Preliminary Documentation for the Proposed Development at 103 Reid Street and 18b Jonesfield Corner, Ardeer, Victoria (EPBC 2014/7358)

Prepared for

P. D. S. D Superfund

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Ecology and Heritage Partners Pty Ltd

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DOCUMENT CONTROL

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- Victorian Department of Energy, Environment, and Climate Action (DEECA) for access to online ecological databases.
- Zoe Thompson (Brimbank City Council) for consultation.

Contents

1 Introduction

Ecology and Heritage Partners Pty Ltd were commissioned by P.D.S.D. Mazzei to prepare a response to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) request for Preliminary Documentation for the proposed development at 103 Reid Street and 18b Jonesfield Corner, Ardeer, Victoria (the development site). A referral (EPBC 2014/7358) under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) was submitted to DCCEEW for the proposed development of the development site. On 29 October 2014 the proposed action was determined a 'Controlled Action' due to the likely significant impact on Matters of National Environmental Significance (MNES). These listed threatened species and communities included the following; the critically endangered flora species, Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens*, one vulnerable fauna species, Striped Legless Lizard *Delma impar* and one critically endangered ecological community, *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP).

Since 2008, a range of ecological studies have been completed within the Development Site and proposed onsite offset site at 103 Reid Street (south of freeway), including general flora and fauna assessments (Abzeco Pty Ltd 2008; Ecology Partners Pty Ltd 2008, 2010a, 2011; Ecology and Heritage Partners Pty Ltd 2014, 2023) and targeted surveys for Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens* (Ecology Partners Pty Ltd 2010b; Ecology and Heritage Partners Pty Ltd 2016a, 2022, 2023), Striped Legless Lizard *Delma impar* (Abzeco Pty Ltd 2008; Ecology and Heritage Partners Pty Ltd 2016b) and spring-flowering flora species (November 2016).

The following information is additional to that outlined in the EPBC Act referral, as requested by DCCEEW. It must be noted that the entire information request has been included (below), with responses provided in sections titled 'Response'.

2 Description of the Action

The preliminary documentation must provide a detailed description of the proposed action. The description must include a summary of all components of the action (e.g. warehouses, roads, storage spaces and other industrial facilities proposed), a description of the activities associated with the and subdivision of the land, and plans or maps to delineate the position of the subdivision. Information should outline the proposed construction activities associated with the development.

2.1 Response

The proposed action is in accordance with a concept development footprint generated by Urbis Pty Ltd dated 05.11.2020 which allows for the multi-lot subdivision for residential housing, and a childcare/medical centre (Figure 2a). The land is currently identified as Industrial Zone which is currently under application to be rezoned to General Residential Zone. Following a successful rezoning application it is understood that the Brimbank City Council is in support of the development of the northern section of the property and the establishment and management of the on-site offset site as an offset site. However, the plans are subject to approval from the Brimbank City Council. Additionally, remediation is proposed to occur in the eastern part of the site within the proposed concept development footprint in the Development Site and do not represent impacts to any additional areas. The remediation works will seek to remove areas of fill from within the southeastern section of the Development Site where the depth of fill ranges from approximately 1 – 2.5 metres deep. The estimated

time to complete the remediation works is 10 weeks, with the primary works involving trucks removing fill from the Development Site prior to commencement of the multi-lot subdivision.

The Development Site and proposed onsite offset site consists of three land parcels located at 57A, 103 Reid Street, Ardeer, Victoria and 18B Jonesfield Corner, Cairnlea.

The proposed development footprint encompasses an area of approximately 10.2 hectares and is located exclusively on the northern side of the freeway of 103 Reid Street and 18B Jonesfield Corner, Ardeer (Development Site). The area on the southern side of the freeway at 103 Reid Street (Lot 1 PS315806) and 57A Reid Street, Ardeer (On-site Offset Site) is not subject to impacts, with the majority of this area to be established and managed as an onsite offset.

The concept plan and any future building works on the lots created will be undertaken by the proponent.

3 Description of the Environment and Matters of National Environmental Significance

3.1 General Description

The preliminary documentation must provide a general description of the environment of the development site, as well as the surrounding areas that may be impacted by the action both in the short and long term. This section must specifically address the following matters:

a) A description of the MNES, which may be affected by the proposal. This section must address, but need not be limited to, the following matters:

- *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP) ecological community - Critically Endangered
- Spiny Rice-flower (*Pimelea spinescens* subsp. *spinescens*) – Critically Endangered
- Striped Legless Lizard (*Delma impar*) - Vulnerable.

3.2 Additional Information

This section must provide the following:

a) Information detailing known populations (and records) or habitat for the relevant species within five kilometres of the proposed action area;

b) Information about the resources used to identify and assess the environmental values of the site (i.e. was consultation or advice sought from fauna experts in regard to the potential presence of threatened species); and

c) An assessment of the adequacy of any surveys undertaken (including survey effort and timing), in particular the extent to which these surveys were undertaken in accordance with the Department's Significant Impact Guidelines. In particular, please provide the following:

- Consistency with Department's Significant Impact Guidelines for the Critically Endangered Spiny Rice-flower (significant impact guidelines) and the total number of Spiny Rice-Flower plants present at the proposed action area;

- Consistency with Environment Protection and Biodiversity Conservation Act 1999 referral guidelines for the vulnerable striped legless lizard, *Delma impar*.

3.3 Response

3.3.1 Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP) ecological community

Known populations or habitat

Vegetation assessments undertaken at the Development Site on 30 April and 2 May 2014. EVCs were determined with reference to DEPI pre-1750 and extant EVC mapping and their published descriptions. MNES under the EPBC Act, including threatened species and ecological communities, were ascertained during the field assessment (Ecology and Heritage Partners Pty Ltd 2014).

One nationally listed ecological community was recorded within the Development Site, NTGVVP, listed as critically endangered under the EPBC Act (Table 1). This ecological community was recorded in accordance with the survey guidelines outlined in the Department of Sustainability, Environment, Water, Population and Communities' (DSEWPaC) *Nationally Threatened Ecological Communities of the Victorian Volcanic Plain: Natural Temperate Grassland & Grassy Eucalypt Woodland* guide to the identification, assessment and management of nationally threatened ecological communities (DSEWPaC 2011), and in accordance with the *Commonwealth listing advice on Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP)(DEWHA 2008). During this survey 3.73 hectares of NTGVVP was recorded within the Development Site corresponding to habitat zones PG1 and PG3.

During vegetation assessments undertaken in February 2020 by an ecologist accredited in the Vegetation Quality Assessment (VQA) assessment method, 2.25 hectares of NTGVVP was recorded. A further assessment was undertaken on 22 September 2023 whereby 0.25 hectares of NTGVVP was recorded. DCCEEW since advised that the 3.73 hectare extent recorded in the 2014 survey must be applied as it reflects the condition of the site at the time of the initial EPBC Act referral. It is noted that significant degradation in the extent of NTGVVP since the referral was first submitted, primarily due to the encroachment of weeds.

During the 2014 survey, this community was located in areas identified as (Heavier Soils) Plains Grassland throughout the Development Site (Figure 2), within Plains Grassland patches PG1 and PG3 (Figure 2a), which meet the condition thresholds that define the EPBC Act-listed NTGVVP.

While access could not be facilitated to assess the Cairnlea Estate development site land beyond the western boundary of the Development Site, a recent survey was undertaken by another consultant (Biosis 2020) with their recorded values confirmed when this land was accessed by Ecology and Heritage Partners in 2022 (Ecology and Heritage Partners 2022a). Most of the Cairnlea Estate development site is highly modified due to a history of disturbance, including introduction and spread of weed species, and soil contamination and major earth works. There is one patch of native vegetation within this site that meets the definition of a patch [Plains Grassland (EVC 132)] as defined under the Guidelines (DELWP 2017) and is in proximity to the development site (Plate 1). The assessment conducted by Ecology and Heritage Partners in 2022 found this Plains Grassland patch to be moderate to high quality (i.e. dominated by Kangaroos Grass with varying weed levels) and met the threshold for NTGVVP. There is not anticipated to be any impact to these values due to the proposed action following implementation of measures proposed in the forthcoming Construction Environmental

Management Plan (CEMP) including sediment fencing, no-go zone fencing, and staff inductions. Biosis (2020) stated the following with respect to the Plains Grassland in the south-east corner of the site, which is located approximately 30 metres beyond the western boundary of the development site:

> *'characterised by Kangaroo Grass, spear grasses and wallaby grasses with occasional forbs in the ground layer. Tree area [is] absent and shrubs are sparse. Degraded remnants have a relatively high cover of weedy perennial grasses such as Serrated Tussock and Chilean Needlegrass (Biosis 2020)'.*

Plate 1. Ecological features recorded within the Cairnlea Estate Development Site (Biosis 2020)

All other land adjacent to the development site was assessed by Ecology and Heritage Partners in April 2024, with small areas of Plains Grassland recorded beyond the northern and southern boundaries of the Development Site. The Plains Grassland to the south is contiguous with patches recorded within the Development Site. Aside from the proposed on-site offset site to the south and the Cairnlea Estate development site to the west, no NTGVVP was recorded in areas adjacent to the development site.

Table 1. Condition Thresholds for Natural Temperate Grassland of the Victorian Volcanic Plain

Trigger	Criteria	NTGVVP Patches (Figure 2)
EVC	The grassland is either Plains Grassland (EVC 132) or Creekline Tussock Grassland (EVC 654)	Criteria Met, where all patches are representative of Plains Grassland (EVC132).
Bioregion	Grassland is in the Victorian Volcanic Plain or near to the Victorian Volcanic Plain (Central Victorian Uplands, Dundas Tablelands and Otway Plain Bioregions)	Criteria Met, where the Development Site is located within the Victorian Volcanic Plain bioregion.
Size of Patch	If grassland remnant is ≤1 hectare, grassland patch needs to be at least 0.05 hectare in size with no more than 5% canopy cover of trees or shrubs.	Criteria met, for patches PG1 and PG3 in the development site, as well as the large continuous patch in the on-site offset site, all contiguous patches listed above are greater than 0.05 hectares. All other Plains Grassland

Trigger	Criteria	NTGVVP Patches (Figure 2)
		patches recorded in the development site did not meet the >50% cover threshold. No canopy trees occur on site
	If grassland remnant is >1 hectare, grassland patch needs to be at least 0.5 hectare in size with no more than 2 trees per hectare.	Not applicable
Key Diagnostic Features	The grassland is associated with Quaternary basalt soils within the Victorian Volcanic Plain bioregion.	Criteria Met
	At least one of the following grass genera is the dominant native species in the ground layer: Kangaroo Grass, Wallaby-grass., Spear-grass, or Tussock-grass.	Criteria met, high cover of Kangaroo Grass, Spear Grasses and Wallaby Grasses in the ground layer.
Condition Thresholds	The native grasses Kangaroo-grass, Wallaby-grass, Spear-grass, or Tussock-grass. account for 50% or more of the perennial tussock cover of the grassland patch. OR	Criteria met in the development site, as well as the large continuous patch in the on-site offset site. High cover (greater than 50%) of *Austrodanthonia, Austrostipa* and *Themeda.*
	Native wildflowers account for 50% or more of the total vegetation from September to February. OR	Moderate (less than 50%) cover of native wildflowers.
	Non-grassy weeds account for less than 30% of the total vegetation cover at any time of the year.	Low (less than 30%) cover of non-grassy weeds. Other areas may not meet this criterion; moderate (up to 50%) cover of weeds in
Additional Characteristics	The conservation value of a patch of the Natural Temperate Grassland of the Victorian Volcanic Plain ecological community is enhanced if it shows any of the following features: • a high native plant species richness; • large patch size; • minimal weed invasion; • presence of threatened plant and/or animal species; • presence of natural exposed rock platforms and outcrops; or • presence of mosses, lichens or a soil crust on the soil surface.	The site is of high conservation value, with patches characterised by: • Large patch sizes (PG1 and 3) • Natural exposed rock platforms (most patches of NTGVVP have this component); • Multiple threatened species present; and • Presence of soil crusts (most patches of NTGVVP have this component).

Resources used to assess the environmental values of the site

- DEECA's NatureKit Tool (DEECA 2023a) was accessed for:
    - Modelled data for location risk, remnant vegetation patches, scattered trees and habitat for rare or threatened species; and,
    - The extent of historic and current EVCs.
- EVC benchmarks (DEECA 2023c) for descriptions of EVCs within the Victorian Volcanic Plain bioregion;
- The VBA (DEECA 2023) for previously documented flora and fauna records within the project locality;
- The Flora Information System (FIS) (Viridans 2014a) and Atlas of Victorian Wildlife (AVW) (Viridans 2014b) for assistance with the distribution and identification of flora and fauna species;

- The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (PMST) for MNES protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DCCEEW 2021);
- Relevant listings under the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act), including the latest Threatened Lists (DEECA 2023a);
- The VicPlan Map (DTP 2023) to ascertain current zoning and environmental overlays in the Development Site;
- Previous ecological or other relevant assessments of the Development Site, including the initial ecological assessment by ABZECO Pty Ltd (ABZECO Pty Ltd 2008) and subsequent ecological assessments by Ecology and Heritage Partners Pty Ltd (Ecology Partners Pty Ltd 2008, 2009, 2010a, 2010b, 2010c, 2010d, 2011; Ecology and Heritage Partners Pty Ltd 2016a, 2016b, 2022, 2023).

Assessment of the adequacy of surveys undertaken

Vegetation assessments were conducted by ecologists experienced in the identification of NTGVVP and the associated condition thresholds, as well as the identification of Spiny Rice-flower (Table 2).

3.3.2 Spiny Rice-flower

Known populations or habitat

The targeted survey for Spiny Rice-flower was conducted on 30 April and 2 May 2014. The field assessment adhered to the survey guidelines for Spiny Rice-flower outlined in the Biodiversity Precinct Structure Planning Kit (DSE 2010) and the Significant Impact Guidelines (DEWHA 2009b) for the species. A total of 5 individuals recorded within the Development Site during the 2014 surveys (Ecology and Heritage Partners Pty Ltd 2014). Spiny Rice-flower was recorded in habitat zone PG1, while habitat zones PG2 and PG3, which occur on the fringes of habitat zone PG 1, were of comparatively lower quality due to higher perennial weed cover (25 to >50%) and reduced flora species diversity and are not considered Spiny Rice-flower habitat.

Additional targeted survey assessments were undertaken at the development site for Spiny Rice-flower on September 2019 and August 2023. Two Spiny Rice-flower individuals were detected in the northern and south-eastern parts of the Development Site during the 2023 survey, while no individuals were detected during the 2019 survey within the Development Site (Ecology and Heritage Partners 2022; 2023). DCCEEW advised that the five individuals recorded in the 2014 survey must be applied as it reflects the conditions at the time of initial EPBC Act referral.

Spiny Rice-flower had previously been recorded within the proposed On-site Offset Site, and adjacent land on numerous occasions. Records include:

- A total of 176 Spiny Rice-flower individuals were recorded in the proposed On-site Offset Site during the 2019 September surveys (Ecology and Heritage Partners 2022). The majority of individuals were mature plants with clusters of new recruits located in areas of disturbed ground. The majority of these occur in areas of moderate to high quality Plains Grassland.
- 106 individuals were previously recorded within the proposed On-site Offset Site in 2010 (Ecology Partners Pty Ltd 2010b) and 145 recorded in 2016 (Ecology and Heritage Partners Pty Ltd 2016).

Nearby known records within five kilometres of the Development Site, which include, but are not limited to:

- The Cairnlea Estate Nature Conservation Reserve, approximately two kilometres to the north;
- The Pimelea Terrace reserve, less than one kilometres to the north;
- An occurrence on private land less than half a kilometre to the north; and,
- St Albans Rail Reserve, less than three kilometres east of the Development Site.

Resources used to assess the environmental values of the site

As per Section 4. and the following:

- *EPBC Act Policy Statement 3.11: Significant Impact Guidelines for the critically endangered Spiny Rice-flower Pimelea spinescens subsp. spinescens* (DEWHA 2009);
- *Conservation Advice Pimelea spinescens subsp. spinescens spiny rice-flower* (TSSC 2016b);
- *National Recovery Plan for the Spiny Rice-flower Pimelea spinescens subsp. spinescens* (Carter & Walsh 2006);
- *FFG Act Action Statement No. 132: Spiny Rice-flower Pimelea spinescens subsp. spinescens* (DSE 2008); and,
- *National Recovery Plan for the Spiny Rice-flower Pimelea spinesens Rye, subsp. spinescens 2012-2016* (Foreman 2012).
- *National Recovery Plan for the Spiny Rice-flower Pimelea spinesens subsp. Spinescens (DEECCW 2024)*

Assessment of the adequacy of surveys undertaken

The targeted survey for Spiny Rice-flower conducted on 30 April and 2 May 2014 adhered to the survey guidelines for Spiny Rice-flower outlined in the Biodiversity Precinct Structure Planning Kit (DSE 2010) and the Significant Impact Guidelines (DEWHA 2009b) for the species. Although the Development Site does not occur in a Precinct Structure Plan area to which the guidelines generally apply, the recommended methods are considered 'best practice' guidelines for conducting Spiny Rice-flower surveys, along with the similar measures specified in the Significant Impact Guidelines (DEWHA 2009). A summary of the survey effort compared with both survey guidelines is provided in Table 2.

The targeted survey was conducted by two qualified botanists familiar with the appearance and ecology of the Spiny Rice-flower. The Development Site was walked in linear transects no greater than five metres apart. The targeted surveys were conducted during the flowering season for Spiny Rice-flower (April to August) and over two days to ensure adequate survey effort and coverage of areas of suitable habitat. The survey effort covered all suitable habitat in the Development Site, which largely correspond to the Plains Grassland EVC (Figure 2).

As recommended in the EPBC Act Policy Statement 3.11 - *Significant Impact Guidelines for the Critically Endangered Spiny Rice-flower (Pimelea spinescens subsp. spinescens)* (DEWHA 2009), a habitat assessment was undertaken to identify and assess the quality of areas of potential Spiny Rice-flower habitat (i.e. remnant grassland, including Plains Grassland and NTGVVP). The location and quality of Plains Grassland and NTGVVP within the Development Site was identified during vegetation assessments undertaken in August 2019 by an ecologist accredited in the Vegetation Quality Assessment (VQA) assessment method.

It was determined that the quality of Plains Grassland throughout the Development Site has been affected by the spread and establishment of perennial grassy weeds, which have increased in extent since 2008 (Ecology Partners 2011). Higher quality Plains Grassland occurs in areas identified as NTGVVP (Figure 2), which contained the greatest diversity of flora species, with embedded rock and moderate soil disturbance from rabbits. The small isolated patches of Plains Grassland were of comparatively lower quality due to higher perennial weed cover (>50%) and reduced flora species diversity, and such areas were heavily disturbed from grazing and disturbance by rabbits. Targeted survey effort was directed to all potential habitat areas of remnant grassland identified during the habitat assessment, including degraded grassland within both the development and on-site offset sites.

Historically, livestock grazing practices for primary production have been undertaken within the Development Site, likely leading to long-term degradation of native vegetation and habitat within the site. There are no records of grazing occurring within the Development Site within the three months prior to targeted surveys being undertaken, and no records of fire occurring within 6 months of the surveys. Surrounding properties are subject to cropping and intense grazing activities, but there is limited similar habitat adjacent to the development site.

While access could not be facilitated to assess the Cairnlea Estate development site land beyond the western boundary of the Development Site, a recent survey was undertaken by another consultant (Biosis 2020) with their recorded values confirmed when this land was accessed by Ecology and Heritage Partners in 2022 (Ecology and Heritage Partners 2022a). Most of the Cairnlea Estate development site is highly modified due to a history of disturbance, including introduction and spread of weed species, and soil contamination and major earth works. There is one patch of native vegetation within this site that meets the definition of a patch [Plains Grassland (EVC 132)] as defined under the Guidelines (DELWP 2017) and is in proximity to the development site (Plate 1). No Spiny Rice-flower was previously recorded within any areas adjacent to the development site.

The development site habitat would have been contiguous with the on-site offset site prior to the construction of the Western Ring Road, and thus the further isolation of this Development Site Spiny Rice-flower population from the known southern population likely contributed to the decline of this small population.

The total number of plants within the Development Site were counted and recorded with a hand-held Global Positioning System (GPS) and transposed onto an aerial photograph of the Development Site (Figure 2). Any additional significant species encountered during targeted surveys were also recorded in the same manner.

Table 2. Survey effort compared with the Biodiversity Precinct Structure Planning Kit (DSE 2010) and the Significant Impact Guidelines for the species (DEWHA 2009).

Survey Guidelines	Achieved?/Comment
Targeted surveys should be done by people familiar with recognising the subspecies.	Yes. Surveys were completed by Botanist Sandra Mijatovic in 2014, who has extensive experience conducting targeted flora surveys, including Spiny Rice-flower surveys, and is highly familiar with the appearance and ecology of the species. The assessor has had several years' experience in environmental consulting, research and flora identification.
Multiple surveys may be required to identify the species and provide adequate survey effort.	Yes. The survey was undertaken over two days to ensure adequate survey effort.

Survey Guidelines	Achieved?/Comment
Surveys should not be conducted for at least six months after fires and for at least three months after the cessation of grazing (DEWHA Survey Guidelines).	Yes. The assessors are not aware of any fires or grazing within the specified timeframes.
Survey between April and August while flowering (easily overlooked when not in flower).	Yes. The assessment was conducted in April and May, within the flowering period for the species. Known individuals in the Development Site were located and found in flower prior to commencing the surveys.
The targeted survey effort should be directed to all potential habitat areas i.e. remnant grassland including degraded grassland.	Yes. All areas of suitable habitat were traversed in linear transects, in accordance with the methods in the guidelines.
Walk through transects at less than 5m grid intervals are required for all potential habitat.	Yes. Transects of less than 5m were generally used and where specimens were detected closer transects were utilised.
Record the number of plants per land parcel.	Yes.

3.3.3 Striped Legless Lizard

Known populations or habitat

Striped Legless Lizard was detected within the Development Site during the 2015 targeted surveys. Striped Legless Lizard was recorded during three of the six tile grid checks, and from Grids 2 and 3, with a total of six individuals recorded. No Striped Legless Lizards were recorded from Grid 1 (Figure 2).

According to the EPBC Act referral guidelines for the Striped Legless Lizard (SEWPaC 2011), once detected on site, all areas of suitable habitat should be considered occupied by the species. All areas of Plains Grassland within the Development Site and On-site Offset Site as well as the balance of the Development Site (14.64 hectares, including 9.87 hectares at the Development Site and 4.77 hectares and the On-site Offset Site) are considered likely to support the species. While recorded Striped Legless Lizard habitat at the Development Site has varied between survey events, DCCEEW advised that the site conditions at the time of initial EPBC Act referral must be applied. Targeted surveys for Striped Legless Lizard conducted in 2014 recorded 16 Striped Legless Lizard individuals across 9.87 hectares of recorded habitat (Ecology and Heritage Partners 2015). As such, 9.87 hectares of Striped Legless Lizard habitat will be applied for the purposes of this documentation.

Striped Legless Lizard has previously been recorded within the Development Site and adjacent land on numerous occasions.

Based on an updated review of the Victorian Biodiversity Atlas (VBA) (DEECA 2025a), Striped Legless Lizard has been recorded 914 times within 10 kilometres, which includes 386 records within 10 kilometres between 2015 and 2021 (Figure 5).The nearest database record occurring at the northern boundary of the Development Site from 2007. Many of the nearby records are sourced from areas which have been subsequently developed; however a large key population is known to occur within the Cairnlea Estate Nature Conservation Reserve, located approximately two kilometres north-west of the Development Site (Figure 5). Additional populations in the broader 10 kilometre region are fragmented from the study area through urban, industrial and rail / road development, with many records being historic. A summary of local Striped Legless Lizard records is provided in Table 3. The VBA does not have any records from years 2022 onwards, which may be a factor of either no observations, or any recent records not yet being verified by the VBA for publication.

Table 3. Summary of past records within 10 kilometres of the Development Site (DEECA 2025a).

Date range	Number of records within 10 kilometres of the Development Site
1962 - 1970	4
1971 - 1980	8
1981 - 1990	31
1991 - 2000	130
2001 - 2010	252
2011 - 2020	487
2021	2

Note: Source: VBA (DEECA 2025a).

While access could not be facilitated to assess the Cairnlea Estate development site land beyond the western boundary of the Development Site, a previous survey was undertaken by another consultant (Biosis 2020) with their recorded values confirmed when this land was accessed by Ecology and Heritage Partners in 2022 (Ecology and Heritage Partners 2022a). Most of the Cairnlea Estate development site is highly modified due to a history of disturbance, including introduction and spread of weed species, and soil contamination and major earth works. There is one patch of native vegetation within this site that meets the definition of a patch [Plains Grassland (EVC 132)] as defined under the Guidelines (DELWP 2017) and is in proximity to the development site (Plate 1). Approximately 500 Striped Legless Lizards have been salvaged and translocated / relocated from throughout the adjacent site (Cairnlea Estate development area between 1999 – 2009 (Biosis 2020a). This translocation was conducted as part of the proposed Cairnlea Estate development (O'Shea 2013). The recipient sites for the Cairnlea Estate Striped Legless Lizard translocation was not published. A population is still assumed to be present at this site due to the presence of historical records and the proximity of the known population within the Development Site.

All other adjacent land to the development site was assessed by Ecology and Heritage Partners in April 2024, with small areas of Plains Grassland recorded beyond the northern and southern boundaries of the development site. The Plains Grassland to the south is contiguous with patches recorded within the development site. In this context, areas immediately abutting the development site to the west, south and north are considered to contain Striped Legless Lizard habitat. There is not anticipated to be any impact to these values due to the proposed action following implementation of measures proposed in the forthcoming Construction Environmental Management Plan (CEMP) including sediment fencing, no-go zone fencing, and staff inductions. The CEMP will be required as a condition of approval within any planning permit issued by Council for the proposed action and will address MNES.

Striped Legless Lizard has been previously recorded in the Development Site during previous ecological assessments and targeted fauna surveys. A targeted fauna survey of the Development Site conducted between November 2007 and January 2008 detected two live Striped Legless Lizards, one with an egg, and three recently shed Striped Legless Lizard skins (ABZECO Pty Ltd 2008). Two individuals were also recorded in the Development Site during an ecological assessment completed in November 2008 (Ecology Partners Pty Ltd 2010). A summary of Striped Legless Lizard records found within the Development Site is provided in Table 4.

Table 4. Past records of Striped Legless Lizard within the Development Site.

Date	Surveyor	Number of records within Development Site	
November 2007 – January 2008	ABZECO Pty Ltd	1	1
September - November 2008	Ecology and Heritage Partners Pty Ltd	2	2
September – November 2014	Ecology and Heritage Partners Pty Ltd	-	16
September – November 2015	Ecology and Heritage Partners Pty Ltd	6	-

Ninety-nine (99) individual Striped Legless Lizards were unearthed during development of the Cairnlea Estate in 2000, approximately 400 metres north-west the Development Site (ABZECO Pty Ltd 2008).

Resources used to assess the environmental values of the site

As per Section 4. and the following:

- The Victorian Biodiversity Atlas (VBA) (DELWP 2020), Victorian Fauna Database (VFD) (Viridans 2014) and the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (PMST) (DCCEEW 2023) for documented records or potential habitat within the local area;
- The DEECA Nature Kit Map (DEECA 2023c);
- FFG Act Action Statements (DSE 2003), EPBC Act Policy Statements and National Recovery Plans (Smith and Robertson 1999; SEWPaC 2011);
- Previous Flora and Fauna Assessment reports, including:
    - *Flora and Fauna report on North and South Sections of Lot 1 Ballarat Road, Ardeer* (ABZECO Pty Ltd 2008);
    - *Ballarat Road, Ardeer, Flora and Fauna and Net Gain Analysis* (Ecology Partners Pty Ltd 2010a);
    - *Biodiversity Assessment, Lot 1 Jonesfield Corner, Ardeer* (Ecology and Heritage Partners Pty Ltd 2014);
    - *Targeted Surveys for Striped Legless Lizard Delma impar, Jonesfield Corner, Ardeer, Victoria* (Ecology and Heritage Partners Pty Ltd 2015); and,
    - *Biodiversity Assessment for the Proposed Residential Development at 103 Reid Street and 18B Jonesfield Corner Ardeer, Victoria* (Ecology and Heritage Partners 2022, 2023).

Assessment of the adequacy of surveys undertaken

Targeted surveys were undertaken to investigate the quality and extent of Striped Legless Lizard habitat within the Development Site and determine the presence and abundance, or absence of the species.

The surveys were conducted in accordance with the prescribed methodology detailed in the *EPBC Act Referral Guidelines for the Vulnerable Striped Legless Lizard, Delma impar* (SEWPaC 2011) and involved the deployment of artificial refuge structures through the establishment of tile grids in areas of suitable grassland habitat within the Development Site. The intention of establishing a grid of roof tiles is that individuals will use the artificial habitat for shelter, and to assist in thermoregulation. The set of artificial refuges provide a target for Zoologists to focus search attempts in which tiles are lifted to check for the presence of lizards. The adopted methodology is widely accepted as the primary survey technique for this species, particularly in areas supporting surface rock cover (DSE 2003; SEWPaC 2011).

In accordance with the Referral Guidelines (SEWPaC 2011), tile grids were established within identified 'patches' of habitat likely to be impacted, with each grid consisting of a matrix of 5 x 10 terracotta roof tiles (measuring approximately 25 metres x 50 metres). Three tile grids were laid on 17 July 2015 at the following locations identified in Table 5.

The targeted surveys were completed by Associate Ecologist Shannon LeBel and Consultant Zoologist Andrew Taylor, who are both highly proficient in reptile survey and capture methodologies and have extensive experience conducting targeted Striped Legless Lizard tile check surveys. Both surveyors have had over 10 years experience in ecological research, fauna surveying and identification, and are highly familiar with the appearance and ecology of the Striped Legless Lizard. The timing of the checks was undertaken in accordance with advice from DEECA who have extensive experience in undertaking surveys for the species. Tiles were checked on six occasions between 29 September and 5 November 2015, as shown below (Table 5; Table 6).

Table 5. Location of tile grids placed within the Development Site and proposed On-site Offset Site.

Tile Grid Number	Eastings[1]	Northings
1 - NW	306472.7	5817650.9
1 - SE	306491.7	5817593.6
2 - NW	306312.8	5817629.3
2 - SE	306349.2	5817582.4
3 - NW	306170.9	5817590.5
3 - SE	306222.7	5817563.9

Note: 1) GDA94, MGA 55

Table 6. Tile survey dates.

Tile Check Number	Date
1	29/09/2015
2	07/10/2015
3	13/10/2015
4	23/10/2015
5	30/10/2015
6	05/11/2015

4 Relevant Impacts

4.1 Assessment of Potential Impacts

The preliminary documentation must include an assessment of potential impacts (including direct, indirect, consequential and cumulative impacts) that may occur as a result of all elements and project phases of the proposed action on the protected species addressed at Section 2. Consideration of impacts must not be confined to the immediate areas surrounding the proposed action but must also consider the potential of the proposed action to impact on adjacent areas that are likely to contain MNES.

4.2 Additional Information

For each protected species and the ecological community addressed in Section 2 this must include, but not be limited to, an assessment of:

a) The direct loss and/or disturbance of habitat from the proposed action. This must include the quantum and quality of habitat in hectares (and as number of individuals, if available and applicable) likely to be impacted;

b) Details on whether any impacts are likely to be unknown, unpredictable or irreversible;

c) Analysis of the acceptability of the relevant impacts;

d) Any technical data and other information used or needed to make a detailed assessment of the relevant impacts; and

e) A local and regional scale analysis of the likely impacts. This should include a discussion of potential cumulative impacts within the broader regional and information on the long-term viability of relevant species and ecological communities.

4.3 Justification of Impacts

All discussions and conclusions drawn regarding the assessment of direct or indirect impacts from the proposed action should include a full justification based on the best available information including scientific literature, existing databases and mapping; and must be referenced. The discussion of impacts must incorporate relevant conservation advices, recovery plans and threat abatement plans, if applicable. If these are not applicable, a brief statement to this effect must be included.

4.4 Response

Impacts associated with the proposed development are summarised in Table 7. These impacts have been calculated based on the footprint, which includes a construction buffer, in which the finished development will be situated (i.e. the 'Development Site' – Figure 2; Table 2a), where all native vegetation is to be impacted within the development site as a result of the proposed rezoning and residential development, and all vegetation within the on-site offset site is to be retained and managed as an onsite offset site. The 'Total Recorded' ecological values refers to NTGVVP and Striped Legless Lizard across both the on-site offset site and development site.

Actions to avoid impacts to ecological values on-site have been taken with areas of highest quality vegetation and fauna habitat proposed to be retained within a proposed conservation reserve. Further details relating to each species are provided below.

Table 7. Ecological values to be impacted and retained.

Ecological Value	Total Recorded	Impacted	Retained	% Retained
NTGVVP	8.27 ha	3.73 ha	4.54 ha	54.90%
Striped Legless Lizard	14.64 ha	9.87 ha	4.77 ha	32.58%
Spiny Rice-flower	181 individuals	5 individuals	176 individuals	97.24%

Table 8. Overall area and quality of NTGVVP, Spiny Rice-flower and Striped legless Lizard habitat at the Development Site and On-site offset sites in Ardeer and the Offset site at Rokewood.

Matter of NES	Impacted Development site, Ardeer		On-site Offset On-site offset site, Ardeer		Off-site Offset Rokewood	
	Area / no. individuals	Quality	Area / no. individuals	Quality	Area	Quality
NTGVVP	3.73ha	3/10	4.54ha	5/10	14ha	6/10
Striped Legless Lizard	9.87ha	4/10	4.77ha	4/10	19ha	6/10
Spiny Rice-flower	5 individuals	-	176 individuals	-	n/a	n/a

4.4.1 Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP)

Direct loss

A total of 3.73 hectares of NTGVVP is proposed to be removed from the Development Site as part of the proposed development, resulting in the direct loss of all patches of this ecological community from the development site. This includes the proposed removal of vegetation within patches PG1 and PG3 (Figure 2a). These impacts are calculated based on the footprint in which the finished development will take place, as outlined in Figure 2a.

All NTGVVP within the development site is proposed to be removed as a result of the current development footprint (Figure 2a). Although the Cairnlea Estate development site, beyond the Development Site's western boundary, was assessed to contain NTGVVP (Section 3.3.1), there are minimal edge effects risks to environmental values, including NTGVVP, in adjacent land after suitable mitigation measures are applied. Mitigation measures to be detailed within a Construction Environmental Management Plan (CEMP) will ensure the risks associated with exotic species infiltration and other construction related risks (e.g. sediment runoff) to the adjacent sites as a result of vegetation removal within the development site are appropriately mitigated. Proposed mitigation measures are summarised in Section 6.1.1.

Habitat Zones recorded meet the condition thresholds that define the EPBC Act-listed Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP) ecological community, as they contain greater than 50% cover of the relevant grass genera with less than 30% cover of broadleaf weed species.

The Heavier Soils Plains Grassland EVC is sporadically distributed in the Development Site (Figure 2). The quality of Plains Grassland located throughout the Development Site has been affected by the spread and establishment of perennial grassy weeds, particularly Serrated Tussock and Chilean Needle Grass, which have increased in extent since 2008 (Ecology Partners 2011). The increase in weed cover has affected the overall extent of Plains Grassland in the Development Site, which has reduced the overall cover and extent of Plains Grassland and NTGVVP.

Higher quality Plains Grassland occurs in areas identified as NTGVVP, located throughout the development site (Figure 2; Table 10). Compared to other habitat zones, areas of NTGVVP contain the greatest diversity of flora species, with embedded rock and moderate soil disturbance from rabbits. The habitat zone has at least 60% cover of indigenous perennial grasses, in particular Kangaroo Grass *Themeda triandra*, with minor occurrences of Kneed Spear-grass *Austrostipa bigeniculata*, Common Wallaby-grass *Rytidosperma caespitosum* and Bristly Wallaby-grass *Rytidosperma setaceum var. setaceum.* The high grass biomass does not appear to have significantly affected the recruitment of native grassland herbs, with the habitat zone characterised by a high diversity of herb species including Berry Saltbush *Atriplex semibaccata*, Black-anther Flax-lily *Dianella admixta,* Curved Rice-flower *Pimelea curviflor*a, Lemon Beauty-heads *Calocephalus citreus,* Hairy Sheep's Burr *Acaena agnipila*, Plains Stackhousia *Stackhousia subterranea* and Sprawling Bluebell *Wahlenbergia gracilis.*

Habitat zones identified as Plains Grassland (Figure 2), which occur as small isolated patches were of comparatively lower quality due to higher perennial weed cover (>50%) and reduced flora species diversity. Such areas were heavily disturbed from grazing and disturbance by rabbits.

Table 9. Habitat hectare results for remnant native vegetation recorded within the Development Site.

Vegetation Zone		PG1	PG2	PG3
Bioregion		VVP	VVP	VVP
EVC		PG(HS)	PG(HS)	PG(HS)
EVC Number		132_61	132_61	132_61
EVC Conservation Status		En	En	En
Patch Condition	Large Old Trees /10	N/A	N/A	N/A
	Canopy Cover /5	N/A	N/A	N/A
	Understorey /25	15	5	10
	Lack of Weeds /15	7	0	4
	Recruitment /10	0	0	0
	Organic Matter /5	5	2	5
	Logs /5	N/A	N/A	N/A
	Treeless EVC Multiplier	1.36	1.36	1.36
	Subtotal =	36.72	9.52	25.84
Landscape Value /25		4	4	4
Habitat Points /100		40.72	13.52	29.84
Habitat Score		**0.41**	**0.14**	**0.3**
Total Area (ha)		3.54	0.19	0.19
Area (ha) to be removed		3.54	0.19	0.19
Area (ha) to be retained		0.00	0.00	0.00
Total habitat hectares		**1.45**	**0.03**	**0.06**
Habitat hectares to be removed		**1.45**	**0.03**	**0.06**
Habitat hectares to be retained		0.00	0.00	0.00

Notes: EVC: Ecological Vegetation Class; VVP: Victorian Volcanic Plain; PG (HS): Heavier Soils Plains Grassland; En: Endangered; N/A: Not Applicable.

Unknown, unpredictable or irreversible impacts

Impacts are not expected to be unknown or unpredictable, however loss of habitat within the Development Site would be considered irreversible.

Acceptability of the relevant impacts

NTGVVP is listed as Critically Endangered under the EPBC Act, a category that is applied to threatened species and ecological communities showing an extremely high risk of extinction in the wild in the immediate future (SEWPaC 2011). Less than five per cent of the original extent of the community remains, although patches in good condition are likely to constitute less than one per cent, and most known remnants are less than 10 hectares in size (SEWPaC 2011).

In light of this information it is preferable to retain NTGVVP wherever possible, particularly high-quality remnants. In this instance the acceptability of impacts may be considered on balance with the proposal to establish an onsite offset to retain a large proportion of NTGVVP. The on-site offset site which holds high quality NTGVVP is proposed to be retained following a change in the development footprint to avoid impacts to the now proposed On-site Offset Site.

The On-site Offset Site was initially proposed to be impacted under a proposed action referred under the EPBC Act in 2010 (Ecology Partners 2010c). A second EPBC-Act referral was submitted in 2014 for a proposed development in the Development Site, with no works proposed in the On-site Offset Site land (Ecology and Heritage Partners 2014b). In 2018, the proposed action was again expanded to include works in the On-site Offset Site land. These plans involved the construction of a commercial and industrial estate, consisting of a number of buildings and associated access roads at 57 and 103 Reid Street, Ardeer, and 614 Ballarat Road Ardeer (i.e. the now proposed On-site Offset Site). The proposed action was planned to involve the following activities:

- Removal of topsoil deposits for the construction of road/infrastructure corridors;
- Site levelling works;
- Sewer, water main and storm water drainage construction and associated works;
- Pavement works; and,
- Construction of buildings, car parking, fencing and landscaping.

The following impacts to the On-site Offset Site were proposed as part of the proposed action:

- Loss of 1.191 hectares of NTGVVP;
- Loss of one Spiny Rice-flower plant; and,
- Loss of 1.237 hectares of potential Striped Legless Lizard habitat.

Discussions with Brimbank Council have since taken place, which led to the reduction in proposed impact footprint to exclude the entire site (i.e. the now proposed On-site Offset Site) and instead limit development to the Development Site (i.e. north of the freeway). As a result, the proposed action has demonstrated avoidance of 1.91 hectares of NTGVVP, one Spiny Rice-flower plant, and 1.237 hectares of Striped Legless Lizard habitat.

Technical data and other information

Ecology and Heritage Partners Pty Ltd 2023. Biodiversity Assessment and Targeted Survey for Spiny Rice-flower: 103 Reid Street and 18B Jonesfield Corner, Ardeer, Victoria. Unpublished report for P. D. S. D. Mazzei. Ecology and Heritage Partners Pty Ltd, Ascot Vale, Victoria.

Ecology and Heritage Partners Pty Ltd 2022. Biodiversity Assessment: 57, 57A, 103 Reid Street and 614 Ballarat Road, Ardeer, Victoria. Unpublished report for P. D. S. D. Mazzei. Ecology and Heritage Partners Pty Ltd, Ascot Vale, Victoria.

Ecology and Heritage Partners Pty Ltd 2016a. Biodiversity Assessment: 57, 57A, 103 Reid Street and 614 Ballarat Road, Ardeer, Victoria. Unpublished report for P. D. S. D. Mazzei. Ecology and Heritage Partners Pty Ltd, Ascot Vale, Victoria.

Ecology and Heritage Partners Pty Ltd 2016b. Targeted Survey for Spiny Rice-flower, 57, 57A, 103 Reid Street and 614 Ballarat Road, Ardeer, Victoria. Unpublished report for P. D. S. D. Mazzei. Ecology and Heritage Partners Pty Ltd, Ascot Vale, Victoria.

Ecology and Heritage Partners Pty Ltd 2016c. Targeted Survey for Striped Legless Lizard Delma impar, 7, 57A, 103 Reid Street and 614 Ballarat Road, Ardeer, Victoria. Unpublished report for P. D. S. D. Mazzei by Ecology and Heritage Partners Pty Ltd, Ascot Vale, Victoria.

Ecology and Heritage Partners Pty Ltd 2014. Biodiversity Assessment, Lot 1 Jonesfield Corner, Ardeer, Victoria. Unpublished report for Connect Project Management Pty Ltd by Ecology and Heritage Partners Pty Ltd, Ascot Vale, Victoria.

Ecology Partners Pty Ltd 2010b. Spiny Rice-flower Targeted Surveys - Ballarat Rd. Ardeer. Unpublished report for Connect Project Management by Ecology Partners Pty Ltd, Brunswick, Victoria.

SEWPaC 2011. Nationally Threatened Ecological Communities of the Victorian Volcanic Plain: Natural Temperate Grassland & Grassy Eucalypt Woodland - A guide to the identification, assessment and management of nationally threatened ecological communities, Environment Protection and Biodiversity Conservation Act 1999. Department of Sustainability, Environment, Water, Population and Communities.

Local and regional scale analysis of the impacts

As stated above, NTGVVP is listed as Critically Endangered under the EPBC Act, with less than five per cent of the original extent of the community remaining (SEWPaC 2011). Ravenhall and surrounding areas form part of Melbourne's outer western suburbs, an area that has seen substantial growth over the past 5 to 10 years due to its proximity to central Melbourne, flat topography, connectivity via the Western Highway and more recently via the Regional Rail Link. As such, very little of the original extent of the community remains and maximising grassland conservation is of utmost importance.

4.4.2 Spiny Rice-flower

Direct loss

A total of five individuals recorded within the Development Site during the 2014 surveys (Ecology and Heritage Partners Pty Ltd 2014).

Additional targeted survey assessments were undertaken at the development site for Spiny Rice-flower on September 2019 and August 2023. Two Spiny Rice-flower individuals were detected in the northern and south-eastern parts of the Development Site during the 2023 survey, while no individuals were detected during the 2019 survey within the Development Site (Ecology and Heritage Partners 2022; 2023). DCCEEW since advised that the results recorded in the 2014 survey must be applied.

The survey results have recorded an overall decline for the species at the development site, with higher numbers of individuals recorded historically at the site, including during a survey six years prior in the same area (ABZECO Pty Ltd 2008). This suggests that the high presence of weeds and rabbits may have been causing a decline to this local population for at least nine years.

Translocation is proposed to salvage individuals recorded within the Development Site, subject to discussion with DEECA and Brimbank Council and translocation permit approval. Translocation is considered a last resort for Spiny Rice-flower due to the low survival rate (TSSC 2016b). However, in limited circumstances where individuals exist in very small numbers, translocation may be considered for salvage purposes in conjunction with appropriate mitigation measures (DEWHA 2009). The proposed translocation will result in the direct loss of at least five individuals from the development site impact area. Further detail on the proposed translocation of Spiny Rice-flower is provided in Section 6.1.1. A Spiny Rice-flower Translocation Plan will be prepared as part of the Conservation Management Plan (CMP) to be prepared following project approval.

The development site is also likely to support Spiny Rice-flower seeds within a natural seedbank. Spiny Rice-flower seeds can remain viable in a soil seedbank for several years and these seeds may therefore still be present within the development site and potentially impacted by the proposed development (DCCEEW 2024). As the genetic material stored in seedbanks is important for the persistence and conservation of Spiny Rice-flower, the proposed development may result in the direct loss of potential individuals and genetic diversity, as well as disrupt connectivity and gene-flow between remaining populations. Reduced gene-flow from fragmentation increases the risk of inbreeding depression and extinction of small, isolated populations (DCCEEW 2024). The potential loss of Spiny Rice-flower seed bank is factored into the proposed loss scenario of potential Spiny Rice-flower habitat. Spiny Rice-flower is present on-site as five Spiny Rice-flower individuals, which are proposed to be removed from the Development Site as part of the proposed development, resulting in the direct loss of all individuals from the development site. This includes the proposed removal of vegetation within patches PG1, PG2 and PG3 (Figure 2a).

Areas of habitat may also be disturbed once the proposed residential development is operational, where a high density of residents increases the likelihood of Spiny Rice-flower habitat being trampled or disturbed by people and/or pets. Such instances of disturbance to soils and vegetation may create sites for weed encroachment, and increase the risk of seed dispersal by pedestrians/dogs or by nutrient enrichment (e.g. via dog faeces).

Unknown, unpredictable or irreversible impacts

Impacts are not expected to be unknown or unpredictable, however loss of Spiny Rice-flower habitat within the Development Site would be considered irreversible, where all vegetation within the development site is proposed to be removed as per the current development footprint.

Acceptability of the relevant impacts

The grassland habitats of Spiny Rice-flower have been extensively cleared or modified for agriculture, urban and industrial developments, with the majority of remaining grassland patches small or narrow, linear areas such as roadside and rail verges (DEWHA 2009c). The small size of many sites, and surrounding land uses, leave these grasslands and the Spiny Rice-flower further exposed to a range of impacts, such as habitat loss or degradation (DEWHA 2009c).

In light of this information it is preferable to retain Spiny Rice-flower wherever possible. In this instance the acceptability of impacts may be considered on balance with the proposal to avoid impacts to a large population of Spiny Rice-flower. The proposed on-site offset site which contains a population of Spiny Rice-flower is

proposed to be retained following a change in the development footprint to avoid impacts to the now proposed On-site Offset Site (see Section 4.4.1).

Technical data and other information

DCCEEW 2024. National Recovery Plan for the Spiny Rice-flower (*Pimelea spinescens* subsp. *spinescens*). Department of Climate Change, Energy, the Environment and Water, Canberra. 20 March 2024.

DEWHA 2009b. EPBC Act Policy Statement 3.11 – Significant Impact Guidelines for the Critically Endangered Spiny Rice-flower (*Pimelea spinescens subsp. spinescens*). Department of the Environment, Water, Heritage and the Arts, Canberra.

DEWHA 2009c. Background Paper to EPBC Act Policy Statement 3.11 – Nationally Threatened Species and Ecological Communities, Significant Impact Guidelines for the Critically Endangered Spiny Rice-flower (Pimelea spinescens subsp. spinescens). Department of the Environment, Water, Heritage and the Arts.

Local and regional scale analysis of the impacts

As stated above, Ravenhall and surrounding areas form part of Melbourne's outer western suburbs, an area that has seen substantial growth over the past 5 to 10 years due to its proximity to central Melbourne, flat topography, connectivity via the Western Highway and more recently via the Regional Rail Link. As such, very little suitable habitat for Spiny Rice-flower remains and maximising species' retention and conservation is of utmost importance.

