) uses the maximum number of Striped Legless Lizards detected at a tile grid during any one site survey as a surrogate for density. This includes counts of sloughs as well as actual lizards.
3 = Three or more individuals or sloughs encountered under the tile grid during any one of seven monitoring events. 2 = A maximum of two individuals or sloughs encountered under the tile grid during any one of seven monitoring events. 1 = A maximum of one individual, or slough encountered under the tile grid during any one of seven monitoring events.

Appendix 5: Striped Legless Lizard Survey: Mia Mia

vegetationlink

Striped Legless Lizard Survey: Mia Mia Conservation Property

Report date: 11 May 2022

Report prepared by:

- Sid Larwill

Objective

To determine if Striped Legless Lizard occurs on the Mia Mia Conservation property.

Figure 1 Striped Legless Lizard Delma imar

Background

Mia Mia Conservation Pty Ltd own a property at Heathcote-Redesdale Road, Mia Mia, Victoria. The property comprises 14 Lots as outlined in the Table below.

Table 1: Lots underlying property surveyed for Striped Legless Lizard, Heathcote-Redesdale Road, Mia Mia, Victoria.

Vol#	Folio #
02916	023
02116	125
00937	338
03861	027
03737	391
01292	268
02153	515
05914	666
01351	005
01292	269
03110	881
02761	062
02215	968
03080	808

Mia Mia Conservation Pty Ltd is in the process of planning future land use and management of the property including consideration of:

- Land rehabilitation with a focus on active erosion areas;
- Establishment of biodiversity offset sites;
- On-going primary production with a focus on regenerative ag;

In the past the property has been used for grazing. Although the majority of the site is cleared of trees, it supports a mixture of vegetation types and landscape features:

- Substantial woodland remnants including examples of the federally listed Grey Box Grassy Woodland confined predominantly to upper slopes and hill tops, as well as patches of other woodland associations along drainage lines and unmade road reserves;
- Extensive native grassland (derived grassland) dominated by *Stipa, Danthonia, Poa and Themeda spp.*;
- Restricted areas dominated by exotic pasture grasses and other non-native species.

Vegetation Link provides periodic advice to Mia Mia Conservation Pty Ltd and its parent company on the biodiversity offset market. We initiated a tile grid survey of the Mia Mia Conservation property to determine whether Striped Legless Lizard *Delma impar* occurred on the site.

Method

Protocols were followed for "artificial shelter site surveys" as per Commonwealth of Australia (2011).

Ten tile grid arrays were installed across the property during the month of June 2021. Locations were chosen with a preference for derived grassland habitat on north facing slopes, with dominance of native tussock grasses and the presence of surface rock. Tile grids consisted of 50 tiles spaced at five metre intervals in a 5x10 array.

The tile grid locations are presented in Figure 2 and latitude and longitude references for each tile grid location is presented in Table 2.

Table 2: Tile Grid Locations

Tile Grid #	Longitude	Latitude
1	144.612864	-36.971459
2	144.616147	-36.976401
3	144.614530	-36.977470
4	144.617100	-36.978258
5	144.618876	-36.980271
6	144.619117	-36.985227
7	144.618746	-36.985470
8	144.617025	-36.984666
9	144.627371	-36.984053
10	144.629571	-36.993919

Checking of tile grids commenced on 28th September 2021. The tile grids were checked 16 times over a six-month survey period ending on 28th March 2022. Tiles were then removed and stockpiled on site.

Results

Striped Legless Lizard was recorded across much of the property (Refer to Table 3 and Figure 2).

There was a total of 44 detections of Striped Legless Lizard occurring at 8 out of the ten grid arrays (Table 3). Complete results are presented in Appendix 1.