4.4.3 Striped Legless Lizard

Direct loss

A total of 9.87 hectares of suitable Striped Legless Lizard habitat is proposed to be removed as part of the proposed development.

All Striped Legless Lizard within the impact area are proposed to be directly impacted as a result of the current development footprint (Figure 2a). Although Striped Legless Lizards have previously been translocated for other past projects, the advice and feasibility of proposed mitigation translocations for the species has been updated. The Conservation Advice for the species states that these actions have high levels of uncertainty regarding the effectiveness of salvage and translocation in the Melbourne Urban Growth Area, species knowledge gaps, concern around the habitat quality and conditions of sites selected, and the recommendation salvage and translocation should only be undertaken for trial purpose in an appropriate experimental framework (O'Shea 2013; DELWP 2015; TSSC 2016a). Further, the recent Threatened Species Assessment determined that this species is not to be translocated (DELWP 2021).

Due to updated conservation advice and research findings relating to the feasibility of mitigation translocations for the Striped Legless Lizard, it is no longer considered a viable option. As such, no translocation plan before Striped Legless Lizard is no longer proposed. Other proposed avoidance, management and mitigation measures have been developed (Section 6.1.1) which includes retaining the areas of highest habitat quality within a proposed conservation reserve that will retain 56.12% of Striped Legless Lizard habitat and be maintained in perpetuity.

Although areas immediately beyond the Development Site's western, southern and northern boundaries are considered to contain Striped Legless Lizard habitat (Section 3.3.3), there are minimal edge effects risks to environmental values, including Striped Legless Lizard habitat, in adjacent land after suitable mitigation measures are applied. Mitigation measures to be detailed within a CEMP will ensure the risks associated with exotic species infiltration and other construction related risks (e.g. sediment runoff) to the adjacent sites as a result of vegetation removal within the development site are appropriately mitigated. Proposed mitigation measures are summarised in Section 6.1.1.

Unknown, unpredictable or irreversible impacts

Impacts are not expected to be unknown or unpredictable, however loss of habitat within the Development Site would be considered irreversible.

Acceptability of the relevant impacts

Striped Legless Lizard is listed as vulnerable under the EPBC Act. The distribution of the species has declined, with many known sites no longer supporting populations (Smith and Robertson 1999). Striped Legless Lizard is a grassland specialist, being found only in areas of native grassland and nearby grassy woodland and exotic pasture. Natural temperate grassland is one of Australia's most threatened ecological communities. It is the loss and degradation of native grassland, through a variety of processes, which is primarily responsible for the decline of Striped Legless Lizard (Smith and Robertson 1999).

In light of this information it is preferable to retain Striped Legless Lizard habitat wherever possible. Given the number of Striped Legless Lizard recorded, the entirety of the site is considered habitat for the species, however it is likely that, in the absence of conservation management, grassland and Striped Legless Lizard habitat will continue to degrade. The acceptability of impacts should also be considered on balance with the proposal to avoid impacts to Striped Legless Lizard in the proposed On-site Offset Site. The proposed on-site offset site which contains a population of Striped Legless Lizard is proposed to be retained following a change in the development footprint to avoid impacts to the now proposed On-site Offset Site (see Section 4.4.1).

Technical data and other information

DELWP 2015. Evaluation of the Melbourne Strategic Assessment Striped Legless Lizard Program. [www Document] URL: https://bio-prd-naturekit-public-data.s3.ap-southeast-2.amazonaws.com/species_assessments/Delma_impar_12159.pdf. Department of Environment Land Water and Planning, Melbourne, Victoria.

DELWP 2021. Threatened Species Assessment. *Delma impar* Striped Legless Lizard. June 2021. Victorian Department of Environment, Land, Water and Planning, Melbourne, Victoria.

DSEWPC 2013. Translocation of Listed Threatened Species – Assessment under Chapter 4 of the EPBC Act. EPBC Act Policy Statement.

O'Shea, Megan 2013. Evaluation the effectiveness of salvage and translocation of Striped Legless Lizards. Arthur Rylah Institute for Environmental Research. Technical Report Series No. 243.

Smith, W. J. S. and Robertson, P. 1999. National Recovery Plan for the Striped Legless Lizard (Delma impar) 1999-2003. NSW National Parks and Wildlife Service & Wildlife Profiles Pty Ltd, June 1999.

TSSC 2016a. *Conservation Advice* Delma impar *striped legless lizard*. Canberra: Department of the Environment and Energy. 16 December 2016.

Local and regional scale analysis of the impacts

As stated above, the loss and degradation of native grassland, through a variety of processes, is primarily responsible for the decline of Striped Legless Lizard. Ravenhall and surrounding areas form part of Melbourne's outer western suburbs, an area that has seen substantial growth over the past 5 to 10 years due to its proximity to central Melbourne, flat topography, connectivity via the Western Highway and more recently via the Regional Rail Link. As such, very little of the original extent of Striped Legless Lizard habitat remains and maximising grassland conservation is of utmost importance.

5 Environmental Outcomes

If the proponents wish to pursue outcomes-based conditions in the event that the action is approved with conditions, the preliminary documentation must provide information on the outcomes that the proponents will achieve for MNES.

5.1 Response

The Development Site supports three MNES proposed to be protected and managed in an onsite offset:

- 3.73 hectares of NTGVVP is proposed to be impacted and 4.54 hectares retained and managed within an onsite offset;
- 9.87 hectares of SLL habitat is proposed to be impacted, 4.77 hectares retained and managed within an onsite offset; and,
- Five Spiny Rice-flower individuals are proposed to be impacted., a population of 176 individual Spiny Rice Flowers proposed to protected and managed within the onsite offset.

6 Proposed Avoidance, Management and Mitigation Measures

6.1 Specific measures proposed to avoid, mitigate and manage impacts

The preliminary documentation must provide information on specific measures proposed to avoid, mitigate and manage impacts to the protected species and ecological community at Section 2 from the proposed action. A description of proposed avoidance, management and mitigation measures should be presented in the form of management plans. The discussion must incorporate conservation advices, recovery plans and threat abatement plans, where relevant.

6.1.1 Response

The proposed development footprint encompasses an area of approximately 10.2 hectares and is located exclusively on the northern site (i.e. the Development Site) of 103 Reid Street, and 18B Jonesfield Corner, Ardeer (Figure 2a) where the southern site (i.e. proposed On-site Offset Site) of 103 Reid Street and 57A Reid Street, Ardeer is to be retained with the majority to be established and managed as an onsite offset (Figure 2). The proposed onsite offset will meet a portion of the required offset. An Offset Management Plan has been developed which details the proposed management actions (Appendix 3).

The current proposal considers all patches on Figure 2a as being lost, due to the proposed subdivision and construction of dwellings and associated infrastructure within the development site. No feasible opportunities exist to avoid impacts on native vegetation within the development site without undermining the key objectives of the proposal.

Actions to avoid impacts to ecological values on-site have been undertaken, with areas of highest quality vegetation and fauna habitat proposed to be retained within a proposed conservation reserve. Overall, 54.90% of NTGVVP, 56.12% of Striped Legless Lizard habitat, and 97.24% of Spiny Rice-flower individuals are proposed to be retained and maintained in perpetuity in an area that would otherwise not receive conservation management. It is likely that in the absence of management, these areas of native vegetation will continue to fragment and degrade in quality, whereas onsite offset management is projected to improve the quality of NTGVVP and Striped Legless Lizard habitat. Overall, the proposed offset strategy is likely to deliver an overall conservation outcome that improves the viability of this nationally significant species and ecological community.

The On-site Offset Site was initially proposed to be impacted under a proposed action referred under the EPBC Act in 2010 (Ecology Partners 2010c). A second EPBC-Act referral was submitted in 2014 for a proposed development in the Development Site, with no works proposed in the On-site Offset Site land (Ecology and Heritage Partners 2014b). In 2018, the proposed action was again expanded to include works in the On-site Offset Site land. These plans involved the construction of a commercial and industrial estate, consisting of a number of buildings and associated access roads at 57 and 103 Reid Street, Ardeer, and 614 Ballarat Road Ardeer (i.e. the now proposed On-site Offset Site). The proposed action was planned to involve the following activities:

- Removal of topsoil deposits for the construction of road/infrastructure corridors;
- Site levelling works;
- Sewer, water main and storm water drainage construction and associated works;
- Pavement works; and,
- Construction of buildings, car parking, fencing and landscaping.

The following impacts to the On-site Offset Site were proposed as part of the proposed action:

- Loss of 1.191 hectares of NTGVVP;
- Loss of one Spiny Rice-flower plant; and,
- Loss of 1.237 hectares of potential Striped Legless Lizard habitat.

Discussions with Brimbank Council have since taken place, which led to the reduction in proposed impact footprint to exclude the entire site (i.e. the now proposed On-site Offset Site) and instead limit development to the Development Site (i.e. north of the freeway). As a result, the proposed action has demonstrated avoidance of 1.91 hectares of NTGVVP, one Spiny Rice-flower plant, and 1.237 hectares of Striped Legless Lizard habitat.

Additionally, impacts to these MNES will be avoided and minimised through the development of a detailed CEMP that addresses any potential threats on-site and outlines measures to ensure ecological values are protected during construction activities. This CEMP will address any local and State native vegetation

requirements which may be specified as a condition to the planning permit. This includes the potential requirement for salvage and translocation of Spiny Rice-flower and maintenance of Striped Legless Lizard habitat. The CEMP will be required as a condition of approval within any planning permit issued by Council for the proposed action and will address MNES.

Proposed management actions to mitigate impacts to the Development Site, including adjacent grassland areas and the proposed On-site Offset Site, will include restricting livestock and vehicle access, particularly during seeding and flowering periods for native herbs and grasses. Management of these areas will also include weed and pest control measures to reduce the pressure on native vegetation and Striped Legless Lizard and Spiny Rice-flower habitat from introduced species. This is particularly important for preventing the spread of weeds to adjacent grassland areas (including the Cairnlea Estate development site) and the on-site offset site during removal of vegetation with a high coverage of perennial grassy weeds (e.g. Serrated Tussock and Chilean Needle Grass within the development site). The proposed development will also include mitigation measures such as erecting appropriate signage to inform construction workers and the general public of the conservation significance of the site, as well as site hygiene maintenance.

Fencing must be installed along the perimeter of the Development Site to ensure no encroachment occurs to ecological values (e.g. SLL habitat) in adjoining properties. Environmental inductions for construction workers will be conducted and include direction on measures proposed for the protection of ecological values. Further detail will be provided as part of a site CEMP.

In the context of the development, the modified condition of ecological values proposed to be impacted, and the extent of native vegetation proposed to be retained and enhanced within the Development Site, it is considered that the minimisation measures implemented are appropriate in this instance.

6.1.1.1 Spiny Rice-flower Translocation Plan Proposal

The objectives of the Translocation Plan will be to protect and manage the five Spiny Rice-flowers proposed to be translocated from the impact site to a designated recipient site in accordance with the below recommendations outlined in the *Pimelea spinscens* Recovery Team Translocation Protocol (PsRT 2013):

- Recipient site permanently protected with protection of biodiversity as a key objective;
- Recipient site inspected to ensure no impacts to other high conservation values;
- Recipient site managed to prevent weed invasion and biomass accumulation;
- Recipient site as close as possible to impact site;
- Weeds controlled within recipient site prior to translocation; and,
- Ecological Vegetation Class of recipient site compatible with SRF habitat requirements

The objectives of the Translocation Plan will be to protect and manage the five Spiny Rice-flowers proposed to be translocated from the impact site to the recipient site.

The impact site is at the Development Site and refers to the location where the five Spiny Rice-flowers (SRF) currently occur and are proposed to be removed from this area into the chosen recipient site. A review of the suitability of the proposed recipient site within proposed On-Site Offset Site against the *Pimelea spinscens* Recovery Team Translocation Protocol (PsRT 2013) is provided in Table 10 below.

Table 10. Review of proposed recipient site against the PsRT Translocation Protocol.

Assessment against PsRT Translocation protocol (PsRT 2013)		
PsRT recommendation	**Criteria met**	**Description**
Recipient site permanently protected with protection of biodiversity as a key objective	Yes	The recipient site is proposed to be the On-site Offset Site, which will be protected and managed in perpetuity via a Trust for Nature covenant under the *Victorian Conservation Trust Act 1972*, or a Section 69 Agreement under the *Conservation, Forests and Lands Act 1897* within 12 months post approval. If a Trust for Nature covenant is selected, a Section 173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.
Recipient site inspected to ensure no impacts to other high conservation values	Yes	The recipient site was assessed to determine the location of any existing ecological values, such as in-situ SRF and native grassland. Translocation area selected adjacent to Development Site and within proximity to 176 in-situ SRF that are likely to have been part of the same population prior to construction of the Tullamarine Freeway.
Recipient site managed to prevent weed invasion and biomass accumulation	Yes	The site will be actively managed as a first-party offset site.
Recipient site as close as possible to impact site	Yes	The recipient site is within 100 meters of the impact site
Weeds controlled within recipient site prior to translocation	Yes	Weeds will be actively controlled from project approval under a forthcoming Conservation Management Plan, prior to the implementation of Spiny Rice-flower translocation
Ecological Vegetation Class of recipient site compatible with SRF habitat requirements	Yes	The recipient site supports high quality Plains Grassland, which is a compatible EVC for SRF habitat requirements.

The below method outlines the general steps required for undertaking the SRF translocation. The five SRF will be mechanically removed from the impact site and translocated to the nearby recipient site. All works must be undertaken during periods of dry weather, to prevent any additional impacts to soils during the translocation process.

It is expected that all works will be completed in one day. Table 11 outlines the process for undertaking the SRF translocation from the impact site to the recipient site, which has been developed in accordance with the *Pimelea spinscens* Recovery Team Translocation Protocol (PsRT 2013).

Table 11. Summary of required tasks on the day of SRF translocation.

#	Task	Risks	Required equipment
1	Mark location of five SRF at impact site to ensure their protection and prevent damaged prior to translocation.	Consider risk of damage by public to visibly marked plants. Ensure any contractors are aware of their location.	Flagging/stake
2	Check around mature plants for any SRF recruits. If identified, review potential to translocate.	Loss of new recruits	

#	Task	Risks	Required equipment
3	One day before translocation, water/soak soil directly around SRF to soften ground and hand weed around SRF at impact site.	Avoid wetting broader area, as this could cause soft ground leading to damage by machinery.	Water cart/can
4	Identify precise transplant location for each individual SRF in recipient site.	Assess for rock in soil and have a few potential locations identified in the instance of hidden rock. Ensure any in-situ SRF are not present at proposed translocation site.	-
5	Identify / walk over best route for machinery to take when relocating plants, ensuring no damage to surrounding native vegetation will occur.	Prevents damage to any additional SRF in the local area, or additional native vegetation.	-
6	Using a tree spade, dig holes for transplanting at the recipient site, water hole thoroughly once dug out.	Ensure that any removed soil is not placed on areas of native vegetation and is removed entirely from the recipient site.	Tree spade (trailer and car)
7	Using the same sized tree spade, carefully remove the SRF at the impact site and immediately re-locate to recipient site. Repeat process for second SRF.	Roots of SRF drying out, plant shock. Aim is to focus on one SRF at a time, to ensure each plant is transplanted as quickly as possible.	Tree spade (trailer and car)
8	Fill any gaps between the transplanted SRF and dug hole with sand.	Ensure sand is free of weed seed to prevent weed growth around transplanted SRF.	Sand
9	Water ground around transplanted SRF.	Roots of transplanted SRF may dry out if adequate water is not provided during the re-establishment period.	Water cart/can
10	Transplanted SRF will be GPS marked and tagged.	Recommended to use inconspicuous metal tag at base of plant to prevent drawing attention to the SRF.	GPS
11	On-going management and monitoring (See section 3).	Failure to manage and monitor the SRF can increase the chance of an unsuccessful translocation (i.e. plant death).	-

6.1.1.2 Striped Legless Lizard Management Strategy

The objective of the Striped Legless Lizard Management Strategy is to protect the proposed off-site and on-site offset sites to ensure suitable habitat is retained and managed appropriately to ensure viability of the existing Striped Legless Lizard population.

The impact site is at the Development Site and refers to the location where the Striped Legless Lizard individuals were recorded and are proposed to be removed from this area into a chosen recipient site. A review of Striped Legless Lizard translocation was undertaken against the species recovery plan and conservation advice (TSSC 2016a; Robertson 2010), to assess the likelihood of successful translocation from the impact site to a recipient site. This review found that translocation of Striped Legless Lizard is not a preferable option for the species (Section 4.4.3). Discussions with Brimbank Council resulted in the reduction of the proposed impact footprint to avoid the loss of 1.237 hectares of Striped Legless Lizard. A Conservation Management Plan (CMP) will be developed following approval for MNES.

6.2 Conservation Management Plan (CMP)

Provide a detailed Conservation Management Plan (CMP) following approval for MNES likely to be impacted by the proposed action including the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing for each environmental issue.

6.2.1 Response

A CMP will be completed following approval as a requirement for the proposed on-site offset area The CMP will detail protection mechanisms and management strategies for the on-site offset area that will improve the site and avert the future loss, degradation or damage of MNES habitat, as well as incorporate translocation plans for Spiny Rice-flower and management strategies for Striped Legless Lizard.

6.3 Construction Environmental Management Plan (CEMP)

Provide a detailed CEMP outlining measures to ensure ecological values are protected during construction activities.

6.3.1 Response

A CEMP will be completed following approval and will address the MNES specified above as well as any local and state native vegetation requirements which may be specified as a condition to the planning permit. This includes the prevention of impacts to ecological values in adjacent properties (e.g. Cairnlea Estate development site), and the potential requirement for salvage and translocation of Spiny Rice-flower.

The CEMP will include measures to protect biodiversity values within the study area. The CEMP will include but not be limited to:

- Site induction requirements;
- Identified location of any retained areas of native vegetation and fauna habitat, and measures to protect these values during construction (e.g. No-Go zone fencing);
- Fauna protection and management protocols;
- Sedimentation and erosion controls;
- Weed, pest and pathogen control and management;
- Rehabilitation strategy;
- Responsibilities; and,
- Maintenance and monitoring requirements.

7 Proposed Offsets

7.1 Offset Management Strategy

The preliminary documentation must include an assessment of the likelihood of residual impacts occurring, after mitigation and management measures relating to the project have been applied. If residual significant impacts to protected matters are likely, please provide:

a) details of an offset package (this may be in the form of an offset management plan) proposed to be implemented to compensate for the residual significant impacts of the project; such as how, when and where the offsets will be delivered and managed;

b) details of how the offset(s) will compensate for the significant residual impacts upon MNES, resulting from the action;

c) a description of how the offset(s) will ensure the protection; conservation and management of MNES, for the duration of the impact;

d) a description of how the offset(s) are consistent with relevant Commonwealth policies and guidance documents on offsets under the EPBC Act. These documents can be found at the following link: www.environment.gov.au/epbc/publications/environmental-offsets-policy.html; and

e) the anticipated cost (financial and other) of delivery the offset(s);

7.2 Additional Information

The offset proposal should include, but not be limited to;

a) Location, description and suitability of proposed offset site, including baseline conditions, environmental values and connectivity with other relevant habitat;

b) Extent to which the proposed offset actions correlate to, and adequately compensate for, the impacts on MNES and habitat critical to the survival of MNES;

c) Conservation gain to be achieved by the offset, i.e positive management strategies that improve the site or avert the future loss, degradation or damage of MNES habitat;

d) Current land tenure of any proposed offset and the method of legally securing the offset for at least the duration of the impact;

e) Measures to protect, and/or manage and rehabilitate habitat at the offset site, including timing, frequency and longevity for each measure and performance criteria that must be met;

f) Monitoring and reporting activities to assess the success of the offset; and

g) An assessment of the proposed offset, using the Department's Offsets Assessment Guide, and clear justification for each input entered.

The offset package can comprise a combination of direct offsets and other compensatory measures, so long as it meets the requirements of the EPBC Act Environmental Offset Policy. Offsets should align with conservation priorities and be tailored specifically to the attribute of the protected matter.

Offsets should compensate for an impact for the full duration of the impact.

Offsets must directly contribute to the ongoing viability of MNES and deliver an overall conservation outcome that improves or maintains the viability of habitat, as compared to what is likely to have occurred under the status quo, i.e., if neither the action nor the offset had taken place.

Note that offsets do not make an unacceptable impact acceptable and do not reduce the likely impacts of a proposed action. Instead, offsets compensate for any residual significant impact.

Offsets required by the State can be applied if the offsets meet the Department's EPBC Act Environmental Offset Policy.

7.3 Response – Offset Management Strategy

a) *Details of an offset package (this may be in the form of an offset management plan) proposed to be implemented to compensate for the residual significant impacts of the project; such as how, when and where the offsets will be delivered and managed;*

Offset Management Plans has been prepared for the project and are submitted alongside this document (Appendix 3; Biodiversity Offsets Victoria 2023; Appendix 4). Two offsets are proposed to compensate for impacts to MNES: one is located on-site at 57A Reid Street and 103 Reid Street, Ardeer, and one is located off-site at Rokewood-Shelford Road, Rokewood, Victoria. The offsite Offset Plan outlines the proposed off-site offset at Rokewood, its ecological values, in-perpetuity security arrangement and 10-year offset management plan (Appendix 3 – Figure 2). The on-site Offset Plan outlines the proposed on-site offset at Ardeer, its ecological values, in-perpetuity security arrangement and 10-year offset management plan (Appendix 4). The landowner and land manager have reviewed, understand, and approve the Offset Management Plans' requirements and targets.

An existing Section 173 agreement currently applies to the proposed On-site Offset Site at 103 Reid Street, Ardeer due to destruction of native vegetation on site in May 2008. The agreement establishes that a baseline for ecological values present prior to the incident be applied for the purposes of any future use of the land. That is, native vegetation offsets in accordance with the Victorian Native Vegetation Management Framework (DSE 2002)(now 52.17 The Guidelines) would be calculated based on the condition of the land prior to May 2008. The agreement does not require any improvement of the land or the establishment of an offset site to occur.

The existing Section 173 agreement is not associated with the current proposal and will be removed. The offset site will ultimately be secured and protected in perpetuity by either a Trust for Nature covenant or a Section 69 Agreement.

b) *Details of how the offset(s) will compensate for the significant residual impacts upon MNES, resulting from the action;*

The proposed off-site offset site comprises 14 hectares of native grassland vegetation and the proposed on-site offset site comprises 4.54 hectares of native grassland vegetation. In accordance with the Victorian Vegetation Quality (Habitat Hectares) Assessment methodology (DSE 2004), the native vegetation is classified as Ecological Vegetation Class (EVC) 132_61 Heavier-soils Plains Grassland of the Victorian Volcanic Plain (VVP) bioregion (DELWP 2021b), and meets the minimum condition thresholds to qualify for the EPBC Act listed NTGVVP. The native grassland vegetation also provides suitable habitat for the Striped Legless Lizard.

The projected decline in quality at the off-site offset site without the offset from 6/10 to 5/10 assumes that the historic grazing practices will continue with a goal of primary production, and not conservation. This decline would result from long-term degradation of native vegetation and habitat under detrimental grazing practices.

Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC 2011). Weed invasions are accelerated by disturbance

regimes that are likely to occur in nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña have contributed to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024).

NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt *et al.* 2007; Dorrough *et al.* 2004, 2008a & 2008b; Zimmer *et al.* 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats.

In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention due to climatic patterns, absence of management and disturbance in adjacent areas (Jacobs Group, 2024).

An updated offset site assessment report was undertaken in 2023 on a neighbouring property approximately 4km directly south of the proposed offset along Geggies Rd. This property was originally assessed during the same season in 2017 as the EPBC 2014/7358 proposed offset. While the proposed offset was subsequently secured on title in 2020 to provide advanced offsets, this neighbouring property was not secured and the land management practices did not change to conservation management. The report shows that in the 6 years from 2017 to 2023, the NTGVVP previous recorded on the property declined in extent by 21% (from 124ha to 98ha), and the quality of all native grassland habitat recorded (in accordance with VQA methodology) declined by 11-20%. This decline occurred under "business-as-usual" practices, which included a set stock grazing regime, for the purposes of agricultural production, not conservation. The decline did not occur due to unlawful activities.

The EPBC 2014/7358 proposed offset was under the same set-stock grazing and land management regime prior to the commencement of the offset. The decline experienced by this neighbouring property is clear evidence that the proposed offset would have also declined without the offset intervention.

The projected improvement of Striped Legless Lizard habitat in quality from 6/10 to 7/10 assumes that the offset will be managed for the purposes of conservation and maintained in perpetuity. The quality of NTGVVP is projected to be maintained or improved over the 10-year offset management period.

c) *A description of how the offset(s) will ensure the protection; conservation and management of MNES, for the duration of the impact;*

Proposed offset site management actions will include restricting livestock and vehicle access, particularly during flowering and seed set periods for native herbs and grasses, to facilitate native recruitment and enhance the diversity and extent of native flora species, and undertaking biomass, weed and pest control to reduce the pressure on native vegetation and Striped Legless Lizard habitat from introduced species. The Landowner Agreement registered on-title comprises detailed 10-year offset management plans (OMP) that were prepared in consultation with the land managers and approved by DEECA. The schedule of management actions over the 10-year offset management period, including the responsibility and timing of each management action, is provided in the Landowner Agreement and Management Plans registered on-title (Biodiversity Offsets Victoria 2023; Appendix 3, 4).

d) *A description of how the offset(s) are consistent with relevant Commonwealth policies and guidance documents on offsets under the EPBC Act. These documents can be found at the following link: www.environment. gov.au/epbc/publications/environmental-offsets-policy.html ; and*

The OMPs were prepared to conserve and improve all MNES present, being NTGVVP, Spiny Rice-flower, and Striped Legless Lizard, in accordance with the relevant EPBC Act conservation and listing advice (TSSC 2002; 2008; 2016) and drew from peer-reviewed literature and expertise in grassland habitat management. A description of how the proposed offsets meet the principles of the EPBC Act Environmental Offsets Policy is provided below (Table 12).

Table 12. Meeting the principles of the EPBC Act Environmental Offsets Policy (Biodiversity Offsets Victoria 2023; Appendix 3, 4).

Principle	Proposed Offset
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 will maintain and improve the overall viability of NTGVVP, Spiny Rice-flower (on-site offset site) and confirmed habitat for Striped Legless Lizard, as it will deliver a gain in the protection and improvement of a larger population size and higher quality habitat area than that impacted on.
Be built around direct offsets but may include other compensatory measures.	The offset proposal includes at least 100% of direct offsets, that includes in perpetuity protection and management of NTGVVP, Spiny Rice-flower and habitat for Striped Legless Lizard.
Be in proportion to the level of statutory protection that applies to the protected matter.	The security, extent and management of the offset is in proportion to the protected matter being impacted in accordance with the EPBC Act offsets calculator. The security and management of MNES at the off-site offset site offset under a Section 69 Agreement will ensure their permanently protected. The on-site offset site is proposed to be protected on-title either through a Section 173 Agreement, and secured via a Trust for Nature covenant under the Victorian Conservation Trust Act 1972, or a Section 69 Agreement under the Conservation, Forests and Lands Act 1897 within 12 months post approval. The s173 Agreement will

Principle	Proposed Offset
	be in place in the interim until the Trust for Nature Covenant is placed on title.
Be of a size and scale proportionate to the residual impacts on the protected matter.	The total area of NTGVVP, Spiny Rice-flower and habitat for Striped Legless Lizard proposed for offset is approximately two to ten times the size of the areas being impacted for these MNES.
Effectively account for and manage the risks of the offset not succeeding.	The off-site offset site is secured under a Section 69 Agreement, administered and governed by DEECA. The Section 69 Agreements and management plans are legally binding and have been prepared to deliver improved outcomes for biodiversity and to mitigate against risks of the offset not succeeding. The on-site offset site is proposed to be protected on-title either through a Section 173 Agreement, and secured via a Trust for Nature covenant under the Victorian Conservation Trust Act 1972, or a Section 69 Agreement under the Conservation, Forests and Lands Act 1897 within 12 months post approval. The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.
Be additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs.	Planning regulations and local laws relevant to the offset allow agricultural activities to continue for the purposes of production, and do not support the permanent protection and improvement of MNES. The Section 69 Agreement and management plan provides in perpetuity protection to areas of NTGVVP, Spiny Rice-flower and habitat for Striped Legless Lizard present, in addition to existing laws and regulations, and ensure that these MNES will be managed for the purposes of conservation at the off-site offset site. The on-site offset site is proposed to be protected on-title either through a Section 173 Agreement, and secured via a Trust for Nature covenant under the Victorian Conservation Trust Act 1972, or a Section 69 Agreement under the Conservation, Forests and Lands Act 1897 within 12 months post approval. The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.
Be efficient, effective, timely, transparent, scientifically robust and reasonable.	The impact and offsets have undergone rigorous ecological assessment for MNES (Sections 2.2 and 3.4), and propose valuable gains in NTGVVP, Spiny Rice-flower and Striped Legless Lizard habitat through a 10-year management plan that draws on literature and research on effective native grassland conservation management.
Have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.	The off-site offset site offset will be delivered in accordance with the relevant Section 69 Agreement and management plan registered on-title. These are legally enforceable, and are administered and governed by DEECA. DEECA review annual monitoring reports and undertake on-site audits. Monitoring of MNES will also be undertaken and reports provided to DCCEEW.

Principle	Proposed Offset
	The on-site offset site is proposed to be protected on-title either through a Section 173 Agreement, and secured via a Trust for Nature covenant under the Victorian Conservation Trust Act 1972, or a Section 69 Agreement under the Conservation, Forests and Lands Act 1897 within 12 months post approval. The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.

e) The anticipated cost (financial and other) of delivery the offset(s);

Delivery of the offsets are anticipated at approximately $112,000.00 per hectare.

7.4 Response – Additional Information

a) Location, description and suitability of proposed offset site, including baseline conditions, environmental values and connectivity with other relevant habitat;

The proposed development of the Development Site proposes to impact 3.73 hectares of NTGVVP and 9.87 hectares of SLL habitat, five Spiny Rice-flower plants. The Offset Management Strategy proposes to achieve the offset obligations via on-site offset in combination with off-site offset located at Rokewood-Shelford Road, Rokewood, Victoria (Biodiversity Offsets Victoria 2023).

An on-site offset site is proposed to be established, achieving 33.62% of impact offset for NTGVVP, 18.95% for SLL habitat, 377.73% for SRF loss. A suitable off-site offset located at Rokewood-Shelford Road, Rokewood, Victoria has been selected to satisfy the remaining offset obligations as identified within Table 12. The off-site offset is proposed to achieve the remaining impact offset for NTGVVP, and of 81.63% for SLL habitat. A summary is provided in Table 13 below.

Table 13. Percentage of Impact Offset for MNES identified on site.

Offset	Direct Impact	% of Impact Offset (on-site/off-site)
NTGVVP	3.73 Hectares	4.54 Hectares (33.62%) on-site 14 Hectares (67.89%) off-site
SLL	9.87 Hectares	4.77 Hectares (18.95%) on-site
		19 Hectares (81.63%) off-site
SRF	5 Plants	176 Plants (377.73%) on-site

NTGVVP Current Conditions

The native vegetation within the on-site offset area received a score of 49 out of 100, and the off-site offset has a score of 60.52 out of 100 (Biodiversity Offsets Victoria 2023). (Habitat Hectares method, as assessed against the Plains Grassland benchmark). The scores are provided in Table 14below:

Table 14. Habitat Hectare results for on-site and off-site offsets.

Habitat Zone		On-Site	Off-site
Bioregion		VVP	VVP
EVC		PG(HS)	PG(HS)
EVC Number		132_61	132_61
EVC Conservation Status		Endangered	Endangered
Patch Condition	Large Old Trees /10	N/A	N/A
	Canopy Cover /5	N/A	N/A
	Under storey /25	15	15
	Lack of Weeds /15	7	9
	Recruitment /10	6	3
	Organic Matter /5	5	5
	Logs /5	N/A	N/A
	Treeless EVC Multiplier	1.36	1.36
	Subtotal =	44.88	43.52
Landscape Value /25		4	17
Habitat Points /100		49	60.52
Habitat Score		0.49	0.60.52

Note: PG(HS) = Plains Grassland (Heavier Soils)

The on-site offset has a moderate score for native vegetation within an urban landscape with proximity to Melbourne's CBD and gives a quality score of 5 out of 10. The site is located within the property south of the Western Ring Road identified as 103 Reid Street, Ardeer. The site is surrounded by industrial buildings and bound by the Metropolitan Ring Road to the north preventing habitat connectivity within the broader landscape.

The off-site offset has been allocated a score of 6 out of 10 which is considered high for native vegetation that has been subject to agricultural disturbance (Biodiversity Offsets Victoria 2023). The site forms part of a 315 hectares patch of native grassland surrounded by farmland located at Rokewood-Shelford Road, Rokewood, Victoria.

The grassland quality was assessed in accordance with Victoria's Vegetation Quality Assessment (VQA) methodology. Under VQA, habitat scores >60/100 are considered high for grassland vegetation as the majority of grassland habitats have a history of disturbance, given their high agricultural and economic values, and are subject to significant ongoing threats (discussed above). Section 3.2 of the Offset Management Plan (Appendix 3) outlines the known history of the property and surrounding landscape, including inappropriate grazing regimes, rock removal, "pasture improvement" (introduction of exotic pasture grasses), cropping and fertiliser use.

The current condition of NTGVVP on-site was also assessed against the conservation values in the listing advice for the ecological community (Table 15), as well as the off-site offset taken from the Offset Management Plan for Rokewood-Shelford Road, Rokewood, Victoria (Biodiversity Offsets Victoria 2023).

Table 15. Habitat Hectare results for on-site and off-site offsets.

Conservation Value	On-Site Offset Area	Off-site Offset Area (Biodiversity Offsets Victoria 2023)
A high native plant species richness	Yes. The proposed on-site offset has a high diversity with 36 native species recorded during the assessment. Areas of NTGVVP are in good condition with localised weed coverage. Dominant species observed include Kangaroo Grass *Themeda triandra*, Black-anther Flax-lily *Dianella admixta*, Bluebell *Wahlenbergia* sp., and a large population of Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens.*	Yes. This site supports native grassland vegetation dominated (>50% cover) by the following native grasses: Spear-grasses, Wallaby-grasses, Tussock-grass and Kangaroo Grass. Other native grasses present include Common Wheat-grass *Anthosachne scabra s.l.* and Common Blown-grass *Lachnagrostis filiformis*. The site also contains Rushes *Juncus spp*. and native herbs, including Blue Devil *Eryngium ovinum*, Prickfoot Eryngium vesiculosum, Sheep's Burr Acaena echinata, Grassland Wood-sorrel *Oxalis perennans,* Kidney-weed *Dichondra repens* and Slender Speedwell *Veronica gracilis*
Large Patch Size	Within the landscape context, yes. The total area of NTGVVP is 4.54 hectares which accounts for the majority of the parcel of land.	Yes. The site forms part of a 315-hectare patch of native grassland, with less than 5% canopy cover of trees and shrubs (no canopy trees occur on site and <1% cover of native shrubs)
Minimal weed invasion	Yes. Although there is the presence of two Weeds of National Significance Serrated Tussock *Nassella trichotoma* and Chilean Needle-grass *Nassella neediana* with a localised distribution at the eastern and southern boundaries. Average cover throughout is approximately 30%	Variable. Perennial native grass genera, including *Themeda, Rytidosperma, Austrostipa* and *Poa*, make up for more than 50% of the vegetative cover across the site. The site also comprises introduced pasture grasses and herbaceous weeds, including Browntop Bent *Agrostis capillaris*, Barley-grass *Hordeum spp*., Toowoomba Canary-grass *Phalaris aquatic*, Capeweed *Arctotheca calendula*, Big Heron's-bill *Erodium botrys,* Cat's Ear *Hypochaeris radicata*, Dock *Rumex spp*., Sow-thistle *Sonchus spp*. and Clover *Trifolium spp,* a number of declared noxious weeds and one Weed of National Significance (WoNS), including Spear Thistle *Cirsium vulgare*, Spiny Rush *Juncus acutus subsp. acutus*, Serrated Tussock *Nassella trichotoma*, Onion Grass *Romulea Rosea*, Variegated Thistle *Silybum marianum* and Bathurst Burr *Xanthium spinosum*, and pest animals, including the Red Fox *Vulpes vulpes* and European Rabbit *Oryctolagus cuniculus*.
Presence of threatened plans and/or animal species	Flora - Yes. One EPBC Act listed flora species, Spiny Rice-flower, was recorded throughout the area.	Flora - No
	Fauna - Yes. One EPBC Act listed fauna species Striped Legless Lizard was recorded.	Fauna - Yes. SLL are recorded.
Presence of natural exposed rock platforms and outcrops	Yes. Basalt surface and embedded rock is present throughout the Offset area.	Yes. Amongst a moderate diversity in native tussock-forming grasses and native herbs, embedded or surface rock provides structural complexity in habitat for the Striped Legless Lizard

Conservation Value	On-Site Offset Area	Off-site Offset Area (Biodiversity Offsets Victoria 2023)
Presence of mosses, lichens or a soil crust on the soil surface	Yes. The natural surface crust is present with mosses and lichens found throughout.	Yes. There is presence of mosses, lichens and soil crust on the soil surface in the Offset area.

SLL Habitat Current Conditions

On-site Offset

The on-site offset is within a 4.77 hectare area, of which 4.54 hectares is moderate conservation value NTGVVP. The 4.77 hectare offset area is considered as habitat for SLL, with the latest surveys recording 16 SLL individuals (Ecology and Heritage Partners 2015). The on-site offset was allocated a Quality of 4 out of 10 which reflects the higher quality condition of the site in terms of habitat, however is restricted in connectivity, size, and a moderately low stocking rate.

Table 16. Assessed and future projected Striped Legless Lizard on-site offset site habitat quality, with and without the offset.

Striped Legless Lizard Habitat Quality Assessment	Max	Assessed Quality	Projected Quality without Offset	Projected Quality with Offset
Site Condition	3	2	1	2
Site Context	1	1	1	1
Species stocking rate	2	1	1	2
Habitat Quality out of 10	6	**4**	**3**	**5**

Off-site Offset (Nature Advisory 2021; 2022)

The off-site offset area supports a single contiguous area of high conservation value NTGVVP that is also confirmed SLL habitat and so was assigned a single Quality score. The Quality of 6/10 reflects the relatively intact condition of the vegetation but a moderately low stocking rate of SLL was recorded during targeted surveys (Nature Advisory 2021; 2022). A total of thirteen SLL individuals were recorded within the offset area during 2021, while eleven were recorded in 2022 (Nature Advisory 2021; 2022). A moderate diversity in native tussock-forming grasses and native herbs is present, with embedded or surface rock providing structural complexity in habitat for the species.

SRF Habitat Current Conditions

On-site Offset

The on-site offset comprises SRF habitat including 176 individual plants across approximately 4.54 hectares (Ecology and Heritage Partners 2015). The on-site offset was assessed to have a future value of 132 individuals without the protection of an offset site, primarily due to the presence of factors known to deteriorate grassland quality. These factors include increased biomass due to La nina conditions and absence of burning regime and/or herbivorous fauna, and weed and pest encroachment. The projected future value with offset is

220 individuals, which is projected to occur when the aforementioned threats are managed via the actions outlined in the Offset Management Plan (Ecology and Heritage Partners 2024).

Table 17. Assessed and future projected Spiny Rice-flower on-site offset site, with and without the offset.

Spiny Rice-flower future value assessment	No. individuals
Start value	176
Future value without offset	132
Future value with offset	220
Raw gain	88

b) Conservation gain to be achieved by the offset, i.e. positive management strategies that improve the site or avert the future loss, degradation or damage of MNES habitat;

A Conservation Management Plan will be prepared to maintain or improve values within the on-site offset site, and an Offset Management Plan has been developed, detailing measures to improve habitats within the off-site offset site. Proposed offset site management actions will include restricting livestock and vehicle access, particularly during flowering and seed set periods for native herbs and grasses, to facilitate native recruitment and enhance the diversity and extent of native flora species, and undertaking biomass, weed and pest control to reduce the pressure on native vegetation and Striped Legless Lizard habitat from introduced species (Biodiversity Offsets Victoria 2023).

Federal offset requirements have been estimated following the EPBC Act Environmental Offsets Policy (SEWPaC 2012a) and the Offsets Assessment Guide (SEWPaC 2012b). Offset requirements are summarised in Table 18.

c) Current land tenure of any proposed offset and the method of legally securing the offset for at least the duration of the impact;

The entire off-site offset site property was secured on-title via two Section 69 (Conservation, Forests and Lands Act 1987) Agreements in 2020 to secure approximately 154 hectares of native grassland habitat for an EPBC Act Offset for NTGVVP, Striped Legless Lizard approved by the Commonwealth in June 2022 (see EPBC 2017/7965), as well as approximately 161 hectares of native grassland habitat to deliver advanced offsets for other impacts to MNES, such as an 11-hectare EPBC Act offset for NTGVVP and Striped Legless Lizard also approved by the Commonwealth in June 2022 (see EPBC 2018/8158). This security mechanism meets the requirements under the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (SEWPaC 2012). The Section 69 Agreement restricts permitted land uses and oblige the landowner to protect and improve native vegetation and habitat in accordance with the agreed management plan in perpetuity (DELWP 2020).

The off-site offset site was not secured under Section 69 for the purposes of conservation. It was secured as part of a very large (315ha) contiguous grassland habitat area for the purposes or providing offsets in advance

of approved impacts. The loss that will now be averted is through permanently securing the site on the land title and implementing the offset (now in Year 5). Section 3.3 of the Offset Management Plan (Appendix 3) provides a clear outline of the proposed offset, it's location within an advanced offset site in relation to five other approved EPBC Act offsets (also approved under an advanced offset approach post-security agreement registration), the purpose of the security agreement on-title and the significant ecological benefits of securing the entire contiguous grassland habitat and commencing an offset in advance of the impacts, including improved conservation management and outcomes for MNES, the reduced lag time between the approved loss and achievement of ecological benefits from the offset, and greater certainty in the achievement of environmental offset targets and Landowner compliance/competence through the existing tracked progress reports provided.

The on-site offset site is proposed to be protected on-title through a Section 173 Agreement, and secured via a Trust for Nature covenant under the Victorian Conservation Trust Act 1972, or a Section 69 Agreement under the Conservation, Forests and Lands Act 1897 within 12 months post approval. The Section 173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.

d) Measures to protect, and/or manage and rehabilitate habitat at the offset site, including timing, frequency and longevity for each measure and performance criteria that must be met;

The performance targets, summary of management activities and offset monitoring requirements include the following management actions (Biodiversity Offsets Victoria 2023):

- In Perpetuity Site Security: The Section 69 Agreement provides permanent administrative protection to the proposed 14-hectare off-site offset through restricting allowable land uses to conservation purposes only in accordance with the approved OMP. Similarly, the on-site offset site is proposed to be protected on-title either through a Section 173 Agreement, and secured via a Trust for Nature covenant under the Victorian Conservation Trust Act 1972, or a Section 69 Agreement under the Conservation, Forests and Lands Act 1897 within 12 months post approval. The Section 173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.
- Fencing, Signage and Access: gates will remain locked to avoid unauthorised access to the property and offset sites. Signs were installed along the boundary fence of the off-site offset site in Year 1 to alert neighbouring properties, roadside managers and the public to the presence of the offset site and prohibited activities. A boundary fence will similarly be installed along the perimeter of the on-site offset site prior to commencement of the action (Figure 2b).
- Biomass Control including strategic grazing and ecological burning: The cover of bare ground prior to the commencement of Year 1 management was approximately 2% at the off-site offset site. Biomass control will aim to maintain 20-40% bare ground or inter-tussock spaces by mid to late Spring each year for the recruitment of native herbs and grasses. Biomass control will be undertaken through strategic grazing with sheep and ecological burning at the off-site offset site, with burning to occur infrequently (once every three years) and only undertaken in autumn as per the referral guidelines for the vulnerable striped legless lizard and the Recovery Plan for the Spiny Rice-flower (SEWPaC 2011; DCCEEW 2024). Reducing biomass through planned burning promotes germination and seedling establishment of Spiny Rice flower, although it can also lead to increased mortality of existing plants

or removal of reproductive output (soil seed bank) if it is undertaken during flowering seasons (Regan *et al.* 2021).

- Weed and Pest Control: The total weed cover will be reduced by Year 10 to create space for the recruitment of native herb species, and habitat for Striped Legless Lizard and Spiny Rice-flower (on-site offset). Monitoring for new and emerging woody and herbaceous weeds will be conducted throughout the year, and any new and emerging weeds eliminated. Weed control methods include strategic grazing, ecological burning, herbicide application, chipping (ie. with hoe) or handpulling.
- Monitoring and Reporting: Offset site monitoring will be undertaken by the Landowner for the duration of the 10-year offset management plan and in perpetuity. The aim of ongoing site monitoring is to review the implementation of offset management activities, ensure that the 10-year and in perpetuity performance targets are being met, and, where they are not being met, to determine the appropriate remedial action to be undertaken. Additional NTGVVP and Striped Legless Lizard monitoring will also be undertaken by suitably qualified personnel to monitor vegetation quality, and Striped Legless Lizard populations for the 10-year offset management period.

The schedule of management actions over the 10-year offset management period, including the responsibility and timing of each management action, is provided in the Landowner Agreement and Management Plans registered on-title (DELWP 2020) and the OMPs (Biodiversity Offsets Victoria 2023; Appendix 3, 4; Table 12 and Table 13). The implementation of the OMPs in conjunction with the approved Management Plans registered on-title is required to achieve the projected gain in NTGVVP, Striped Legless Lizard, and Spiny Rice-flower habitat (Biodiversity Offsets Victoria 2023).

e) Monitoring and reporting activities to assess the success of the offset; and

The landowner will submit a report annually to DEECA, DCCEEW and PDSD Superfund Pty Ltd at the end of each management year over the 10-year management period. The annual report will outline the offset progress against the management activities and performance targets set out in the Management Plan and Addendum Offset Plan, and site observations. The vegetation quality and SLL assessment reports will be prepared after each assessment and submitted by the approval holder to DEECA and PDSD Superfund Pty Ltd.

f) An assessment of the proposed offset, using the Department's Offsets Assessment Guide, and clear justification for each input entered.

The proposed Reid Street development will include the removal of areas supporting the EPBC Act-listed NTGVVP, Striped Legless Lizard and Spiny Rice-flower habitat. Federal offset requirements have been estimated following the EPBC Act Environmental Offsets Policy (SEWPaC 2012a) and the Offsets Assessment Guide (SEWPaC 2012b), with values present at Rokewood used as inputs for the off-site offset site (Table 18). Federal offsets for both NTGVVP and Striped Legless Lizard habitat are to be in part achieved within the on-site offset site, while 14 hectares of NTGVVP and 19 hectares of habitat for Striped Legless Lizard would remain to be sourced from the Rokewood offset site. Federal offsets are achieved in full for Spiny Rice-flower within the On-site Offset Site.

Table 18. Federal offset requirements, based on EPBC Act Offset Calculator (Based on Offsets Assessment Guide output [SEWPaC 2012b])

Ecological Value		Striped Legless Lizard	NTGVVP	SRF
Total Losses (no./ha)		9.87 ha	3.73 ha	5 individuals
On-site offset site	Total protected	4.77 ha	4.54 ha	176 individuals
	% of impact offset*	18.95%	33.62%	377.73%
Off-site offset site	Total protected	19 ha	14 ha	-
	% of impact offset*	81.63%	67.89%	-
Total % of impact offset		100.58%	101.51%	377.73%

EPBC Act Offset Calculator

Offset targets were determined in accordance with the EPBC Act Offsets Policy (October 2012). The EPBC Act Offsets calculator (Excel spreadsheet) was used to determine appropriate offset targets to compensate for the loss of MNES. The assumptions used to populate the calculator are presented below (Table 19 and Table 20).

Table 19. EPBC Act Offset Calculator (NTGVVP)

On-site offset site	Off-site offset site
Offset location = On-site. *Habitat to be removed* = 3.73 hectares. *Habitat quality* = 3/10. NTGVVP to be removed varies in quality from Low to High and is described in Section 4.4.1. The majority of the area of impact supports introduced vegetation and high weeds cover that does not qualify as a remnant patch. Habitat hectares results are provided in Table 10. *Risk-related time horizon* = 20 years. The land will be managed in perpetuity for conservation purposes for NTGVVP. *Time until ecological benefit* = 10 years. Native vegetation is expected to improve in extent, species diversity and density within 10 years through applied weed and biomass control regimes. *Start area and quality* = 4.54 hectares and 5/10. The offset site supports NTGVVP of moderate quality. *Risk of loss without offset* = 0%. A reduction in quality over time is a potential risk, predominantly due to weed encroachment and lack of land management, however under the Guidance for deriving Risk of Loss there are no conditions that meet the criteria to apply a score greater than 0. *Future quality without offset* = 4/10. Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC 2011). Weed invasions are accelerated by disturbance regimes that are likely to occur in	*Offset location* = Rokewood, Victoria *Habitat to be removed* = 3.73 hectares. *Habitat quality* = 3/10. NTGVVP to be removed varies in quality from Low to High and is described in Section 4.4.1. The majority of the area of impact supports introduced vegetation and high weeds cover that does not qualify as a remnant patch. *Risk-related time horizon* = 20 years. The land will be managed in perpetuity for conservation purposes for NTGVVP. *Time until ecological benefit = 7* years. Native vegetation is expected to be maintained or improved in extent, species diversity and density within 10 years through applied weed and biomass control regimes. Offsets have already commenced at the off-site offset site and improvements are demonstrated in advance (Appendix 3). The final three years of the 10-year management plan will comprise maintenance to ensure values are maintained at improved levels and monitoring. *Start area and quality* = 14 hectares and 6/10. The offset site supports NTGVVP of moderate quality. *Risk of loss without offset* = 0%. A reduction in quality over time is a potential risk, predominantly due to weed encroachment and lack of land management, however under the Guidance for deriving Risk of Loss there are no conditions that meet the criteria to apply a score greater than 0. *Future quality without offset* = 5/10. Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC

On-site offset site	Off-site offset site
nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña have contributed to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024).	2011). Weed invasions are accelerated by disturbance regimes that are likely to occur in nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña have contributed to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024).
NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt *et al* 2007; Dorrough *et al* 2004, 2008a & 2008b; Zimmer *et al* 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats.	NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt *et al* 2007; Dorrough *et al* 2004, 2008a & 2008b; Zimmer *et al* 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats.
In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention due to climatic patterns, absence of management and disturbance in adjacent areas (Jacobs Group, 2024).	In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention due to climatic patterns, absence of management and disturbance in adjacent areas (Jacobs Group, 2024).
Risk of loss with offset = 0%. The land will be managed in perpetuity for conservation purposes for NTGVVP.	An updated offset site assessment report was undertaken in 2023 on a neighbouring property approximately 4km directly south of the proposed offset along Geggies Rd. This property was originally assessed during the same season in 2017 as the
Future quality with offset = 6/10. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a vegetation management plan incorporating	

On-site offset site	Off-site offset site
weed control and regular monitoring, aiming to maintain and enhance native biodiversity. *Confidence in result* = 80%. Confidence in applied scores is due to careful consideration of the offset site, existing habitats and landscape context.	EPBC 2014/7358 proposed offset. While the proposed offset was subsequently secured on title in 2020 to provide advanced offsets, this neighbouring property was not secured and the land management practices did not change to conservation management. The report shows that in the 6 years from 2017 to 2023, the NTGVVP previous recorded on the property declined in extent by 21% (from 124ha to 98ha), and the quality of all native grassland habitat recorded (in accordance with VQA methodology) declined by 11-20%. This decline occurred under "business-as-usual" practices, which included a set stock grazing regime, for the purposes of agricultural production, not conservation. The decline did not occur due to unlawful activities. The EPBC 2014/7358 proposed offset was under the same set-stock grazing and land management regime prior to the commencement of the offset. The decline experienced by this neighbouring property is clear evidence that the proposed offset would have also declined without the offset intervention. *Risk of loss with offset = 0%*. The land will be managed in perpetuity for conservation purposes for NTGVVP. *Future quality with offset = 6*/10. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a vegetation management plan incorporating weed control and regular monitoring, aiming to maintain and enhance native biodiversity. Offsets have already commenced at the off-site offset site and improvements are demonstrated in advance (Appendix 3). The 10-year management plan will comprise management and maintenance to ensure values are maintained at improved levels and monitoring. *Confidence in result* = 86%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing habitats and landscape context. Given the offset site has demonstrated strong compliance with the approved Landowner Agreement and Management Plan registered on the land title by DEECA, and that an improvement in habitat quality has been demonstrated, greater confidence that the offset (and quality improvement target) will be achieved is appropriate.

Table 20. EPBC Act Offset Calculator (Striped Legless Lizard)

On-site offset site	Off-site offset site
Offset location = On-site. *Habitat to be removed* = 9.87 hectares.	*Offset location* = Rokewood, Victoria *Habitat to be removed* = 9.87 hectares.

On-site offset site	Off-site offset site
Habitat quality = 4/10. The majority of Striped Legless Lizard habitat to be removed comprises grassland areas that do not qualify as a remnant patch due to a native species cover of less than 25%, and with a high cover of weed species. Remnant patches proposed to be removed vary in quality from Low to High and are described in Section 4.4.1. Habitat hectares results are provided in Table 10. *Time over which loss is averted* = 20 years. The land will be managed in perpetuity for conservation purposes for Striped Legless Lizard. *Time until ecological benefit* = 10 years. Native vegetation is expected to improve in extent, species diversity and density within 10 years through applied weed and biomass control regimes. *Start area and quality* = 4.77 hectares and 4/10. The offset site supports native grassland habitat of moderate quality and Striped Legless Lizard has been recorded at this location. *Risk of loss without offset* = 0%. A reduction in quality over time is a potential risk, predominantly due to weed encroachment and lack of land management, however under the Guidance for deriving Risk of Loss there are no conditions that meet the criteria to apply a score greater than 0. *Future quality without offset* = 3/10. Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC 2011). Weed invasions are accelerated by disturbance regimes that are likely to occur in nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña have contributed to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024). NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete	*Habitat quality* = 4/10. The majority of Striped Legless Lizard habitat to be removed comprises grassland areas that do not qualify as a remnant patch due to a native species cover of less than 25%, and with a high cover of weed species. Remnant patches proposed to be removed vary in quality from Low to High and are described in Section 4.4.1. *Time over which loss is averted* = 20 years. The land will be managed in perpetuity for conservation purposes for Striped Legless Lizard. *Time until ecological benefit* = 7 years. As the management of the offset site is now in Year 4 of implementation, native vegetation is expected to improve in extent, species diversity and density within 7 years through applied weed and biomass control regimes. Offsets have already commenced at the off-site offset site and improvements are demonstrated in advance (Appendix 3). The final three years of the 10-year management plan will comprise maintenance to ensure values are maintained at improved levels and monitoring. *Start area and quality* = 19 hectares and 6/10. The offset site supports native grassland habitat of moderate quality and Striped Legless Lizard has been recorded at this location. *Risk of loss without offset* = 0%. Without protection as an offset site there is uncertainty regarding the future use of the land. However, under the Guidance for deriving Risk of Loss there are no conditions that meet the criteria to apply a score greater than 0. *Future quality without offset* = 5/10. Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC 2011). Weed invasions are accelerated by disturbance regimes that are likely to occur in nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña have contributed to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024). NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal

On-site offset site	Off-site offset site
loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt *et al* 2007; Dorrough *et al* 2004, 2008a & 2008b; Zimmer *et al* 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats. In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention due to climatic patterns, absence of management and disturbance in adjacent areas (Jacobs Group, 2024). *Risk of loss with offset* = 0%. The land will be managed in perpetuity for conservation purposes for Striped Legless Lizard. *Future quality with offset* = 5/10. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a vegetation management plan incorporating weed control and regular monitoring, aiming to maintain and enhance native biodiversity. *Confidence in result* = 80%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing habitats and landscape context.	legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt *et al* 2007; Dorrough *et al* 2004, 2008a & 2008b; Zimmer *et al* 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats. In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention due to climatic patterns, absence of management, and disturbance in adjacent areas (Jacobs Group, 2024). An updated offset site assessment report was undertaken in 2023 on a neighbouring property approximately 4km directly south of the proposed offset along Geggies Rd. This property was originally assessed during the same season in 2017 as the EPBC 2014/7358 proposed offset. While the proposed offset was subsequently secured on title in 2020 to provide advanced offsets, this neighbouring property was not secured and the land management practices did not change to conservation management. The report shows that in the 6 years from 2017 to 2023, the NTGVVP previous recorded on the property declined in extent by 21% (from 124ha to 98ha), and the quality of all native grassland habitat recorded (in accordance with VQA methodology) declined by 11-20%. This decline occurred under "business-as-usual" practices, which included a set stock grazing regime, for the purposes of agricultural production, not conservation. The decline did not occur due to unlawful activities. The EPBC 2014/7358 proposed offset was under the same set-stock grazing and land management regime prior to the commencement of the offset. The decline experienced by this

On-site offset site	Off-site offset site
	neighbouring property is clear evidence that the proposed offset would have also declined without the offset intervention. *Risk of loss with offset* = 0%. The land will be managed in perpetuity for conservation purposes for Striped Legless Lizard. *Future quality with offset* = 7/10. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a vegetation management plan incorporating weed control and regular monitoring, aiming to maintain and enhance native biodiversity. *Confidence in result* = 86%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing habitats and landscape context. Given the offset site has demonstrated strong compliance with the approved Landowner Agreement and Management Plan registered on the land title by DEECA, and that an improvement in habitat quality has been demonstrated, greater confidence that the offset (and quality improvement target) will be achieved is appropriate.

Table 21. EPBC Act Offset Calculator (Spiny Rice-flower)

On-site offset site
Offset location = On-site. *Habitat to be removed* = 5 individuals *Time over which loss is averted* = 20 years. The land will be managed in perpetuity for conservation purposes for Spiny Rice-flower. *Start value* = 176 individuals. The offset site supports Spiny Rice-flower with 176 individuals recorded at this location. *Future value without offset* = 132 individuals. Without protection as an offset site there is uncertainty regarding the future use of the land. A reduction in the population is likely over time, predominantly due to weed encroachment and lack of land management. *Future value with offset* = 220 individuals. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a vegetation management plan incorporating weed control and regular monitoring, aiming to maintain and enhance native biodiversity. *Confidence in result* = 80%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing habitats and landscape context.

Conclusion

P.D.S.D. Mazzei believe that the above package satisfies the eight principles set out in the EPBC Act Offsets Policy (SEWPaC 2012a) because the proposed Offset Management Strategy:

1. Delivers 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;
2. Is built around direct offsets;

3. Is in proportion to the level of statutory protection that applies to the protected matter;
4. Is of a size and scale proportionate to the residual impacts on the protected matter;
5. Effectively accounts for and manages the risks of the offset not succeeding;
6. Is additional to what is already required, determined by law or planning regulations or agreed to under other schemes or programs;
7. Is efficient, effective, timely, transparent, scientifically robust and reasonable; and,
8. Has transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.

8 Social and Economic

The economic and social impacts of the action, both positive and negative, must be analysed and provided. Matters of interest may include:

a) details of any public consultation activities undertaken, and their outcomes;

b) details of any consultation with Indigenous stakeholders;

c) projected economic costs and benefits of the project, including the basis for their estimation through cost/benefit analysis or similar studies, and

d) employment opportunities expected to be generated by the project (including construction and operational phases).

Economic and social impacts should be considered at the local, regional and national levels.

8.1 Response

Response provided by Urbis Pty Ltd:

a) Public consultation has not been undertaken. As part of the Planning Scheme Amendment process to rezone the land from industrial to residential, there will be a public consultation period. During this time the community can make submissions to the planning authority about the amendment proposal.

b) Consultation within indigenous stakeholders have been undertaken to the extent that was required for the preparation of Cultural Heritage Management Plans.

c) Please refer to the Economic Benefits of Rezoning Report. Appendix 1

d) Please refer to the Economic Benefits of Rezoning Report. Appendix XX.

9 Environmental Record of Persons Proposing to take the Action

The information provided must include details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

a) the person proposing to take the action, and

b) for an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework must also be included.

9.1 Response

Response provided by Urbis Pty Ltd: There are no current proceedings under the Commonwealth; State or Territory law against the proponent. However, the proposed On-site Offset Site of 103 Reid street was subject to a proceeding following unlawful removal of native vegetation in 2008. The proceeding determined offset obligations under state legislation be paid to Council following an Enforcement Order. Agreement AL959317D was made to ensure that Council hold that offset payment in an interest-bearing bank account until the southeast portion (south of the Western Ring Road) is developed, known as the Affected Area (refer to Annexure A of the Agreement, Appendix 2). If the Affected Area is developed, the owner would be required to calculate and provide additional offsets for the lawful removal of native vegetation within the Affected Area.

10 Other Approvals and Conditions

The preliminary documentation must include information on any other requirements for approval or conditions that apply, or that the proponents reasonably believe are likely to apply, to the proposed action. This must include:

a) a description of any approval that has been obtained or is required to be obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the EPBC Act), including any conditions that apply (or are reasonably expected to apply) to the action, and

b) a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

10.1 Response

Response provided by Urbis Pty Ltd: An approval from the State is required to rezone the land from industrial to residential. An amendment request to rezone land has been lodged and is currently being assessed by the Local Government, Brimbank City Council. Following approval of the rezoning, a Development Plan must be submitted and approved by Council. The Development Plan will act as the masterplan that will guide overall development on the site. Following approval of the Development Plan, a planning permit application that is consistent with the Development Plan can be lodged. The planning permit application will facilitate subdivision and construction of dwellings on the site.

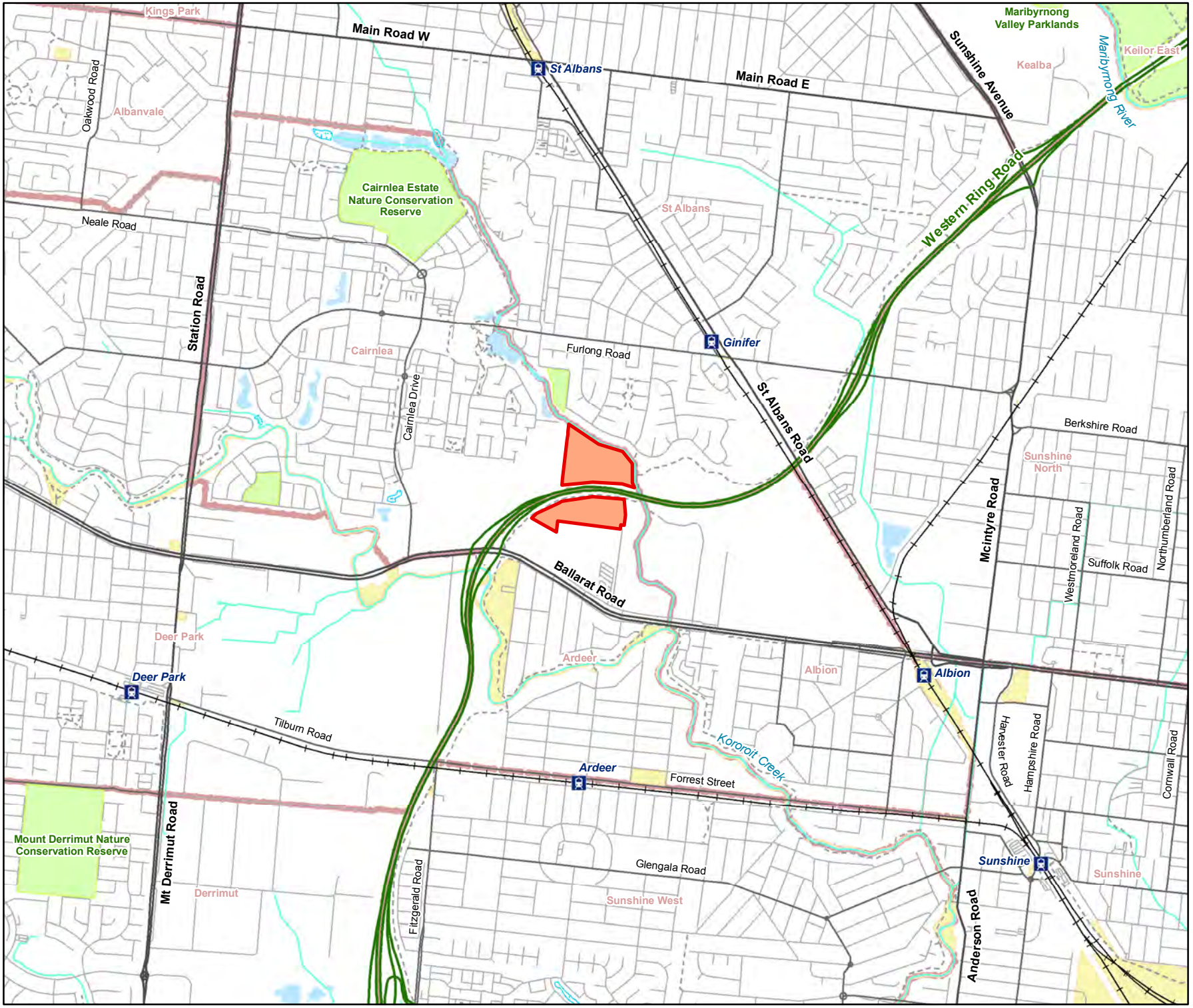


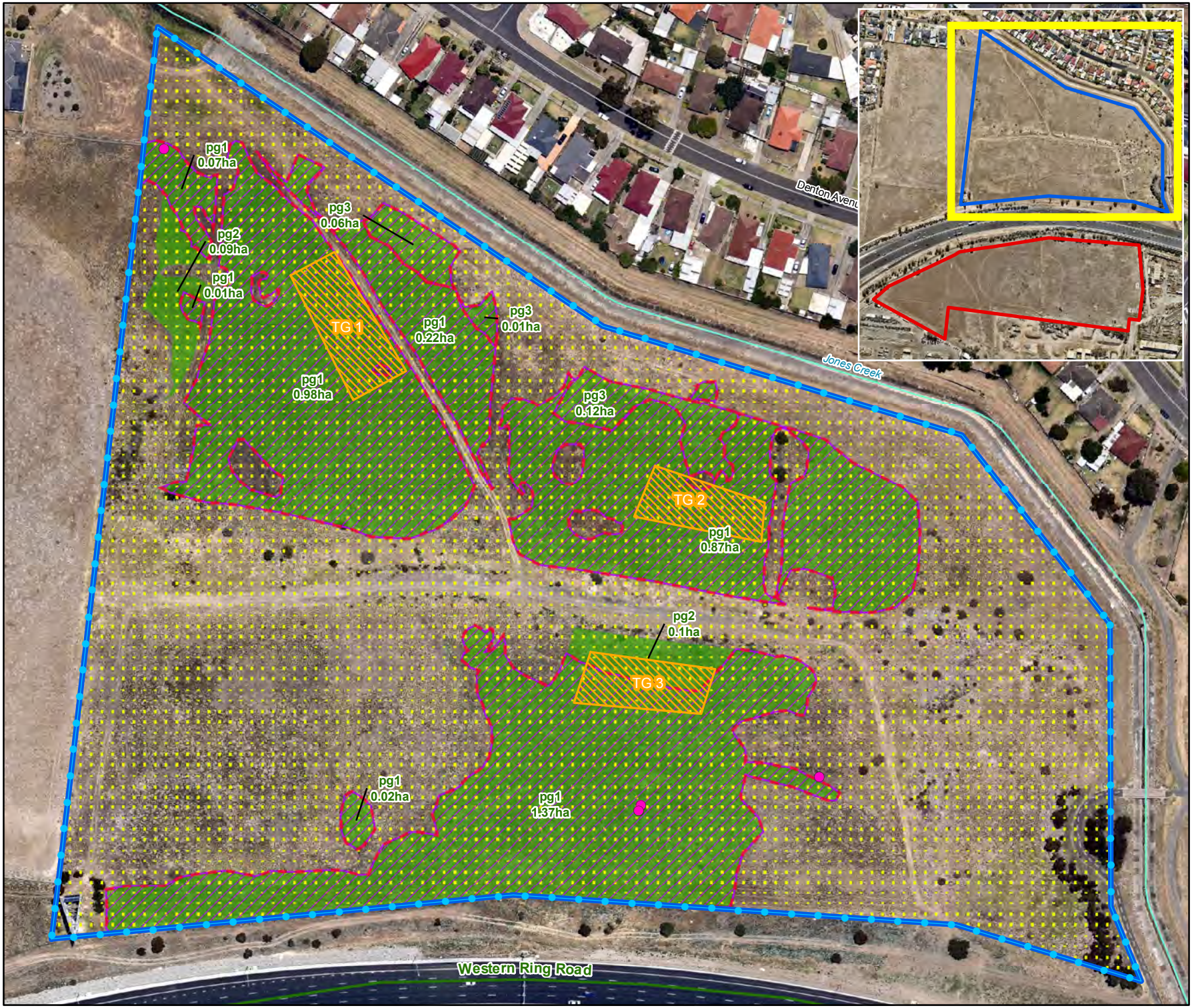
Figure 1

Location of the study area

Proposed Development at 103 and 57a Reid Street, Ardeer and 18b Jonesfield Corner, Cairnlea

ecology & heritage partners

12195_Fig01_StudyArea 15/05/2024 psorensen



Legend

- Development Site
- Proposed sediment fencing and no-go exclusion fencing
- Spiny Rice-flower
- Striped Legless Lizard tile grid
- Confirmed Striped Legless Lizard habitat

EPBC Act Listed Community

- Natural Temperate Grassland of the Victorian Volcanic Plain

Ecological Vegetation Class

- Heavier Soils Plains Grassland EVC 132_61 (PG)
- Vegetation proposed to be impacted (~3.73 ha)

Figure 2a

Northern development

Proposed Development at 103 and 57a Reid Street, Ardeer and 18b Jonesfield Corner, Cairnlea

N

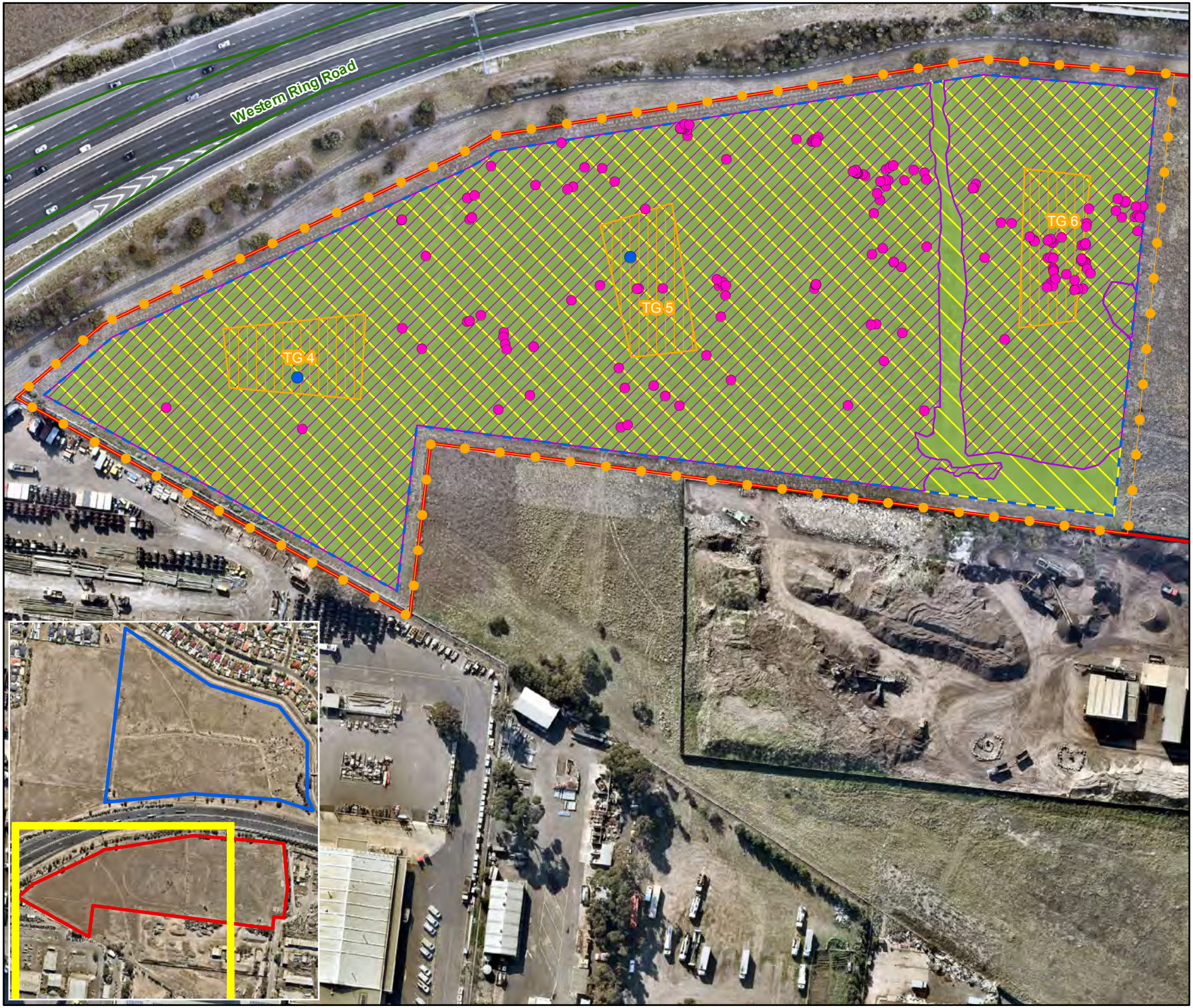
0 25 50

Metres

ecology & heritage partners

12195_Fig02a_NorthernDev 13/11/2024 melsley

Aerial source: Nearmap 2014



Legend

- 103 Reid Street, Ardeer
- Proposed offset site (indicative) (~4.8ha)
- Striped Legless Lizard tile grid

Matters of National Environmental Significance

- Natural Temperate Grassland of the Victorian Volcanic Plain
- 6m Management Buffer
- Rabbit-proof fencing
- Striped Legless lizard habitat
- Striped Legless Lizard Record (Ecology and Heritage Partners Pty Ltd 2015)
- Spiny Rice-flower (x 176)

Figure 2b

On-site Offset Site

Proposed Development at 103 and 57a Reid Street, Ardeer and 18b Jonesfield Corner, Cairnlea

N

0 25 50

Metres

ecology & heritage partners

Aerial source: Nearmap 2021

Legend

- Study Area

Significant flora

- Austral Crane's-bill
- Basalt Peppercress
- Basalt Podolepis
- Basalt Sun-orchid
- Button Wrinklewort
- Cut-leaf Burr-daisy
- Fragrant Saltbush
- Giant Honey-myrtle
- Glaucous Flax-lily
- Large-flower Crane's-bill
- Large-fruit Yellow-gum
- Large-headed Fireweed
- Matted Flax-lily
- Mugga
- Pale Swamp Everlasting
- Pale-flower Crane's-bill
- Purple Diuris
- River Swamp Wallaby-grass
- Rye Beetle-grass
- Small Milkwort
- Small Scurf-pea
- Spiny Rice-flower
- Spotted Gum
- Tough Scurf-pea

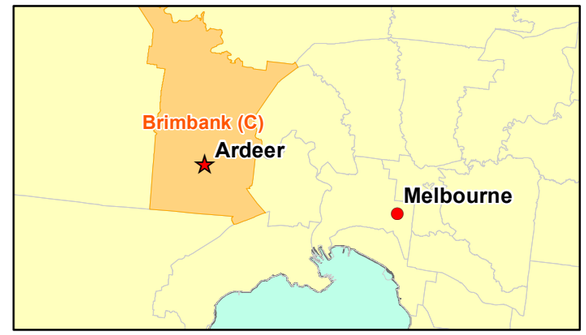


Figure 3

Previously documented significant flora within 5km of the study area

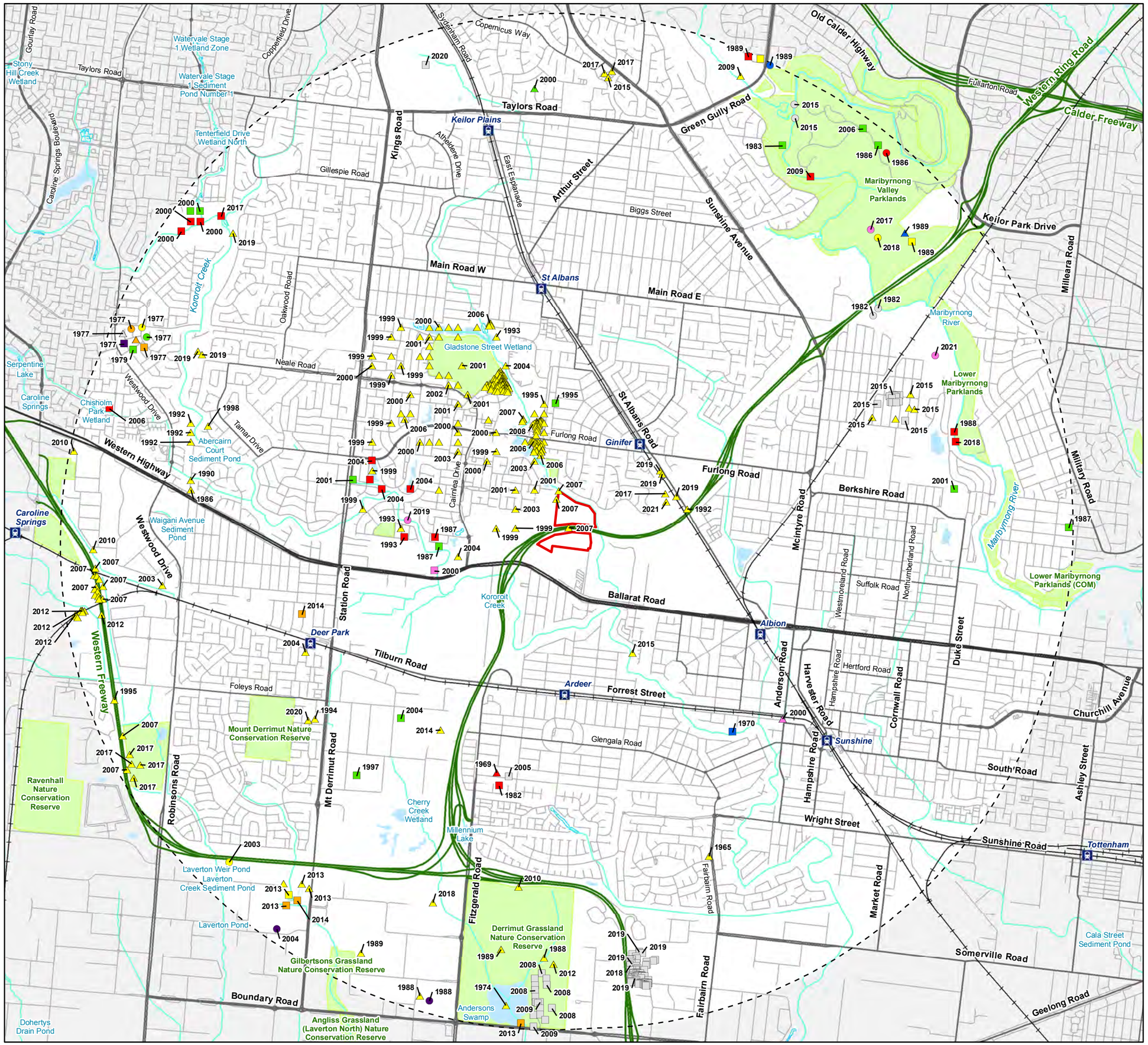
Proposed Development at 103 and 57a Reid Street, Ardeer and 18b Jonesfield Corner, Cairnlea

0 1 2

Kilometres

Map Scale: 1:38,000 @ A3
Coordinate System: GDA 1994 MGA Zone 55

ecology & heritage partners



Legend

Study Area

Significant fauna

- Australian Grayling
- Australian Little Bittern
- Australian Painted-snipe
- Black Falcon
- Blue-winged Parrot
- Brown Toadlet
- Eastern Great Egret
- Fat-tailed Dunnart
- Golden Sun Moth
- Growling Grass Frog
- Latham's Snipe
- Lewin's Rail
- Little Eagle
- Macquarie Perch
- Murray River Turtle
- Musk Duck
- Orange-bellied Parrot
- Platypus
- Sharp-tailed Sandpiper
- Striped Legless Lizard
- Swift Parrot
- White-throated Needletail
- Yellow-bellied Sheathtail Bat

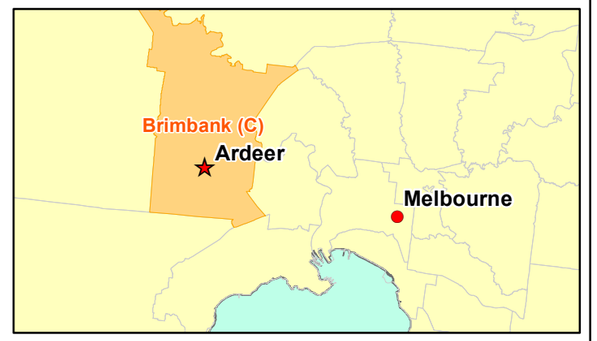


Figure 4

Previously documented significant fauna within 5km of the study area

Proposed Development at 103 and 57a Reid Street, Ardeer and 18b Jonesfield Corner, Cairnlea

0 1 2

Kilometres

Map Scale: 1:38,000 @ A3
Coordinate System: GDA 1994 MGA Zone 55

ecology & heritage partners

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Appendix 1 Economic Benefits and Re-zoning Report

deep end services

Part 103 Reid Street, Ardeer

Economic benefit of proposed rezoning

Prepared for:
PDSD Superfund Pty Ltd

20 November 2020

Deep End Services
Deep End Services is an economic research and property consulting firm based in Melbourne. It provides a range of services to local and international retailers, property owners and developers including due diligence and market scoping studies, store benchmarking and network planning, site analysis and sales forecasting, market assessments for a variety of land uses, and highest and best use studies.

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Document Name
103 Reid Street, Ardeer - Economic benefits of rezoning - 20 Nov 2020
20.11.20

Contents

Tables + Figures

Executive Summary

Proposal

1. The amendment is seeking to rezone approximateky 10 hectares of land lying just north of the Western Ring Road in Cairnlea from Industrial 3 to Residential Growth zone.
2. The land includes the northern section of 103 Reid Street in Cairnlea which was split and isolated from its southern section on Reid Street Ardeer by the construction of the Western Ring Road in 1996. The rezoning request includes a small adjoining parcel to the east known as 18B Jonesfield Corner.
3. The amendment will facilitate a residential community of varying densities and dwelling styles with an indicate capacity of 365 dwellings or about 1,000 people. The number and density of dwellings is subject to change and will be confirmed at the planning permit application stage.
4. The site lies directly east of 41 hectares of land in Cairnlea which is subject to a residential subdivision proposal by Development Victoria of potentially 800-1,000 dwellings.

Policy

5. The land falls within the Framework Plan of the Sunshine National Employment and Innovation Cluster (SNEIC). The Plan encourages new housing stock close to the major institutions and nodes of the SNEIC and in areas well-served by transport and services. The site is identified for a potential change in land use with improved connections to St Albans and the Sunshine health cluster.
6. The land is one of a number of small and underperforming pockets of industrial-zoned land in Brimbank isolated from other services. Council's local planning policy (LPP 21.02) recognises the opportunity to redevelop and redefine these sites.
7. The site is part of a larger Strategic Development Site identified in the City of Brimbank's Strategic Framework Plan (LPP 21.04) where land use change is anticipated.

Alternative use

8. The land was severely constrained when severed by the Western Ring Road from its street access (Reid Street) in Ardeer. Any limited prospect for future industrial use became redundant when Development Victoria changed its intentions for the neighbouring Cairnlea land, from a previous Business Park concept to a residential community.
9. A residential scheme with access through Development Victoria's land now appears to be the only practical and conceivable land use from planning and commercial viability considerations.
10. In terms of industrial land loss, the land represents just **2.3%** of the total supply of IN3Z land in the City of Brimbank and **5.6%** of the vacant IN3Z land.

Benefits

11. The demographic profile of the surrounding suburbs will change in the next 15 years with a significant increase in older residents and 'lone person' and 'couple

only' households. The existing dwelling structure of 85% detached homes of mainly 3-4 bedrooms is mismatched to the needs of future families.

12. The indicative housing mix on the Amendment site of 35% detached homes and 65% townhouses and apartments will address a growing demand in the area for smaller, more appropriate dwelling structures for the population. These homes are suited not only to down sizers but young couples and singles who may be working in professional or service occupations in the Sunshine NEIC. The availability of new and varied, lifestyle-appropriate dwellings will also enhance the NEIC as a more desirable workplace.
13. New residents will have good access to established neighbourhood and higher-order shopping facilities in the central areas of Brimbank. A potential Local Convenience Centre in Development Victoria's proposed Cairnlea estate would be well supported by a further 1,000 residents within its catchment.
14. The new community will have good access to existing child care and medical centres and employment opportunities in the NEIC and broader industrial areas. Residents will also utilise the extensive walking trails and open space resources around the site.
15. Civil works and home building on the site will generate almost 1,200 FTE job years. Assuming a five year project, it is the equivalent of 240 full time jobs on site for five years. The employment generated will add an additional $82 million dollars in added value to the State economy.
16. New residents will generate about $13.7 million in annual retail spending, a high proportion of which will be directed to centres at Cairnlea, Sunshine, Deer Park and St Albans.
17. The completed community will generate about $570,000 in rate revenue for the City of Brimbank.
18. The proposal will seamlessly extend the existing and proposed housing area of Cairnlea and reimage a neglected area of central Brimbank. It can efficiently utilise existing infrastructure, services and outdoor assets but also contribute spending to local centres. It has important employment benefits for the area and broader economy which far outweigh preserving the existing zone and continuing a non-productive use of a neglected land holding.

1

Introduction

This report is prepared for PDSD Superfund, owners of 103 Reid Street, Ardeer (subject site). The proposal is to rezone the vacant northern section of the subject site (lying north of the Western Ring Road) in Cairnlea from the Industrial 3 zone(IN3Z) to the Residential Growth Zone (RGZ).

The rezoning will enable the subdivision of the site for a master-planned residential community with a range of housing styles and densities linked to existing areas of open space and pedestrian paths.

The objectives of this report are to:

- Evaluate the development prospects of the site under its current industrial zoning.
- Assess the significance of the loss of industrial land to the City of Brimbank.
- Evaluate the benefits of a residential development across the site.
- Draw conclusions on the net benefits of the proposal.

2

Proposal

2.1 Regional context

The subject site is located in the City of Brimbank, 15 km north-west of the Melbourne CBD (refer Figure 1).

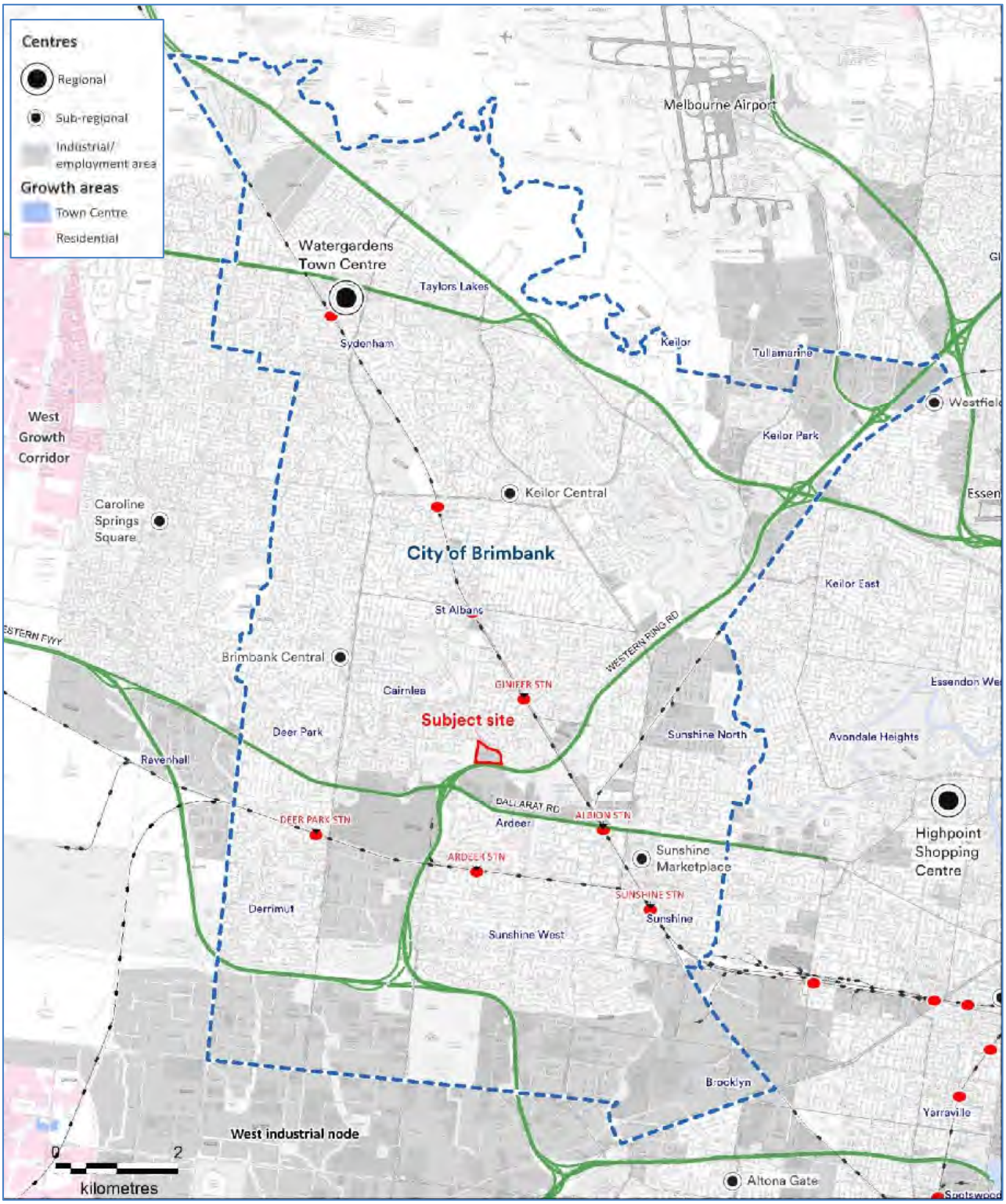
It lies at the southern edge of a sprawling residential area extending north of Ballarat Road and west of the Western Ring Road, comprising the suburbs of Deer Park, Cairnlea, St Albans and Keilor.

The site has its southern boundary to the Western Ring Road and will have a short road connection to Cairnlea Drive and Ballarat Road via a new development on land to the west . The nearby major arterials connect the site to the northern suburbs and Tullamarine Airport, to the outer western growth areas and back to central Melbourne via the Westgate Freeway.

The site is close to the West Industrial Node, the largest employment area in Melbourne's west. It is accessible to a range of regional and sub-regional centres including Watergardens Town Centre, Brimbank Central, the Sunshine and St Albans Major Activity Centres and Highpoint Shopping Centre.

The Sunbury rail line passes just east of the site with the nearest stations at Ginifer and Albion. To the south, the Melton line and the Regional Rail Link passes close to the site with stations at Deer Park and Ardeer.

Figure 1—Regional location



Source: Deep End Services; Planning Victoria; Urban Development Plan 2018

2.2 Site description

The subject site is the northern section of 103 Reid Street which was split and isolated from Reid Street itself by the construction of the Western Ring Road in 1996. The land to be rezoned also includes a small adjoining parcel to the east known as 18B Jonesfield Corner.

The two sites of 9.06 hecatres and 0.81 hectares have a total area of 9.87 hectares.

The subject site has the following boundaries:

- A 432 metre southern boundary to the Western Ring Road. The western point of this boundary is about 600 metres north-east of the Western Ring Road and Ballarat Road interchange.
- A 600 metre boundary to the east and north defined by Jones Creek – a local drainage line that flows south east through St Albans to Kororoit Creek in Sunshine West. Where it passes the site, the creek has been constructed as an open culvert.
- A 360 metre boundary to the west abutting a large vacant land holding which is subject to a proposed residential subdivision by Development Victoria. Most of the eastern boundary is to a future recreation reserve to be developed as part of the adjacant subdivision.

The effect of the extensive creek boundary, the undeveloped land to the east and the Western Ring Road which has isolated the subject site from its former access road, means the subject site has no existing road frontage or formal access point. Future development will rely on obtaining a road connection through Development Victoria's land to the west.

The site is generally flat and covered by grasses and low scattered shrubs.

North of the site, across Jones Creek, is the established residential area of St Albans with approximately 2,620 people in the area bounded by the creek, Furlong Road and St Albans Road.

West of the site, the area of Cairnlea east of Cairnlea Drive and south of Furlong Road was subdivided from about 2000 and was almost fully developed by 2010. This area has an established but still slowly growing population of 2,350 people.

South of the Western Ring Road is an area on Industrial 3 zoned land and Industrial 2 zoned land along Ballarat Road. Reid Street runs north into the area from Ballarat Road and terminates south of the Western Ring Road. Just over half the IN3Z land is vacant including the southern section of 103 Reid Street. Industrial activities in the IN3Z include:

- Several old factory and warehouse-style buildings on the east side of Reid Street.
- A crane storage yard at the north end of Reid Street.
- A building materials and waste recovery yard on the west side of Reid Street.

East of Jones Creek and south of Western Ring Road is a Polish Sport and Recreation Club comprising a social club and outdoor playing fields. North and east of the club is Carrington Reserve, home to an outdoor karting complex, BMX track, bocce club and pidgeon club.

Formal pedestrian and bicycle paths extend along the creek line and around the recreation reserve where they join and extend under the Ring Road to the eastern boundary of the subject site. At this point, the path branches east through an open reserve along the Western Ring Road and north along the east side of Jones Creek to Cairnlea Lake and beyond. South of the Western Ring Road, the Jones Creek path continues south to the Kororoit Creek trails or branches west following the Ring Road to Moore Park and beyond. The site can be easily connected into these important regional paths extending through large areas of Brimbank.

Figure 2—Local setting

Source: Ausway

Figure 3— Aerial map with industrial zoning

Source: Nearmap

The subject site is located approximately 1.1 km south-east of Cairnlea Town Centre, a Coles anchored (3,204 sqm) neighbourhood centre with a range of specialty retail and local services including a pharmacy, medical clinic, childcare centre and gym. The Town Centre offers the closest neighbourhood shopping facilities which can be reached by car via Cairnlea Drive or on foot or bicycle via the Jones Creek path.

Figure 4—Aerial view looking north-east

Source: Deep End Services; MapInfo

2.1 Development Victoria site

Development Victoria is planning a new residential community on the last major land holding in the suburb of Cairnlea. The 41 hectare site abuts the western boundary of the subject site and extends through to Cairlea Drive. Most of the land was rezoned to the General Residential Zone in 2016 with a small section near Ballarat Road zoned Commercial 2 Zone. The area forms a logical southern extension of the existing line of housing in Cairnlea.

Plans are yet to be released however the vision is to deliver a range of affordable housing, a network of open spaces and a small commercial area. The residential capacity is unknown at this stage but could be in the range of 800 - 1,000 dwellings. Construction is expected to commence in 2022 with completion by 2027.

2.2 Proposal

The proposal for the subject site is a rezoning from IN3Z to RGZ.

A draft Master Plan for the site is shown in Figure 5. The Masterplan (including proposed non-residential uses and external road connections) may be subject to change following the planning scheme amendment process. For the purposes of this assessment the main elements are:

- A local street pattern contoured to the irregular shape of the site. Streets and lanes provide for a range of front and rear loaded dwellings.
- A predominant residential land use other than a potential site at the entry / exit point shown as a child care centre and / or medical centre. This site could be subject to further demand testing and may be influenced by the size and composition of the local centre on Development Victoria's land.
- Two areas of medium density housing including a long section of row housing backing on to the Western Ring Road and a development site abutting Jones Creek.
- Maximum use of Jones Creek with north facing lots to the creek reserve and west facing lots to the Future Sports Reserve on Development Victoria's land.
- A single entry / exit point to the estate via a future road coming in from Development Victoria's land, parallel to the Western Ring Road reserve.

Figure 5—Draft Master Plan

Source: Urbis

The indicative design capacity of the estate is 365 dwellings. A Development Plan and a detailed multi-lot subdivision plan will be subject to a separate town planning process which could vary the capacity.

An indicative breakdown of the 365 dwellings (subject to final subdivision plan) is:

- 127 (35%) detached homes of 3-4 bedrooms.
- 67 (18%) townhouses of 2 and 3 bedrooms.
- 171 (47%) acoustic wall edge units of 2 bedrooms.