Non target species were identified w

Table 3: Results of tile grid survey summarized by tile grid number

Array Number	Total SLL	Unidentified Reptile	Bluetongue Lizard	Brown Snake	Bougainville Skink	Fat-tailed Dunnart
1	0	1	1	0	0	0
2	5	2	1	0	0	1
3	16	2	0	0	0	0
4	1	4	0	0	0	0
5	2	8	1	1	0	0
6	5	1	1	1	0	1
7	4	0	0	0	0	0
8	10	0	1	0	0	1
9	1	0	0	0	0	2
10	0	0	0	0	1	0

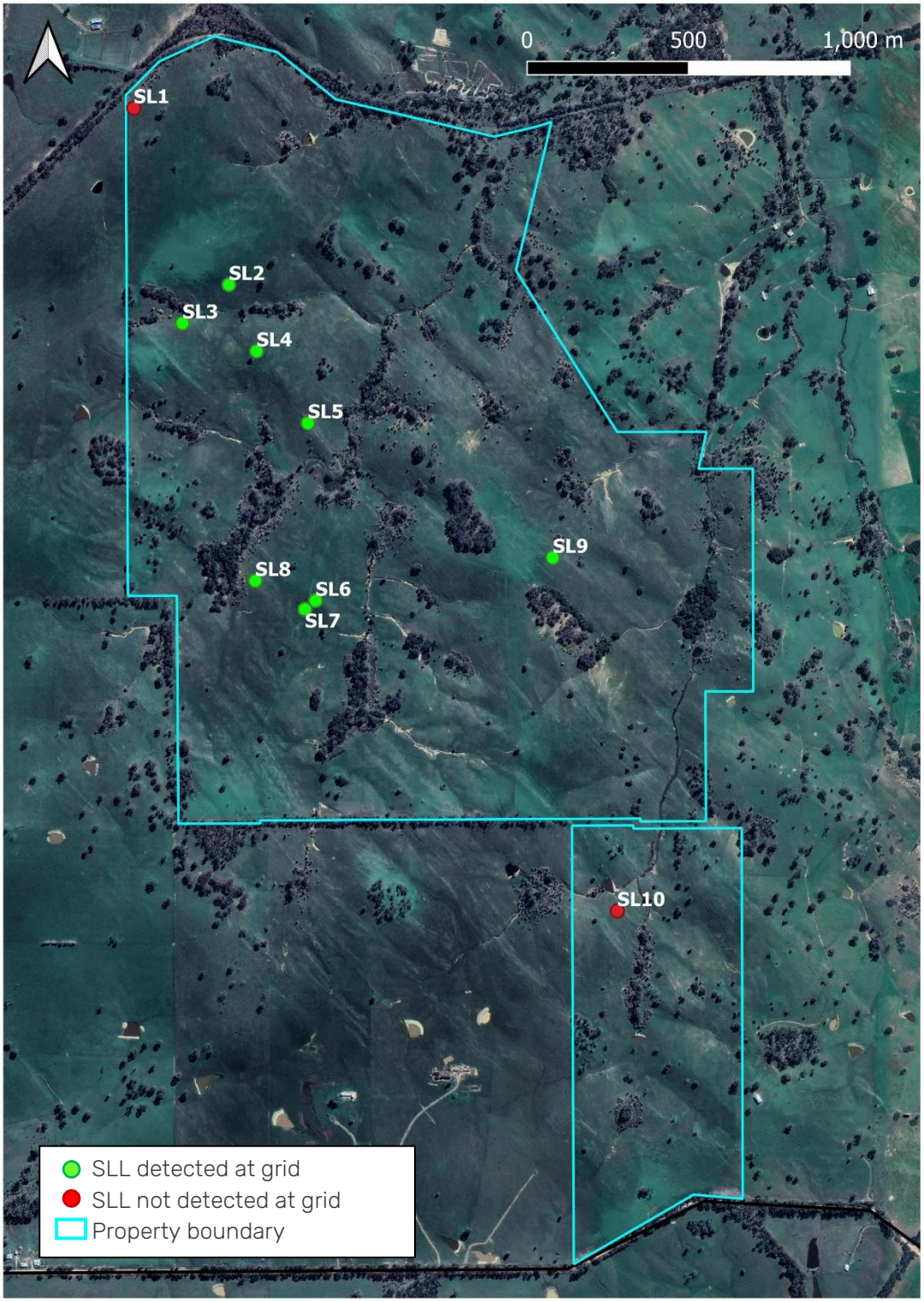

Figure 2 Tile Grid Locations Mia Mia Conservation Property.

Conclusions

Striped Legless Lizard occurs in significant numbers across much of the Mia Mia Conservation Property.

The species was not recorded in tile grids in the northwest corner and southern-most portion of the property and only one tile grid was located in the eastern half of the property. Further survey work using tile grids in previously unsurveyed locations would provide an expanded picture of distribution of the species across the breadth of the property.