The dwelling structure provides a wide range of dwelling types, many well-suited to the changing age and family structure of the City of Brimbank.

Future residents will have good access to large areas of formal and informal reserves east and west of the site and extensive regional pedestrian and bicycle paths.

2.3 Callaway Park case study

An example of a successful and comparable infill housing development in the City of Brimbank is the recently completed Callaway Park estate, located off Fitzgerald Road in Sunshine West (refer Figure 6).

The 38-hectare site was the former Sunshine Golf Club that relocated to Mt Derrimut Road in a land swap facilitated by the Callaway Park developer, Australand (now Frasers Property).

Callaway Park was master planned with 660 lots with the first houses appearing in 2008. By 2015 all lots were sold and by late 2017 only several lots were undeveloped. The time frame from initial construction to completion was close to 10 years.

At the 2016 Census, the small statistical area, which almost precisely covers the estate, recorded the following:

- A resident population of 1,727 people which was probably approaching capacity.
- A total dwelling stock of 626 homes comprising:
    - 232 separate houses (37%)
    - 330 semi-detached dwellings (53%)
    - 37 apartments (6%)
    - 24 other dwelling types (4%)
- 491 occupied dwellings yielding an average household size of 3.2 persons.

The mix of detached homes to townhouses and apartments at Callaway Park (37%/63%) is similar to the indicative mix on the subject site (35%/65%). The success of Callaway Park underlines the potential demand for new and varied housing types in Brimbank.

Figure 6—Callaway Park, Sunshine West

Source: Nearmap

Figure 7—Callaway Park typical housing

Source: Google

3

Planning context

3.1 Sunshine National Employment and Innovation Cluster

The subject site is close to several major institutions and employment generating nodes which make up the Sunshine National Employment and Innovation Cluster (SNEIC) – one of seven clusters in Melbourne identified under the metrpolitan planning policy *Plan Melbourne 2017-2050*. These nodes include:

- The Sunshine Health Wellbeing and Education Precinct. At Sunshine Hospital the $200 million Joan Kirner wing was completed in 2019 and a $35 million upgrade is underway to the emergency department, medical imaging suites and mental health services.
- Sunshine Metropolitan Activity Centre which is home to sub-regional and large format retailing, a cinema coimplex and street-based shops, services, cafes and restaurants and the Sunshine campus of Victoria University.
- St Albans Major Activity Centre including the St Albans campus of Victoria University.
- Solomon Heights Investigation Area.

A *Draft Framework Plan* for the SNEIC (March 2017) is a vision to build on the established public and private institutions, business services and transport connections to become the preferred location for healthcare, research, education and training, transport, business and retail services in Melbourne's west.

The Vision statements note that the Sunshine Cluster presents opportunities for residential growth and for new dwellings to be built for workers close to jobs. This is supported by one of the five Principles which is to *"Provide a greater range of new housing stock and accommodation in locations that are well-served by transport and services"*.

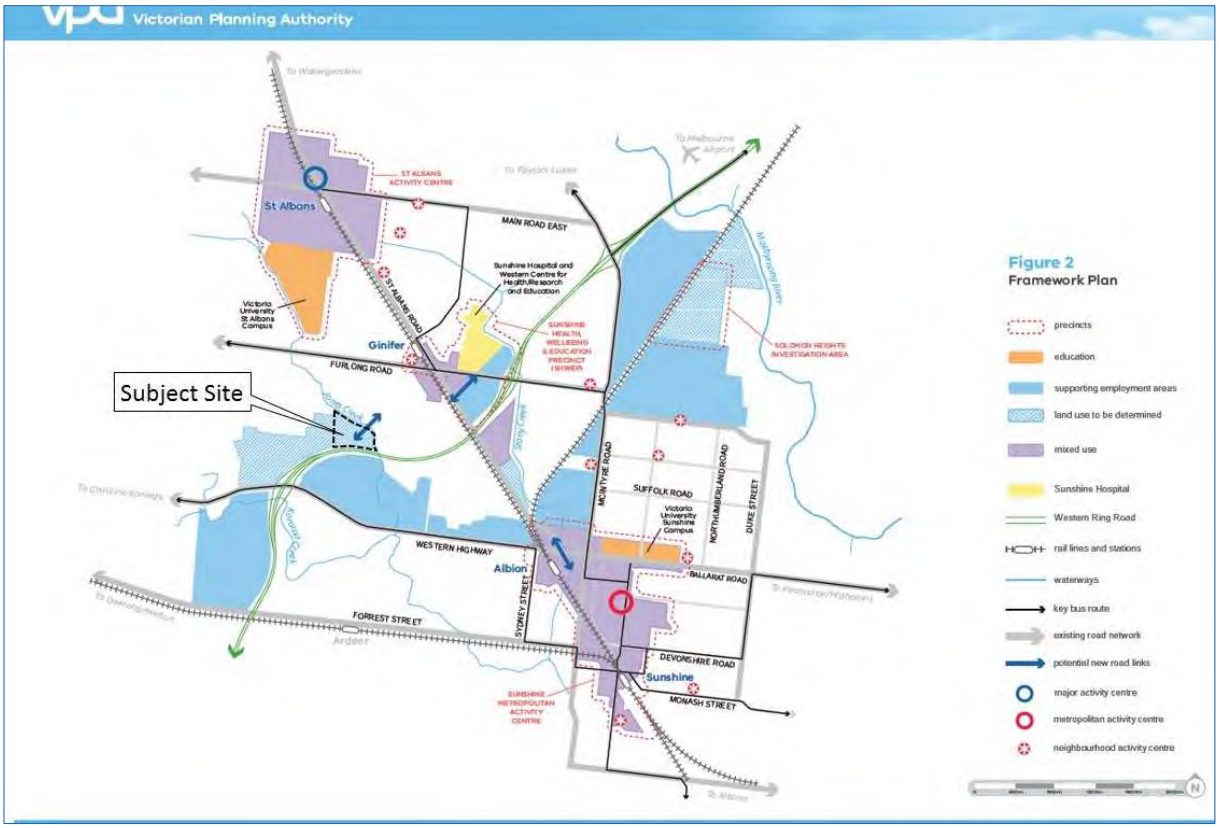
The draft Framework Plan for the SNEIC is shown in Figure 8 with the subject site outlined and notated. It shows the subject site is central and accessible to most of the key health, education, retail and business nodes in the SNEIC. The Framework Plan highlights the subject site and the adjoining Development Victoria land in Cairnlea as "land use to be determined" while the IN3Z and IN1Z land south of the Western Ring Road is retained as "support employment areas".

This shows an expectation that the subject site is no longer suited to its IN3 Zoning in the context of the wider strategic land use planning.

The Framework Plan also shows a potential new road link from the subject site across Jones Creek into the adjoining residential area of St Albans. Under the Plan's 'Strategic Outcome 2: Deliver an integrated transport network linking pools of workers with the key job centres in the Sunshine Cluster', Action 2.5 (p.13) is *"Explore the potential for a new link across Jones Creek between Cairnlea and St Albans to link workers in Cairnlea and Deer Park to the SHWEP"*.

This potential link is picked up in the draft Master Plan for the subject site as a possible long-term connection.

Figure 8—SNEIC Framework Plan



Source: VPA

3.2 Local Planning Policies

Under Clause 21.02 *Key Land Use Issues*, the local policy notes a number of key land use issues which are important to the future development of Brimbank. They include:

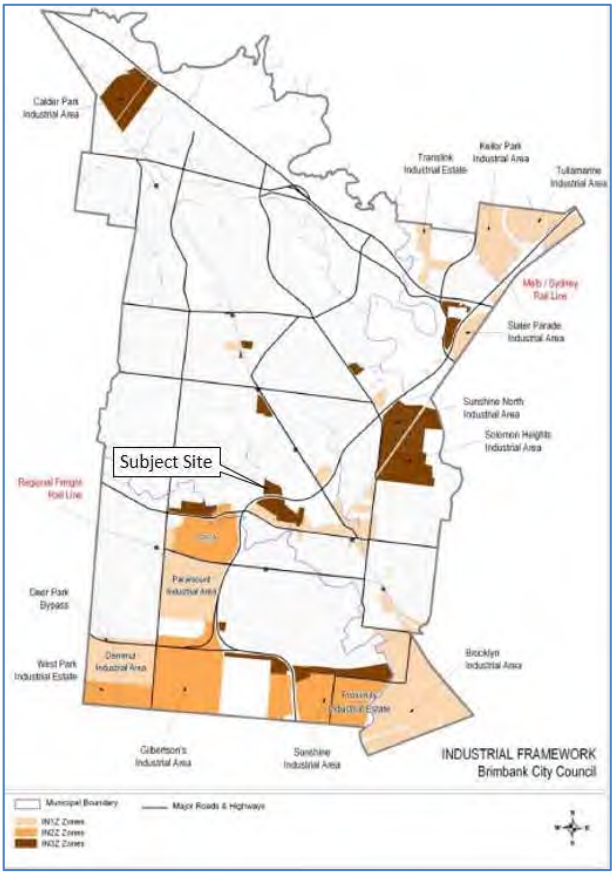
- For **housing**, the expected ageing population will create an increased demand for smaller dwellings and aged accommodation and services. The dwelling needs of future families is mismatched to Brimbank's older, predominantly detached dwelling stock.
- There are no greenfield development sites remaining in Brimbank so population growth will be contained to infill medium and higher density developments, in activity centres, the General Residential zone and Residential Growth Zone.
- For **industrial land use**, there is a 17-23 year supply of vacant land in Brimbank that will support up to 7,470 jobs.
- A number of smaller industrial pockets that are either underperforming or isolated from other services. Opportunity exists to redevelop and redefine these.

Figure 9 shows the City of Brimbank's Industrial Framework plan from its local planning policy, *Industrial Land Use*. It shows the subject site as a small remnant area, isolated from the larger IN3Z area south of the Western Ring Road.

Large areas of IN3Z are at Sunshine North, Solomon Heights and Calder Park. Solomon Heights has large areas of vacant land while Calder Park is undeveloped.

Figure 9—City of Brimbank Industrial Framework

Source: Brimbank Planning Scheme

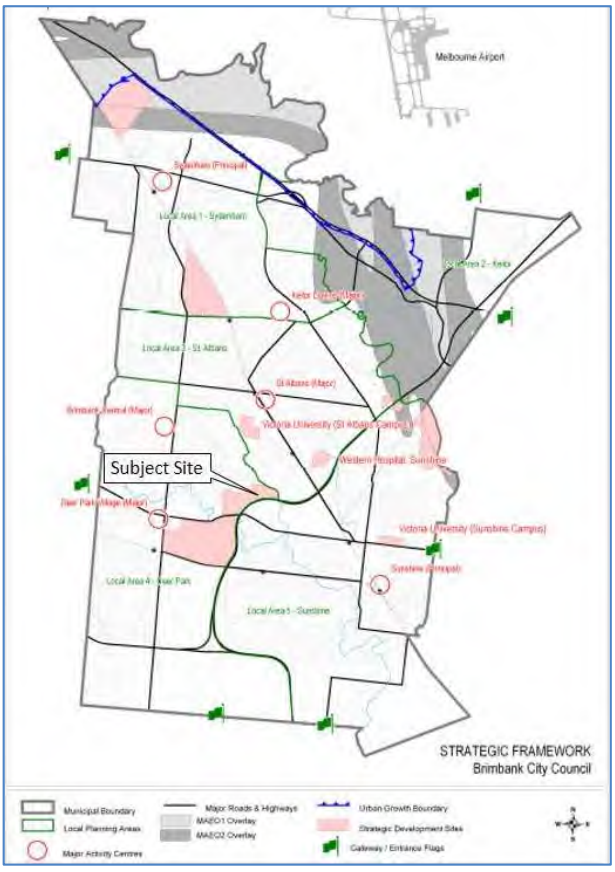


Among Councils major land use and policy directions are Strategic Development Sites which are "*..identified areas that due to their size, location, environment or current and past use have the potential for development, redevelopment and rehabilitation to facilitate large-scale industrial, commercial and residential developments, increase local employment and economic development*".

The subject site is identified as a strategic development area (refer Figure 10) in Council's Strategic Framework Plan. It is part of a larger area including Development Victoria's land at Cairnlea and the Orica land holding at Deer Park.

Figure 10— City of Brimbank Strategic Framework

Source: Brimbank Planning Scheme



A review of the zoning and change of permitted land use on the subject site is well-supported by planning policy. It is:

- A residual and redundant industrial zoning isolated from roads and other services.
- Identified as a Strategic Development Area where future land use change is encouraged.
- Close to the SNEIC where the draft Framework Plan identifies the subject site for future land use change. In this context, the site can provide new housing close to large private and institutional land use and employment nodes, identified for further development.

4

Economic analysis

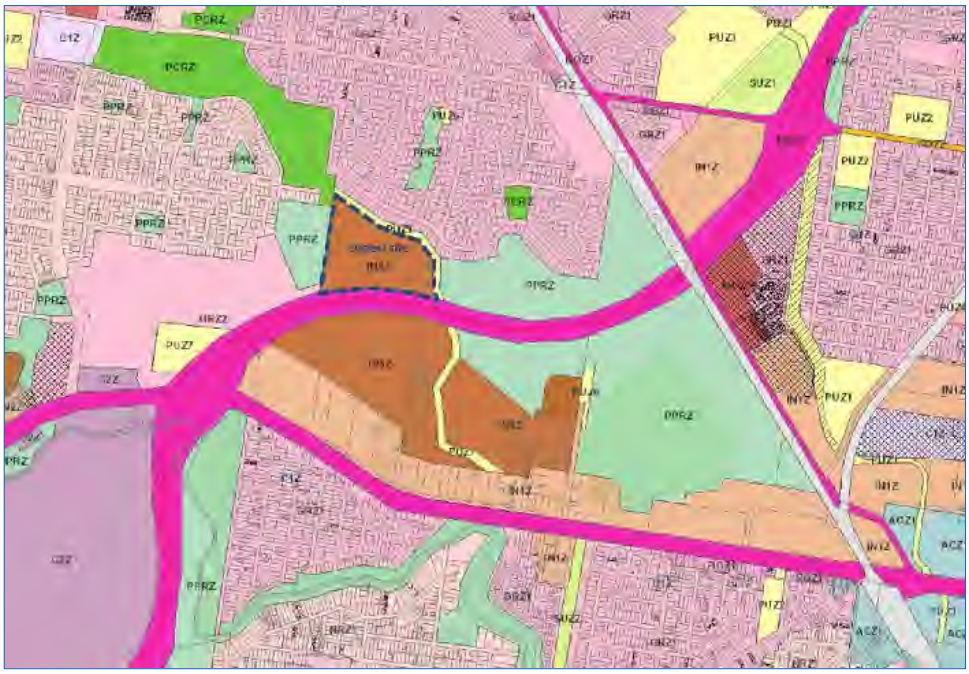
4.1 Alternative land use

The subject site is zoned Industrial 3 under the City of Brimbank Planning Scheme (refer Figure 11). The purpose of the zone is to provide for industries and associated uses where consideration is given to avoid inter-industry conflicts. The zone provides a buffer or transition to lower impact uses between Industrial 1 and Industrial 2 zones and local communities.

The subject site is shown in Figure 11 in the context of other adjoining zones.

Figure 11—Existing zoning

Source: VPA



Since the construction of the Western Ring Road which isolated the subject site from its street access (Reid Street) and link to Ballarat Road, the potential use of the land for industrial purpose has become redundant.

This redundancy was reinforced when Development Victoria resolved to change its development intentions for the Cairnlea site, from a previous Business Park proposal to residential use. The rezoning of the Cairnlea land to GRZ in 2016 isolated the subject site as an industrial zoning anomaly.

There is no conceivable industrial use for the subject site where it now relies on access through a future residential estate to the west. There appears to be no prospect of an effective link to the existing IN3Z land south of the Western Ring Road.

Any alternative uses (other than residential) for the subject site must have regard to the local access constraint and the sensitive residential interfaces to the north and west.

Any potential institutional use (health or education) would be a high traffic generating activity that would need main road access. Sunshine Hospital is unlikely to develop further well beyond its current boundary and Victoria University at St Albans has additional land for expansion, if needed.

Recreation or membership-based club activities uses are the only other potential land use. The western suburbs is already well provided with cultural clubs and sporting facilities. There are large areas of public purpose reserved land close to the site which have further improvement and development potential for active and passive recreation or leisure uses, if needed.

The 5.6 hectares of PPRZ land abutting the site within the Cairnlea development area is a potential resource while informal reserves and walking tracks extend east of the site.

In our view, a residential use is the only practical and conceivable land use from a planning and commercial viability point of view.

4.2 Loss of industrial land

Figure 12 illustrates the distribution of industrial land in the City of Brimbank and beyond in the municipalities of Melton, Wyndham and Hobsons Bay.

The Western State Significant Industrial Precinct (WSSIP) extends across a wide region of the middle and outer western suburbs including the larger tracts of industrial zoned land in Brimbank, generally south of Ballarat Road (Western Highway). These areas are dominated by IN1 and IN2 zoned land.

In the City of Brimbank, the IN3Z land is in two large areas at North Sunshine and Calder Park with smaller areas along Ballarat Road and adjoining the Western Ring Road and elsewhere in small isolated pockets.

Outside Brimbank, there is a large area of IN3Z land at Ravenhall.

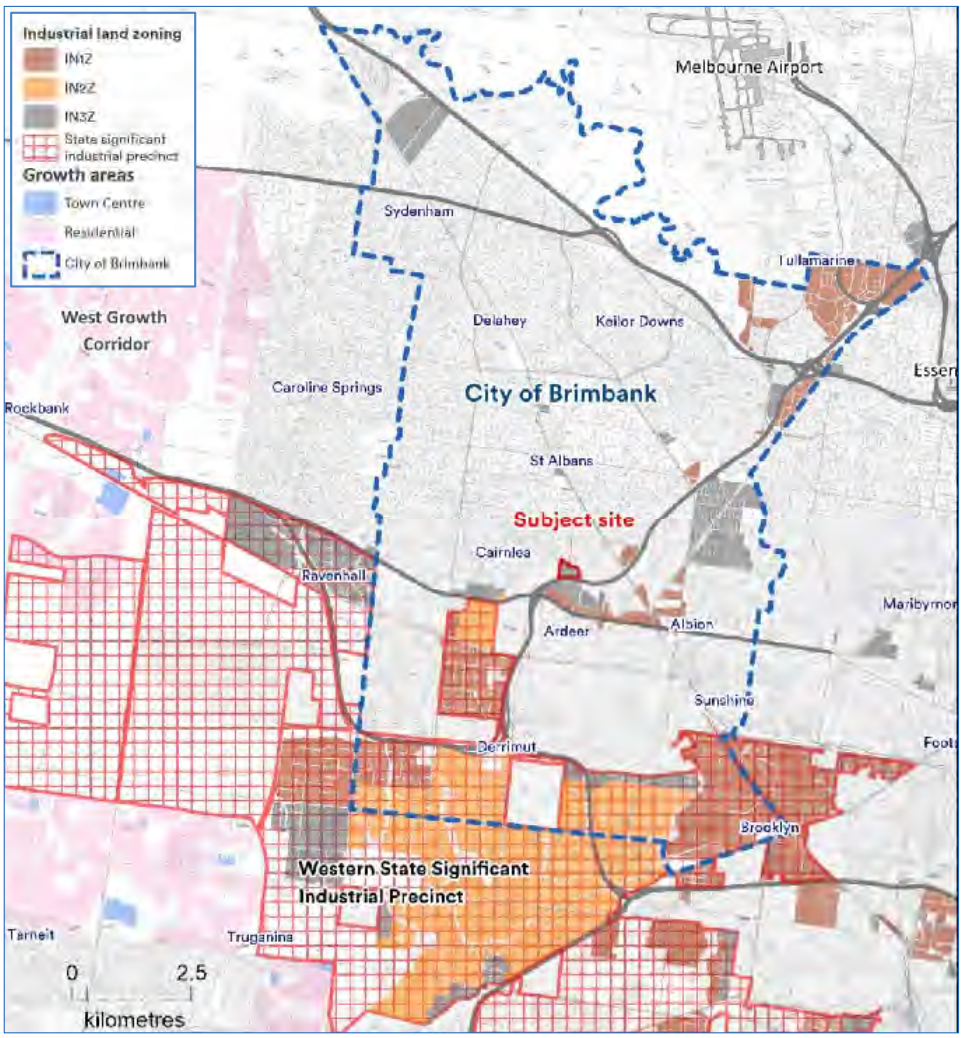


Figure 12—Western Melbourne industrial land provision

Source: Deep End Services; Urban Development Program 2018

Table 1 sets out the current industrial land supply in the City of Brimbank for the three industrial zones and the land area measured by the 2018 Urban Development Program (UDP) as occupied or vacant.

Table 1—City of Brimbank industrial land supply by zoning

Source: Urban Development Program 2018

City of Brimbank	IN1Z	IN2Z	IN3Z	Total
Occupied (ha.)	864.8	523.6	252.6	1,641.0
Vacant (ha.)	104.7	23.0	179.6	307.3
Total (ha.)	**969.5**	**546.7**	**432.2**	**1,948.4**
Vacant (%)	11%	4%	42%	16%

In total, the City of Brimbank has almost 1,950 ha of industrial land. About half the industrial land supply is zoned IN1Z.

The IN3Z applies to 432 hectares of land in the City of Brimbank or about 22% of its total industrial land supply. Of this, 179.6 hectares was vacant or 42% of the total IN3 zoned land.

The area of vacant IN3Z land was well in excess of the 104.7 ha. of vacant IN1Z land and 23.0 ha. of vacant IN2Z land. The vacant land proportion of the IN3Z land (42%) is well above the IN1Z land (11%) and INZ land (4%).

In terms of industrial land loss, the subject site of approximately 10 ha represents just **2.3%** of the total supply of IN3Z land in the City of Brimbank and **5.6%** of the vacant IN3Z land.

The proposed rezoning of the subject site from IN3Z to RGZ is a minor, if not inconsequential loss of industrial land to the City of Brimbank.

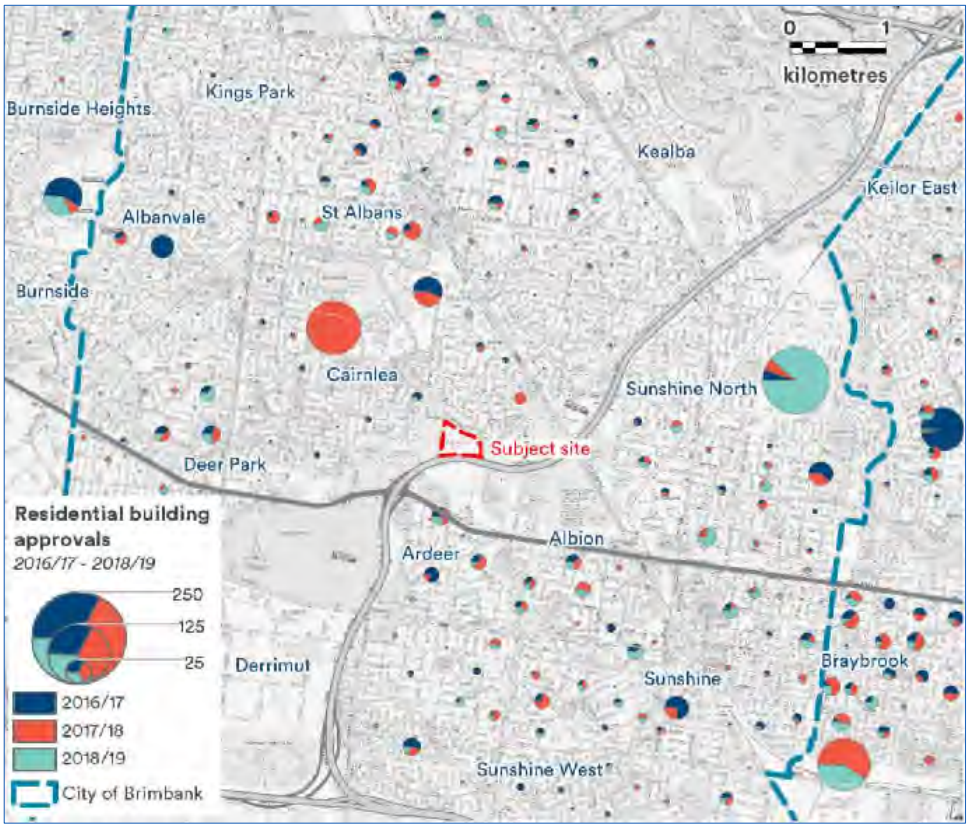
The loss is even more insignificant given the redundant location of the land and the lack of any suitable industrial use for the site because of its location, access and adjoining land use constraints.

4.3 New housing activity

Figure 13 shows the volume and distribution of new residential building approvals (at SA1 level) across the central and southern residential areas of the City of Brimbank for the three financial years 2016/17 to 2018/19.

Figure 13— Residential building approvals (2016–2019)

Source: Deep End Services; ABS



It shows two nodes of significant new housing activity – at Cairnlea where new homes and townhouses are filling out the final sites near the Town Centre and at River Valley Estate in Sunshine North which had a recent spike in activity but further long term capacity.

Elsewhere, the region is characterised by several small to mid-sized infill developments but otherwise small housing projects and replacement dwellings in established areas.

The subject site presents an opportunity for a large infill subdivision. At 365 dwellings it will be one of the largest currently identified in the City of Brimbank.

A development of this scale – particularly with the adjoining Development Victoria site – has the potential to reimage a neglected and baron area of the city visible from the Western Ring Road. It will fill out the residual areas of Cairnlea and bring new activity to an area that otherwise has little or no prospect of future development for other purposes.

4.4 Benefits of new housing

4.4.1 Effect on population levels

Table 2 presents the 2016 (Census) population levels for the five nearest suburbs around the subject site and population forecasts by .id consulting through to 2036. Forecasts are adjusted down in 2020, 2021 and 2022 to reflect the impact of COVID-19 and lower net overseas migration levels.

Table 2— Population forecasts by suburb

Source: ABS, .id, Deep End Services

	Census	.id forecasts				
Suburb	**2016**	**2020**	**2022**	**2026**	**2030**	**2036**
Cairnlea	10,206	10,939	10,988	10,667	10,786	10,863
Deer Park	18,850	19,614	19,449	19,744	20,072	20,270
Derrimut	8,686	9,077	8,728	8,420	8,233	7,987
Sunshine	10,241	11,130	11,805	13,510	15,332	16,938
Sunshine North	12,123	12,668	13,199	14,247	14,969	15,464
Total 5 Brimbank suburbs	**60,106**	**63,428**	**64,169**	**66,588**	**69,392**	**71,522**
Change (% per annum)	-	1.4%	0.6%	0.9%	1.0%	0.5%

On the current forecasts by .id, Cairnlea will have a relatively stable population level from 2020 to 2036.

.id have allowed for 200 new dwellings at 130 Reid Street Ardeer (which may be the subject site) between 2026 and 2036 however there is no assumption of new housing on the Development Victoria site at Cairnlea. The addition of 800-1,000 new dwellings on Development Victoria's land could add up to 3,000 new residents, based on the large average household size evident in Cairnlea today.

The 365 new dwellings for the subject site are assumed to house about 1,000 people at 2.8 persons per dwelling.

Combined, the subject site and the Development Victoria land could house 4,000 people in the next 10 years, increasing Cairnlea's population by 36% to about 15,000. The increase in population will have significant positive benefits for the Cairnlea Centre and others drawing across the area.

Elsewhere, population levels in Deer Park and Derrimut are likely to be stable or declining over the next 15 year period. Sunshine North will grow with 1,500 new dwellings at River Valley and Sunshine will increase with higher densities in and around the activity centre.

4.4.2 Responding to demographic changes

Notwithstanding different population scenarios that may emerge in Cairnlea or other suburbs in the next 15 years, there are underlying changes to the household and age structure that are relevant to the planning of new residential areas and their dwelling mix. The subject site has an opportunity to respond and meet the changing needs of the population.

The five Brimbank suburbs referred to in the following charts are Cairnlea, Deer Park, Derrimut, Sunshine and Sunshine North. Projections of age structure and household composition for these suburbs are drawn from .id forecasts from 2020-2036.

Figure 14 shows the change in age composition of the five suburbs from 2016 to 2026 compared to Brimbank and Melbourne in 2016. Figure 15 shows the absolute change in the age cohorts from 2016 to 2036.

Figure 14— Population by age group

Source: Deep End Services ; ABS; forecast.id

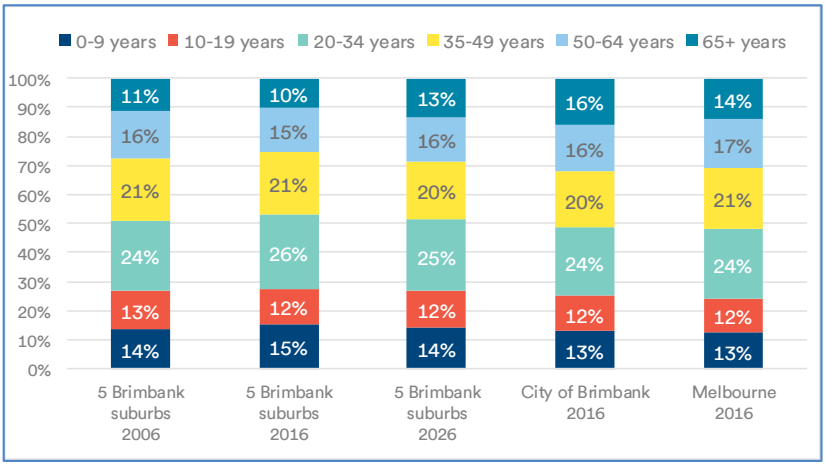
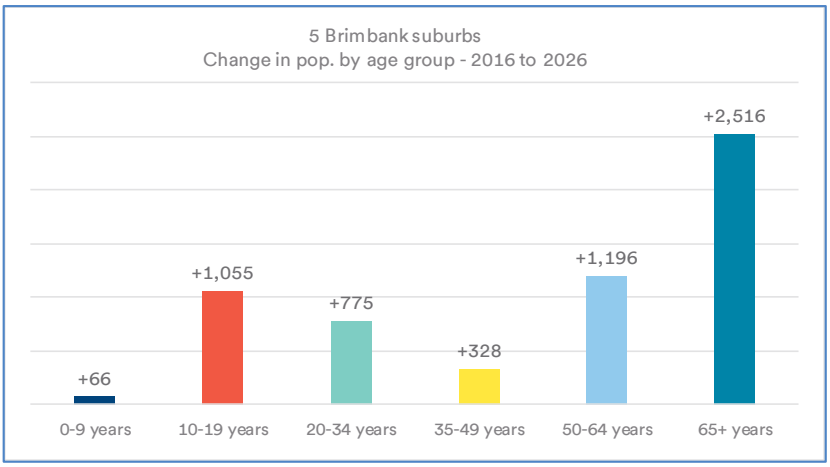


Figure 15— Change in population by age group

Source: Deep End Services ; ABS; forecast.id



While the five suburbs had a relatively young population in 2026 compared to the Brimbank and Melbourne averages, over the next 10 years the area will age with a higher proportion of people in the 65+ age groups.

The small percentage differences over time are significant when applied to the total population. Figure 15 shows the significant absolute increase in the older age groups relative to other ages over the next 10 years. This will become more pronounced in later years as the larger middle age groups also move into the older cohorts.

The population group aged over 65 years will increasingly look for affordable and smaller, low maintenance homes.

Figure 16 shows a similar and related trend – the projected change in household composition for the five suburbs from 2016 to 2026.

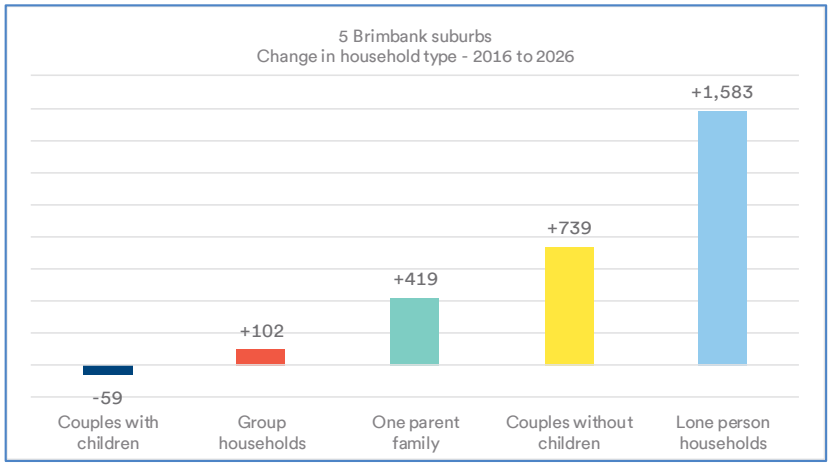
Over the 10 year period there will be a net decline in couples with children. There will be a solid increase in one-parent families, a higher number of additional 'couples with children' (both old and young) but more than double that increase again in 'lone person households'.

While 'couples with children' will still be the dominant household type making up 40% of all households in 2026, one and two-person households will make up nearly 30% and account for almost 85% of the increase or change in households over the 10 year period.

These groups are prime candidates for smaller dwelling units. Single-parent families may also have a stronger preference to smaller, low maintenance dwellings.

Figure 16—Change in household composition

Source: Deep End Services ; ABS; forecast.id



With these changes in age and family composition, it is instructive to now examine the existing dwelling stock in the five suburbs. Figure 17 shows the profile of the five suburbs compared to the City of Brimbank and Greater Melbourne averages.

Cairnlea is a new suburb, developed over the last 20 years. 91% of homes are detached dwellings and 53% are of 4 bedrooms or more. This dwelling mix explains the large average household size (3.7 persons in 2016).

Derrimut, where most of the suburb was developed in the last 10 years, has a similar proportion of detached dwellings, but fewer large 4+ bedroom homes.

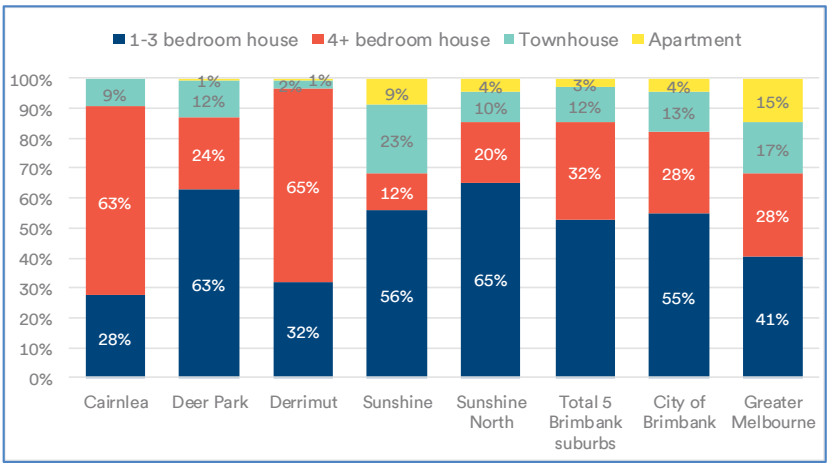
The older suburbs of Deer Park, Sunshine and Sunshine North have smaller detached homes with 13-15% of dwellings comprising townhouses and apartments. While this is similar to the Brimbank average (17%) it is well below the Melbourne average of 32%.

In view of the changing age and household mix over the next 10 years, the existing dwelling stock dominated by large, detached dwellings is unlikely to meet the preferences of the growing number of small households.

In other suburbs, there is an ageing (post war) dwelling stock that will need upgrading or replacement in future years to be attractive to new younger homebuyers or older people looking to downsize.

Figure 17—Dwelling structure by number of rooms (Census 2016)

Source: ABS



The rising mismatch between the predicted changing family structure of the surrounding suburbs – and Brimbank more generally – and a fixed dwelling stock which is difficult to change or adapt, creates an opportunity for new housing areas such as the subject site.

The indicative housing mix of 35% detached homes and 65% townhouses and apartments will address a growing demand in the area for smaller, more appropriate dwelling structures for the population. These homes are suited not only to down sizers but young couples and singles who may be working in professional or service occupations in the Sunshine NEIC. The availability of new and varied, lifestyle-appropriate dwellings will enhance the NEIC as a desirable workplace.

4.5 Integration and use of existing infrastructure

The subject site can be developed in concert with the adjoining Development Victoria site. It will present as a seamless progression of the new housing estate extending east of Cairnlea Drive. Both developments can utilise the existing road and walking paths for access and circulation and existing public transport infrastructure.

Utilities would appear capable of being easily extended to the site while existing Council services, such as rubbish collection, can be efficiently extended without significant cost to Council.

New residents are close to large employment-generating uses such as the health and education nodes, Sunshine activity centre and the West Industrial Node.

New residents have a wide range of neighbourhood and higher-order activity centres in the area, accessible by walking and bicycle trails, car or public transport (refer Figure 18). These include:

- The Cairnlea Town Centre which is a contemporary neighbourhood centre with a range of community and service uses.
- The St Albans major activity centre with its strong Asian customer and business mix.
- The larger Sunshine Activity Centre with major shopping complexes, street-based retailing, entertainment uses, tertiary education and civic and administration functions.
- Brimbank Centre, a large enclosed sub-regional shopping centre with multiple supermarkets and a wide range of specialty shops and services.

The Development Victoria housing estate is expected to include a Local Convenience Centre which would be close and well-used by new residents of the subject site. The additional 1,000 people living within the catchment of the centre will significantly improve its viability and possibly extend the range of available shops and services.

Figure 19 shows the distribution of child care centres, medical centres and pharmacies in areas beyond the subject site.

Multiple child care centres are located at Cairnlea, Deer Park and St Albans - if the subject site or the Development Victoria estate does not provide a child care centre.

The future population will have good access to established and future areas of informal open space and active playing areas and the regional walking and cycle paths that extend past the site.

A proposal in the Sunshine NEIC to naturalise the constructed sections of Jones Creek where it passes the site could receive more attention with the development of the site and greater use of the adjoining and connected paths.

Figure 18—Activity centres and employment nodes

Source: Deep End Services; VPA

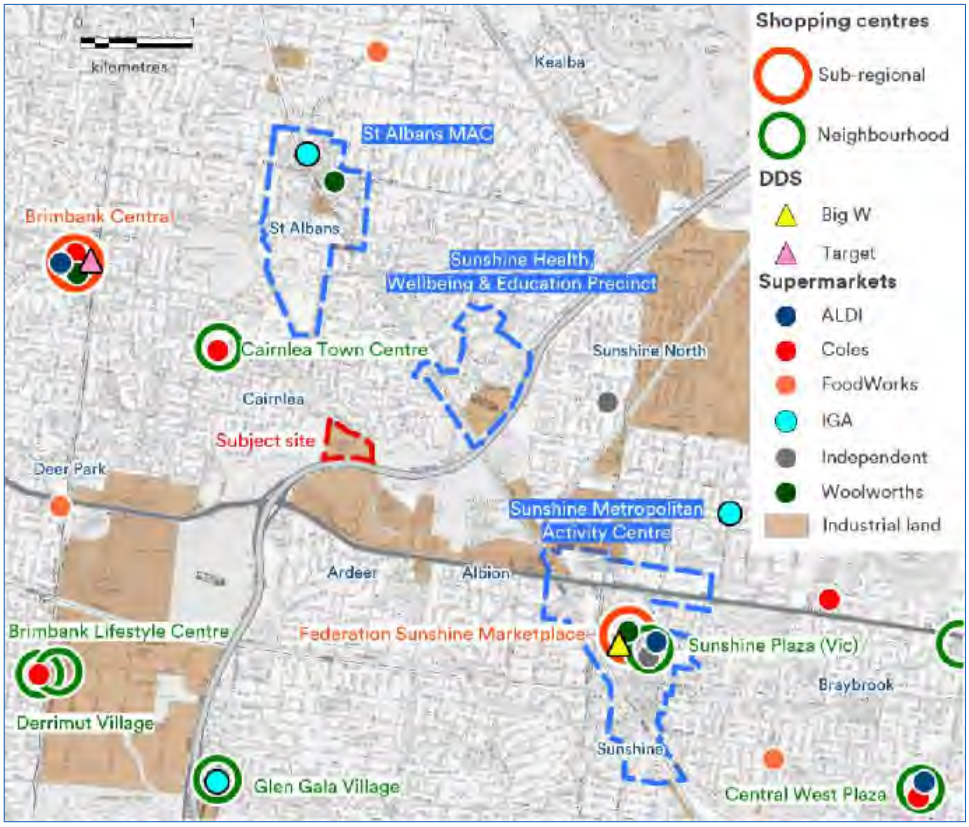
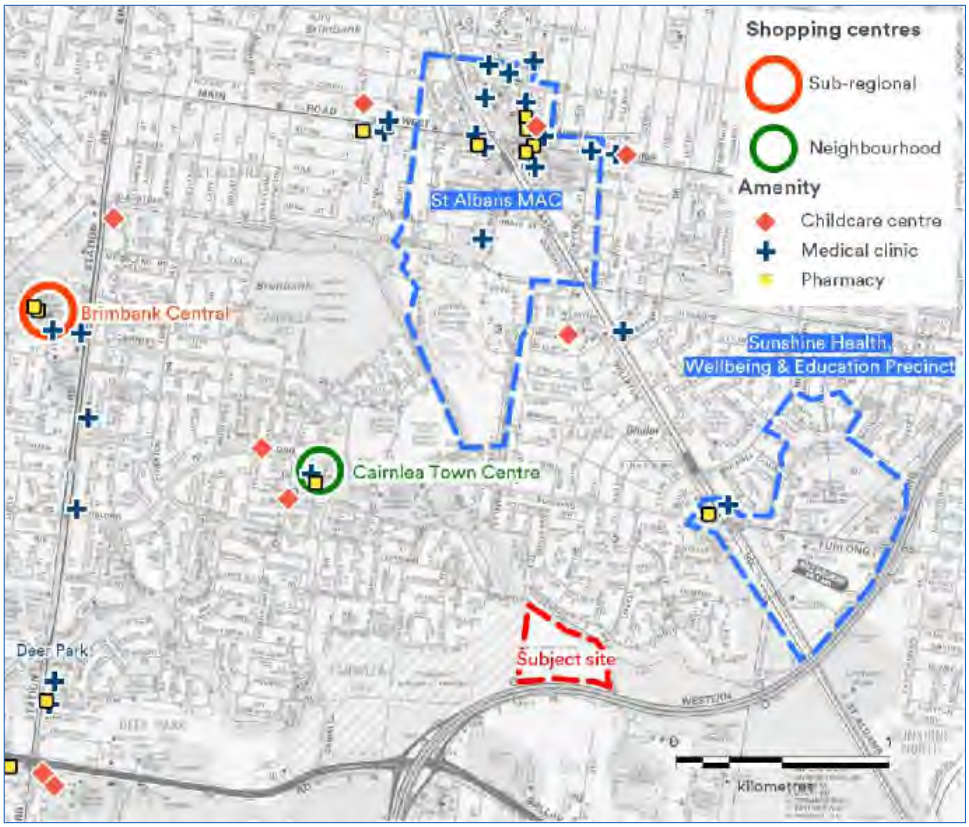


Figure 19—Child care and medical centres

Source: Deep End Services



4.6 Employment generation & State value add

A residential development across the site will generate employment during the infrastructure and subdivision works and in new home building. It will support indirect employment in the supply of materials, finished products and services and will generate additional value to the Victorian economy through on-site jobs in the construction phase.

Table 3 sets out the estimated development costs for the subdivision and housing and the direct and indirect employment levels generated in each stage.

A report by SMEC[1] for Infrastructure Victoria set out, amongst other things, the average costs of residential development in different settings. It reported the average cost to create a housing lot for precinct scale brownfield (medium density) developments of 20-80 lots per hectare was approximately $44,000 per lot. This average rate has been applied to the project.

Typical contract prices for new homes in Melbourne's outer areas range from $170,000 - $200,000. With the subject site having an indicative split of detached homes (35%) and townhouses and apartments (65%) a mid- range average cost of $185,000 ($2020) is adopted over the life of the project.

Construction costs for infrastructure, services and subdivision / lot creation is estimated at $16.1 million and the construction cost of dwellings is $67.5 million.

Applying average FTE wages in the construction industry generates an estimated **480 FTE job years** from the civil and home building works. Assuming a 5 year construction period this would be 96 FTE jobs on site for five years.

Further employment is created in the wider economy by the supply of materials, finished products, equipment and other services to the construction sector. Using ABS multipliers an additional **715 FTE job years** are generated during the construction phase.

Finally, for each job generated during the construction phase, the ABS estimate additional value multipliers for the Victorian economy. Applying differential rates to civil and construction works generates an additional **$82.1m** of additional value to the Victorian economy during construction.

Table 3— Construction employment estimates

Source: Deep End Services; ABS; SMEC

Item	Civil works	Dwelling construction	Total
Number of dwellings	365	365	365
Construction cost	$16.1m	$67.5m	$83.6m
Labour cost	$9.6m	$33.8m	$43.4m
Employment			
Direct employment (job years)	117	417	533
Direct employment (FTE job years)	105	375	480
Indirect employment (FTE job years)	90	625	715
Total employment (FTE job years)	**195**	**1,000**	**1,195**
Annual value add	$20.1m	$62.0m	$82.1m

[1] Infrastructure Provision in Different Development Settings. Metropolitan Melbourne Costing and Analysis Report, SMEC (January 2019)

4.7 Retail expenditure

Annual retail spending by future residents of the proposed community are set out in Table 4. It assumes a resident population of 1,020 people and an average spending profile similar to the current-day residents of Cairnlea.

Total annual spending by future residents will be approximately **$13.1 million** per annum of which $5.8 million will be on food, liquor and groceries and almost $2 million on takeaway food and restaurant meals.

A high proportion of this spending will be directed to local centres which should strengthen their performance and help support or increase local employment levels.

Table 4—Total estimated spending by residents ($2020)

Source: Deep End Services; ABS; Market Data Systems; Deloitte Access Economics

Spending category	Subject site
Food & Groceries	$5,309,862
Take-Home Liquor	$500,881
Prepared Food	$1,883,038
Fashion	$1,324,049
Household Goods	$2,562,834
Other Non-Food Goods	$1,178,878
Retail Services	$367,491
Total	**$13,127,033**

4.8 Rate revenue

A new community of 365 dwellings will generate valuable rate revenue for the City of Brimbank.

Based on the City of Brimbank Annual Budget report (2020), the average rates and charges levied on a residential property in the City of Brimbank in 2019/20 was **$1,567** comprising general rates ($1,150), a municipal charge ($85) and an environmental charge ($332).

Applying the average charge to 365 dwellings would generate **$572,000** ($2020) in rate revenue.

5

Conclusions

The proposed amendment to rezone 10 hectares on IN3Z to RGZ resolves a redundant pocket of industrial land and brings an infill development to a neglected area of the City of Brimbank.

The proposal lends support to the objectives of the Sunshine NEIC and is identified as an area of land use change in local planning policy.

The proposal will generate a number of economic benefits including:

- Delivering a range of housing options better suited to the needs of a changing age and household profile.
- Bringing a suitable, low impact use to an infill site which has limited prospects for other land use options.
- Utilising existing community infrastructure and services.
- Delivering employment benefits during the construction phase and spending benefits to local centres when fully built and populated.
- Increasing rate revenue for Council that can be returned with improved community infrastructure.

The proposal has a range of positive benefits that outweigh the retention of the existing zone and continuing the vacant, non-productive function of the land. For all the above reasons, the amendment should be supported.

Appendix 2 Title Document

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10224 FOLIO 212 Security no : 124088077357V
Produced 11/02/2021 05:31 PM

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 315806X.
PARENT TITLE Volume 09721 Folio 278
Created by instrument PS315806X 14/08/1992

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
PDSD SUPER FUND PTY LTD of 56 VALE PARK DRIVE DONVALE VIC 3111
AN277786Y 15/11/2016

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

AGREEMENT as to part Section 173 Planning and Environment Act 1987
AL959317D 16/06/2015

DIAGRAM LOCATION

SEE PS315806X FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: 103 REID STREET ARDEER VIC 3022

DOCUMENT END

Application by a responsible authority for the making of a recording of an agreement

Section 181 Planning and Environment Act 1987

AL959317D
16/06/2015 $116.50 173

Lodged by:

Name:	HWL EBSWORTH LAWYERS
Phone:	+61 3 8644 3500
Address:	Level 26, 530 Collins Street Melbourne VIC 3000
Reference:	513300
Customer Code:	0985 X

The Responsible Authority having made an agreement referred to in Section 181(1) of the *Planning and Environment Act 1987* requires a recording to be made in the Register.

Land: *(volume and folio)* Part of
Volume 10224 Folio 212 – being the land shown hatched on Plan attached which = 3.598 ha

Responsible Authority: *(full name and address including postcode)*
BRIMBANK CITY COUNCIL of Municipal Offices, Alexander Avenue, Sunshine VIC 3020

Section and Act under which agreement made:
Section 173 of the Planning and Environment Act 1987

A copy of the agreement is attached to this Application.

Date: 7 APR 2015

Signature for Responsible Authority: .....

Name of Officer: *(full name)* KRISTEN GILBERT, MANAGER CITY PLANNING.

Form 18

THE BACK OF THIS FORM MUST NOT BE USED

Land Victoria, 570 Bourke Street, Melbourne, 3000, Phone: 8636-2010

HWL EBSWORTH
LAWYERS

Deed of Agreement

Under s173 of the Planning and Environment Act 1987

Brimbank City Council

and

LONGPORT PTY LTD

103 Reid Street Ardeer

Ref: DV: 513300

Doc ID 227544533/v1

Level 26, 530 Collins Street, Melbourne VIC 3000 Australia
PO Box 3, Collins Street West VIC 8007 Australia
DX 564 Melbourne

Telephone +61 3 8644 3500
Facsimile 1300 365 323 (Australia) +61 3 9034 3257 (International)
hwlebsworth.com.au

HWL EBSWORTH
LAWYERS

AL959317D
16/06/2015 $116.50 173

Table of contents

HWL EBSWORTH
LAWYERS

Deed of Agreement

AL959317D
16/06/2015 $116.50 173

Date 8 May 2015

Parties

BRIMBANK CITY COUNCIL

of Municipal Offices, Alexander Avenue, Sunshine VIC 3020

(**Council**)

LONGPORT PTY LTD ACN 006 844 971

of 136 Bell Street, Coburg VIC 3058

(**Owner**)

Recitals

A. Council is the Responsible Authority pursuant to the Act for the administration and enforcement of the Planning Scheme, which applies to the Subject Land

B. The Owner is or is entitled to be the registered proprietor of the Subject Land, which is the land over which this Agreement is intended to be registered.

C. In May 2008, native vegetation was removed and destroyed at the Subject Land.

D. On 26 November 2009, the Owner entered into a section 173 agreement with Council in part settlement of Enforcement Proceedings instigated by Council in respect of the removal and destruction of the vegetation at the Subject Land ("**First Agreement**").

E. The Owner has applied to Council to end the First Agreement.

F. Pursuant to the orders in the Enforcement Proceedings, the Owner paid an Offset Payment to Council. The First Agreement provided a five year period, which ended on 26 November 2014, within which Council was to apply the Offset Payment (together with any interest earned) towards any native vegetation offsets that may be required for the lawful use and/or development of any part of the Affected Area of the Subject Land ("**Offset Period**").

G. Council has agreed to extend the Offset Period until 26

November 2016.

H. The Parties have agreed to enter into this Agreement:

(a) to provide for the extension of the Offset Period;

(b) to establish an agreed baseline for the flora and fauna values of the Affected Area prior to the removal and damage referred to at Recital **C** for the purpose of the Owner calculating and providing native vegetation offsets in accordance with the *Victorian Native Vegetation Management Framework* (DSE 2002) in respect of any future lawful use or development of the Affected Area of the Subject Land

(c) to achieve or advance the objectives of planning in Victoria and the objectives of the Planning Scheme in respect of the Subject Land.

I. This Agreement is made under Division 2 of Part 9 of the Act.

This deed witnesses that in consideration of, among other things, the mutual promises contained in this deed the parties agree as follows:

1. Definitions and interpretation clauses

1.1 Definitions

Act	means the *Planning and Environment Act 1987* (Vic).
Agreement	means this Deed of Agreement and any Agreement executed by the Parties expressed to be supplemental to this Agreement.
Affected Area	means the area of the Subject Land shown hatched in the plan attached at Annexure 'A' to this Agreement.
Business Day	means a day that is not a Saturday, Sunday or public holiday in Melbourne.
Claim	means any claim, action, proceeding or demand made against the person concerned, however it arises and whether it is present

or future, fixed or unascertained, actual or contingent.

Deemed Condition	means the agreed environmental condition of the Affected Area of the Subject Land, including species, composition, habitat values, extent, ecological value and environmental significance of the native vegetation, as detailed in report no. 0938.3 titled; "*Flora and Fauna assessment report on land at 103 Reid* Street, *Ardeer, Victoria*", by Abzeco Pty Ltd dated September 2009.
Enforcement Proceeding	means the application by the Council for enforcement orders to be made by the Victorian Civil and Administrative Tribunal in proceeding P695/2009
GST	means the goods and services tax as defined in the *GST Act*.
GST Act	means the *A New Tax System (Goods and Services Tax) Act 1999* (Cth) (as amended).
Loss	means any loss, damage, cost, expense or liability incurred by the person concerned, however it arises and whether it is present or future, fixed or unascertained, actual or contingent.
Mortgagee	means the person or persons registered or entitled from time to time to be registered by the Registrar of Titles as mortgagee of the Subject Land or any part of it.
Offset Payment	means an amount of $90,000.00 being part of the $170,000 required to be paid to the Council pursuant to orders made on 27 October 2009 in the Enforcement Proceeding for the purpose of native vegetation remediation or offset works at the Subject Land or other land, the maximum amount being the actual amount that has in fact been received by the Council at the time that any payment towards offset works at the Subject Land may be triggered under clause 4.2 of this Agreement.
Owner	means the person or persons registered or entitled from time to time to be registered by the Registrar of Titles as proprietor or proprietors of an estate in fee simple in the Subject Land or any part of it and includes a Mortgagee-in-possession.
Party or Parties	means the Owner and Council under this Agreement as appropriate.

Planning Scheme	means the Brimbank Planning Scheme and any other Planning Scheme which applies to the Subject Land.
Subject Land	means the land within the Scheme situated at 103 Reid Street, Ardeer being the southernmost piece (6.200 ha) of the two pieces of land described in certificate of title volume 10224 folio 212.
Tax Invoice	in relation to a supply, means an invoice for the supply required by the GST Act to support a claim by the recipient for an Input Tax Credit for the GST on the supply.
Termination Date	means the date upon which this Agreement ends in accordance with section 177 of the Act, namely upon the provision of remediation or offset requirements in accordance with this Agreement to the satisfaction of the Council for the whole of the Affected Area of the Subject Land.
VCAT	means the Victorian Civil and Administrative Tribunal.

1.2 Interpretation

(a) In this document, unless the context otherwise requires:

(i) The singular includes the plural and vice versa.

(ii) A reference to a gender includes a reference to each other gender.

(iii) A reference to a person includes a reference to a firm, corporation or other corporate body and that person's successors in law.

(iv) If a Party consists of more than one person this Agreement binds them jointly and each of them severally.

(v) A term used in this Agreement has its ordinary meaning unless that term is defined in this Agreement. If a term is not defined in this Agreement and it is defined in the Act it has the meaning as defined in the Act.

(vi) A reference to an Act, Regulation or the Planning Scheme includes any Acts, Regulations or amendments amending, consolidating or replacing the Act, Regulation or Planning Scheme.

(vii) The introductory clauses to this Agreement are and will be deemed to form part of this Agreement.

ii) Headings are for guidance only and do not affect the interpretation of this Agreement.

(b) The obligations of the Owner under this Agreement, will take effect as separate and several covenants which are annexed to and run at law and equity with the Subject Land; and

(i) bind the Owner, its successors, transferees and permitted assigns, the registered proprietor or proprietors for the time being ot the Subject Land; and

(ii) if the Subject Land is subdivided further, this Agreement must be read and applied so that each subsequent Owner of a lot is only responsible for those covenants and obligations which relate to that Owner's lot.

2. Owner's obligations

2.1 Deemed Condition of the Subject Land

The Owner covenants and agrees that the Deemed Condition is to be the basis for assessing any native vegetation remediation or offsets required to be provided in respect of the Affected Area of the Subject Land in accordance with this Agreement.

2.2 Provision of offsets

The Owner covenants and agrees that prior to the commencement of any use or development of any part of the Affected Area of the Subject Land for a lawful purpose (whether or not a planning permit is required under the Scheme for that use or development), native vegetation offsets are to be calculated and provided by the Owner in accordance with the *Victorian Native Vegetation Management Framework* (DSE 2002) as if that Affected Area is in the Deemed Condition, to the satisfaction of Council.

3. Further obligations

3.1 Notice and registration

The Owner will bring this Agreement to the notice of all prospective purchasers, Mortgagees, lessees, charges, transferees and assigns of the Subject Land.

3.2 Giving effect to this Agreement

The Owner will do all things necessary to give effect to this Agreement, including executing any further documents and will comply with its obligations under this Agreement.

3.3 Recording by Registrar of Titles

The Owner will consent to Council making application to the Registrar of Titles to make a recording of this Agreement in the Register on the Certificate of Title of the Subject Land in accordance with s181 of the Act and do all things necessary to enable Council to do so including signing any further agreement, acknowledgement or document or procuring the consent to this Agreement of any Mortgagee or caveator to enable the recording to be made in the Register under that section.

3.4 Council's costs to be paid

(a) The Owner will immediately pay to Council, Council's reasonable costs and expenses (including legal expenses) of and incidental to the preparation, drafting, finalisation, engrossment, execution, registration and enforcement of this Agreement which are and until paid will remain a debt due to Council by the Owner.

(b) If in dispute, Council may have the costs assessed by the Law Institute of Victoria Costing Service and the parties will be bound by any assessment, and the cost of any assessment will be paid equally by the parties.

3.5 Mortgagee to be Bound

The Owner covenants to obtain the consent of any mortgagee to be bound by the covenants in this Agreement if the mortgagee becomes mortgagee in possession of the Subject Land.

3.6 Covenants run with the Subject Land

The Owner's obligations in this Agreement are intended to take effect as covenants which shall be annexed to and run at law and in equity with the Subject Land and every part of it, and bind the Owner and its successors, assignees and transferees, the registered proprietor or proprietors for the time being of the Subject Land and every part of the Subject Land.

4. Council's Covenants

4.1 Deemed Condition of the Subject Land

Council covenants and agrees that the Deemed Condition is to be the basis for assessing any native vegetation remediation or offsets required to be provided in respect of the Affected Area of the Subject Land in accordance with this Agreement.

4.2 Offset Payment

Council covenants and agrees that during the period that ends on 26 November 2016, if any part of the Affected Area of the Subject Land is used and/or developed for a lawful purpose that requires native vegetation offsets including deemed offsets pursuant to this

Agreement, Council must apply the Offset Payment (together with any interest earned) towards such native vegetation offsets to the Council's satisfaction.

Any balance remaining from the Offset Payment after 26 November 2016 may be used by the Council for remediation or management of native vegetation in respect of any land, at the Council's absolute discretion.

4.3 Offset Payment Account

Council covenants and agrees that during the period that ends on 26 November 2016, to hold the Offset Payment in an interest bearing bank account separate from its general and administrative accounts.

5. Agreement under Section 173 of the Act

5.1 Agreement under the Act

Council and the Owner agree without limiting or restricting their respective powers to enter into this Agreement and, insofar as it can be so treated, this Agreement is made pursuant to section 173 of the Act.

6. Owner's warranties

6.1 Owner's warranties

Without limiting the operation or effect which this Agreement has, the Owner warrants that apart from the Owner and any other person which has consented in writing to this Agreement, no other person has any interest, either legal or equitable, in the Subject Land which may be affected by this Agreement.

7. Successors in title

7.1 Successors in title

Without limiting the operation or effect which this Agreement has, the Owner must ensure that until such time as a memorandum of this Agreement is registered on the title to the Subject Land, successors in title shall be required to:

(a) give effect to and do all acts and sign all documents which will require those successors to give effect to this Agreement; and

(b) execute a deed agreeing to be bound by the terms of this Agreement.

8. Notices

8.1 Service

A notice or other communication required or permitted to be served by a Party on another Party must be in writing and may be served:

(a) by delivering it personally to that Party;

(b) by sending it by prepaid post addressed to that Party at the address set out in this Agreement or subsequently notified to each Party from time to time; or

(c) by sending it by facsimile provided that a communication sent by facsimile shall be confirmed immediately in writing by the sending Party by hand delivery or prepaid post.

8.2 Time of service

A notice or other communication is deemed served:

(a) if delivered, on the next following business day

(b) if posted, on the expiration of two business days after the date of posting, or

(c) if sent by facsimile, on the next following business day unless the receiving Party has requested retransmission before the end of that business day.

9. Miscellaneous

9.1 Time of the essence

Time is of the essence as regards all dates, periods of time and times specified in this Agreement.

9.2 Commencement of Agreement

Unless otherwise provided in this Agreement, this Agreement commences from the date of this Agreement.

9.3 Default

(a) If the Owner fails to comply with the provisions of this Agreement, Council may serve a notice on the Owner specifying the works, matters and things in respect of which the Owner is in default.

(b) If the alleged default continues for 30 days after the service of such notice, Council may, by its officers, employees, agents and contractors, enter the Subject Land and ensure that the works, matters and things are carried out.

(c) The costs incurred by the Council in undertaking the works as a result of the Owner's default will be payable by the Owner.

9.4 Ending of Agreement

This Agreement ends on the date that the Council issues a letter confirming that the Owner has complied with all of its obligations under this Agreement.

9.5 Application to Registrar

As soon as reasonably practicable after the Agreement has ended, Council will, at the request and at the cost of the Owner make application to the Registrar of Titles under s183(2) of the Act to cancel the recording of this Agreement on the register.

9.6 No fettering of Council's powers

It is acknowledged and agreed that this Agreement does not fetter or restrict the power or discretion of Council to make any decision or impose any requirements or conditions in connection with the granting of any planning approval or certification of any plans of subdivision applicable to the Subject Land or relating to any use or development of the Subject Land.

9.7 No waiver

(a) Any time or other indulgence granted by Council to the Owner or any variation of the terms and conditions of this Agreement or any judgment or order obtained by Council against the Owner will not in any way amount to a waiver of any of the rights or remedies of Council in relation to the terms of this Agreement.

9.8 Severability

(a) If a court, arbitrator, tribunal or other competent authority determines that a word, phrase, sentence, paragraph or clause of this Agreement is unenforceable, illegal or void then it must be severed and the other provisions of this Agreement will remain operative.

(b) Clause 9.8(a) will not apply if to do so will materially affect the commercial arrangement formed by this Agreement.

9.9 Proper law

This Agreement is governed by and the Owner submits to the laws of the State of Victoria.

Executed as a deed

SIGNED, SEALED AND DELIVERED by)
and on behalf of **Brimbank City Council** by)
the Manager City Planning pursuant to the)
power delegated to that person by an)
Instrument of Delegation dated ~~2 October 2014~~ 21 April 2015)

Witness Signature

Michael Mielczarek
Witness Name

AL959317D
16/06/2015 $116.50 173

EXECUTED by LONGPORT PTY LTD ACN 006 844 971 in accordance with)
section 127(1) of *Corporations Act 2001* by)
being signed by authorised persons)

Director

Dino Mazzei
Name of Director

1/136 Bell St Coburg
Address

Director / Company secretary
* delete whichever is not applicable

Peter Mazzei
Name of Director / secretary

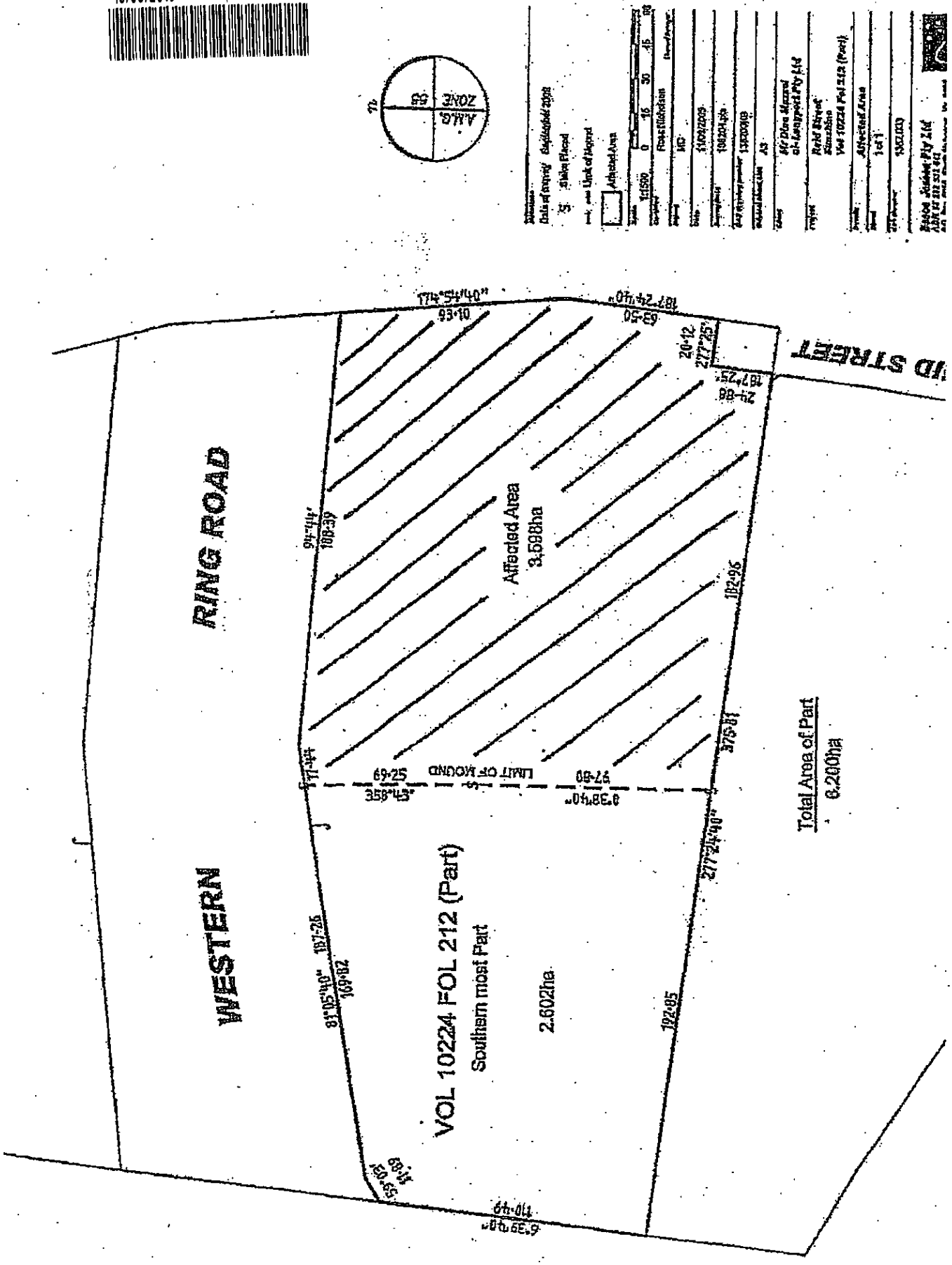
1/136 Bell St Coburg
Address

Annexure 'A' - Plan of Affected Area

AL959317D
16/06/2015 $116.50 173

AL959317D

16/06/2015 $116.50 173



PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

STAGE NO. /

LTO use only

EDITION 3

Plan Number

PS 315806X

Location of Land

Parish: MARIBYRNONG

Section: 8

Crown Allotment: B AND C(Part)

LTO Base Record: CHART 17 (3061)

Title Reference: Vol 9721 Fol278

Last Plan Reference: LP 204758R (Lot 2)

Postal Address: Reid Street
(at time of subdivision) Ardeer 3022.

AMG Co-ordinates (of approx. centre of land in plan) E 306400 N 5817600 ZONE: 55

Vesting of Roads and / or Reserves

Roads and reserves vest in the council/body/person named when the appropriate vesting date is recorded or transfer registered. Only roads and reserves marked thus (%) vest upon registration of this plan.

Identifier	Council/Body/Person

Council Certification and Endorsement

Council Name: CITY OF SUNSHINE Ref: 92/104

A. This is a plan under section 35 of the Subdivision Act 1988 which does not create any additional lots.

B. This plan is exempt from Part 3 of the Subdivision Act 1988.

~~C. This is a plan under section 35 of the Subdivision Act 1988 which creates (an) additional lot(s).~~

D. It is certified under section 6 of the Subdivision Act 1988.

~~E. It is certified under section 11(7) of the Subdivision Act 1988.~~

~~F. Date of original certification under section 6. / /~~

G. This is a statement of compliance under section 21 of the Subdivision Act 1988.

Council Delegate
~~Council Seal~~

Date 4 / 5 / 1992

Re-certified under section 11(7) of the Subdivision Act 1988.

Council Delegate
Council Seal

Date / /

Notations

Staging This ~~is~~/is not a staged subdivision
Planning Permit No. PERMIT NOT REQUIRED.

Depth Limitation DOES NOT APPLY

Land to be acquired by compulsory process: NIL

Land to be acquired by agreement:

All the land is to be acquired free from all encumbrances other than any easements specified on this plan.

DIMENSIONS UNDERLINED ARE NOT THE RESULT OF THIS SURVEY

Survey: This plan is based on survey and is compiled from Roads Corporation SP18480.

This survey has been connected to permanent marks no(s). 329
in Proclaimed Survey Area No. ———

Easement Information

Legend: A - Appurtenant Easement E - Encumbering Easement or Condition in Crown Grant in the nature of an Easement
R - Encumbering Easement (Road)

Easements marked (-) are existing easements
Easements marked (+) are created upon registration of this plan.
Easements marked (*) are created when the appropriate vesting date is recorded or transfer registered.
Easements marked (#) are removed when the appropriate vesting date is recorded or transfer registered.

Symbol	Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
-	E-1	WATER SUPPLY	See Diagram	C/E G55534	M.M.B.W.
-	E-2	WATER SUPPLY	See Diagram	C/E G55534	M.M.B.W.

LTO use only

Statement of Compliance/ Exemption Statement

Received ☑

Date 28/5/92

LTO use only

PLAN REGISTERED

Time

Date 14/8/92

Assistant Registrar of Titles

Sheet 1 of 3 Sheets

ROADS CORPORATION

Land Information and Survey Department
60 Denmark Street
Kew 3101.

LICENSED SURVEYOR (PRINT) IAN J. CHAMBERS.

SIGNATURE ..... DATE 27/3/92

SR 9231

REF. SP 18480 PS1 VERSION ———

DATE 4/5/92

COUNCIL DELEGATE SIGNATURE

Original sheet size A3

RC PLANT035.DGN

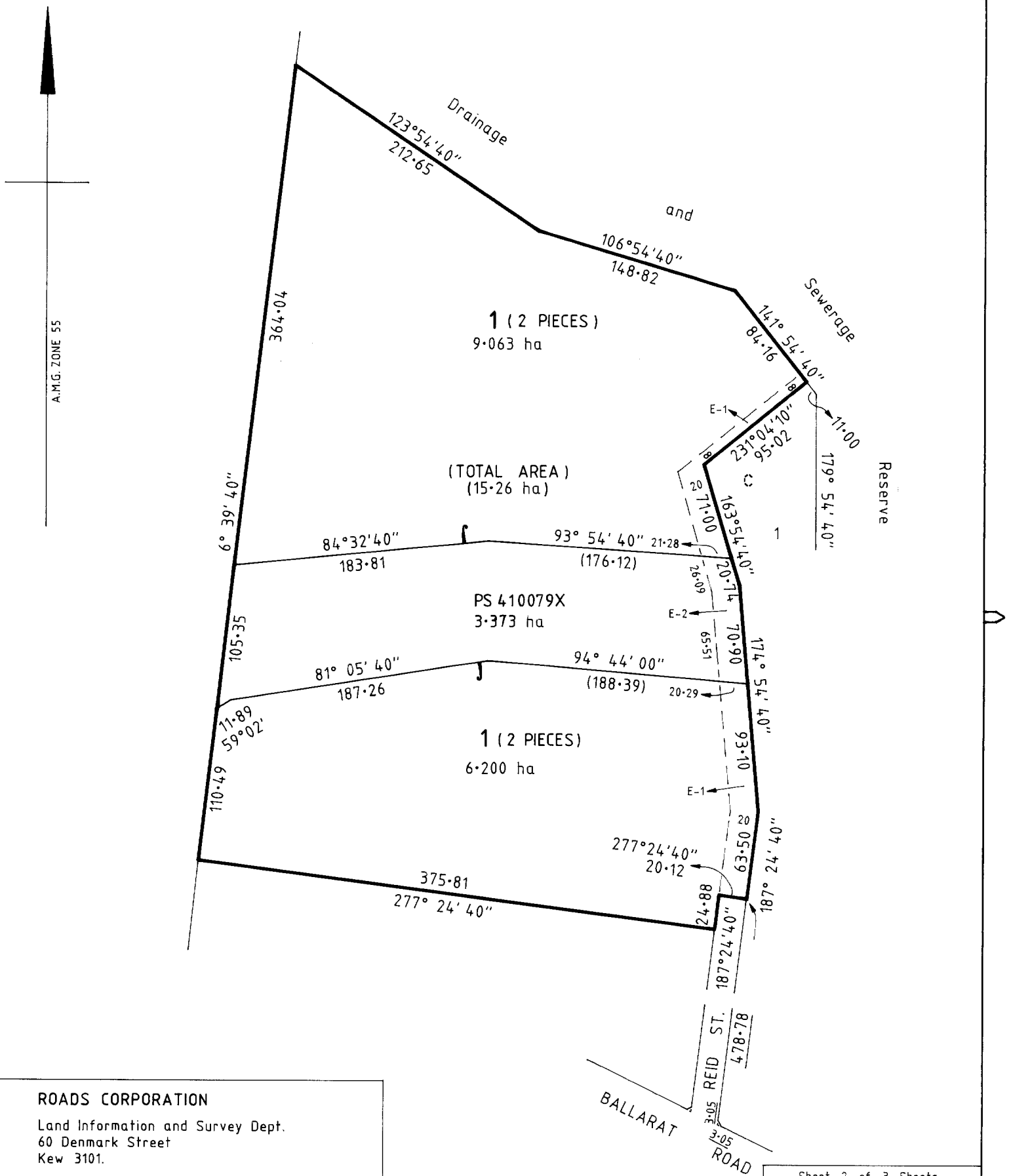
PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

Stage No.

Plan Number

PS 315806X



ROADS CORPORATION

Land Information and Survey Dept.
60 Denmark Street
Kew 3101.

Sheet 2 of 3 Sheets

ORIGINAL

SCALE 1:2500

SHEET SIZE A3

SCALE 25 0 25 50 75 100

LENGTHS ARE IN METRES

LICENSED SURVEYOR (PRINT) IAN J. CHAMBERS

SIGNATURE ..... DATE 27/3/92

SR 9231

REF. SP 18480 PS1

VERSION

DATE 4/5/92

COUNCIL DELEGATE SIGNATURE

Original sheet size A3

RC
PLANT02.DGN

PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

Stage No. /

Plan Number PS 315806X

VESTING DATES & TRANSFER REGISTRATION DATES OF ACQUIRED LAND

Land affected	Land acquired by compulsory process prior to certification			Land acquired by compulsory process after registration of plan				Land acquired by agreement	LTO reference of transfers or notifications of vesting dates	Assistant Registrar of Titles Signature
	Vesting date	Gov't. Gaz.		Date of recording of vesting date	Vesting date	Gov't. Gaz.		Date of registration of transfer		
		Page	Year			Page	Year			
RESERVE No.1	——	——	——	——	——	——	——	23·8·94	T2666398	

Sheet 3 of 3 Sheets

ROADS CORPORATION

Land Information and Survey Dept.
60 Denmark Street
Kew 3101.

LICENSED SURVEYOR (PRINT) IAN J. CHAMBERS.

SIGNATURE ..... DATE 27 / 3 / 92

SR 9231

REF. SP 18480 PS1 VERSION ——

DATE 4 / 5 / 92

COUNCIL DELEGATE SIGNATURE

Original sheet size A3

RC
PLANT02.DGN

MODIFICATION TABLE
RECORD OF ALL ADDITIONS OR CHANGES TO THE PLAN

PLAN NUMBER

PS 315806 X

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			DATE	TIME		
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" "	REMOVAL OF RESERVE STATUS	PS 410079X			3	JS.

Register Search Statement - Volume 10153 Folio 349

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 10153 FOLIO 349 Security no : 124088077394F
Produced 11/02/2021 05:34 PM

LAND DESCRIPTION

Lot 1 on Plan of Subdivision 315853N.
PARENT TITLE Volume 09721 Folio 277
Created by instrument PS315853N 13/10/1993

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
PDSD SUPER FUND PTY LTD of 136-144 BELL STREET COBURG VIC 3058
AM901522U 30/06/2016

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS315853N FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: 18B JONESFIELD CORNER CAIRNLEA VIC 3023

DOCUMENT END

PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

STAGE NO. /

LTO use only

EDITION 4

Plan Number

PS 315853N

Location of Land

Parish: MARIBYRNONG
Section: 8
Crown Allotment: C, D AND E (Part)
Section: 9
Crown Allotment: G, H, J AND K (Part)
LTO Base Record: CHARTS 17 AND 18 (3061)
Title Reference: Vol 5189 Fol 759, Vol 8095 Fol 660, Vol 8858 Fol 393, Vol 9103 Fol 597, Vol 9185 Fol 356, Vol 9354 Fol 349, Vol 9679 Fol 744, Vol 9881 Fol 938, Vol 9721 Fol 277 & Vol 10010 Fol 374.
Last Plan Reference: CP 107886, LP 114514, LOT 1 + PART (PART) OF LOT 2 LP 204758R and LP 206595H LOT 1 LOT 2 (PART) + FORMER ROAD
Postal Address: (at time of subdivision) HULETT STREET, SUNSHINE. 3020

AMG Co-ordinates (of approx. centre of land in plan) E 307300 N 5817500 ZONE: 55

Council Certification and Endorsement

Councils Name: CITY OF SUNSHINE Ref: 92/219

A. This is a plan under section 35 of the Subdivision Act 1988 which does not create any additional lots.

B. This plan is exempt from Part 3 of the Subdivision Act 1988.

~~C. This is a plan under section 35 of the Subdivision Act 1988 which creates (an) additional lot(s).~~

D. It is certified under section 6 of the Subdivision Act 1988.

~~E. It is certified under section 11(7) of the Subdivision Act 1988.~~

~~F. Date of original certification under section 6. / /~~

~~G. This is a statement of compliance under section 21 of the Subdivision Act 1988.~~

Council Delegate
~~Council Seal~~

Date 10 / 5 / 93

Re-certified under section 11(7) of the Subdivision Act 1988.

Council Delegate
Council Seal

Date / /

Vesting of Roads and / or Reserves

Roads and reserves vest in the council/body/person named when the appropriate vesting date is recorded or transfer registered. Only roads and reserves marked thus (%) vest upon registration of this plan.

Identifier	Council/Body/Person

Notations

Staging This ~~is~~/is not a staged subdivision
Planning Permit No. PERMIT NOT REQUIRED

Depth Limitation DOES NOT APPLY

Land to be acquired by compulsory process:

Land to be acquired by agreement:

All the land is to be acquired free from all encumbrances other than any easements specified on this plan.

THE LAND BEING SUBDIVIDED IS ENCLOSED WITHIN THICK CONTINUOUS LINES

DIMENSIONS UNDERLINED ARE NOT THE RESULT OF THIS SURVEY

AREA OF LOTS 5 AND 6 ARE COMPUTED.

Survey THIS PLAN IS BASED ON SURVEY AND IS COMPILED FROM ROADS CORPORATION SP 18479A
This survey has been connected to permanent marks no. 328 in Proclaimed Survey Area No. ———

Easement Information

Legend: A - Appurtenant Easement E - Encumbering Easement or Condition in Crown Grant in the nature of an Easement
R - Encumbering Easement (Road)

Easements marked (-) are existing easements
Easements marked (+) are created upon registration of this plan.
Easements marked (*) are created when the appropriate vesting date is recorded or transfer registered.
Easements marked (#) are removed when the appropriate vesting date is recorded or transfer registered.

Symbol	Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
		SEE SHEET 2			

LTO use only

Statement of Compliance/ Exemption Statement

Received ☑

Date 27 / 7 / 93

LTO use only

PLAN REGISTERED

Time 9.50

Date 13/ 10 /93

ZKC

Assistant Registrar of Titles

Sheet 1 of 7 Sheets

ROADS CORPORATION
Land Information and Survey Department
60 Denmark Street
Kew 3101.

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SR 9230

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RC
PLANT035.DGN

PLAN OF SUBDIVISION Under Section 35 of the Subdivision Act 1988	STAGE NO. /	LTO use only EDITION	Plan Number PS 315853N

Easement Information

Legend: A - Appurtenant Easement E - Encumbering Easement or Condition in Crown Grant in the Nature of an Easement
R - Encumbering Easement (Road)

Easements marked (-) are existing easements
Easements marked (+) are created upon registration of this plan.
Easements marked (*) are created when the appropriate vesting date is recorded or transfer registered.
Easements marked (#) are removed when the appropriate vesting date is recorded or transfer registered.

Symbol	Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of
-	E-1	Drainage & Sewerage	3·05	LP 138678F	Lots in 138678F
-	E-2	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheets 5 & 6	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-3	Transmission of Electricity	See Sheet 5	C/E 2380082	S.E.C.V.
-	E-3	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-4	Transmission of Electricity	33·53	C/E 1117852	S.E.C.V.
-	E-4	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-5	Carriageway	20·12	Book 426 Mem 306	The Victorian Railways Commissioners
-	E-5	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-6	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883213	Land coloured Purple in Transfer 883213 being part of Vol 3378 Fol 542
-	E-6	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-7	Transmission of Electricity	See Sheet 5 & 6	C/E 2051969	S.E.C.V.
-	E-8	Power Line	See Sheet 6	LP 206595H Section 103B of the State Electricity Commission Act 1958	S.E.C.V.
-	E-9	Carriageway	See Sheet 5 & 6	Book 426 Mem 306	The Victorian Railways Commissioners
-	E-10	Electricity Supply	See Sheet 6	LP 129672	Lots in LP 129672
-	E-10	Carriageway	See Sheet 6	Book 426 Mem 306	The Victorian Railways Commissioners
-	E-11	Railway Siding	3·09	Transfer 883213	Land coloured Red in Vol 4349 Fol 649
-	E-12	Railway Siding	6·06	Transfer 883213	Land coloured Red in Vol 4349 Fol 649
-	E-12	Electricity Supply	6·06	LP 129672	Lots in LP129672
-	E-13	Transmission of Electricity	12·19	N/E P989799N (88-2 TLA)	S.E.C.V.
-	E-13	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-14	Transmission of Electricity	See Sheet 5	N/E P989798R (88-2 TLA)	S.E.C.V.
-	E-14	To allow Dust, Fumes, Noise, Smoke, Vibrations & Disturbance caused by Quarrying, Blasting & Crushing.	See Sheet 5	Transfer 883215	Land coloured Red in Transfer 883215 being part of Vol 3349 Fol 753
-	E-15	Transmission of Electricity	See Sheets 5 & 6	N/E P989800B (88-2 TLA)	S.E.C.V.

Sheet 2 of 7 Sheets

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Land Information and Survey Dept.
60 Denmark Street
Kew 3101.

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SR 9230
REF. SP 18479A PS1 VERSION ——

DATE / /
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Original sheet size A3

RC
PLANT02.DGN

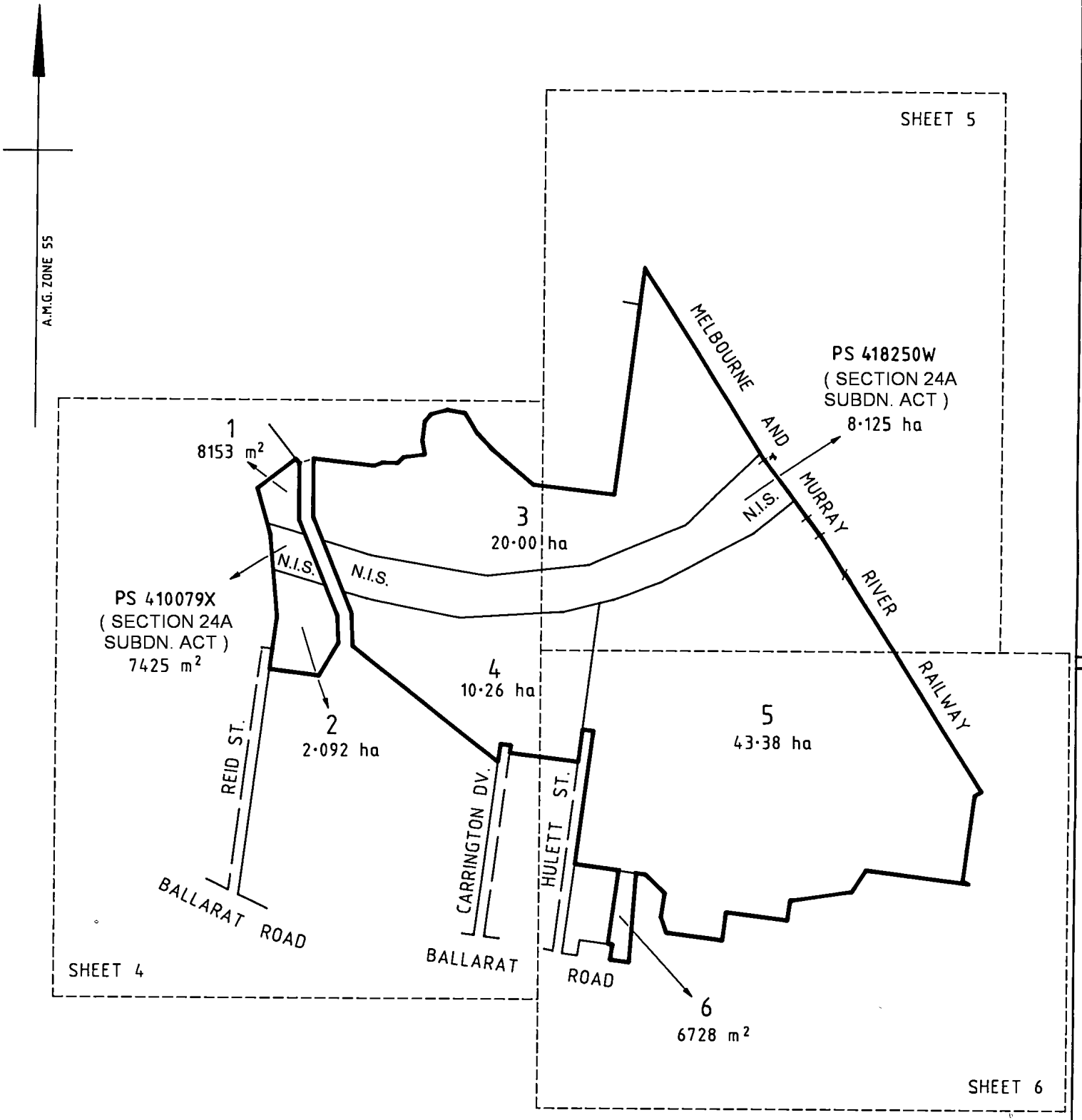
PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

Stage No.

Plan Number

PS 315853N



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60 Denmark Street
Kew 3101.

ORIGINAL		SCALE		
SCALE	SHEET SIZE	75 0 75 150 225 300	LICENSED SURVEYOR (PRINT) IAN JOHN CHAMBERS L.S.	Sheet 3 of 7 Sheets
1:7500	A3	LENGTHS ARE IN METRES	SIGNATURE ..... DATE / /	DATE / /
			SR 9230 REF. SP 18474A PS1 VERSION	COUNCIL DELEGATE SIGNATURE
				Original sheet size A3

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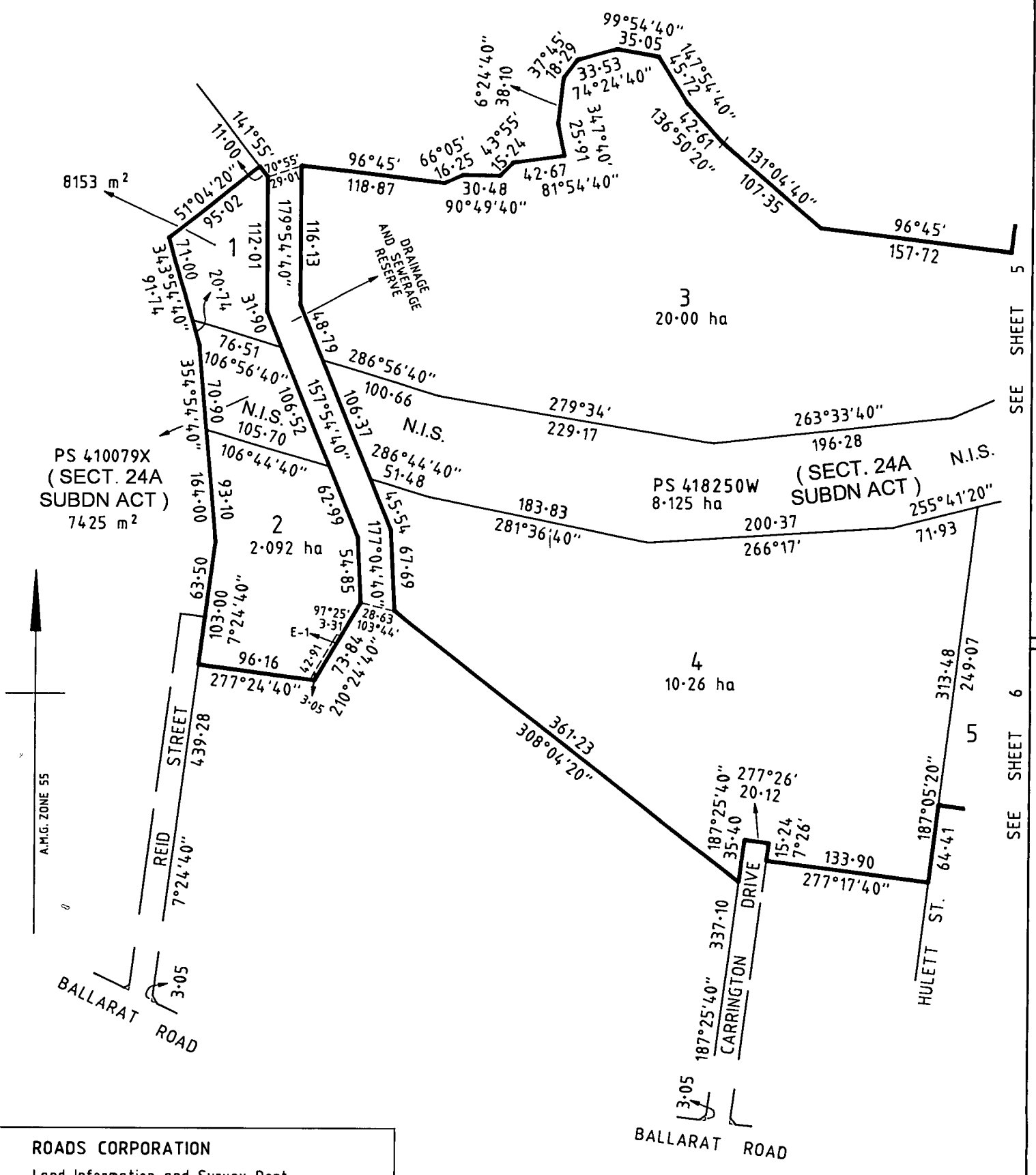
PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

Stage No.

Plan Number

PS 315853N



ROADS CORPORATION

Land Information and Survey Dept.
60 Denmark Street
Kew 3101.

Sheet 4 of 7 Sheets

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REF. SP 18479A PS1 VERSION

DATE / /

COUNCIL DELEGATE SIGNATURE

Original sheet size A3

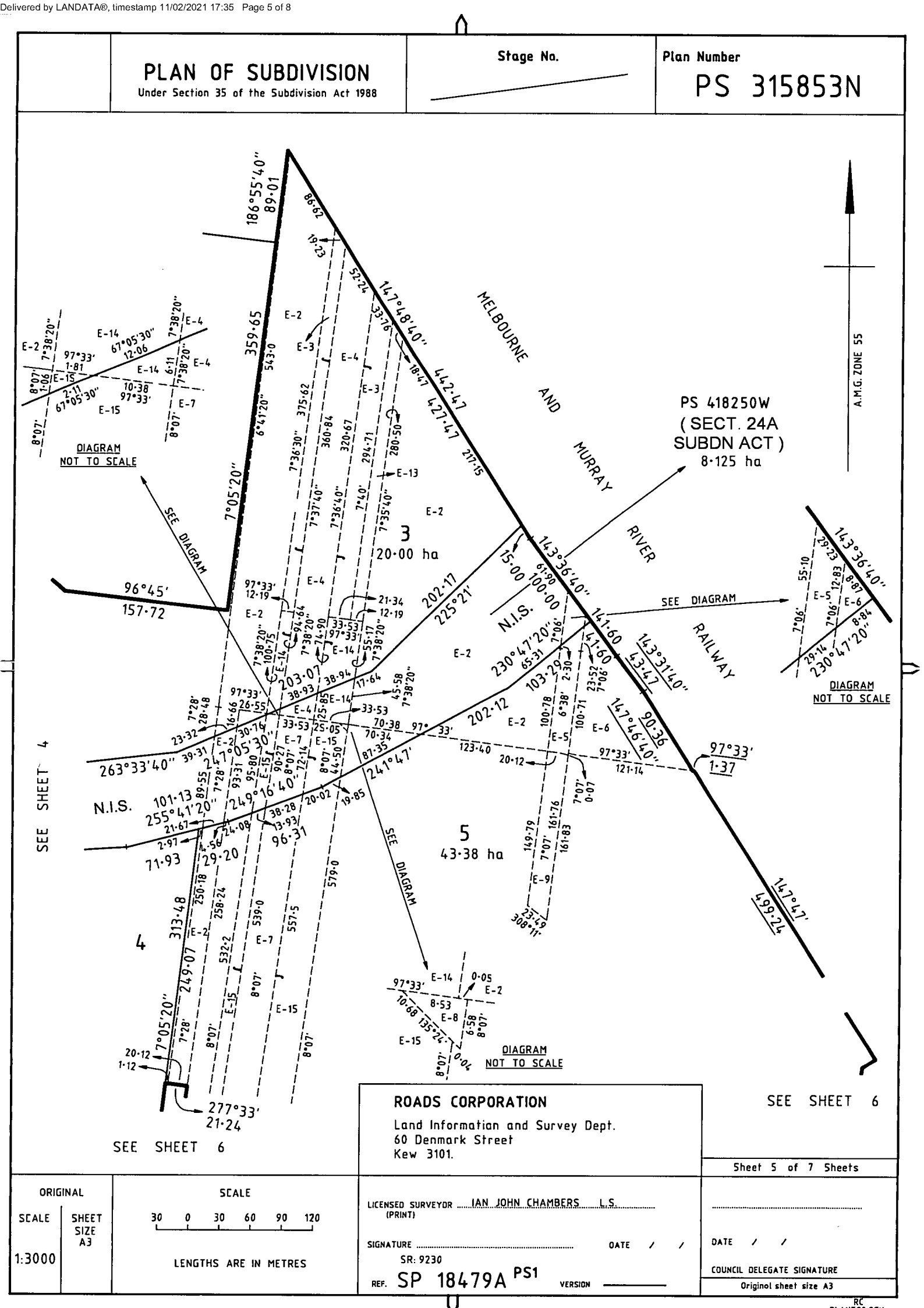
RC PLANT02.DGN

PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

Stage No. ———

Plan Number **PS 315853N**



Sheet 5 of 7 Sheets

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LICENSED SURVEYOR (PRINT) IAN JOHN CHAMBERS L.S.