The presence of the Striped Legless Lizard on the property should be considered in future management.

Acknowledgements

The tile grid survey was conducted under the terms of DELWP Wildlife Research Permit #10010146. The survey was co-ordinated by Sid Larwill (Vegetation Link). Tile grid site selection and installation was done by Sid Larwill, Kim Cornford and Caitlin Symon. Tile grid checking was done by John O'Sullivan, Caitlin Symon, Danah Leary, Josh Smith, Adeline Chew, Ray De Mack, Laura Barsdell and Kim Cornford (all of Cassinia Environmental Pty Ltd). Data collation by Julie Groce (Vegetation Link) and Adeline Chew (Cassinia Environmental).

References

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

Appendix 1 Tile Grid Array Data

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
28/9/21	clear, sunny	10	22	6km/h NE	20	0	1	12:01	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	2	12:22	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	3	12:45	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	4	13:00	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	5	13:40	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	6	13:53	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	7	14:02	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	8	14:14	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	9	14:40	0	0	0
28/9/21	clear, sunny	10	22	6km/h NE	20	0	10	15:02	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	1	12:09	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	2	12:18	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	3	12:28	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	4	12:35	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	5	12:41	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	6	12:55	0	1	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	7	12:59	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	8	13:05	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	9	14:12	0	0	0
6/10/21	clear, sunny	5	21	17km/h N	5	0	10	14:23	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	1	12:30	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	2	12:41	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	3	12:50	0	0	0

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
20/10/21	clear, sunny	6	21	14km/h E	0	0	4	13:00	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	5	13:05	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	6	13:45	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	7	13:55	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	8	14:00	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	9	14:15	0	0	0
20/10/21	clear, sunny	6	21	14km/h E	0	0	10	14:25	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	1	9:35	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	2	9:50	0	1	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	3	10:00	4	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	4	10:23	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	5	10:39	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	6	10:54	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	7	11:02	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	8	11:11	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	9	12:44	0	0	0
27/10/21	sunny, slight haze	12	26	6km/h NE	0	0	10	14:21	0	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	1	8:08	0	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	2	8:19	0	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	3	8:28	3	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	4	8:53	0	1	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	5	9:04	0	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	6	9:15	0	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	7	9:20	2	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	8	9:41	2	0	0
1/11/21	clear, sunny	8	29	5km/h NE	0	0	9	9:59	0	0	0

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
1/11/21	clear, sunny	8	29	5km/h NE	0	0	10	10:17	0	1 (Bougainville's skink)	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	1	9:40	0	0	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	2	9:52	0	0	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	3	10:02	4	1	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	4	10:17	1	0	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	5	10:29	0	1 (brown snake)	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	6	10:43	0	0	1
9/11/21	clear, sunny	9	21	8km/h S	0	0	7	10:53	0	0	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	8	11:02	1	0	0
9/11/21	clear, sunny	9	21	8km/h S	0	0	9	11:21	0	0	1
9/11/21	clear, sunny	9	21	8km/h S	0	0	10	11:41	0	0	0
16/11/21	cloudy	5	18	17km/h S	20	0	1	9:11	0	0	0
16/11/21	cloudy	5	18	17km/h S	20	0	2	9:25	3	0	0
16/11/21	cloudy	5	18	17km/h S	20	0	3	9:36	1	0	0
16/11/21	cloudy	5	18	17km/h S	20	0	4	9:48	0	1	0
16/11/21	cloudy	5	18	17km/h S	20	0	5	10:00	1	1	0
16/11/21	cloudy	5	18	17km/h S	20	0	6	10:17	0	0	0
16/11/21	cloudy	5	18	17km/h S	20	0	7	10:28	0	0	0
16/11/21	cloudy	5	18	17km/h S	20	0	8	10:39	4	1 (blue tongue)	0
16/11/21	cloudy	5	18	17km/h S	20	0	9	10:57	0	0	1
16/11/21	cloudy	5	18	17km/h S	20	0	10	11:11	0	0	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	1	9:02	0	1	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	2	9:15	2	1	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	3	9:27	2	0	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	4	9:37	0	1	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	5	9:47	1	1	0