SIGNATURE ..... DATE / /

SR: 9230

REF. SP 18479A PS1 VERSION ———

DATE / /

COUNCIL DELEGATE SIGNATURE

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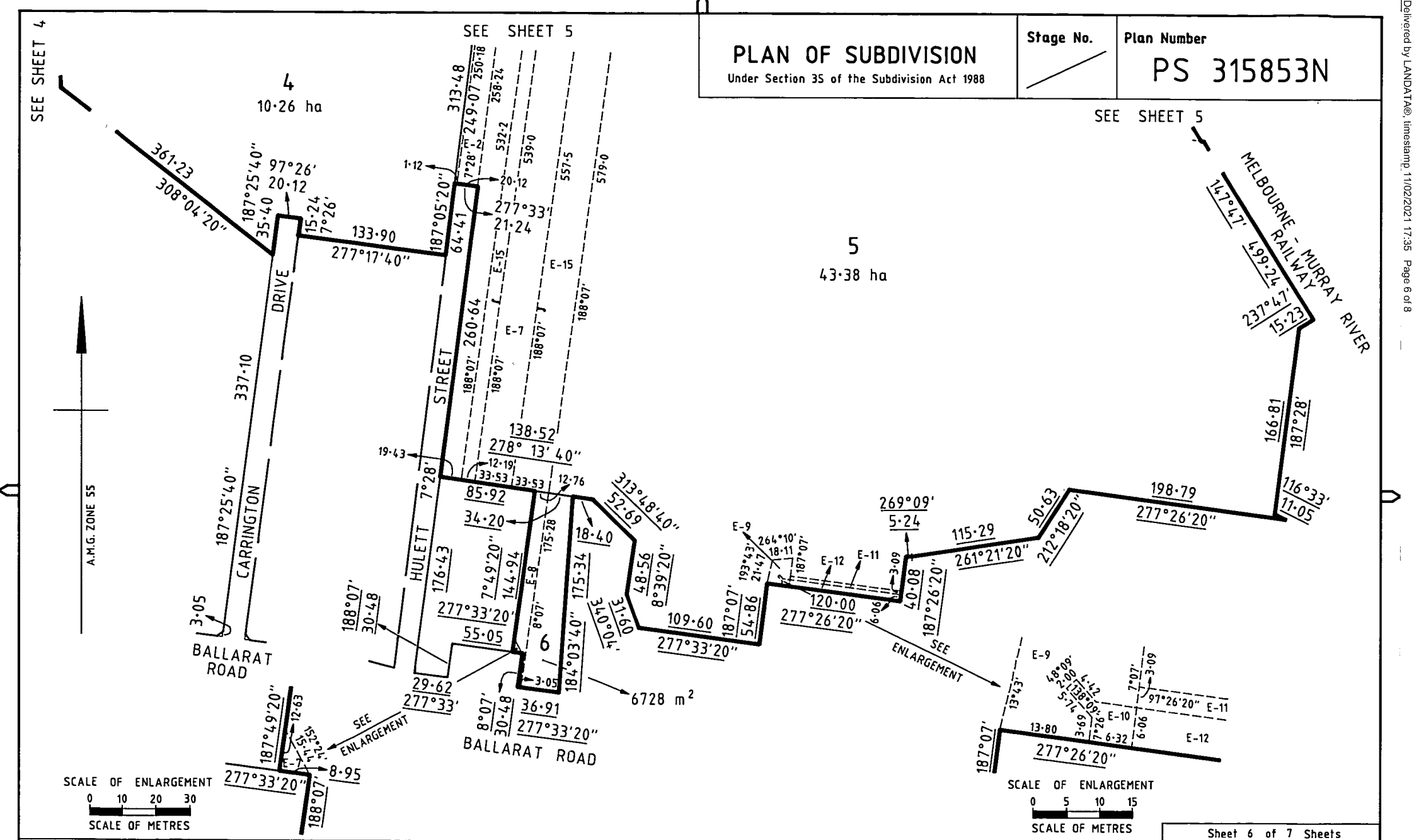

PLAN OF SUBDIVISION

Under Section 35 of the Subdivision Act 1988

Stage No. /

Plan Number PS 315853N

ROADS CORPORATION

Land Information and Survey Dept.
60 Denmark Street
Kew 3101.

ORIGINAL SCALE	SHEET SIZE A3
1:3000	

SCALE
30 0 30 60 90 120
LENGTHS ARE IN METRES

LICENSED SURVEYOR (PRINT) IAN JOHN CHAMBERS L.S.

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Sheet 6 of 7 Sheets

DATE / /

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0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150mm

RC

PLAN OF SUBDIVISION Under Section 35 of the Subdivision Act 1988	STAGE NO. /	LTO use only EDITION	Plan Number PS 315853N

VESTING DATES & TRANSFER REGISTRATION DATES OF ACQUIRED LAND

Land affected	Land acquired by compulsory process prior to certification			Land acquired by compulsory process after registration of plan				Land acquired by agreement	LTO reference of transfers or notifications of vesting dates	Assistant Registrar of Titles
	Vesting date	Gov't. Gaz.		Date of recording of vesting date	Vesting date	Gov't. Gaz.		Date of registration of transfer		Signature
		Page	Year			Page	Year			
RESERVE No1	10-6-1992	1432	1992							
RESERVE No2	———	———	———	———	———	———	———	30/5/95	T704351A	

Sheet 7 of 7 Sheets

ROADS CORPORATION

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MODIFICATION TABLE
RECORD OF ALL ADDITIONS OR CHANGES TO THE PLAN

PLAN NUMBER
PS315853N

LAND	MODIFICATION	DEALING REFERENCE	DATE AND TIME ENTERED		NEW EDITION NUMBER	SIGNATURE OF ASSISTANT REGISTRAR OF TITLES
			DATE	TIME		
RESERVE 2	VESTING	T704351A			2	
RESERVE 1.	REMOVAL OF RESERVE STATUS	PS 410079X			3	Js.
RESERVE 2	REMOVAL OF RESERVE STATUS	PS 418250W			4	Js.

Appendix 3 Offsite Offset Management Plan

EPBC Act 2014/7358

Natural Temperate Grassland of the Victorian Volcanic Plain and Striped Legless Lizard *Delmar impar* Offset Plan

Addendum to VC_CFL-3697_01 Offset Management Plan, Rokewood-Shelford Road, Rokewood, Victoria.

Final Report

Prepared by Biodiversity Offsets Victoria Pty Ltd
on behalf of PDSD Superfund Pty Ltd

December 2024

Document Control

Report	*Natural Temperate Grassland of the Victorian Volcanic Plain* and.Striped Legless Lizard *Delmar impar* Offset Plan: Addendum to VC_CFL-3697_01 Offset Management Plan, Geggies Road, Rokewood, Victoria.		
EPBC Act Ref	EPBC 2014/7358		
Project	Residential Development, 103 Reid St, Ardeer and 18B Jonesfield Corner, Cairnlea, Victoria.		
Proponent	Dino Mazzei, Peter Mazzei, Silvio Mazzei and Daniel Mazzei		
Approved Action	The development of residential premises and associated infrastructure in Ardeer and Cairnlea, Victoria.		
Report Author	Anna O'Brien, Biodiversity Offsets Victoria	**Project Number**	0407
Mapping	Amanda Feetham, GeoEccentric		
File Name	BioOffVic0407_RokewoodSLL+NTGVVP_AddendumOffsetPlan_FinalV4_05122024		
Version	Final V4		
Date	05/12/2024		

Cover Photos: *Natural Temperate Grassland of the Victorian Volcanic Plain*, Rokewood-Shelford Road, Rokewood (photo taken by Anna O'Brien, 17/7/2017), and Striped Legless Lizard (photo taken by Nature Advisory 14/11/2019).

Disclaimer

Although I, Anna O'Brien, have taken all the necessary steps to ensure that this document is accurate, and in accordance with relevant legislation and policies, I accept no responsibility for any damages or losses incurred as a result of actions that are undertaken as a result of either the report or its constituent parts.

Declaration of accuracy

I declare that:

1. To the best of my knowledge, all the information contained in, or accompanying this Management Plan (*Natural Temperate Grassland of the Victorian Volcanic Plain and Striped Legless Lizard Delmar impar Offset Plan: Addendum to VC_CFL-3697_01 Offset Management Plan, Rokewood-Shelford Road, Rokewood, Victoria*, Version Final 4, 05/12/2024) is complete, current and correct.

2. I am duly authorised to sign this declaration on behalf of the approval holder.

3. I am aware that:

   a. Section 490 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) makes it an offence for an approval holder to provide information in response to an approval condition where the person is reckless as to whether the information is false or misleading.

   b. Section 491 of the EPBC Act makes it an offence for a person to provide information or documents to specified persons who are known by the person to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2000 (Cth) where the person knows the information or document is false or misleading.

   c. The above offences are punishable on conviction by imprisonment, a fine or both.

_____

Signature

_____

Full Name (please print)

_____

Organisation (please print)

_____

Date

Contents

1 Introduction

PDSD Superfund Pty Ltd proposes to undertake a residential development at 103 Reid Street, Ardeer, and 18B Jonesfield Corner, Cairnlea, Victoria (the Project). The Project will have a significant impact on two *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed *Matters of National Environmental Significance* (MNES). These are *Natural Temperate Grassland of the Victorian Volcanic Plains* and Striped Legless Lizard *Delmar impar* habitat (Table 1). A referral under the EPBC Act was made in 2014 and a delegate of the Commonwealth Minister for the Environment has determined the proposed residential development as a 'controlled action' to be assessed by preliminary documentation (see EPBC 2014/7358 Referral Decision).

Two offsets are proposed to compensate for impacts to MNES: one is located on-site at 57 and 57A Reid Street and 614 Ballarat Road, Ardeer, and one is located off-site at Rokewood-Shelford Road, Rokewood, Victoria (Table 1). This Offset Plan outlines the proposed off-site offset at Rokewood, its ecological values, in-perpetuity security arrangement and 10-year offset management plan.

Table 1. Proposed Impacts and Offsets for MNES

Matters of National Environmental Significance	Impact		On-site Offset Ardeer		Off-site Offset Rokewood	
	Area	Quality	Area	Current Quality	Area	Current Quality
Natural Temperate Grassland of the Victorian Volcanic Plains	3.73ha	3/10	4.77ha	5/10	14ha	6/10
Striped Legless Lizard *Delma impar* habitat	9.87ha	4/10	4.77ha	4/10	19ha	6/10

1.1 Matters of National Environmental Significance

Matters of National Environmental Significance (MNES) relevant to the impact and proposed offset are described below.

1.1.1 Natural Temperate Grassland of the Victorian Volcanic Plain

Natural Temperate Grassland of the Victorian Volcanic Plains (NTGVVP) is an ecological community listed as critically endangered under the EPBC Act. NTGVVP occurs on the fertile and poorly drained basalt soils in the Victorian Volcanic Plain bioregion that extends from the north and west of Melbourne to far-west Victoria (DCCEEW 2022). It is dominated by native tussock-forming perennial grasses, including Kangaroo-grass *Themeda triandra*, Wallaby-grasses *Rytidospema* spp., Spear-grasses *Austrostipa* spp. and Tussock-grasses *Poa* spp., with native herbs, mostly from the daisy (*Asteraceae*), lily (*Anthericaceae, Asphodelaceae, Phormiaceae*), pea (*Fabaceae*) and orchid (*Orchidaceae*) families, occupying inter-tussock spaces. Native shrubs and trees are absent or sparse. NTGVVP is a dynamic and inherently variable ecological community. Its species richness and

composition are subject to seasonal and climatic conditions, weather patterns, site and land management practices (TSSC 2008).

NTGVVP has been listed as critically endangered under the EPBC Act, as its original area of occupancy has reduced by more than 98% from clearance primarily for agriculture, including livestock grazing and cropping, and urbanisation. Remaining areas of NTGVVP continue to be threatened by these land uses, weed invasion, fragmentation and other pressures (TSSC 2008: CES 2018).

1.1.2 Striped Legless Lizard

The Striped Legless Lizard is listed as Vulnerable under the EPBC Act. It is a member of the family Pygopodidae, the legless or flap footed lizards (Cogger 2000). It is up 300mm in length and is typically pale grey-brown above and cream below, with the head darker than the body and a series of stripes along the sides of the body which become diagonal bands on the tail. Other distinguishing features of this species are visible ear openings, a rounded tongue and the presence of scaly hind limb flaps.

The Striped Legless Lizard inhabits natural temperate grasslands, often with rocky rises, and nearby grassy woodlands and introduced pastures, in Victoria, Eastern South Australia and Southern New South Wales. It utilises rocks, soil cracks, burrows and grass tussocks for sheltering (Coulson 1990). The species has been listed as Vulnerable under the EPBC Act as it is dependent on grassland habitat that is under threat of ongoing loss, degradation and fragmentation (TSSC 2016).

2 Impact

PDSD Superfund Pty Ltd propose to rezone and undertake a residential development at 103 Reid Street (northern portion only), Ardeer, and 18B Jonesfield Corner, Cairnlea, Victoria, subject to Commonwealth and State approval.

2.1 Location

The impact site is located at 103 Reid Street (north), Ardeer (postcode 3022), and 18B Jonesfield Corner, Cairnlea (postcode 3023), Victoria, approximately 24 kilometres north-west of Melbourne (Figure 1). The property at 103 Reid Street is split into the northern and southern portions on either side of the Western Ring Road (EHP 2022). The proposed impact site at 103 Reid Street (north), Ardeer, and 18B Jonesfield Corner, Cairnlea, is approximately 9.87 hectares in area, and is bordered by Jones Creek and existing residential housing along its northern boundary, public parkland at its eastern boundary, open paddock at its western boundary and the Western Ring Road at its southern boundary. A 4.77-hectare area at 103 Reid Street (south), Ardeer, is proposed for an on-site offset.

The impact site is situated in the Brimbank City Council, the Port Phillip and Westernport Catchment Management Authority and the Victorian Volcanic Plain bioregion. The site is currently zoned Industrial 3 Zone (INZ3) and contains a Development Contributions Plan Overlay – Schedule 2 (DCPO2). An Environmental Significance Overlay – Schedule 6 (ESO6) also occurs over 103 Reid Street (north and south), Ardeer (DELWP 2022a). A planning scheme amendment is proposed to rezone 103 Reid Street (north), Ardeer, and 18B Jonesfield Corner, Cairnlea, to Residential Growth Zone (RGZ), and to remove the ESO at 103 Reid Street (north), Ardeer (EHP 2022).

2.2 Relevant Ecological Reports

The impact site has undergone multiple ecological assessments since 2008. These have included:

- Biodiversity, and flora and fauna assessments (Abzeco 2008; Ecology Partners 2008, 2010a, 2011; Ecology and Heritage Partners 2014, 2022);
- Targeted Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens* surveys (Ecology Partners 2010b; Ecology and Heritage Partners 2016a); and,
- Targeted Striped Legless Lizard *Delma impar* surveys (Abzeco 2008; Ecology and Heritage Partners 2016b); and,
- Targeted Golden Sun Moth *Synemon plana* surveys (Ecology Partners 2009).

2.3 Description

The impact site comprises a mixture of native and non-native vegetation and habitat, with evidence of soil disturbance, rock removal and soil stockpiles. Nine patches of Plains Grassland (EVC 132) vegetation of varying quality (low to high) were recorded that comprise native shrubs, grasses, lilies and herbs, including Berry Saltbush *Atriplex semibaccata*, Kangaroo Grass *Themeda triandra*, Wallaby-grasses *Rytidosperma* spp., Kneed Spear-grass *Austrostipa bigeniculata*, Black-anther Flax-lily *Dianella revoluta*, Curved Rice-flower *Pimelea*

curviflora, Lemon Beauty-heads *Calocephalus citreus*, Hairy Sheep's Burr *Acaena agnipila*, Plains Stackhousia *Stackhousia subterranean* and Sprawling Bluebell *Wahlenbergia gracilis*. Four plants of the nationally significant, EPBC Act listed Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens* were recorded in the impact site in 2008 (north of the Western Ring Road) (Abzeco 2008), however these plants no longer occur today (Ecology and Heritage Partners 2022). Six patches (totalling 2.25 hectares) of higher quality Plains Grassland also qualified for the EPBC Act listed ecological community, *Natural Temperate Grassland of the Victorian Volcanic Plains* (NTGVVP).

The impact site comprises a high cover of declared noxious weeds of Victoria and Weeds of National Significance (WONs), including Artichoke Thistle *Cynara cardunculus*, Serrated Tussock *Nassella trichotoma*, Chilean Needle-grass *Nassella neesiana*, African Boxthorn *Lycium ferocissimum*, Spear Thistle *Cirsium vulgare* and Soursob *Oxalis pes-caprae*. Other environmental weeds present include Galenia *pubescens* var. *pubescens*, Ribwort *Plantago lanceolata*, Couch *Cynodon dactyalon* var. *dactylon* and Wild Oat *Avena fatua* (Ecology and Heritage Partners 2022).

Planted native trees and shrubs also occur at the peripheries of the impact site, including Golden Wattle *Acacia pycnantha*, Black Wattle *Acacia mearnsii*, Drooping Sheoake *Allocasuarina verticillata*, Yellow Box *Eucalyptus melliodora* and Fragrant Saltbush *Rhagodia parabolica*. These species are commonly planted outside their natural distribution range and are not associated with EVC 132 Plains Grassland (Ecology and Heritage Partners 2022).

Areas of Plains Grassland vegetation provide habitat for snakes, lizards, skinks and grassland birds, and potential foraging habitat for diurnal and nocturnal raptors. The EPBC Act listed Striped Legless Lizard was recorded in areas of native and non-native vegetation, and therefore the entire impact site is considered habitat for the species (Abzeco 2008; Ecology and Heritage Partners 2016b). While areas of Plains Grassland vegetation also provide suitable habitat for the EPBC Act Golden Sun Moth *Synemon plana*, the species was not detected during the targeted species surveys (Ecology Partners 2009).

2.4 Matters of National Environmental Significance

The entire impact site covering 9.87 hectares north of the Western Ring Road provides habitat for Striped Legless Lizard. 3.73 hectares of Plains Grassland vegetation also qualified for NTGVVP in accordance with the minimum condition thresholds for this ecological community (SEWPaC 2011a). No Spiny Rice-flower plants currently occur on site and no Golden Sun Moths were detected during the targeted species surveys (Ecology Partners 2009). The proposed rezoning and residential development at 103 Reid Street (north), Ardeer, and 18B Jonesfield Corner, Cairnlea, Victoria, will impact the following maximum areas of MNES:

- 3.73 hectares of Plains Grassland vegetation that qualifies for NTGVVP; and,
- 9.87 hectares of Striped Legless Lizard habitat.

2.5 Significant Impact

Impacts to NTGVVP and Striped Legless Lizard habitat present are considered significant under Commonwealth policy (DoE 2013; SEWPaC 2011b; TSSC 2008) and are required to be offset in accordance with this addendum offset plan. Impacts will involve vegetation and habitat removal of up to 2.25 hectares of NTGVVP and up to

9.87 hectares of Striped Legless Lizard habitat, which will likely contribute to a decline of the species in the local area. No other MNES are proposed to be impacted through the rezoning and residential development of 103 Reid Street (north), Ardeer, and 18B Jonesfield Corner, Cairnlea, Victoria (Ecology and Heritage Partners 2022).

3 Offset

A suitable offset has been identified to compensate for a portion of the proposed impacts to MNES outlined in Section 2. Section 3 outlines the offset available and Section 4 details the offset management to be implemented to achieve the portion the total offset required. Table 2 below summarises the current offset site, and the security and management arrangement to secure the offset required.

Table 2. Offset Site Security and Management

Address	Rokewood-Shelford Road, Rokewood VIC 3330
Allotment	Lot 102 TP944788Y
Victorian Bioregion	Victorian Volcanic Plain
Catchment Management Authority	Corangamite
Local Government Area	Golden Plains
Current Zoning	Farm Zone
Planning Overlays	Environmental Significance Overlay – Schedule 2 (ESO2)
Offset Security	Section 69 (*Conservation, Forests and Lands Act 1987*) Agreement.
Date of commencement of Security Agreement	Security Agreement was executed by DELWP Secretary on 17 July 2020 and offset management has commenced.
Offset Management Period	10 years (commenced 17 July 2020)
Offset Site Management Responsibility	Landowner
Offset Monitoring Responsibility	Landowner, PDSD Superfund Pty Ltd and Victorian Department of Energy, Environment and Climate Action (DEECA).

3.1 Location

The offset is located within a 360-hectare sheep grazing property at Rokewood-Shelford Road, Rokewood, Victoria (Council Property No. 53141310) (Figure 1). The property is zoned Farming Zone (FZ), contains an Environmental Significance Overlay (ESO2) to protect the adjacent watercourse, and is situated in the Golden Plains Shire Council, Corangamite Catchment Management Authority and Victorian Volcanic Plain bioregion. ESO2 requires additional considerations for proposed construction activities adjacent to Ferrers Creek (DTP 2023).

3.2 Historic Land Use and Disturbance

The offset site has had a long history (more than 100 years) of sheep grazing, and the landowner has undertaken a set stocking grazing regime throughout the site since they purchased the property approximately 60 years ago. This regime has supported the persistence of some native grassland species, but also led to overgrazing of native grassland vegetation during dry periods and under-grazing during wet, which has likely limited the diversity and cover of native flora, and habitat complexity for native fauna. Rock removal and cropping occurs on adjacent land and is common in the area. The offset presents no evidence of significant ground disturbance (ie. cropping or rock removal), and, to the knowledge of the current landowner, the site

has ever been cropped. Fertiliser application and broad acre spraying have been undertaken previously on the site.

3.3 Offset Security

The offset is located within a 360-hectare property that supports native grassland habitat. 315 hectares of the property was secured on-title via two Section 69 (*Conservation, Forests and Lands Act 1987*) Agreements in 2020 for the purposes of securing approximately 154 hectares of native grassland habitat for an EPBC Act Offset NTGVVP, Striped Legless Lizard and Golden Sun Moth approved by the Commonwealth in June 2022 (see EPBC 2017/7965, Figure 2), and securing approximately 161 hectares (known as Credit Site VC_CFL-3697_01) of native grassland habitat concurrently to deliver advanced offsets for other impacts to MNES, including:

1. An 11-hectare EPBC Act offset for NTGVVP and Striped Legless Lizard approved by the Commonwealth in June 2022 (EPBC 2018/8158);
2. A 5-hectare EPBC Act offset for Striped Legless Lizard approved by the Commonwealth in December 2022 (EPBC 2021/9081);
3. 12-hectare EPBC Act offset for NTGVVP offset approved by the Commonwealth in May 2023 (EPBC 2022/09386); and,
4. A 43.83-hectare EPBC Act offset for NTGVVP and Golden Sun Moth approved by the Commonwealth in September 2023 (EPBC 2017/8049) (Figure 2).

The security agreement for Credit Site VC_CFL-3697_01 is administered and governed by DEECA, and meets the requirements under the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy* (SEWPaC 2012). The Section 69 Agreement restricts permitted land uses and oblige the landowner to protect and improve native vegetation and habitat in accordance with the agreed management plan in perpetuity (Attachment 2).

Credit Site VC_CFL-3697_01 is also registered with DEECA's Native Vegetation Credit Register (NVCR). The NVCR have allocated the approved EPBC Act offsets above to Credit Site VC_CFL-3697_01 in accordance with their offset registration, trading and allocation procedures, which prevents duplicate trading of offset credits from registered credit sites.

One other EPBC Act offset, for 7.5 hectares of NTGVVP and Striped Legless Lizard habitat (EPBC 2020/8720) has also been proposed on this land. Figure 2 shows the location of the current proposed offset for the project within Credit Site VC_CFL-3697_01, relevant to all other approved or proposed EPBC Act offsets. The proposed 19-hectare offset for EPBC 2014/7358 (the Project) has not been used or proposed to meet any other legislative, or biodiversity conservation and/or offset requirements from Credit Site VC_CFL-3697_01.

Securing the entire 315-hectare native grassland in advance of the approved impacts to MNES, rather than securing the only the immediate 19-hectare offset required to meet EPBC 2014/7358 requirements, supports the long-term conservation of MNES present due to the following:

1. The entire 315-hectare native grassland habitat is managed consistently and concurrently as one contiguous area of habitat for all MNES that it supports. This ensures that NTGVVP, Striped Legless

Lizard and other MNES present are not limited by the 19-hectare offset boundary, have access to adequate area for foraging and shelter beyond this boundary, and are not at risk from unmanaged threats (eg. weed invasion) adjacent to the offset.

2. The offset management can be delivered efficiently and effectively by the land manager in conjunction with the conservation of the entire grassland habitat. Initiating separate security agreements and management plans per EPBC Act impact approval requirement would result in the grassland habitat being broken up into multiple smaller areas, each with its own management requirements and delivery timeframes. This would result in a patchwork of management approaches for the MNES on site, which may meet administrative approval requirements, but would ultimately be unworkable for the land manager and significantly risk the successful conservation and management of these MNES.
3. The lag time between an approved impact and the achievement of the ecological benefit to the MNES from the offset is reduced, thereby minimising the deficit in habitat that would otherwise occur and the associated long-term risks to the MNES from such a deficit (Bekessy et al 2010). Shorter lag times between the approved habitat loss and gain also improves certainty in the achievement of offset outcomes, as the offset management and monitoring have already been initiated. As this offset is now in Year 3 of implementation, the landowner has already demonstrated successful compliance with the on-title Section 69 Agreement and the successful delivery of MNES conservation and management for two years (Attachments 4 and 5).

3.4 Relevant Ecological Assessments and Plans

The offset underwent a vegetation assessment in July 2017 and January 2022, and targeted Striped Legless Lizard surveys in 2019, 2020, 2021 and 2023 (Attachments 8-10). Targeted surveys have also been undertaken for the EPBC Act listed Golden Sun Moth *Synemon plana* in 2018, 2020, 2021 and 2023/24 (Attachments 11-13). The Section 69 (*Conservation, Forest and Lands Act 1987*) "Landowner Agreement" covering the larger 161-hectare area was executed on 17 July 2020 and registered on the land title (Attachment 2). The offset covers 19 hectares of this area secured for the purposes of protecting MNES. The following documents outline the findings of the ecological assessments and detail the offset site security and management plan:

1. **Offset Section 69 (*Conservation, Forest and Lands Act 1987*) Agreement Documentation**

***1.1. Assessment Report for Credit Site VC_CFL-3697_01* (Attachment 1)**

This report details the findings of the vegetation assessment and targeted species surveys undertaken between 2017 and 2019, which confirmed the presence of NTGVVP, Striped Legless Lizard and Golden Sun Moth. It provides a description of the available 161 hectare offset area, and summarises the offset attributes and management approach to achieve the native vegetation gains. The report contains aerials plans and photos of the offset site delineating the extent of MNES. The Assessment Report will be kept on file by DELWP as part of the registration of the offset under a Section 69 Agreement, however it will not be registered on the land title.

***1.2. VC_CFL-3697_01 Landowner Agreement and Management Plan* (Attachment 2)**

The Landowner Agreement is an on-title security agreement made pursuant to Part 8 of the *Conservation, Forests and Lands Act 1987* (Vic), and was executed by the landowner and the Secretary of DEECA on 17 July 2020. The Landowner Agreement includes an offset management plan that prescribes management

actions and timings over a 10-year period to be implemented at the offset site. The purpose of the Landowner Agreement and Management Plan is to protect and improve the extent and quality of native vegetation and habitat in the offset site in perpetuity.

***1.3. Internal Fencing Proposal* (Biodiversity Offsets Victoria 2020) (Attachment 3)**

Internal fencing was installed at the offset site to support a rotational grazing regime using sheep for biomass and weed control. The internal fencing proposal outlines the conservation benefits, specifications and installation method of the internal fencing. The internal fencing proposal is required under Clause 52.17 Native Vegetation (conservation works exemption) of the Golden Plains Planning Scheme, and was approved by the then Victorian Department of Environment, Land, Water and Planning (DELWP, now DEECA).

***1.4. VC_CFL-3697_01 Department of Environment, Land, Water and Planning Annual Report Year 1* (Attachment 4)**

***1.5. VC_CFL-3697_01 Department of Environment, Land, Water and Planning Annual Report Year 2* (Attachment 5)**

***1.6. VC_CFL-3697_01 Department of Energy, Environment and Climate Action Annual Report Year 3* (Attachment 6)**

***1.7. VC_CFL-3697_01 Department of Energy, Environment and Climate Action Annual Report Year 4* (Attachment 7)**

Years 1-4 Annual Reports were complete for the entire 161-hectare grassland offset area, including the proposed 19-hectare offset (Site 1A, VC_CFL-3697_01) and outlines the offset management and monitoring implemented in Years 1-4 in accordance with the Section 69 Agreement and Management Plan registered on-title. DEECA has accepted all four annual reports and confirmed the landowner's compliance with their offset security agreement.

1.8. Rokewood-Shelford Rd, Rokewood: Striped Legless Lizard survey (Nature Advisory 2021a) (Attachment 8);

1.9. Rokewood-Shelford Rd, Rokewood: Striped Legless Lizard survey – 2021 (Nature Advisory 2022a) (Attachment 9);

1.10. Rokewood-Shelford Rd, Rokewood: Striped Legless Lizard survey – Offset Site Monitoring Year 4 (Nature Advisory 2024a) (Attachment 10);

These reports detail the findings of the Striped Legless Lizard monitoring surveys undertaken at the offset site in 2020, 2021 and 2023. The species was detected during all surveys.

1.11. Rokewood-Shelford Rd, Rokewood: Golden Sun Moth survey (Nature Advisory 2021b) (Attachment 11);

1.12. Rokewood-Shelford Rd, Rokewood: Golden Sun Moth survey (Nature Advisory 2022b) (Attachment 12);

1.13. Rokewood-Shelford Rd, Rokewood: Golden Sun Moth – Offset Site Monitoring Year 4 – 2023/24 (Nature Advisory 2024b) (Attachment 13);

These reports detail the findings of the Golden Sun Moth monitoring surveys undertaken at the offset site in 2020, 2021 and 2023. The species was detected during all surveys.

1.14. Credit Site VC_CFL-3697_01 Offset Monitoring: Year 2 Vegetation Quality Assessment, Rokewood-Shelford Road, Rokewood (Biodiversity Offsets Victoria 2022) (Attachment 14).

This report details the findings of the updated Vegetation Quality Assessment (VQA) undertaken in Year 2 of offset implementation. The quality of native vegetation had not declined since the previous VQA undertaken prior to the commencement of the offset, and showed improvement in some zones. The next VQA is scheduled to be undertaken during Year 5 of the 10-year offset management plan.

3.5 Description

The proposed offset site comprises 19 hectares of native grassland vegetation and forms part of Site 1A in Credit Site VC_CFL-3697_01 (Attachments 1 and 2; Figure 2). In accordance with the Victorian Vegetation Quality (Habitat Hectares) Assessment methodology (DSE 2004), the native vegetation is classified as Ecological Vegetation Class (EVC) 132_61 *Heavier-soils* Plains Grassland of the Victorian Volcanic Plain (VVP) bioregion (DELWP 2021b), and meets the minimum condition thresholds to qualify for the EPBC Act listed NTGVVP (TSSC 2008; Table 3). The native grassland vegetation also provides suitable habitat for the Striped Legless Lizard (TSSC 2016; Table 4) and Golden Sun Moth (TSSC 2002; Table 5). No other MNES have been detected in larger 315-hectare grassland offset area.

Plains grassland vegetation is dominated by native grasses, including Spear-grass *Austrostipa* spp., Wallaby-grass *Rytidosperma* spp. and Tussock-grass *Poa* spp., with scattered Rushes *Juncus* spp. and native herbs, including Blue Devil *Eryngium ovinum*, Prickfoot *Eryngium vesiculosum*, Sheep's Burr *Acaena echinata*, Grassland Wood-sorrel *Oxalis perennans*, Kidney-weed *Dichondra repens* and Slender Speedwell *Veronica gracilis* (Plates 1-3). The assessed vegetation quality in the offset is 6/10 (DSE 2004; Table 6; Attachment 1).

It also comprises introduced pasture grasses and herbaceous weeds, including Browntop Bent *Agrostis capillaris*, Barley-grass *Hordeum* spp., Toowoomba Canary-grass *Phalaris aquatic*, Capeweed *Arctotheca calendula*, Big Heron's-bill *Erodium botrys* Cat's Ear *Hypochaeris radicata*, Dock *Rumex* spp., Sow-thistle *Sonchus* spp. and Clover *Trifolium* spp, a number of declared noxious weeds and one Weed of National Significance (WoNS), including Spear Thistle *Cirsium vulgare*, Spiny Rush *Juncus acutus* subsp. *acutus*, Serrated Tussock *Nassella trichotoma*, Onion Grass *Romulea Rosea*, Variegated Thistle *Silybum marianum* and Bathurst Burr *Xanthium spinosum*, and pest animals, including the Red Fox *Vulpes vulpes* and European Rabbit *Oryctolagus cuniculus*.

The offset site has a moderate diversity in native tussock-forming grasses and native herbs, with embedded or surface rock, providing structural complexity in habitat for the Striped Legless Lizard. The condition of Striped Legless Lizard habitat recorded in the offset site is 6/10 (Table 7; Appendix 2).

Plate 1 NTGVVP and Stripe Legless Lizard habitat in the offset site (photo taken by Anna O'Brien, 17/07/2017)

Plate 1 Blue Devil and surface rock in offset site (photo taken by Anna O'Brien, 24/01/2020)

Plate 2 Fox den along Ferrers Creek, south of offset site (photo taken by Anna O'Brien, 17/07/2017)

3.6 Matters of National Environmental Significance

The offset site supports two EPBC Act listed threatened species, Striped Legless Lizard and Golden Sun Moth, and one ecological community, NTGVVP. Tables 3, 4 and 5 below outline the condition thresholds for these matters of environmental significance, and how the offset meets these condition thresholds.

Table 3. Response to Condition Thresholds for EPBC Act listed *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP) in the offset (TSSC 2008).

	NTGVVP Condition Thresholds	Offset Site
Vegetation Description	Natural Temperate Grassland of the Victorian Volcanic Plain is mostly limited to a ground layer of grasses and herbs. Large shrubs and trees are absent to sparse. The ground layer is dominated by native tussock-forming perennial grasses with a variety of herbs, mostly from the daisy (*Asteraceae*), lily (*Anthericaceae, Asphodelaceae, Phormiaceae*), pea (*Fabaceae*) and orchid (*Orchidaceae*) families, occupying the spaces among grass tussocks. The main grass species present are Kangaroo-grass *Themeda triandra*, particularly on drier sites, Wallaby-grasses *Rytidosperma* spp., Spear-grasses *Austrostipa* spp. and Tussock-grasses *Poa* spp.. Low gradient ephemeral and intermittent drainage lines may be dominated by a dense sward of the Tussock-grass *Poa labillardierei*.	This site supports native grassland vegetation dominated (>50% cover) by the following native grasses: Spear-grasses, Wallaby-grasses, Tussock-grass and Kangaroo Grass. Other native grasses present include Common Wheat-grass *Anthosachne scabra* s.l. and Common Blown-grass *Lachnagrostis filiformis*. The site also contains Rushes *Juncus* spp. and native herbs, including Blue Devil *Eryngium ovinum*, Prickfoot *Eryngium vesiculosum,* Sheep's Burr *Acaena echinata*, Grassland Wood-sorrel *Oxalis perennans*, Kidney-weed *Dichondra repens* and Slender Speedwell *Veronica gracilis* (Attachment 1).
Ecological Vegetation Classes (EVCs)	The native vegetation within the site includes one or both of the following EVCs: Plains Grassland (EVC 132) or Creekline Tussock Grassland (EVC 654).	The site supports Plains Grassland (EVC 132) vegetation.
Bioregions	Site is in the Victorian Volcanic Plain or near to the Victorian Volcanic Plain (Central Victorian Uplands, Dundas Tablelands and Otway Plain Bioregions)	The site is within the Victorian Volcanic Plain
Size of Patch	If grassland remnant is ≤1 hectare, grassland patch needs to be at least 0.05 hectares in size with no more than 5% canopy cover of trees or shrubs. If grassland remnant is >1 hectare, grassland patch needs to be at least 0.5 hectares in size with no more than 2 trees per hectare.	The site forms part of a 315-hectare patch of native grassland, with less than 5% canopy cover of trees and shrubs (no canopy trees occur on site and <1% cover of native shrubs)
Condition Thresholds	One or more of the following native grass genera accounts for at least 50% of the perennial ground layer cover: *Themeda*, *Rytidosperma*, *Austrostipa*, *Poa* and/or *Microleana*. OR Native wildflowers account for 50% or more of the total vegetation from September to February. OR Non-grassy weeds account for less than 30% of the total vegetation cover at any time of the year.	Perennial native grass genera, including *Themeda*, *Rytidosperma*, *Austrostipa* and *Poa*, make up for more than 50% of the vegetative cover across the site.
Additional Characteristics	The conservation value of a patch of the ecological community is enhanced if it shows any of the following features: ▪ A high native plant species richness; ▪ Large patch size or connectivity with a large patch of remnant vegetation; ▪ Minimal weed invasion; ▪ Presence of threatened plant and/or animal species; ▪ Presence of natural exposed rock platforms and outcrops; or ▪ Presence of mosses, lichens or a soil crust on the soil surface.	The site forms part of very large patch of native grassland vegetation, with embedded and surface rock and a diversity of native plant species. This site also provides habitat for EPBC listed Golden Sun Moth and Striped Legless Lizard.

Table 4. Response to Habitat Condition Thresholds of the EPBC Act listed Striped Legless Lizard *Delma impar* in the offset (TSSC 2016).

	Striped Legless Lizard Habitat Condition Thresholds	Offset Site
Location	Important populations known to occur in Victoria: -North Melbourne, Vic -West Melbourne, Vic -East and West Volcanic Plains, Vic -North Ballarat, Vic -East Grampians, Vic -Northern alluvial plains, Vic -North eastern slopes, Benalla, Vic -Horsham, Vic -North eastern slopes, Alexandra, Vic -South-east Bendigo, Vic	The site is located in the Victorian Volcanic Plain
Vegetation Type	Native Grasslands associated with the following EPBC Act listed ecological communities: *-Natural Temperate Grassland of the Victorian Volcanic Plain* *-Grassy Eucalypt Woodland of the Victorian Volcanic Plain* *-Natural Temperate Grassland of the South Eastern Highlands* *-White Box-Yellow Box-Blakely's Red Gum Grassy Woodland*	The site supports *Natural Temperate Grassland of the Victorian Volcanic Plain*
Habitat Quality	Native grassland with a high structural complexity and floristic diversity to provide for breeding, foraging and refuge, including tussock grasses, surface rocks, and anthropod burrows or cracking soils	The site supports native grasslands with structural complexity and floristic diversity, including native tussock grasses, non-tufted grasses, rushes, herbs, surface rock and cracking soils.
Size of Habitat	Site forms part of a large (>0.5 hectares, non-urban) area of habitat and is connected to breeding habitat or areas subject to conservation management.	The site forms part of a large 315-hectare patch of native grassland vegetation, providing connectivity between breeding, foraging and refuge habitat, and will be subject to conservation management.
Species Presence	Appropriate targeted surveys have been undertaken (SEWPaC 2011), which confirmed presence of an important population of Striped Legless Lizards. OR	A total of 90 Striped Legless Lizards over four monitoring seasons have been recorded across the entire (315-hectare) patch of native grassland vegetation since 2019 (Nature Advisory 2020, 2021a, 2021c, 2022a, 2022c, 2024a & 2024c).
	Previous records of Striped Legless Lizards show a high density of lizards on site or nearby, and the site is large in size and has complex grass structures and refuges.	Striped Legless Lizards have also been previously recorded within 5km of the offset (DEECA 2024b).
Security	Site to be secured under an on-title security agreement to protect the site from development and to manage it for conservation in perpetuity.	The site has been secured under a Section 69 (*Conservation, Forests and Lands Act 1987*) Agreement (Attachment 2) for the purposes of protecting MNES.

Table 5. Response to Habitat Condition Thresholds of the EPBC Act listed Golden Sun Moth *Synemon plana* in the offset (DoE 2013; TSSC 2002).

	Golden Sun Moth Habitat Condition Thresholds	Offset Site 1
Location	Important populations known to occur in Victoria: -Victorian Midlands -Southern Volcanic Plain -South East Coastal Plain IBRA Bioregions -Port Phillip and Westernport CMA -Glenelg Hopkins CMA -North Central CMA	The site is located in the Southern Victorian Volcanic Plain
Vegetation Type	Native Grasslands associated with the following EPBC Act listed ecological communities in Victoria: *-Natural Temperate Grassland of the Victorian Volcanic Plain* *-Grassy Eucalypt Woodland of the Victorian Volcanic Plain* *-White Box-Yellow Box-Blakely's Red Gum Grassy Woodland* *-Grey Box (Eucalyptus macrocarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia*	The site supports *Natural Temperate Grassland of the Victorian Volcanic Plain*
Habitat Requirements	Native grassland with at least 40% cover of Wallaby Grasses *Rytidosperma* spp. and/or Spear Grasses *Austrostipa* spp. OR	The site supports native grasslands with at least 40% cover of Wallaby Grass and Spear Grass species. No Chilean Needle Grass was recorded at the site.
	Introduced pastures with at least 40% cover of Chilean Needle Grass Nasella neesiana.	
Size of Habitat	Site forms part of a large area (minimum area not known) of habitat, or provides connectivity to larger areas, and is subject to conservation management.	The site forms part of a large 315-hectare patch of native grassland vegetation, and will be subject to conservation management to protect MNES.
Species Presence	Appropriate targeted surveys have been undertaken (DSE 2010), which confirmed presence of an important population of Golden Sun Moth. OR	A total of 72 Golden Sun Moths have been recorded over four monitoring seasons across the contiguous (315 hectare) patch of native grassland vegetation since 2018 (Biodiversity Offsets Victoria 2020b; Nature Advisory 2021b, 2021d, 2022b, 2022d, 2024b & 2024d). Golden Sun Moths have also been previously recorded within 5km of the offset (DEECA 2024b).
	Previous records of Golden Sun Moth show a high density of moths within the vicinity, and the site is large in size and has at least 40% cover of native Wallaby and/or Spear Grasses, or introduced Chilean Needle Grass.	
Security	Site to be secured under an on-title security agreement to protect the site from development and to manage it for conservation in perpetuity.	The site has been secured under a Section 69 (*Conservation, Forests and Lands Act 1987*) Agreement (Attachment 2) for the purposes of protecting MNES.

4 Addendum Offset Plan

This offset plan is an addendum to the existing management plan registered on the land title (Attachment 2). It summarises the offset management being implemented at the offset site in accordance with the Section 69 Agreement secured on-title to conserve MNES present, and the additional monitoring required for Striped Legless Lizard and NTGVVP for the proposed offset.

4.1 Offset Objectives

The primary objectives of the offset management plan are as follows:

Objective 1: Secure and manage the offset site to conserve MNES purposes in perpetuity

The Section 69 Agreement provides permanent administrative protection to the offset site through restricting allowable land uses to conservation purposes only. This on-title security restricts permitted land uses and obligates the landowner to protect and improve native vegetation and habitat in accordance with the management plan in perpetuity (Attachment 2). It will protect the site from agriculture or development activities that would otherwise impact MNES on site, including uncontrolled livestock access, unauthorised vehicle access and threats from adjacent farmland, such as spray drift. Sheep will access the offset site under a controlled grazing regime for the purposes of biomass control and weed management only, discussed further in sections 4.2.3 and 4.2.4 below. The Section 69 Agreement was executed by the Secretary of DEECA on 17 July 2020 and offset management is currently in Year 3.

Objective 2: Achieve a gain in native vegetation and habitat to compensate for the impact

The proposed offset site comprises 19 hectares of the EPBC Act listed NTGVVP and Striped Legless Lizard habitat, both with a quality score of 6/10 (Tables 6 and 7). To compensate for a portion of the proposed loss of 3.73 hectares of NTGVVP and 9.87 hectares Striped Legless Lizard habitat, 14 hectares of NTGVVP and 19 hectares of Striped Legless Lizard habitat at the offset site is required to undergo conservation management in accordance with the Landowner Agreement and Management Plan registered on-title, and this Addendum Offset Plan, to avoid future decline in its assessed extent and quality, and to improve the quality of Striped Legless Lizard habitat over the 10-year offset management period (initiated 17 July 2020).

Tables 6 and 7 outline the assessed vegetation quality of the offset site using habitat hectare methodology (DSE 2004; Appendix 1: Attachment 1), and the assessed Striped Legless Lizard habitat quality (Appendix 2) respectively, the projected decline in quality over 10 years without the offset, and the projected quality with the offset. The quality of NTGVVP is projected to be at least maintained or improved over the 10-year offset management period, and the quality of Striped Legless Lizard habitat is projected to improve by 1 point out of 10.

The offset site is situated in the Farming Zone and contains an ESO2 that restricts potential development adjacent to Ferrers Creek, but does not restrict agricultural uses (DTP 2023). Native grassland and herbland vegetation communities experience the highest rates of loss in Victoria, with an estimated loss of 14% reported between 2005 and 2015 (CES 2018). This loss is primarily due to agricultural expansion and intensification, and urban development. Given native grassland ecosystems are declining at a significant rate in Victoria, and are under ongoing threats, the protection and maintenance of remaining areas of NTGVVP is of significant value to the conservation of this critically endangered community, and the maintenance and improvement in Striped Legless Lizard habitat will ensure the long-term persistence and dispersal of the species on site.

The projected decline in quality without the offset from 6/10 to 5/10 assumes that the historic grazing practices will continue with a goal of primary production, and not conservation. This decline would result from long-term degradation of native vegetation and habitat under detrimental grazing practices that are not targeted under biodiversity protection legislation, including over-grazing of native herbs and grasses in Spring, Summer, and other dry periods, under-grazing (or lack of biomass control) of introduced grasses and herbaceous weeds during high-growth (wet) periods, soil disturbance and rock removal, and fertilizer and broad-acre herbicide application. These practices have been shown to promote the spread of introduced annual grasses and herbaceous weeds, and reduce the extent and diversity of native grassland species, reduce soil crust (for recruitment and habitat), and limit native organic litter available for decomposition (Tumble and Fraser 1932; Dorrough et al 2004 & 2008a).

The maintenance of NTGVVP quality and projected improvement in quality Striped Legless Lizard habitat from 6/10 to 7/10 assumes that the offset will be managed for the purposes of conservation and maintained in perpetuity (Tables 6 and 7). It has been determined based on the offset management actions proposed to be implemented over the 10-year management period (Attachment 2; Section 4.2). This will include restricting livestock and vehicle access, particularly during flowering and seed set periods for native herbs and grasses, to facilitate native recruitment and enhance the diversity and extent of native flora species, and undertaking biomass, weed and pest control to reduce the pressure on native vegetation and Striped Legless Lizard habitat from introduced species. All threats to Striped Legless Lizard will be removed to improve the site context score (Table 7; Appendix 2).

Table 6. Assessed and future projected vegetation quality, with and without the offset (Appendix 1).

Vegetation Quality (Habitat Hectare) Assessment			Assessed Quality	Projected Quality without Offset	Minimum projected Quality with Offset
EVC name			**Plains Grassland**	**Plains Grassland**	**Plains Grassland**
EVC Number			**132_61**	**132_61**	**132_61**
Bioregion			**Victorian Volcanic Plain**	**Victorian Volcanic Plain**	**Victorian Volcanic Plain**
		Max Score	**Score**	**Score**	**Score**
Site Condition Score	Large Old Trees	10	NA	NA	NA
	Canopy Cover	5	NA	NA	NA
	Understorey	25	15	10	15
	Lack of Weeds	15	9	6	9
	Recruitment	10	3	3	3
	Organic Matter	5	5	2	5
	Logs	5	NA	NA	NA
	Standardiser		1.36	1.36	1.36
	Total Site Condition Score	**75**	**43.52**	**28.56**	**43.52**
Landscape value	Patch Size	10	8	8	8
	Neighbourhood	10	5	5	5
	Distance to Core	5	4	4	4
	Total Landscape Score	**25**	**17**	**17**	**17**
Habitat points out of 100		**100**	**60.52**	**45.56**	**60.52**
Habitat (Quality) Score out of 10		**10**	**6**	**5**	**6**

Table 7. Assessed and future projected Striped Legless Lizard habitat quality, with and without the offset (Appendix 2).

Striped Legless Lizard Habitat Quality Assessment		Assessed Quality	Projected Quality without Offset	Projected Quality with Offset
	Max			
Site condition	**3**	2	1	2
Site context	**4**	3	3	4
Species stocking rate	**3**	1	1	1
Habitat Quality out of 10	**10**	**6**	**5**	**7**

Objective 3: Implement the 10-year offset management plan

The Landowner Agreement registered on-title comprises a detailed 10-year offset management plan (OMP) that was prepared in consultation with the land manager and approved by DEECA (Attachment 2). This OMP covers a larger 161-hectare area and is consistent with the adjacent 154-hectare EPBC Act offset (EPBC 2017/7965). The OMP was prepared to conserve and improve all MNES present, being NTGVVP, Striped Legless Lizard and Golden Sun Moth, in accordance with the relevant EPBC Act conservation and listing advice (TSSC 2002; 2008; 2016), and drew from peer-reviewed literature and expertise in grassland habitat management. The performance targets, summary of management activities and offset monitoring requirements are outlined below. The schedule of management actions over the 10-year offset management period, including the responsibility and timing of each management action, is provided in the Landowner Agreement and Management Plan registered on-title (Attachment 2). The implementation of this addendum offset plan in conjunction with the approved Management Plan registered on-title is required to achieve the projected gain in NTGVVP and Striped Legless Lizard habitat.

Objective 4: Undertake an adaptive management approach

Native grasslands are dynamic and inherently variable ecosystems, where vegetation and habitat composition can change yearly and seasonally in response to rainfall, temperature, fire, grazing pressure and management (Langford 2005). Without native canopy protection, the condition of grassland vegetation and habitats are particularly vulnerable to weed invasions and climatic extremes. Managers of native grassland habitats must be highly responsive to seasonal variability, changes in site conditions and the emergence of new threats, and have sufficient flexibility to adapt their management appropriately.

An adaptive management approach involves continual monitoring, review and re-evaluation of management strategies to achieve the management objectives. Undertaking an adaptive management approach is essential to the success of this offset, as it will ensure that the land manager has adequate flexibility to adjust their management approach according to the outcomes of implemented management activities and/or unforeseen threats that may arise, and to respond to seasonal variations, in particular fluctuations in annual grassy and herbaceous weeds.

An adaptive management approach may involve adjustments in the timing and methods of the management activities (Attachment 2; Section 4.2). It may also involve the introduction of alternative management activities that are not outlined below, but which also align with the objectives of the offset management plan. Any activities and approaches beyond the scope of the current Landowner Agreement and Management Plan registered on-title should be approved by DEECA prior to their implementation.

4.2 Management Actions

4.2.1. In Perpetuity Site Security

The Section 69 (*Conservation, Forests and Lands Act 1987*) Agreement was executed by the Secretary of DEECA on 17 July 2020 and subsequently registered on-title, covering 161 hectares of native grassland habitat. The Section 69 Agreement provides permanent administrative protection to the proposed 19-hectare offset through restricting allowable land uses to conservation purposes only in accordance with the approved OMP (Attachment 2).

4.2.2. Fencing, Signage and Access

The offset property is fenced and all property fencing was upgraded to meet DEECA's minimum fencing standard in Year 1 (DELWP 2021; Attachment 4). New fencing was also erected along the remaining boundaries (3.535km) of the 161-hectare grassland habitat. All offset boundary fencing is stockproof. The proposed 19-hectare offset area will not be fenced separately, as this will prohibit the effective control of biomass and weeds through strategic sheep grazing and ecological burning that must be undertaken in conjunction with the larger 161-hectare grassland. Additional internal fencing (2.535km) was also erected in Year 1 to support the strategic grazing regime.

Gates are installed to allow stock movement and vehicle access for offset management and monitoring purposes. The offset site will be accessible to vehicles when their threat to native vegetation and habitat is low

(ie. when dry) to implement offset management activities. The property is accessible by locked gates from Geggies Road. These gates will remain locked to avoid unauthorised access to the property and offset site. Signs were installed along the boundary fence in Year 1 to alert neighbouring properties, roadside managers and the public to the presence of the offset site and prohibited activities.

4.2.3. Biomass Control

Biomass control is an important management activity to promote floristic diversity in native grassland vegetation and to maintain suitable habitat for the Striped Legless Lizard and Golden Sun Moth. Biomass control aims to maintain the inter-tussock spaces for germination and recruitment of native flora, in particular native herb species. Golden Sun Moths also require bare ground or inter-tussock spaces for habitat and breeding.

The cover of bare ground prior to the commencement of Year 1 management was approximately 2%. Biomass control will aim to maintain 20-40% bare ground or inter-tussock spaces by mid to late Spring each year for the recruitment of native herbs and grasses, and to coincide with the start of the Golden Sun Moth breeding season. Biomass control will be undertaken through strategic grazing with sheep and ecological burning.

4.2.3.1. *Strategic Grazing*

Strategic livestock grazing has been recognised as an essential management tool for the conservation of productive grassland ecosystems (Lunt et al 2007; Dorrough et al 2008b). However, a controlled approach must be undertaken to target introduced grasses and herbaceous weeds, promote the recruitment and extent of native species, and create adequate bare ground for the Golden Sun Moth breeding season. Through sheep grazing trials undertaken in NTGVVP, Zimmer et al (2010) found that a grazing and rest regime, with a rest in either Spring or Summer, resulted in a higher cover and diversity of native herbs than a set-stocking or grazing exclusion regime. A rest over both Spring and Summer however resulted in a slightly reduced cover and diversity of native herbs, most likely due to competition with introduced annual grasses and herbaceous weeds.

Zimmer et al (2010) caution that the cover and extent of native and non-native species from each grazing trial was site-dependent, and that management decisions need to take into account the existing species composition and seasonal conditions. As such, the number of sheep, timing and grazing period for the offset will depend largely on seasonal conditions, and will involve close monitoring by the land manager to determine the appropriate pressure, timing and frequency. Under a strategic grazing regime for this offset, and unless approval is sought from DELWP for a variation to this, the land manager will:

- Aim to maintain at least 70% vegetative cover;
- Install additional internal fencing in accordance with the internal fencing proposal (Attachment 3) to support a rotational grazing regime;
- Implement a grazing and rest regime with sheep;
- Allow native grasses sufficient rest and recovery time after each grazing period (ie. until all native grass species have at least three tillers);
- Reduce the grazing pressure in Spring (eg. 0-5 DSE/ha depending on seasonal conditions) where possible to minimise impacts to native forb species;

- Maintain a minimal stocking rate over Summer (eg. 0-5 DSE/ha depending on seasonal conditions) to support the natural recruitment of native grass species;
- Where possible, aim for a 3-month exclusion period in either Spring or Summer if seasonal and vegetative conditions allow (eg. if annual introduced grasses and herbaceous weeds are not out-competing native flora); and,
- Reduce or remove grazing from the offset site at any other time as required (eg. during dry, low growth periods, or extreme wet conditions when site may be at risk of pugging), to avoid impacts to native grassland vegetation and habitat.

4.2.3.2. *Ecological Burning*

Ecological burning can assist in reducing both native and non-native biomass and, where targeted, the cover of introduced grasses, particularly if undertaken in conjunction with strategic grazing and other weed control (Lunt & Morgan 2002). The outcomes of burning can however be varied and should be used on a 'trial and error' basis, followed up by regular monitoring and review.

For this offset, ecological burning will involve burning over a non-targeted mosaic pattern, or over one or multiple targeted areas with a high cover of introduced grasses or dense swards of native grass (eg. Kangaroo Grass) that are limiting inter-tussock spaces. Prior to burning the land manager will:

- Obtain a burn permit from Golden Plains council if within the fire danger period;
- Notify CFA and council of burn days;
- Prepare a burn plan with a consultant or CFA;
- Ensure appropriate containment equipment and protocols are in place; and,
- Any fire breaks to be slashed and wetted (no foam or mineral earth breaks)

The reintroduction of grazing should be delayed after a burn to allow sufficient recovery of native perennial grass (eg. plants have a minimum of three tillers). Close monitoring will be undertaken to review the outcomes of each ecological burn and plant recovery. The ultimate timing, size and frequency of ecological burning will be at the discretion of the landowner depending on seasonal conditions, the outcomes of other management activities and the availability of suitable personnel and equipment.

4.2.3.3. *Rapid Spring Assessment*

A rapid spring assessment by a qualified botanist/ecologist will be undertaken each year to assist landowner biomass management decisions (and monitor other threats as required) through reviewing vegetation and habitat condition, the composition of flora species present, including the cover of introduced grasses and herbaceous weeds, and the outcomes of strategic grazing and ecological burning undertaken.

4.2.4. Weed Control

The offset site does not contain any woody weeds but comprises approximately 25% cover of introduced pasture grasses and herbaceous weeds. Table 5b(i) in Attachment 1 and Table 4 in Attachment 2 list all the weeds observed on site, their threat status (based on their invasiveness and status under the *Catchment and Land Protection Act 1994*), and the method and timing for their control. The total weed cover will be reduced by Year 10 to create space for the recruitment of native herb species, and habitat for Golden Sun Moth and

Striped Legless Lizard. Monitoring for new and emerging woody and herbaceous weeds will be conducted throughout the year, and any new and emerging weeds eliminated.

Weed control methods include strategic grazing (section 4.3.4.1), ecological burning (Section 4.3.4.2), herbicide application (section 4.3.5.1), chipping (ie. with hoe) or handpulling.

4.2.3.1. *Herbicide Application*

The application of herbicides is an effective and efficient control method for a range of woody, herbaceous and grass weeds. Herbicide application methods will vary depending on the weed species being targeted, their location, growth and flowering periods, and density. Off-target impacts to native flora and fauna, and waterways, must be avoided through the correct use, timing and careful application of herbicides. All herbicide application must be undertaken by suitably qualified personnel, using best-practice methods, and in accordance with the manufacturer's specifications and occupational health and safety policies.

Onion Grass *Romulea* spp. occurs in the offset site at a low cover (approximately 1%). Control options for Onion Grass are limited in native grasslands, as there are no selective herbicides that will target Onion Grass without also harming adjacent native species. Corms may be dug out, but this practice will cause significant ground disturbance for native flora and fauna. If concentrated infestations occur, that do not contain any native flora, herbicide may be applied. If infestations contain native flora, herbicide cannot be applied.

4.2.5. Pest Control

The *Catchment and Land Protection Act 1994* lists rabbits and foxes as established pest animals and requires that all landowners take reasonable steps to prevent the spread of, and as far as possible eradicate, established pest animals on their land. Rabbits and foxes are a threat to native fauna through competition and predation respectively. Rabbits also impact native grassland vegetation from over-browsing and erosion.

A number of warrens and dens have been recorded along the banks of Ferrers Creek, adjacent to the proposed offset. Rabbits and foxes will be monitored and controlled as required throughout the year in accordance with Table 6 in Attachment 2. Control methods that may be implemented include fumigation, hand collapsing of burrows/dens, shooting and baiting if required. Any carcasses must be removed to prevent poisoning of native predators. Rubbish and artificial piles of logs and rocks may be used as harbour by pest animals, and will be removed or dispersed as appropriate. Indigenous plants, fallen logs or rocks will not be removed from the site.

Monitoring for new and emerging pest animals will also be undertaken throughout the year, and control undertaken as required.

4.2.6. Monitoring and Reporting

Offset site monitoring will be undertaken by the Landowner for the duration of the 10-year offset management plan and in perpetuity. The aim of ongoing site monitoring is to review the implementation of offset management activities, ensure that the 10-year and in perpetuity performance targets are being met, and, where they are not being met, to determine the appropriate remedial action to be undertaken (Sections 4.3.1 and 4.3.2). NTGVVP and Striped Legless Lizard monitoring will also be undertaken by suitably qualified personnel to monitor vegetation quality, and Striped Legless Lizard populations for the 10-year offset

management period. Table 11 below summarises the monitoring and reporting schedule for the offset in accordance with the on-title security agreement, plus the additional monitoring for these MNES.

4.2.6.1 Annual Reporting

The landowner will submit a report annually to DEECA and PDSD Superfund Pty Ltd at the end of each management year over the 10-year management period. The annual report will outline the offset progress against the management activities and performance targets set out in the Management Plan and Addendum Offset Plan, and site observations. Annual Reports should include photos and provide enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of, or progress against, the performance targets for each management activity. The annual report will be consistent with DEECA's Annual Report template, as per Attachments 4 and 5.

4.2.6.2 Vegetation (NTGVVP) Quality Assessment

To monitor the quality of NTGVVP and habitat for Striped Legless Lizard in the offset site, vegetation quality assessments have or will be undertaken by suitably qualified botanists/ecologists in Years 2 (Attachment 10), 5, 8 and 10 of the 10-year offset management plan. These assessments should include:

- A record of flora species present;
- Review vegetative covers of native and non-native vegetation, including native grasses and herbs, woody and herbaceous weeds, and high threat herbaceous weeds;
- Undertake a Vegetation Quality (Habitat Hectare) Assessment;
- Reassessment of the vegetation and habitat against the condition thresholds for NTGVVP and Striped Legless Lizard habitat (Tables 3 and 4); and,
- Vegetation quality assessment reports to be prepared after each assessment in Years 2, 5 and 10.

The vegetation quality assessment reports will be prepared after each assessment and submitted by the approval holder to DEECA and PDSD Superfund Pty Ltd.

4.2.6.3 Striped Legless Lizard Monitoring

Striped Legless Lizard population monitoring will be undertaken by suitably qualified zoologists/ecologists according to the methodology detailed in *Survey guidelines for Australia's threatened reptiles* (SEWPaC 2011b). Striped Legless Lizard monitoring will determine if the distribution and population of Striped Legless Lizard persists in the offset site and ensure that the management activities and habitat are suitable for a viable Striped Legless Lizard population in the future.

Striped Legless Lizard population monitoring will be undertaken by suitably qualified zoologists/ecologists during the appropriate survey period (tile grids laid by June, monitoring from September to December) in each monitoring year. Monitoring has already been undertaken in Year 1 to gather baseline monitoring data, and in Year 2 to monitor the population (Attachments 6 and 7), and will subsequently be undertaken in Years 4, 6, 8 and 10 to continue monitor the population. Striped Legless Lizard population monitoring reports will be prepared after each monitoring year and submitted by the approval holder to DEECA and PDSD Superfund Pty Ltd.

4.3 Performance and Completion Criteria

4.3.1 10-Year Offset Management

The time until the ecological benefit from the commencement of the offset is 10 years. Native grasslands are dynamic ecosystems that can respond rapidly to changes in management approaches, in particular grazing pressure, ecological burning, pest animal control and weed control. This time period is considered more than adequate to achieve the required gain in NTGVVP and Striped Legless Lizard habitat. Table 8 below outlines the 10-year performance targets and in which year each target will be achieved. The risk of each target not being achieved has been determined in accordance with the Risk Assessment Framework detailed in Appendix 3.

Table 8. 10-year Performance and Completion Criteria

Ecological Outcome	Management Measure		Responsibility	Performance Criteria	Completion Criteria	Expected Timeframe For Completion	Risk of Completion Criteria not being met	Remedial action if Completion Criteria not achieved
To protect, preserve and improve the quality of NTGVVP, and the habitat, distribution and population of Striped Legless Lizard	**Site Security**	Apply and retain administrative protection on the land title	Landowner, DEECA	Site secured through appropriate administrative protection to permanently restrict allowable land uses and activities to the conservation of MNES	Section 69 (*Conservation, Forest and Lands Act 1987*) Agreement registered on-title	Section 69 Agreement on-title registration completed, 17 July 2020, prior to commencement of Year 1 management.	Very Low	Section 69 Agreement to remain on-title in-perpetuity or re-registered if removed.
	Fencing, Signage and Access	Update, install and maintain stockproof perimeter fencing	Landowner	Signage erected, gates locked and stockproof fencing installed in accordance with DEECA's minimum fencing standards (DELWP 2021)	Offset site is stockproof	Within 3 months of commencement of Year 1	Low	All new fencing and signage installed in Year 1. Fencing, signage and locked gates to be monitored, maintained and repaired as required to prevent access from unauthorised vehicles and neighbouring livestock, and alert the public to the presence of the offset site.
		Install and maintain signage on perimeter fence			Public alerted to the presence of offset site and prohibited activities		Very Low	
		Lock vehicle access gates			Vehicle access is restricted		Low	
	Biomass Control	Installation of internal fencing to support strategic grazing	Landowner	Internal fencing installed Year 1	20-40% bare ground maintained for native recruitment and SLL habitat	Year 10	Low	Internal fencing installed in Year 1. Monitor, maintain and repair fencing as required to continue rotational grazing
		Strategic sheep grazing		Biomass controlled annually			Low	Adjust strategic grazing regime, undertake ecological burning or control introduced grasses and herbaceous weeds to achieve the inter-tussock space required (see Sections 4.2.3 and 4.2.4, and Tables 4 and 8 in Attachment 2 for methods and timing)
		Ecological burning						
		Annual biomass monitoring	Landowner, Ecologist	Rapid Spring Assessment undertaken each year	Biomass control adapted to seasonal and site conditions	Spring Years 1-10	Low	Coordinate rapid spring survey with suitably qualified personnel each Spring, and adjust biomass and weed

								management according to site and seasonal conditions (see Sections 4.2.3 and 4.2.4, and Tables 4 and 8 in Attachment 2 for methods and timing)
	Weed Control	Woody and herbaceous weed control	Landowner	Weed control undertaken annually in accordance with Table 5b(i) in Attachment 1 and Table 4 in Attachment 2	No woody weeds present	End Year 1, ongoing	Low	Monitor and eliminate all new and emergent woody weeds (see page 33, Attachment 2 for woody weed control requirements)
					All introduced grasses and herbaceous weeds <25% cover	Year 10	Low	Supplementary control introduced grasses and herbaceous weeds (see Section 4.2.4 and Table 4 in Attachment 2 for control methods and timing)
	Pest Control	Control rabbit and fox populations	Landowner	Rabbit and fox control undertaken annually in accordance with Table 6 in Attachment 2	Rabbit and fox populations controlled or reduced	Years 1-10	Low	Monitor and control pest animals (see Section 4.2.5 and Table 6 in Attachment 2 for control methods and timing)
		Collapse/ fumigate rabbit warrens and fox dens		Number of rabbit warrens and fox dens reduced by 20% each year	No active rabbit warrens and fox dens	Year 10	Moderate	
		Control new and emergent pest animals		New and emergent pests controlled annually on identification of threat	No new and emergent pest animals	Years 1-10	Low	
	Monitoring and Reporting	Site Monitoring	Landowner, PDSD Superfund Pty Ltd, DEECA, DCCEEW	Annual report prepared and submitted to DEECA and PDSD Superfund Pty Ltd. PDSD Superfund Pty Ltd submit reports to DCCEEW	Offset management undertaken in accordance with Landowner Agreement and Addendum Offset Plan	Years 1-10	Low	Undertake regular site monitoring throughout each year, and keep a record or observations, management actions and photos.
		Vegetation/Habitat Quality Assessment	Landowner, PDSD Superfund Pty	Vegetation Quality Assessment undertaken, and report prepared and submitted to DEECA and PDSD Superfund	Extent (19ha) of NTGVVP and habitat for Striped Legless Lizard maintained.	Year 10	Moderate	Coordinate VQA with suitably qualified personnel, and submit VQA report to all stakeholders.

			Ltd, DEECA, DCCEEW, Botanist/ ecologist	Pty Ltd Years 2, 4, 5, 8 and 10. PDSD Superfund Pty Ltd submit reports to DCCEEW	Quality of NTGVVP maintained at 6/10 (or higher), and quality of Striped Legless Lizard habitat improved from 6/10 to 7/10		Low	Undertake management in accordance with the OMP and/or adjust management as required to meet ongoing performance and completion criteria (see Section 4.2 and Attachment 2 for management approach and timing). Seek DEECA approval if alternative management actions are required that are not addressed in the OMP.
		Striped Legless Lizard monitoring	Landowner, PDSD Superfund Pty Ltd, DEECA, DCCEEW, Zoologist/ ecologist	Striped Legless Lizard monitoring undertaken, and report prepared and submitted to DEECA and PDSD Superfund Pty Ltd Years 1, 2, 4, 6, 8 and 10. PDSD Superfund Pty Ltd submit reports to DCCEEW	Striped Legless Lizard distribution and population maintained	Year 10	Low	Coordinate Striped Legless Lizard monitoring with suitably qualified personnel and submit report to all stakeholders. Undertake management in accordance with the OMP and/or adjust management as required to meet ongoing performance and completion criteria (see Section 4.2 and Attachment 2 for management approach and timing). Seek DEECA approval if alternative management actions are required that are not addressed in the OMP.

4.3.2 In Perpetuity Offset Management

The detailed Management Plan registered on-title (Attachment 2) and Table 8 above outline the offset management measures and criteria to be implemented at the offset to improve and maintain the quality and condition of NTGVVP and habitat for Striped Legless Lizards for 10-years. At the completion of the 10-year management period, the landowner is required to continue to undertake management to maintain the improved quality and extent of NTGVVP and Striped Legless Lizard habitat in the offset site in perpetuity. Table 9 below outlines the in perpetuity performance and completion criteria. The Landowner is responsible for the management and monitoring of the offset in perpetuity and will ensure that all ongoing performance and completion criteria are met, and/or the implementation of remedial actions if not met. The risk of each target not being achieved has been determined in accordance with the Risk Assessment Framework detailed in Appendix 3.

Table 9. In Perpetuity Performance and Completion Criteria

Ecological Outcome	Management Measure		Responsibility	Performance Criteria	Completion Criteria	Risk of Completion Criteria not being met	Remedial action if performance criteria is not met
To protect and preserve the improved quality of NTGVVP and habitat for Striped Legless Lizard	**Site Security**	Permanent administrative protection	Landowner, DEECA	Site secured through appropriate administrative protection to permanently restrict allowable land uses and activities to the conservation of MNES	Section 69 Agreement (*Conservation, Forest and Lands Act 1987*) remains on-title.	Very Low	Section 69 Agreement to remain on-title or re-registered if removed
	Fencing, Signage and Access	Maintain stockproof perimeter fencing, signage and locked vehicle access gates	Landowner	Signage erected, vehicle gates remain locked and stockproof fencing is maintained in accordance with DEECA's minimum fencing standards (DELWP 2021)	Offset site is stockproof	Low	Upgrade, replace and/or maintain fencing, signage and vehicle access gates to prevent access from neighbouring livestock and unauthorised vehicles (see page 31, Attachment 2 for fencing requirements)
					Public alerted to the presence of offset site and prohibited activities	Very Low	
					Vehicle access is restricted	Low	
	Biomass Control	Maintain internal fencing to support strategic grazing	Landowner	Internal fencing maintained to support strategic grazing regime	20-40% bare ground maintained for native recruitment and SLL habitat	Low	Upgrade, replace and/or maintain internal fencing to support ongoing strategic grazing regime (see page 31, Attachment 2 for fencing requirements)
		Strategic sheep grazing		Biomass controlled annually		Low	Adjust strategic grazing regime, undertake

		Ecological burning				Low	ecological burning or control introduced grasses and herbaceous weeds to achieve the inter-tussock space required (see Tables 4 and 8 in Attachment 2 for methods and timing)
	Weed Control	Woody and herbaceous weed control	Landowner	Weed control undertaken annually in accordance with Table 5b(i) in Attachment 3 and Table 4 in Attachment 4	No woody weeds present	Low	Monitor and eliminate all new and emergent woody weeds (see page 33, Attachment 4 for woody weed control requirements)
					All introduced grasses and herbaceous weeds <25% cover	Low	Supplementary control introduced grasses and herbaceous weeds (see Table 4 in Attachment 2 for control methods and timing)
	Pest Control	Control rabbit and fox populations	Landowner	Rabbit and fox control undertaken annually in accordance with Table 6 in Attachment 4	Rabbit and fox populations controlled or reduced	Low	Monitor and control pest animals (see Table 6 in Attachment 2 for control methods and timing)
		Collapse/ fumigate rabbit warrens and fox dens		New rabbit warrens and fox dens collapsed/fumigated annually	No active rabbit warrens and fox dens	Moderate	
		Control new and emergent pest animals		New and emergent pests controlled annually on identification of threat	No new and emergent pest animals	Low	
	Monitoring and Reporting	Site Monitoring	Landowner, DEECA, DCCEEW	Site monitoring undertaken throughout each year	Offset management undertaken in accordance with Landowner Agreement and this Addendum Offset Plan. ,	Low	Adjust management according to site and seasonal conditions to meet ongoing performance and completion criteria (see Attachment 2 for management approach and timing)
					Extent (19ha) of NTGVVP and habitat for Striped Legless Lizard maintained	Moderate	

					Quality of NTGVVP maintained at 6/10 (or higher), and Striped Legless Lizard habitat maintained at 7/10.	Low	

5 EPBC Act Environmental Offsets Policy

5.1 Meeting the Principles of the EPBC Act Environmental Offsets Policy

Table 10 below outlines how the proposed offsets meet the principles of the *EPBC Act Environmental Offsets Policy* (SEWPaC 2012).

Table 10. Meeting the principles of the *EPBC Act Environmental Offsets Policy*

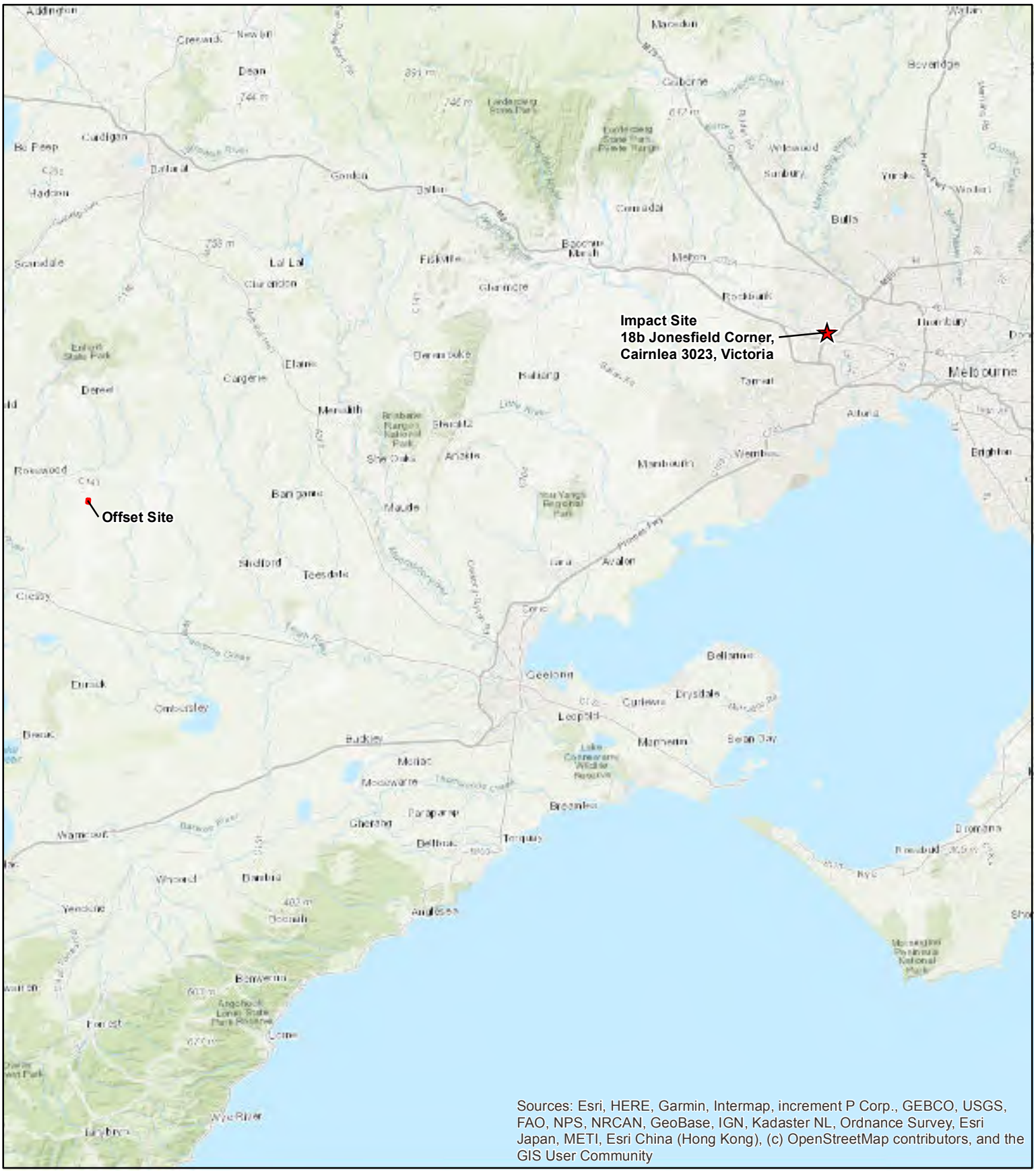
Principle	Proposed Offset
Deliver an overall conservation outcome that improves or maintains the viability of the aspect of the environment that is protected by national environment law and affected by the proposed action.	The offset will maintain and improve the overall viability of NTGVPP and confirmed habitat for Striped Legless Lizard, as it will deliver a gain in the protection and improvement of a larger population size and higher quality habitat area than that impacted on.
Be built around direct offsets but may include other compensatory measures.	The offset proposal includes at least 100% of direct offsets, that includes in perpetuity protection and management of NTGVVP, and habitat for Striped Legless Lizard.
Be in proportion to the level of statutory protection that applies to the protected matter.	The security, extent and management of the offset is in proportion to the protected matter being impacted in accordance with the EPBC Act offsets calculator. The security and management of MNES at the offset under a Section 69 Agreement will ensure their permanently protected.
Be of a size and scale proportionate to the residual impacts on the protected matter.	The total area of NTGVVP and habitat for Striped Legless Lizard proposed for offset is approximately 2.4 to 5 times the size of the areas being impacted for these MNES.
Effectively account for and manage the risks of the offset not succeeding.	The offset is secured under a Section 69 Agreement, administered and governed by DEECA. The Section 69 Agreements and management plans are legally binding and have been prepared to deliver improved outcomes for biodiversity and to mitigate against 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.	Planning regulations and local laws relevant to the offset allow agricultural activities to continue for the purposes of production, and do not support the permanent protection and improvement of MNES. The Section 69 Agreement and management plan provides in perpetuity protection to areas of NTGVVP and habitat for Striped Legless Lizard present, in addition to existing laws and regulations, and ensure that these MNES will be managed for the purposes of conservation.
Be efficient, effective, timely, transparent, scientifically robust and reasonable.	The impact and offsets have undergone rigorous ecological assessment for MNES (Sections 2.2 and 3.4), and propose valuable gains in NTGVVP and Striped Legless Lizard habitat through a 10-year management plan that draws on literature and research on effective native grassland conservation management.

Have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.	The offset will be delivered in accordance with the relevant Section 69 Agreement and management plan registered on-title. These are legally enforceable, and are administered and governed by DEECA. DEECA review annual monitoring reports and undertake on-site audits. Monitoring of MNES will also be undertaken and reports provided to DCCEEW.

Figures

FIGURE 1 - IMPACT AND OFFSET LOCATION

Rokewood - Shelford Road, Rokewood



Legend

EPBC Act 2020/8158 Proposed Offset (NTGVVP) (SLL)

N

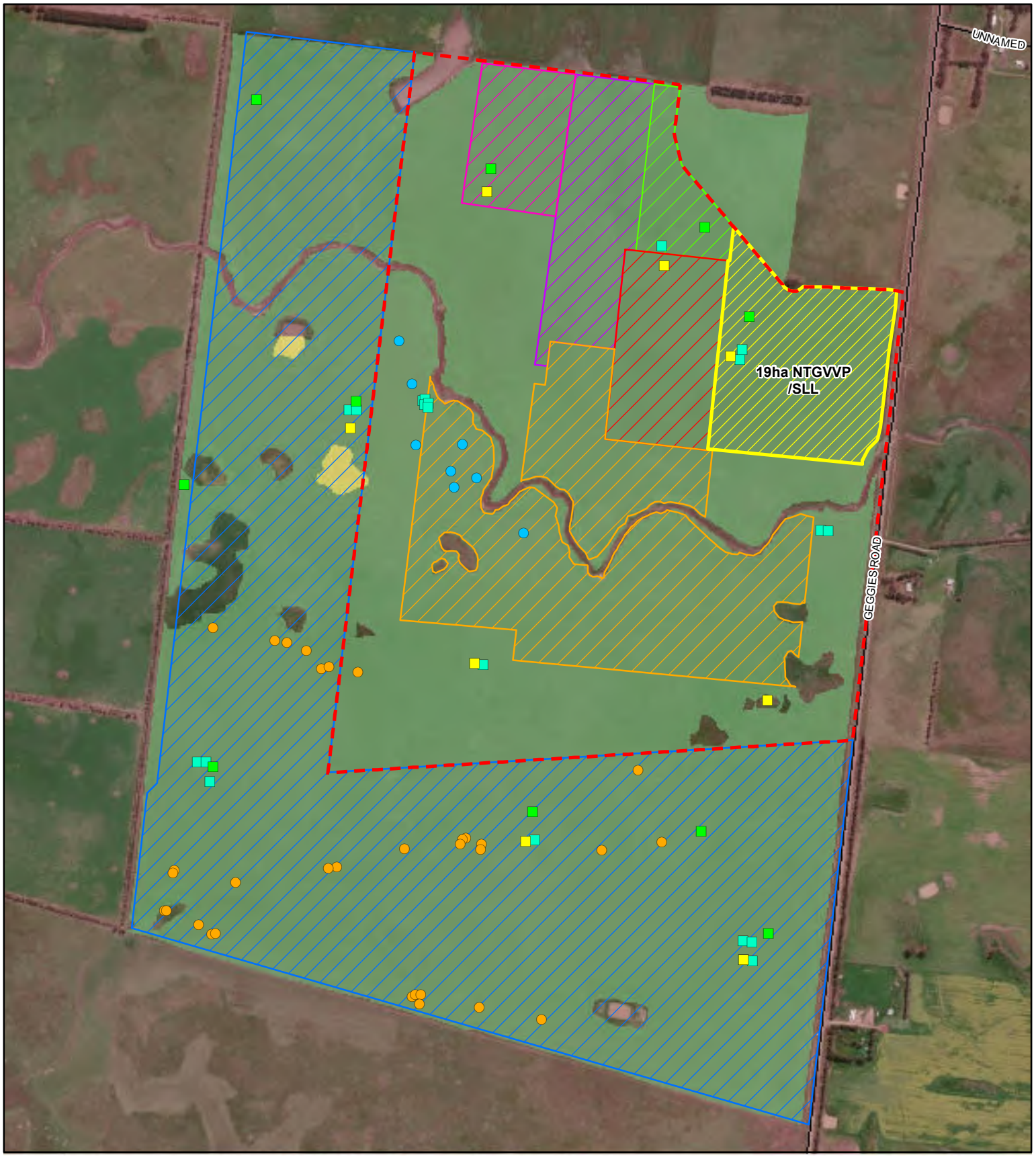
0 4 8 16 24 32

Kilometres

Prepared by GeoEccentric on behalf of Biodiversity Offsets Victoria 10/11/2022

FIGURE 2 – ROKEWOOD OFFSET SITE

Rokewood - Shelford Road, Rokewood



Legend

- EPBC 2014/7358 Proposed Offset (19ha)
- Credit Site VC_CFL-3697_01 (s69 Agreement) Boundary
- EPBC Act 2020/8720 Proposed Offset (NTGVVP) (SLL)
- EPBC 2017/7965 Approved Offset (154.53ha)
- EPBC 2017/8049 Approved Offset (43.83ha)
- EPBC 2018/8158 Approved Offset (11ha)
- EPBC 2021/9081 Approved Offset (5ha)
- EPBC 2022/09386 Approved Offset (12ha)

Matters of Environmental Significance

- Seasonal Herbaceous (Freshwater) Wetland of the Temperate Lowland Plains
- Natural Temperate Grassland of the Victorian Volcanic Plain
- Striped Legless Lizard Records (2019)
- Striped Legless Lizard Records (2020)
- Striped Legless Lizard Records (2024)
- Golden Sun Moths Records (2019)
- Golden Sun Moths Records (2020)

N

0 50 100 200 300 400

Metres

Prepared by GeoEccentric on behalf of Biodiversity Offsets Victoria 5/12/2024

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Appendices

Appendix 1. Treeless Vegetation Quality (Habitat Hectares) Assessment Scoring Framework.

Treeless Vegetation Quality Field Assessment Sheet

Version 1.4 - July 2009

Department of Sustainability and Environment

Site Name/No. ..... Location ..... Date .....

Assessor(s) ..... Map Name/No. ..... AMG / MGA .....

Tenure ..... EVC ..... Bioregion .....

'Site Condition Score'

Understorey Life forms

LF Code from EVC benchmark	# spp observed / Benchmark spp.	% cover observed / Benchmark % cover	Present (✓)	Modified (✓)
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
	/	/		
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	/	/		
	/	/		
	/	/		

Present	For life forms with benchmark cover of < 10%, considered 'present' if • any specimens are observed. For life forms with benchmark cover of ≥ 10%, considered 'present' if • the life form occupies at least 10% of benchmark cover.
Modified (apply only where life form is 'present')	For life forms with benchmark cover of <10%, then considered substantially 'modified' if the life form has either: • < 50% of the benchmark species diversity; or • no reproductively-mature specimens are observed. For life forms with benchmark cover of ≥ 10%, then considered substantially 'modified' if the life form has either: • < 50% of benchmark cover; or • < 50% of benchmark species diversity; or • ≥ 50% of benchmark cover due largely to immature canopy specimens but the cover of reproductively-mature specimens is < 10% of the benchmark cover.

Understorey *Score*

Category & Description		
All strata and Life forms effectively absent		0
Up to 50% of life forms present		5
≥ 50% to 90% of Life forms present	• of those present, ≥ 50% substantially modified	10
	• of those present, < 50% substantially modified	15
≥ 90% of Life forms present	• of those present, ≥ 50% substantially modified	15
	• of those present, < 50% substantially modified	20
	• of those present, none substantially modified	25

Lack of Weeds *Score*

Category & Description	*'high threat' weeds**		
	None	*≤ 50%*	*> 50%*
> 50% cover of weeds	4	2	0
25 - 50% cover of weeds	7	6	4
5 - 25% cover of weeds	11	9	7
< 5% cover of weeds**	15	13	11

* proportion of weed cover due to 'high threat' weeds - see EVC benchmark for guide.

'High threat' weed species are defined as those introduced species (including non-indigenous 'natives') with the ability to out-compete and substantially reduce one or more indigenous life forms in the longer term assuming on-going current site characteristics and disturbance regime.

The EVC benchmark lists typical weed species for the EVC in the bioregion and provides an estimate of their 'invasiveness' and 'impact'. In general, those weed species considered to have a *high impact* are considered *high threat* regardless of their invasiveness.

** if total weed cover is negligible (<1%) and high threat weed species are present then score '13'.

Recruitment *Score*

Percentage cover of recruitment area#	High native herb diversity*	Low native herb diversity*
0 to 5% cover	0	0
> 5% to 20% cover	6	3
> 20% to 40% cover	10	6
> 40% to 60% cover	6	3
> 60% to 90% cover	3	1
> 90% cover	0	0

\# cumulative % cover of bare ground, bryophytes/lichens and soil crust

* high native herb diversity defined as ≥ 50% of benchmark diversity within 'herb' life forms

Organic Litter *Score*

Category & Description	Dominated by native organic litter	Dominated by non-native organic litter
< 10% of benchmark cover	0	0
< 50% or > 150% of benchmark cover	3	2
≥ 50% or ≤ 150% of benchmark cover	5	4

Treeless Vegetation Quality Field Assessment Sheet

Version 1.4 - July 2009

Department of Sustainability and Environment

Logs (where applicable+) *Score*

Category & Description	Large logs present*	Large logs absent#
< 10% of benchmark length	0	0
< 50% of benchmark length	3	2
≥ 50% of benchmark length	5	4

Large logs defined as those with diameter ≥ 0.5 of benchmark large tree dbh.

\+ Applicable to some shrublands and scrubs (refer to EVC benchmark as a guide). Where applicable assess in accordance with the habitat hectares method for logs in treed EVCs. Note that most shrublands and scrubs do not contain a large tree component and hence a large log assessment is not required (refer to EVC benchmark as a guide). Such EVCs should be scored as if 'large logs present'.

* present if large log length is ≥ 25% of EVC benchmark log length.

\# absent if large log length is < 25% of EVC benchmark log length.

'Landscape Context Score'

Patch Size *Score*

Category & Description	
< 2 ha	1
Between 2 and 5 ha	2
Between 5 and 10 ha	4
Between 10 and 20 ha	6
≥ 20 ha, but 'significantly disturbed'*	8
≥ 20 ha, but not 'significantly disturbed'*	10

* 'significantly disturbed' defined as per RFA 'Old Growth' analyses eg. roading, coupes, grazing etc. – effectively most patches within fragmented landscapes.

Neighbourhood *Score*

Radius from site	% Native vegetation*	Weighting	
100 m		0.03	
1 km		0.04	
5 km		0.03	
	subtract 2 if the neighbourhood is 'significantly disturbed'		
		Add Values and 'round-off'	

* to nearest 20%.

Multiply % native vegetation x Weighting for each radius from the zone (eg. 40% x 0.03 = 1.2); then add values to obtain final Neighbourhood Value.

Distance to Core Area *Score*

Distance	Core Area not significantly disturbed*	Core Area significantly disturbed*
> 5 km	0	0
1 to 5 km	2	1
< 1 km	4	3
contiguous	5	4

* defined as per RFA 'Old Growth' analyses.

Final Habitat Score

Component	'Site Condition Score'							'Landscape Context Score'			Total
	Understorey	Lack of Weeds	Recruitment	Organic Litter	Logs (*if applicable*)	Standardiser	Subtotal	Patch Size	Neighbourhood	Distance to Core Area	100
Score											

Victoria The Place To Be

Appendix 2. 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>
<tr><th colspan="2">Species Stocking Rate – out of 3</th></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="2">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.</td></tr>
</table>

Appendix 3. Risk Assessment Framework

RISK LEVEL		Likelihood				
		1	2	3	4	5
Consequence	1	Very Low	Very Low	Very Low	Low	Low
	2	Very Low	Low	Low	Low	Moderate
	3	Low	Low	Moderate	Moderate	High
	4	Low	Moderate	High	High	Very High
	5	Moderate	Moderate	High	Very High	Very High

Category Descriptions		
Likelihood		
1	***Rare***	Would only occur under exceptional circumstances (eg. 1 in 100-year event).
2	***Unlikely***	Could occur but considered unlikely (eg. 1 in 10-50-year event).
3	***Possible***	May occur under non-average circumstances during the offset management period (eg. 1 in 10-year event).
4	***Likely***	Will occur under average circumstances (eg. annually).
5	***Almost Certain***	Expected to occur under most circumstances (eg. multiple times per year).
Consequence		
1	***Insignificant***	No impacts on MNES or achievement of OMP objectives. Inconvenience for management only.
2	***Minor***	Some short-term impacts on MNES and/or achievement of OMP objectives. Remediation <1 year.
3	***Moderate***	Medium-term impacts on MNES and/or achievement of OMP objectives. Remediation 1-5 years.
4	***Major***	Long-term impacts on MNES and/or achievement of OMP objectives. Remediation >5 years.
5	***Catastrophic***	Irreversible impacts to MNES. OMP objectives cannot be achieved. Remediation not possible

Attachments

Attachment 1: *Assessment Report for Credit Site VC_CFL-3697_01*

Attachment 2: *VC_CFL-3697_01 Landowner Agreement and Management Plan*

Attachment 3: *Internal Fencing Proposal (Biodiversity Offsets Victoria 2020)*

Attachment 4: *VC_CFL-3697_01 Department of Environment, Land, Water and Planning Annual Report Year 1*

Attachment 5: *VC_CFL-3697_01 Department of Environment, Land, Water and Planning Annual Report Year 2*

Attachment 6: *VC_CFL-3697_01 Department of Energy, Environment and Climate Action Annual Report Year 3*

Attachment 7: *VC_CFL-3697_01 Department of Energy, Environment and Climate Action Annual Report Year 4*

Attachment 8: *Rokewood-Shelford Rd, Rokewood: Striped Legless Lizard survey (Nature Advisory 2021a)*

Attachment 9: *Rokewood-Shelford Rd, Rokewood: Striped Legless Lizard survey – 2021* (Nature Advisory 2022a)

Attachment 10: *Rokewood-Shelford Rd, Rokewood: Striped Legless Lizard survey – Offset Site Monitoring Year 4 (Nature Advisory 2024a)*

Attachment 11: *Rokewood-Shelford Rd, Rokewood: Golden Sun Moth survey* (Nature Advisory 2022b)

Attachment 12: *Rokewood-Shelford Rd, Rokewood: Golden Sun Moth survey Summer 2021/2022* (Nature Advisory 2022b)

Attachment 13: *Rokewood-Shelford Rd, Rokewood: Golden Sun Moth – Offset Site Monitoring Year 4 – 2023/24* (Nature Advisory 2024b)

Attachment 14: *Credit Site VC_CFL-3697_01 Offset Monitoring: Year 2 Vegetation Quality Assessment, Rokewood-Shelford Road, Rokewood* (Biodiversity Offsets Victoria 2022)

Appendix 4 Onsite Offset Management Plan

Draft Report

First Party Offset Management Plan: 103 and 57A Reid Street, Ardeer (EPBC 2014/7358)

Prepared for

P.D.S.D. Mazzei

December 2024

Ecology and Heritage Partners Pty Ltd

MELBOURNE: 292 Mt Alexander Road, Ascot Vale VIC 3032 **GEELONG:** 230 Latrobe Terrace, Geelong West Vic 3218

BRISBANE: Level 22, 127 Creek Street, Brisbane QLD 4000 **ADELAIDE:** 22 Greenhill Road, Wayville SA 5034

CANBERRA: PO Box 6067, O'Connor ACT 2602 **SYDNEY:** Level 5, 616 Harris Street, Ultimo, NSW, 2007

DOCUMENT CONTROL

Assessment	EPBC 2014/7358: Offset Management Plan
Address	103 and 57A Reid Street, Ardeer
Project number	12195
Project manager	Alex Wilkinson (Consultant Zoologist)
Report reviewer	Aaron Organ (Director – Principal Ecologist)
Other staff	Jordan Whitmore (Consultant Botanist)
Mapping	Dr Monique Elsley (GIS Coordinator)
File name	12195_EHP_Ardeer_Onsite_OMP_DRAFT_16122024
Client	P.D.S.D. Mazzei
Bioregion	Victorian Volcanic Plain
CMA	Melbourne Water (formerly Port Phillip and Westernport)
Council	Brimbank City Council

Report versions	Comments	Comments updated by	Date submitted
Draft 01	Submitted to client	-	07/12/2023
Draft 02	DCCEEW	AW	16/12/2024

Ecology and Heritage Partners acknowledge the Traditional Owners of the country we live and work on, and we pay our respect to Elders past, present and emerging.

GLOSSARY

Acronym	Description
Approval holder	means the persons to whom the approval is granted, or to whom the approval is transferred under section 145B of the EPBC Act (persons taking the action).
CaLP	*Catchment and Land Protection Act 1994*
CMA	Catchment Management Authority
DEECA	Victorian Department of Energy, Environment and Climate Action
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DELWP	(former) Victorian Department of Environment, Land, Water and Planning
DEWHA	(former) Commonwealth Department of Environment, Water, Heritage and the Arts
DAWE	(former) Commonwealth Department of Agriculture, Water and the Environment
DSEWPaC	(former) Commonwealth Department of Sustainability, Environment, Water Population and Communities.
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EVC	Ecological Vegetation Class
FFG Act	*Flora and Fauna Guarantee Act 1988*
NES	National Environmental Significance
NTGVVP	Natural Temperate Grassland of the Victorian Volcanic Plain
OMP	Offset Management Plan
SLL	Striped Legless Lizard
SRF	Spiny Rice Flower

DECLARATION OF ACCURACY

I declare that:

1. To the best of my knowledge, all the information contained in, or accompanying this Management Plan (EPBC 2014/7358: Offset Management Plan: 103 and 57A Reid Street and 18B Jonesfield Corner, Ardeer, Victoria is complete, current and correct.
2. I am duly authorised to sign this declaration on behalf of the approval holder.
3. I am aware that:
    a. Section 490 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence for an approval holder to provide information in response to an approval condition where the person is reckless as to whether the information is false or misleading.
    b. Section 491 of the EPBC Act makes it an offence for a person to provide information or documents to specified persons who are known by the person to be performing a duty or carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth) where the person knows the information or document is false or misleading.
    c. The above offences are punishable on conviction by imprisonment, a fine or both.

_____ _____

Signed Date

_____

Full name (please print)

_____

Organisation (please print)

EXECUTIVE SUMMARY

Introduction

Ecology and Heritage Partners Pty Ltd was engaged by P.D.S.D. Mazzei an Offset Management Plan (OMP) to compensate for impacts associated with the proposed development of 130 Reid Street and 18B Jonesfield Corner, Ardeer, Victoria (EPBC 2014/7358).

The intention of this OMP is to detail the offset strategy to mitigate the loss of 9.87 hectares of Striped Legless Lizard (SLL) *Delma impar* habitat, five Spiny Rice Flower (SRF) *Pimelea spinescens* subsp. *spinescens* plants, and 3.73 hectares of the ecological community, *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP) at the development site. This is achieved by outlining management actions for the protection of 4.77 hectares (18.95%) of SLL habitat, SRF habitat containing 176 SRF plants, and 4.54 hectares (33.62%) of NTGVVP at a site located at 103 and 57A Reid Street, Ardeer, Victoria. The remaining offset obligations have been satisfied through an off-site offset which is detailed in a separate Offset Management Plan. This OMP has been written in consultation with the landowner/proponent of the offset site (P.D.S.D Mazzei) and is intended to be implemented by the landowner/proponent.