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	6	10:00	2	0	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	7	10:10	0	0	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	8	10:20	2	0	0
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	9	-	-	-	-
23/11/21	cloudy, slight breeze	15	23	20km/h N	100	0	10	-	-	-	-
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	1	9:15	0	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	2	9:28	0	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	3	9:37	1	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	4	9:46	0	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	5	9:56	0	1 (blue tongue)	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	6	10:09	2	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	7	10:15	2	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	8	10:27	1	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	9	10:46	1	0	0
15/12/21	cloudy, slight breeze	13	22	13km/h	100	0-4	10	10:58	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	1	9:11	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	2	9:21	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	3	9:27	1	0	0
18/1/22	sunny	12	23	20km/h s	10	0	4	9:35	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	5	9:41	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	6	9:51	1	0	0
18/1/22	sunny	12	23	20km/h s	10	0	7	10:15	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	8	10:31	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	9	10:42	0	0	0
18/1/22	sunny	12	23	20km/h s	10	0	10	11:30	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	1	9:30	0	0	0

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
27/1/22	overcast	20	31	3.5km/h NE	100	25	2	9:43	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	3	9:50	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	4	9:57	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	5	10:09	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	6	10:17	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	7	10:27	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	8	10:40	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	9	10:52	0	0	0
27/1/22	overcast	20	31	3.5km/h NE	100	25	10	11:00	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	1	9:55	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	2	10:03	0	1 (blue tongue)	1
15/2/22	sunny	15	32	21km/h S	0	0	3	10:11	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	4	10:18	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	5	10:26	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	6	10:36	0	1 (brown snake)	0
15/2/22	sunny	15	32	21km/h S	0	0	7	10:43	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	8	10:50	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	9	11:03	0	0	0
15/2/22	sunny	15	32	21km/h S	0	0	10	11:13	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	1	11:27	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	2	11:36	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	3	10:44	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	4	11:52	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	5	12:00	0	1	0
22/2/22	clear	9	30	25km/h s	0	0	6	12:37	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	7	12:42	0	0	0

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
22/2/22	clear	9	30	25km/h s	0	0	8	12:48	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	9	13:01	0	0	0
22/2/22	clear	9	30	25km/h s	0	0	10	13:09	0	0	0
8/3/22	clear, windy	12	19	40km/h S	30	0	1	11:05	0	1 (blue tongue)	0
8/3/22	clear, windy	12	19	40km/h S	30	0	2	11:13	0	0	0
8/3/22	clear, windy	12	19	40km/h S	30	0	3	11:19	0	0	0
8/3/22	clear, windy	12	19	40km/h S	30	0	4	11:27	0	1	0
8/3/22	clear, windy	12	19	40km/h S	30	0	5	11:33	0	2	0
8/3/22	clear, windy	12	19	40km/h S	30	0	6	11:42	0	1 (blue tongue)	0
8/3/22	clear, windy	12	19	40km/h S	30	0	7	11:48	0	0	0
8/3/22	clear, windy	12	19	40km/h S	30	0	8	11:54	0	0	1
8/3/22	clear, windy	12	19	40km/h S	30	0	9	12:08	0	0	0
8/3/22	clear, windy	12	19	40km/h S	30	0	10	12:18	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	1	11:53	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	2	12:01	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	3	12:08	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	4	12:15	0	1	0
15/3/22	overcast	14	23	20km/h N	100	5	5	12:22	0	2	0
15/3/22	overcast	14	23	20km/h N	100	5	6	12:29	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	7	12:35	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	8	12:40	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	9	12:52	0	0	0
15/3/22	overcast	14	23	20km/h N	100	5	10	13:04	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	1	12:22	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	2	13:19	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	3	13:30	0	1	0

Date	Conditions	Temp. (°C)		Wind	Cloud cover (%)	Precipitation (mm)	Array number	Time	Number of:		
		Min.	Max.						Striped Legless Lizard	Other reptiles	Fat-tailed Dunnarts
28/3/22	overcast	12	26	8km/h NE	50	0	4	13:45	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	5	13:56	0	1	0
28/3/22	overcast	12	26	8km/h NE	50	0	6	14:14	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	7	14:23	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	8	14:42	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	9	15:04	0	0	0
28/3/22	overcast	12	26	8km/h NE	50	0	10	15:21	0	0	0