The proposed SLL and NTGVVP offsets outlined within this OMP comprise a portion of land within the southern property of 103 and 57A Reid Street, not the entire property.

Proposed Offset Site

The proposed offset site is located within the southern property of 103 and 57A Reid Street, Ardeer. The proposed development is for the northern property only. The offset site contains known habitat for SLL and patches of moderate-quality Plains Grassland which meet the key criteria for listing as the nationally significant ecological community NTGVVP. In accordance with the *Planning and Environment Act 1987*, 4.77 hectares of SLL habitat, SRF habitat comprising 176 SRF plants, and 4.54 hectares of NTGVVP will be protected on-title either through a Section 173 Agreement, and secured via a Trust for Nature covenant under the *Victorian Conservation Trust Act 1972,* or a Section 69 Agreement under the *Conservation, Forests and Lands Act 1897* within 12 months post approval. The 4.54 hectares of NTGVVP will be situated within the 4.77 hectare SLL offset area.

Management Actions

The offset site will be managed for the purposes of conservation and will involve physical protection of the SLL habitat and NTGVVP as well as a population of SRF, through the control of pest animals and environmental weeds, biomass reduction and general maintenance of the character and quality of the native vegetation. The landholder will adopt an adaptive management approach to allow flexibility to respond appropriately and effectively to uncertainties involved in ecological processes. This will ensure that management objectives are being met while allowing for altered circumstances to be included in the management of the offset site.

Any proposed changes to the management actions for the offset site contrary to those specified within this plan must be approved by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) prior to implementation. Any proposed uses or development of the offset site which conflict

with the landowners' commitments or maintenance/improvement of the community are not permitted under this plan.

CONTENTS

1 INTRODUCTION

1.1 Background

Ecology and Heritage Partners Pty Ltd was engaged by P.D.S.D. Mazzei to prepare an Offset Management Plan (OMP) to compensate for impacts associated with the proposed development of 130 Reid Street and 18B Jonesfield Corner, Ardeer, Victoria (EPBC 2014/7358).

A referral for the action was submitted for assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (EPBC 2014/7358). The referral will be assessed under Preliminary Documentation, which requires the proponent to prepare and implement an Offset Management Plan to compensate for the removal of 9.87 hectares of Striped Legless Lizard (SLL) habitat, 5 Spiny Rice-flower *Pimelea Spinescens* subsp. *Spinescens* plants and 3.73 hectares of the nationally significant community: *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP).

The intention of this OMP is to detail the ongoing management actions required to protect 4.77 hectares of SLL habitat, a population of 176 Spiny Rice-flower, as well as 4.54 hectares of NTGVVP at an onsite offset within the southern parcel of 103 and 57A Reid Street, Ardeer, Victoria. The OMP has been written in consultation with P.D.S.D. Mazzei who own the property 103 Reid Street and are proposing the action (EPBC 2014/7358). Management will be implemented by the landowner.

The OMP is both strategic and focused on management actions and performance measures (quantitative amounts indicated, where appropriate) in order to address management issues and key threats across the offset site.

2 OBJECTIVES AND CONTEXT OF THE PROJECT

2.1 Impact Site

The impact site (Development Site) for the proposed development is located within private property known as 103 Reid Street and 18B Jonesfield Corner. The development site is located approximately 16 kilometres west of Melbourne's CBD and is partitioned by the Western Ring Road into two separate areas to the north (Development Site) and south (On-site Offset Site). The impact site is bound by the western ring road to the south, Jones Creek to the north and east, and undeveloped land to the west.

At the time that the EPBC referral (2014/7358) was lodged in 2014, the northern properties were considered for development with a complete loss of native vegetation, while the southern properties were considered for development with some loss of native vegetation. Since this time, a development concept plan has been refined which proposes the same losses for the Development Site, however the southern properties are to now be established as an on-site offset to partially compensate for these losses and to protect a large population of the Critically Endangered Spiny Rice Flower *Pimelea spinescens* subsp. *spinescens*. The northern properties are the preferred development site with a construction footprint of approximately nine hectares.

The Development Site comprises private land adjacent to residential housing which has continually degraded over the past seven years since the submission of the EPBC referral (2014/7358), this has been primarily due to urban disturbance and establishment of pest flora species such as the Weed of National Significance (WoNS) Serrated Tussock *Nassella trichotoma* and fauna species such as the European Rabbit *Oryctolagus cuniculus*. Patches of native vegetation identified within the development site are fragmented by the establishment of Serrated Tussock.

According to the Department of Energy, Environment and Climate Action (DEECA) NatureKit Map (DEECA 2023), the development site is located within the Victorian Volcanic Plain bioregion, Melbourne Water (formerly Port Phillip and Westernport) (CMA) and Brimbank City Council.

The site is currently zoned as Industrial Zone – Schedule 3, which is currently under a re-zoning application to be listed as General Residential Zone with the Brimbank City Council. One other overlay is relevant to the site: Environmental Significance Overlay – Schedule 6.

The proposed action at the impact site will have a direct impact on 9.87 hectares of SLL habitat and 3.73 hectares of NTGVVP, and five SRF plants. The objectives of this OMP are to offset the loss of 9.87 hectares of SLL habitat, five SRF plants and 3.73 hectares of the nationally significant ecological community NTGVVP. SRF is listed as Critically Endangered, SLL is listed as Vulnerable and NTGVVP is listed as Critically Endangered under the EPBC Act.

2.2 Offset Site

2.2.1 Description of the Offset Site

The proposed on-site offset is located on private property on the same parcel of land as the proposed action and the adjacent property: 103 and 57A Reid Street, Ardeer. Although the offset site is on the same property

as the development, the land to be protected and managed is separated by the Metropolitan Ring Road. The offset site was identified to protect and enhance 4.77 hectares of SLL habitat, 176 SRF individuals and 4.54 hectares of NTGVVP.

Since 2008, a range of ecological studies have been completed within the proposed offset site, including general flora and fauna assessments (Abzeco Pty Ltd 2008; Ecology Partners Pty Ltd 2008, 2010a, 2011; Ecology and Heritage Partners Pty Ltd 2014) and targeted surveys for Spiny Rice-flower *Pimelea spinescens* subsp. *spinescens* (Ecology Partners Pty Ltd 2010b; Ecology and Heritage Partners Pty Ltd 2016a, Ecology and Heritage Partners 2021, 2023), Golden Sun Moth *Synemon plana* (Ecology Partners Pty Ltd 2009), Striped Legless Lizard *Delma impar* (Abzeco Pty Ltd 2008; Ecology and Heritage Partners Pty Ltd 2016b) and spring-flowering flora species (November 2016).

Natural Temperate Grassland of the Victorian Volcanic Plain

The Heavier Soils Plains Grassland Ecological Vegetation Class within the proposed offset site area qualifies as NTGVVP totalling an area of 4.54 hectares. Areas of NTGVVP contain the greatest diversity of flora species, with embedded rock and inter-tussock spacing providing suitable habitat for SLL. The habitat zone has at least 60% cover of indigenous perennial grasses, in particular Kangaroo Grass *Themeda triandra*, with minor occurrences of Kneed Spear-grass *Austrostipa bigeniculata*, Common Wallaby-grass *Rytidosperma caespitosum* and Bristly Wallaby-grass *Rytidosperma setaceum var. setaceum.* The high grass biomass does not appear to have significantly affected the recruitment of native grassland herbs, with the habitat zone characterised by a high diversity of herb species including Berry Saltbush *Atriplex semibaccata*, Black-anther Flax-lily *Dianella admixta,* Curved Rice-flower *Pimelea curviflora*, Lemon Beauty-heads *Calocephalus citreus,* Hairy Sheep's Burr *Acaena agnipila*, Plains Stackhousia *Stackhousia subterranean*, Sprawling Bluebell *Wahlenbergia gracilis* and a population of approximately 176 individuals within the proposed on-site offset site.

Spiny Rice Flower

A total of 176 Spiny Rice-flower individuals were recorded in the proposed On-site Offset Site during the 2019 September surveys, all of which were recorded within the southern site (Ecology and Heritage Partners 2022). The majority of individuals were mature plants with clusters of new recruits located in areas of disturbed ground.

The population within the proposed on-site offset site has persisted with multiple new recruiting individuals being recorded. All targeted surveys for the species adhered to the survey guidelines for Spiny Rice-flower outlined in the Biodiversity Precinct Structure Planning Kit (DSE 2010) and the Significant Impact Guidelines (DEWHA 2009b) for the species.

Striped Legless Lizard

A resident population of Striped Legless Lizard is known to occur within the proposed on-site offset site as specimens have previously been recorded during targeted surveys (Abzeco 2008; Ecology and Heritage Partners 2010, 2015) within the offset area.

Additional targeted surveys for Striped Legless Lizard were conducted by Ecology and Heritage Partners Pty Ltd (2010) using the tile grids previously installed by Abzeco (2008). Tiles were inspected on two occasions in September and November 2008. Two Striped Legless Lizard individuals were observed during the surveys.

Targeted surveys during the 2014/15 spring and summer survey period were conducted to provide an up to date profile of the presence or absence of this species, and where possible to ascertain its current distribution and abundance within the proposed on-site offset site. Sixteen Striped Legless Lizard were captured and one sloughed skin were recorded within the proposed on-site offset site during targeted surveys.

Given the species has been recorded within the proposed on-site offset site across multiple surveys since 2008, the offset site supports a viable and important population as defined under the EPBC Act. As such, the offset site in its entirety is considered habitat for the species supporting a total of 4.77 hectares.

The matters of NES outlined in this OMP will be protected on-title either through a Section 173 Agreement under the *Planning and Environment Act* 1987 and a Trust for Nature covenant under the *Victorian Conservation Trust Act 1972* or a Section 69 Agreement under the *Conservation, Forests and Lands Act 1897* to be managed in perpetuity for the area covered by this OMP, with the management actions specified within the Agreement alike to those specified within this OMP specific to NTGVVP, SRF and SLL. The offset site selected is part of the broader southern property of 103 and 57A Reid Street as shown in Figure 2. The offset site has been chosen as it completes in part 100% of the direct offset requirements generated by the vegetation removal at the impact site, and forms part of the mitigation and compensation of impacts within the broader property and results in a demonstrable benefit in accordance with the Commonwealth's Environmental Offset Policy (DSEWPaC 2012a).

According to the DEECA Native Vegetation Information Management Tool (NVIM) (DEECA 2023), the offset site occurs within the Victorian Volcanic Plain Bioregion. It is located within the jurisdiction of the Melbourne Water (CMA) and the Brimbank City Council municipality.

2.2.2 *Tenure Arrangements*

The proposed offset site is privately owned by P.D.S.D Mazzei which is to be protected through either a Section 173 Agreement under the *Planning and Environment Act 1987* and a Trust for nature covenant, or a Section 69 Agreement under the *Conservation, Forests and Lands Act 1897.* The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.

The site is currently protected under a Section 173 Agreement which will be removed. The Section 173 agreement that currently applies to the proposed On-site Offset Site at 103 Reid Street, Ardeer due to destruction of native vegetation on site in May 2008. The agreement establishes that a baseline for ecological values present prior to the incident be applied for the purposes of any future use of the land. That is, native vegetation offsets in accordance with the Victorian Native Vegetation Management Framework (DSE 2002)(now 52.17 The Guidelines) would be calculated based on the condition of the land prior to May 2008. The agreement does not require any improvement of the land or the establishment of an offset site to occur.

2.2.3 Environmental Condition and Values

The offset site contains a population of SLL, which reside within and outside the areas of NTGVVP, and an SRF population. This OMP will focus on three matters of NES relevant to the proposed action (NTGVVP, SRF and SLL).

3 RISK ASSESSMENT

An assessment of potential risks associated with the objectives of this plan are outlined within Table 1. All risks are considered manageable and actions within subsequent sections of this OMP address relevant risks.

Table 1. Risk assessment and management actions for specific offset site for SLL, SRF and NTGVVP (Appendix 1).

Management objective/desired outcome	Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions	Notes
			L	C	RR			
To legally secure approved offset properties for conservation.	Failure to legally secure approved offset site	Engage with expert offset brokers	Unlikely	Moderate	Low	n/a	Engage a consultant	Low risk: the site is currently secured and protected with an on-title agreement (Section 173 Agreement). The site will either be secured under a Section 173 or Section 69 agreement which will apply the management actions in accordance with this OMP. The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.
	Legislative reform prejudices proposed tenure arrangements for offset properties.	Monitor DCCEEW, DEECA, LGAs and other legislative bodies on developments to offsets	Rare	High	Low	Newsletters, expert liaison, press releases and direct contact.	Adjust offset calculations accordingly.	

Management objective/desired outcome	Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions	Notes
			L	C	RR			
To achieve performance targets and completion criteria for all MNES	Landowner-proponent agreements fail to adequately address management commitments in the offset plan	Engage an expert to manage this process. Ensure all impacts are suitably offset.	Unlikely	High	Medium	Quality assurance and monitoring	Revise on-title and/or proponent agreements.	The site is currently secured and protected with an on-title agreement (Section 173 Agreement). The site will either be secured under a Section 173 or Section 69 agreement which will apply the management actions in accordance with this OMP. The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title.
To achieve performance targets and completion criteria for all MNES	Adjacent/regional landowner's land management practices fail to support attainment of offset outcomes.	Liaise with adjacent landholders. Ensure understanding of offset objectives	Unlikely	High	Medium	Adjacent land practices begin to negatively impact offset site.	Take steps to halt negative impacts. Follow up with stakeholder discussions	The adjacent land parcels contain industrial sites. Based on the current land management and 173 agreement practices in the region and it is unlikely that any foreseeable land management practices within the vicinity will impact the offset site.
To achieve performance targets and completion criteria for all MNES	Insufficient funds provided by proponent to implement the plan.	Ensure reputable land holder to implement plan.	Unlikely	High	Medium	Monitoring and/or annual reporting	Review plan for cost efficiencies.	The offset funds will be provided by the proponent, who is also the land holder.

Management objective/desired outcome	Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions	Notes
			L	C	RR			
To achieve performance targets and completion criteria for all MNES	Stochastic events (wildfire/drought/flood) prejudice attainment of interim performance targets and/or completion criteria for MNES.	Ensure appropriate biomass management. Plan for scheduling delays.	Possible	High	Medium	Monitoring and/or annual reporting	Apply adaptive management to ensure the objectives of the OMP are not compromised.	-
	Approved development on/near project/offset prejudicing plan outcomes	Ensure proper stakeholder engagement to prevent poor outcomes.	Unlikely	High	Medium	Advertisement of planning scheme amendments/planning permit applications	Objection to proposed development/laisse with proponent to ensure the proposed development does not compromise the objectives of the OMP.	The offset site is within an urban landscape surrounded by industrial buildings. The ecological values within the offset site do not rely on habitat values within adjacent land.
	Drought	Apply adaptive management to ensure the site biomass is managed	Likely	Moderate	Medium	Drought Event	Apply adaptive management to ensure the site biomass is managed	The SLL offset (4.77 hectares) includes the NTGVVP offset (4.54 hectares) and SRF offset. The offset site sits adjacent to industrial properties and will require active management to
	Wildfire		Likely	Moderate	Medium	Wildfire Event		

Management objective/desired outcome	Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions	Notes
			L	C	RR			
								control biomass and maintain habitat.
NTGVVP habitat improved	Uncontrolled illegal dumping/clearing	Maintain fences and install temporary fencing, if required (Section 5.5.5.1)	Highly Likely	Moderate	Unlikely	Continual monitoring	Repair permanent fences, and/or install temporary exclusion fences.	The strategic burning regimes specified within this plan aim to shift species dominance to favour native species abundance and diversity, improving the ecological condition and habitat. Further, strategic burning strategies will improve and maintain recruitment space required for native plants to establish, further improving species diversity over time.
	High biomass levels preventing establishment of native herbs (see Section 5.5.8.4 for performance indicators)	Undertake controlled burns (Section 5.5.8.2)	Highly Likely	Moderate	Possible	Annual monitoring	Apply controlled burns in appropriate season to reduce biomass levels (Section 5.5.8.2)	
	Loss of biodiversity due to competition with weeds (see Section 5.5.6.3 for performance indicators)	Spot spraying of weeds (Section 5.5.6.2)	Likely	Moderate	Possible	Annual monitoring	Undertake weed control activities (Section 5.5.6.2)	The Offset Management Plan includes actions to reduce weed cover, improving the ecological condition of the site over the 10-year period.
		Undertake controlled burns (Section 5.5.6.2)						
		Annual monitoring to adapt future control works and						

Management objective/desired outcome	Event or circumstance	Relevant management actions/measures	Residual risk			Trigger detection and monitoring activity/ies	Feasible/effective corrective actions	Notes
			L	C	RR			
		targets (Section 5.5.6.2)						
	Loss of biodiversity due to pest animal activity (see Section 5.5.7.3 for performance indicators)	Rabbit warrens are controlled (Section 5.5.7.2)	Likely	Moderate	Possible	Annual monitoring	Undertake pest control activities (Section 5.5.7.2)	The Offset Management Plan includes actions to reduce pest animal activity, thereby reducing grazing/soil disturbance by the European Rabbit. As a result, the SLL and SRF population and NTGVVP ecological community is likely to improve and expand within the site as it is managed.

Notes. L = Likelihood; C = Consequence; RR = Residual Risk

4 UNAVOIDABLE LOSS AND OFFSET OBLIGATIONS

4.1 Unavoidable Loss

The proposed development at the impact site of 103 Reid Street (development site) and 18B Jonesfield Corner will result in the removal of the following Matters of National Environmental Significance (NES):

- 9.87 hectares of Striped Legless Lizard;
- Five SRF plants; and,
- 3.73 hectares of *Natural Temperate Grassland of the Victorian Volcanic Plain*.

4.2 Offset obligations, user inputs and applying the offset guide

4.2.1 *Striped Legless Lizard, Spiny Rice-flower and Natural Temperate Grassland of the Victorian Volcanic Plain*

Based on the EPBC Act offset calculator (DSEWPaC 2012b), the protection and management of 4.77 hectares of SLL habitat (which overlaps with NTGVVP and SRF) at the proposed on-site offset site of 103 and 57A Reid Street, Ardeer provides an offset which accounts for 18.95% of the impacts to 9.87 hectares of SLL habitat (Table 2; Appendix 2). The protection and management of 4.54 hectares of NTGVVP accounts for 33.62% of the direct impacts to 3.73 hectares of the community (Table 3; Appendix 2). The remaining offset requirement is achieved through an off-site offset located at Rokewood-Shelford Road, Rokewood, Victoria (Section 69 Agreements). The protection and management of a population of 176 SRF accounts for 377.73% of the direct impacts to five individuals (Table 3; Appendix 2). As such, 100% of the offset requirements will be met through direct offsets and are considered to be in accordance with the Commonwealth environmental offset policy (DSEWPaC 2012a).

Table 2. EPBC Act Offset Calculator (Striped Legless Lizard) associated with the on-site offset site.

Offset Criteria	Response
Impact Site	
Impact Location	130 Reid Street and 18B Jonesfield corner, Ardeer Victoria 3022
Habitat to be removed	9.87 hectares of Striped Legless Lizard habitat (SLL)
Habitat quality	4/10. Striped Legless Lizard habitat to be removed comprises grassland areas that are also NTGVVP. Remnant patches proposed to be removed vary in quality from Low to High. Therefore, the habitat quality at the impact area is of moderate quality (DSEWPaC 2012b).
Offset Site	
Offset location	103 and 57A Reid Street, Ardeer, Victoria

Offset Criteria	Response
Risk-related time horizon	20 years. The land will be managed in perpetuity for conservation purposes for Striped Legless Lizard.
Time until ecological benefit	10 years. Native vegetation is expected to improve in extent, species diversity and density within 10 years through applied weed and biomass control regimes.
Start area and quality of offset site	4.77 hectares and 4/10. The offset site supports native grassland habitat of moderate quality and Striped Legless Lizard has been recorded at this location. The habitat quality is based on DSEWPaC 2012b. A resident population of Striped Legless Lizard is known to occur within the offset site as specimens have previously been recorded during targeted surveys (Abzeco 2008; Ecology and Heritage Partners 2010; Ecology and Heritage Partners 2015) within the offset area. Ecology and Heritage Partners has confirmed the offset site to support favourable habitat structure and a suitable cover of native grasses including Kangaroo Grass *Themeda triandra*, Spear grass *Austrostipa spp.* and Wallaby-grass *Rytidoserma spp.,* interspersed with the WoNS listed Serrated Tussock. Overall Rock cover throughout the offset site comprised approximately 10% cover, with suitable inter-tussock spacing and cracking clay soils making the area suitable habitat for the species. Targeted surveys during the 2014/15 spring and summer survey period were conducted to provide an up to date profile of the presence or absence of this species, and where possible to ascertain its current distribution and abundance within the offset site. Sixteen Striped Legless Lizard were captured and one sloughed skin were recorded within the offset site during targeted surveys
Risk of loss without offset	0%. There is currently a section 173 agreement on the site that is protecting the ecological values present within the offset site. The site is located within an Industrial Zone (IN3Z) and surrounded by industrial properties. The site has historically been subject to disturbance of illegal dumping of spoil and stockpiling which resulted in the application of a 173 agreement to protect the known values on the site.
Future quality without offset	3/10. Without increased management as an offset, a reduction in quality over time is likely due to continued pest and weed encroachment from within the property, as well as perennial weeds that exist elsewhere within the broader property, as well as a lack of land management, including biomass management resulting in a reduction in species diversity. Relatively small areas within the site have a high cover (60%) of the weed Serrated Tussock, which is a fast-growing species that can quickly outcompete native grass species such as Wallaby-grass and Spear-grass. Without increased management, this weed is likely to displace plants that constitute important habitat structure for SLL. Rabbits have been recorded within and nearby the offset site. Without increased management, rabbits could establish and are likely to dilapidate habitat structure, leading to a decline in the SLL community. Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC 2011). Weed invasions are accelerated by disturbance regimes that may occur in nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña contribute to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024). NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks

Offset Criteria	Response
	and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt *et al* 2007; Dorrough *et al* 2004, 2008a & 2008b; Zimmer *et al* 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats. In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention (Jacobs Group, 2024).
Risk of loss with offset	0%. There is a 0% chance that the SLL population will be lost with the offset being protected and managed in accordance with the OMP placed on-title. There is a level of risk is low, given the ecological values on site are currently protected under a section 173 agreement.
Future quality with offset	5/10. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a vegetation management plan incorporating weed control and regular monitoring, aiming to maintain and enhance native biodiversity There is a high level of confidence that the future quality of the SLL offset site will increase through the active implementation of the various actions outlined in the Offset Management Plan. There is a high likelihood that the management actions provided in the Offset Management Plan will lead to an increase in the species' habitat quality, site occupancy and population size. The management actions outlined in this Plan are well known and proven, and therefore there is a high likelihood that the quality of the habitat will improve in the future (DEWHA 2011b, 2009b). Currently, the exotic vegetation cover is variable across the site, with the average cover being approximately 30%. It is expected that at the end of the 10-year management period the exotic vegetation cover will not exceed 25%, Further, this will be measured through a demonstrated increase in the VQA site condition score. It is expected that at the end of the 10-year management of the site, the weed score will have improved to at least a 9/15, and the recruitment score improved to 10/10. The weed score will improve through the management of exotic grasses, where biomass will be monitored to ensure adequate inter-tussock spacing, and targeted control of Serrated Tussock and Chilean Needle-grass will be undertaken. The targeted control of high threat grass will provide opportunity for native grass and herb recruitment, increasing the cover of native species and maintaining the understory score to a minimum of 15/25. Further detailed on weed control actions are detailed in Section 5.5.6. Due to the commitment of the current landowner to the existing 173 agreement and investment, provides a high level of confidence that the future quality of the offset will increase (i.e. a score of seven is realistic). The offset site is to be re-secured and managed for conservation purposes in perpetuity, with implementation of a management plan incorporating weed control, biomass control and regular monitoring, aiming to enhance native biodiversity.

Offset Criteria	Response
	The species was previously observed in grassland areas with at least 20% native grass cover (wallaby-grass *Rytiodosperma* spp., spear-grass *Austrostipa* spp.) and weed management is necessary to ensure that native grass cover is maintained. Appropriate burn management is necessary to ensure that biomass is maintained for species diversity and habitat. Pest management is required to ensure rabbit populations do not establish.
Confidence in result	80%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing condition and existing conditions the landholder is abiding to. The site will be protected either through a Section 69 Agreement under the *Conservation, Forests and Lands Act 1987*, or 173 Agreement under the *Planning and Environment Act 1987* with Council. Council undertakes a quality assurance process for all offset sites to ensure the landowner agreements address the management commitments in the plan. Further, the site will be secured via a Trust for Nature covenant under the *Victorian Conservation Trust Act 1972* within 24 months post approval of the referral.
% of impact offset off-site	4.77 hectares high quality SLL habitat: 18.95%

Table 3. EPBC Act Offset Calculator (Natural Temperate Grassland of the Victorian Volcanic Plain).

Offset Criteria	Response
Impact Site	
Impact Location	130 Reid Street and 18B Jonesfield corner, Ardeer Victoria 3022
Habitat to be removed	3.73 hectares of Natural Temperate Grassland of the Victorian Volcanic Plains (NTGVVP)
Habitat quality	3/10. Higher quality Plains Grassland occurs in areas identified as NTGVVP, located in the north and south portions of the study area (Figure 2). Compared to other habitat zones, areas of NTGVVP contain the greatest diversity of flora species, with embedded rock and moderate soil disturbance from rabbits. The habitat zone has at least 60% cover of indigenous perennial grasses, in particular Kangaroo Grass *Themeda triandra*, with minor occurrences of Kneed Spear-grass *Austrostipa bigeniculata*, Common Wallaby-grass *Rytidosperma caespitosum* and Bristly Wallaby-grass *Rytidosperma setaceum var. setaceum.* The high grass biomass does not appear to have significantly affected the recruitment of native grassland herbs, with the habitat zone characterised by a high diversity of herb species including Berry Saltbush *Atriplex semibaccata*, Black-anther Flax-lily *Dianella admixta,* Curved Rice-flower *Pimelea curviflora*, Lemon Beauty-heads *Calocephalus citreus,* Hairy Sheep's Burr *Acaena agnipila*, Plains Stackhousia *Stackhousia subterranea* and Sprawling Bluebell *Wahlenbergia gracilis.*
Offset Site	
Offset location	103 and 57A Reid Street, Ardeer, Victoria
Risk-related time horizon	20 years. The land will be managed in perpetuity for conservation purposes for Natural Temperate Grassland of the Victorian Volcanic Plains
Time until ecological benefit	10 years. The existing habitat condition is expected to be improved over the 10-year active management schedule detailed in the Offset Management Plan.
Start area and quality of offset site	4.54 hectares; 5/10. The offset site was assessed by Ecology and Heritage Partners (2020) which recorded 4.54 hectares of NTGVVP within the offset area. The offset site supports moderate quality NTGVVP. The proposed offset site is 4.77 hectares in size, of which 4.54 hectares is NTGVVP (and overlapping SLL habitat). It is contiguous with larger areas of moderate quality NTGVVP within the broader property. The condition of the NTGVVP area proposed to be offset is 49/100 based on the Habitat Hectare assessment completed by Ecology and Heritage Partners (2020). The patch of NTGVVP selected for the offset site covers the central and eastern extent of the property, which overlaps with confirmed SLL habitat. The NTGVVP offset site Start area and habitat quality is based on (DSEWPaC 2012b): Site condition: 5/10. The site supports a diversity of native grasses (Wallaby-grass., Spear-grass, Tussock Grass and Kangaroo Grass, with at least a 50% perennial cover of native species, which meets the minimum threshold criteria for NTGVVP; Threats that occur to the community within and adjacent to the offset site include the loss of habitat through unauthorized disturbance i.e illegal clearing/dumping and and weed incursion. Specifically, the habitat (site condition), NTGVVP community extent and presence of populations of two federally listed species within the offset site are considered to be the most influential factors contributing to offset site quality. The habitat is considered to be moderate-high quality for NTGVVP. This is based on the patch identified as NTGVVP, having a moderate diversity of native grasses and herbs with minimal weed incursion. The definition for NTGVVP of sufficient quality for listing has been based on information provided in the *Nationally Threatened Ecological Communities of the Victorian Volcanic*

Offset Criteria	Response
	Plain: Natural Temperate Grassland & Grassy Eucalypt Woodland (DSEWPaC 2011). The combination of habitat factors presented has resulted in the starting quality of NTGVVP habitat being assessed at 5/10.
Risk of loss without offset	0%. There is currently a section 173 agreement on the site that is protecting the ecological values present within the offset site. The site is located within an Industrial Zone (IN3Z) and surrounded by industrial properties. The site has historically been subject to disturbance of illegal dumping of spoil and stockpiling which resulted in the application of a 173 agreement to protect the known values on the site.
Future quality without offset	4/10. Without increased management as an offset, a reduction in quality over time is likely due to continued pest and weed encroachment from within the property, as well as perennial weeds that exist elsewhere within the broader property, as well as a lack of land management, including biomass management resulting in a reduction in species diversity. Relatively small areas within the site have a high cover (60%) of the weed Serrated Tussock, which is a fast-growing species that can quickly outcompete native grass species such as Wallaby-grass and Spear-grass. Without increased management, this weed is likely to displace plants that constitute the community structure. Rabbits have been recorded within and nearby the offset site. Without increased management, rabbits could establish and are likely to dilapidate habitat structure, leading to a decline in quality and extent of the NTGVVP community. Without regular monitoring and intervention, invasive weeds outcompete native species for resources and degrade the quality of native grasslands (DSEWPC 2011). Weed invasions are accelerated by disturbance regimes that may occur in nearby areas such as soil disturbance and fertilisers (DSEWPC 2011), as well as climatic conditions that favour weed species (DSEWPC 2011; Jacobs Group 2024). Patterns of high rainfall associated with La Niña contribute to high weed growth due to being favourable growing conditions for many weed species and a decline in the quality of native grasslands (Jacobs Group, 2024). NTGVVP and all other native grassland habitat are the most under threat vegetation communities in Victoria (CES 2018), from urban and agricultural development, as well as ongoing weed invasion, fertiliser and herbicide use, inappropriate grazing and fire regimes, pest animal and disease outbreaks and neglect. Less than 2% of the original area supporting NTGVVP is estimated to now remain. While some land uses that threaten grasslands may require approval under state or federal legislation, many do not. For the example, entitled grazing practices, that include over-grazing in spring and summer has shown to deteriorate native grassland habitat, and under-grazing (or removal of grazing entirely) has led to the complete loss of native grasslands through out-competition from introduced pasture grasses, particularly Phalaris (Tumble and Fraser 1932; Lunt et al 2007; Dorrough et al 2004, 2008a & 2008b; Zimmer et al 2010). Active and targeted conservation management of native grasslands is essential to protect what areas remain. Given the significant economic value of grasslands in the VVP for urban development and agricultural production, offsets are current the only economically viable mechanisms available to landowners to permanently protect these remaining high value grassland habitats. In the recent review of EPBC Act offset sites, conditions of 55% were maintained, 30% were worse, and only 10% had improved (Jacobs Group, 2024). In Victoria, 60% were recorded as worse and 40% as having maintained vegetation conditions. The report concluded that Victorian grasslands are likely to reach maturity and require management both sooner and to a greater extent than is currently undertaken. The report's results show that a decline in the quality of grassland areas is common in managed sites, which strongly suggests a decline in the quality of grassland areas is likely in the absence of any intervention (Jacobs Group, 2024).
Risk of loss with offset	0%. There is a 0% chance that the NTGVVP community will be lost with the offset being protected and managed in accordance with the OMP placed on-title. There is a level of

Offset Criteria	Response
	risk is low, given the ecological values on site are currently protected under a section 173 agreement.
Future quality with offset	6/10. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a management plan incorporating weed control, biomass control and regular monitoring, aiming to enhance native biodiversity. The quality of NTGVVP will be improved by actions outlined in Section 5.5, and include: • Reducing weed cover, targeting perennial grass weeds which outcompete plants that constitute NTGVVP; • Eliminate all high threat weeds (<1% cover), reducing competition for the NTGVVP community; • Ensure rabbit populations do not establish and thereby reducing the threat posed to on-going survival and establishment of native herb diversity by overgrazing from exotic herbivores; and, • Ensuring that burning regimes undertaken in a manner sensitive to the requirements of NTGVVP. Proposed management actions are above and beyond both current and past management of the site. While the site is protected under a 173 agreement, and has been historically grazed, the grazing periods are not managed in consideration of biodiversity values and NTGVVP. Further, while some weed and rabbit control has occurred on the property, the level of control committed under this management plan is well beyond current management. Based on the increased management of the site, as outlined within Section 5.5 of this plan, which as outlined above are beyond past and current management, the habitat quality of the offset site is likely to be significantly improved beyond what the site would be without implementation of the offset. Largest changes in community quality are likely to be represented by Site Condition. Measurable targets to demonstrate the success of management actions aimed at improving the future quality of the offset site are provided in Sections 5.7.3.3, 5.7.4.3 and 5.7.5.3.
Confidence in result	80%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing condition and evidence of the landholder's capability to manage and abide by conditions set under either a section 69 Agreement or 173 agreement. The site will be protected through either a Section 69 Agreement under the *Conservation, Forests and Lands Act 1987* or Section 173 Agreement under the *Planning and Environment Act 1987* with Council. Council undertakes a quality assurance process for all offset sites to ensure the landowner agreements address the management commitments in the plan.
% of impact offset off-site	33.62%

Table 4. EPBC Act Offset Calculator (Spiny Rice-flower).

Offset Criteria	Response
Impact Site	
Impact Location	130 Reid Street and 18B Jonesfield corner, Ardeer Victoria 3022
Habitat to be removed	Five (5) Spiny Rice-flower individuals
Habitat quality	3/10. Higher quality Plains Grassland occurs in areas containing SRF, in the north and the southern extent of the development site (Figure 2). Areas containing SRF individuals contain the greatest diversity of flora species, with embedded rock and moderate soil disturbance from rabbits. The habitat zone has at least 60% cover of indigenous perennial grasses, in particular Kangaroo Grass *Themeda triandra*, with minor occurrences of Kneed Spear-grass *Austrostipa bigeniculata*, Common Wallaby-grass *Rytidosperma caespitosum* and Bristly Wallaby-grass *Rytidosperma setaceum var. setaceum.* The high grass biomass does not appear to have significantly affected the recruitment of native grassland herbs, with the habitat zone characterised by a high diversity of herb species including Berry Saltbush *Atriplex semibaccata*, Black-anther Flax-lily *Dianella admixta,* Curved Rice-flower *Pimelea curviflor*a, Lemon Beauty-heads *Calocephalus citreus,* Hairy Sheep's Burr *Acaena agnipila*, Plains Stackhousia *Stackhousia subterranea* and Sprawling Bluebell *Wahlenbergia gracilis.*
Offset Site	
Offset location	103 and 57A Reid Street, Ardeer, Victoria
Risk-related time horizon	20 years. The land will be managed in perpetuity for conservation purposes for Natural Temperate Grassland of the Victorian Volcanic Plains
Time until ecological benefit	10 years. The existing habitat condition is expected to be improved over the 10-year active management schedule detailed in the Offset Management Plan.
Start value	176 SRF individuals. The offset site was assessed by Ecology and Heritage Partners (2020) which recorded 176 SRF individuals within the offset area. The areas within the offset site containing SRF are selected for the offset site and this covers the central and eastern extent of the property, which overlaps with confirmed SLL habitat and NTGVVP area.
Risk of loss without offset	0%. There is currently a Section 173 agreement on the site that is protecting the ecological values present within the offset site. The Section 173 agreement currently applies to the proposed On-site Offset Site at 103 Reid Street, Ardeer due to destruction of native vegetation on site in May 2008. The agreement establishes that a baseline for ecological values present prior to the incident be applied for the purposes of any future use of the land. That is, native vegetation offsets in accordance with the Victorian Native Vegetation Management Framework (DSE 2002)(now 52.17 The Guidelines) would be calculated based on the condition of the land prior to May 2008. The agreement does not require any improvement of the land or the establishment of an offset site to occur. The site is located within an Industrial Zone (IN3Z) and surrounded by industrial properties. The site has historically been subject to disturbance of illegal dumping of spoil and stockpiling which resulted in the application of the Section 173 agreement to protect the known values on the site.
Future value without offset	132 SRF individuals. Without increased management as an offset, a reduction in quality over time is likely due to perennial weeds that exist elsewhere within the broader

Offset Criteria	Response
	property, as well as a lack of land management, including biomass management resulting in a reduction in species diversity. Relatively small areas within the site have a high cover (60%) of the weed Serrated Tussock, which is a fast-growing species that can quickly outcompete native grass species such as Wallaby-grass and Spear-grass. Without increased management, this weed is likely to displace SRF plants. Rabbits have been recorded within and nearby the offset site. Without increased management, rabbits could establish and are likely to dilapidate habitat structure, leading to a decline in the SRF population. The SRF population in the development site has declined over the past 10 years (from 5 to 2) as biomass and weed coverage has increased during this time. It is likely a similar effect will occur in the proposed offset site if no protections and management actions are put in place.
Risk of loss with offset	0%. There is a 0% chance that the SRF population will be lost with the offset being protected and managed in accordance with the OMP placed on-title. There is a level of risk is low, given the ecological values on site are currently protected under a Section 173 agreement.
Future value with offset	220 SRF individuals. The offset site is to be secured and managed for conservation purposes in perpetuity, with implementation of a management plan incorporating weed control, biomass control and regular monitoring, aiming to enhance native biodiversity. The number of SRF will be increased by actions outlined in Section 5.5, and include: • Reducing weed cover, targeting perennial grass weeds which outcompete SRF plants; • Eliminate all high threat weeds (<1% cover), reducing competition for the SRF plants; • Ensure rabbit populations do not establish and thereby reducing the threat posed to on-going survival and establishment of SRF by overgrazing from exotic herbivores; and, • Ensuring that burning regimes undertaken in a manner sensitive to the requirements of SRF. Proposed management actions are above and beyond both current and past management of the site. While the site is protected under a 173 agreement, and has been historically grazed, the grazing periods are not managed in consideration of biodiversity values and SRF. Further, while some weed and rabbit control has occurred on the property, the level of control committed under this management plan is well beyond current management. Based on the increased management of the site, as outlined within Section 5.5 of this plan, which as outlined above are beyond past and current management, the number of SRF plants at the offset site is likely to be significantly increased beyond what the site would be without implementation of the offset.
Confidence in result	80%. Confidence in applied scores is relatively high due to careful consideration of the offset site, existing population and evidence of the landholder's capability to manage and abide by conditions set under either a section 69 Agreement or 173 agreement. The site will be protected through either a Section 69 Agreement under the *Conservation, Forests and Lands Act 1987* or Section 173 Agreement under the *Planning and Environment Act 1987* with Council. The s173 Agreement will be in place in the interim until the Trust for Nature Covenant is placed on title. Council undertakes a quality assurance process for all offset sites to ensure the landowner agreements address the management commitments in the plan.
% of impact offset off-site	377.73%

5 OFFSET IMPLEMENTATION

5.1 Management Objectives and Strategy

The offset site will be managed for the purposes of conservation and will involve physical protection of the SLL habitat, SRF and NTGVVP, the control of pest animals and environmental weeds, biomass reduction and general maintenance of the character and quality of the native vegetation, consistent with its historic context.

The offset site will be protected in perpetuity via a Section 173 Agreement (Table 5) and a Trust for Nature Covenant. The Section 173 agreement will be an interim mechanism until the Trust for nature covenant is placed on title (within 12 months of the EPBC Act approval for the project). This OMP will be attached to the on-title agreement and require the landowner to manage the offset site in accordance with the requirements detailed herein. Security, management and monitoring responsibilities are summarised in Table 5. This OMP relates solely to the 4.77 hectares of SLL habitat, SRF and 4.54 hectares of NGTVVP and includes actions related to the ongoing monitoring and management of the ecological communities.

Table 5. Security and Management Responsibility.

Offset Security and Management Responsibility	Development 103 Reid Street and 18B Jonesfield Corner
Who is liable/responsible for meeting offset requirements?	P.D.S.D. Mazzei
Type of security mechanism	Interim: Section 173 agreement Future: Trust for Nature Covenant
Agreement or Planning Permit Number (ID)	TBC/2023 EPBC 2014/7358
Date 10-year offset management to commence	Upon approval of this OMP by DCCEEW
Date 10-year offset management expires	10 years following approval of this OMP by DCCEEW
Offset site management responsibility (i.e. Landowner, Authority Name)	P.D.S.D Mazzei
Offset Monitoring Responsibility (i.e. Responsible Authority)	P.D.S.D. Mazzei, DCCEEW

5.2 Compliance with Offset Principles

The '*Environmental Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy' (DSEWPaC 2012a) outlines a set of principles that a proposed offset must meet in order to be assessed under the referral process. These principles are detailed in Section 7 of the Preliminary Documentation (Ecology and Heritage Partners 2024), along with how the proposed offset site meets these requirements.

5.3 Offset Targets

The EPBC Act offsets policy (DSEWPaC 2012a) provides the details of the offsetting approach for Matters of NES; this includes an Offset Assessment Guide and offset calculator.

The Offset Assessment Guide offset calculator has been completed to determine the area of offset required to adequately compensate for the removal of SLL habitat, five SRF individuals, and NTGVVP at the development site. The Offset Assessment Guide offset calculator is provided in Appendix 2, and a justification for the scores given in Section 4.2.

5.4 Ongoing Land-use Commitments

The offset site will be managed to ensure the quality of remnant native vegetation and habitat for Matters of NES is improved over 10 years. After this period of management, the land will be required to be maintained in the condition achieved as a result of that management, in perpetuity.

From the commencement of the agreement, the Landowner agrees to undertake the following long-term (ongoing) management commitments in perpetuity for the 4.77 hectares of SLL habitat, SRF, and 4.54 hectares of NTGVVP:

- Retain and manage all native vegetation as directed by this OMP;
- Eliminate all woody weeds < 1 % cover;
- Reduce cover of exotic grassy weeds to < 20% cover;
- Reduce herbaceous weed cover below the current level;
- Achieve a VQA weed score of at least 9/15 at the end of the 10 Year management;
- Monitor for any new and emerging weeds and eliminate to < 1% cover;
- Control rabbits; and,
- Undertake biomass management (burning).

5.5 Management Actions

Implementation of the management actions (excluding third party monitoring) outlined within this OMP is the responsibility of the landowners (P.D.S.D Mazzei), who in this case are also those proposing the action, however, direct management responsibility may be delegated to a designated site manager and/or managing ecologist with annual reports submitted to Council, Trust for Nature, DCCEEW and the Proponent (P.D.S.D Mazzei). Specific monitoring and reporting requirements are detailed in Section 8.

Management actions detailed in this OMP will commence from the date the offset site is secured on title (i.e. registration of the Section 173 Agreement). A breakdown of management actions required over the mandatory 10-year active management period is shown below (Table 11). Following the 10-year active management period, the landowner will continue to manage the offset site as specified in this plan, such that:

- By Year 10 of management, the weed cover must be reduced from levels upon inception of this plan (Section 5.5.6). Following Year 10 of this plan, the weeds within the site must be maintained at the improved state achieved at year 10, or ideally improved further;
- SLL and SRF habitat will be improved through an improvement in site condition and at minimum, maintaining the current stocking rates, and;
- NTGVVP community is improved through the improvement of the site condition.

Funding for undertaking security, management and monitoring actions prescribed in this OMP has been agreed to by the landowner/Proponent P.D.S.D Mazzei.

Any proposed uses or development of the offset site which conflict with the landowner's commitments are not permitted under this plan. The sensitivities of the offset site must be considered with all management actions and all contractors entering the offset site need to be made aware of its ecological values.

The management and monitoring actions detailed in this OMP have been development in accordance with the following legislations and/or policies:

- *Environment Protection and Biodiversity Conservation Act 1999;*
- *Flora and Fauna Guarantee Act 1988* (FFG Act)*;*
- *Catchment and Land Protection Act 1994* (CaLP Act)*;*
- Commonwealth's Threat abatement plan for competition and land degradation by rabbits (DAWE 2016);
- Commonwealth Listing Advice on *Natural Temperate Grassland of the Victorian Volcanic Plain* (TSSC 2012c);
- Approved Conservation Advice for the *Natural Temperate Grassland of the Victorian Volcanic Plain* (TSSC 2008); and,
- Environment Protection and Biodiversity Conservation Act 1999: referral guidelines for the vulnerable striped legless lizard, Delma impar. Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC 2011b).

Of note, weed invasion and inappropriate grazing regimes are two of the main demonstrated threats to NTGVVP communities, and SRF and SLL populations.

This OMP addresses these demonstrated threats by including management actions aimed at reducing the likelihood of weed invasion, the preparation of an appropriate grazing regime sensitive to the values that exist in the offset site and surrounds.

5.5.1 Striped Legless Lizard

This management plan has been formulated to address several priority actions outlined within the Conservation Advice for the species (DoE 2013):

- To protect and manage the SLL habitat to maintain the potential for its evolution in the wild across its natural geographical range;

- Protect and prevent impacts to habitat critical to the survival of the species in the planning, construction and post construction phases of developments;
- Negotiate and implement conservation agreements or reserves for SLL on privately owned land which do not allow high intensity grazing, cropping and pasture improvement activities and involve ongoing management;
- Identify, control and reduce the spread of invasive grasses including escaped pasture species;
- Control feral cats and foxes in areas where SLL are present; and,
- Work with fire authorities and private landholders to plan and undertake any burns proposed in areas of habitat critical to the survival of the species in a way that will maintain or improve the habitat for the species.

Existing Threats

The main threats to the offset site are unapproved impacts such as dumping and/or stockpiling. Other threats include the expansion of the existing high threat weed populations that are present within the surrounding area, weed invasion in general and the accumulation of ground cover biomass. High threat weeds are defined as those introduced species (including non-indigenous natives) with the ability to outcompete and substantially reduce one or more indigenous life forms in the longer terms assuming on-going current site characteristics and disturbance regime.

This OMP details the prescribed actions and outlines the relevant timing for implementation. These actions will be applied to the entire offset area identified in Figure 2.

Maintenance and protection of the offset site will be achieved by:

- Fencing around the boundary of the offset site;
- Weed control through active management;
    - Eliminating all woody environmental weeds to < 1% cover;
    - Reducing cover of exotic grass to <20% cover;
    - Controlling all herbaceous weeds to reduce cover;
- Biomass control through ecological burns;
- Monitoring and controlling pest animals, particularly rabbits; and,
- Managing native species understorey diversity and recruitment.

Threats specific to Striped Legless Lizard

The key threats to SLL, as identified in the Significant Impact Guidelines for the species are outlined below (Table 6) (DEWHA 2009) and addresses the management action that will be applied to the offset site to mitigate the threat. Further details regarding each mitigation measure are provided in Section 5.5.4 to Section 5.5.9, and a table of recommended management actions for each year in Section 5.6.

Table 6. Key threats to Striped Legless Lizard.

Key threat to SLL (DEWHA 2011b)	Mitigation measure
Removal of vegetation	Habitat for SLL within the offset site will be protected by fencing (Section 5.5.4) and will protected through a Section 173 Agreement and a Trust for Nature Covenant. Without this protection, the site may be used for cropping purposes or cleared for other reasons.
Inappropriate fire regimes	Ensure biomass is maintain at low levels to reduce fuel loads across the site, as well as maintain suitable habitat structure for SLL (Section 5.5.7). The biomass level monitoring will also aid in the prevention of a damaging wildfire through fuel reduction management.
Weed invasion	Two main weeds; Serrated Tussock and Chilean Needle Grass, pose a threat of invasion and reducing the native grasses present within the offset site. The species' will be prioritised for control, with target levels set to achieve within the 10-year management plan (Section 5.5.5). Without the control of Toowoomba Canary-grass, it is likely the species would dominate the site, and reduce the suitable habitat available to SLL and extent of the NTGVVP community. Therefore, efforts will be focused on reducing the cover of the two grasses across the offset area.
Pest species establishment (causing loss of habitat plants, changes to soil and plant structure or increase nutrient load)	The offset site currently does not show signs of establishment of the pest fauna species European Rabbit, however warrens have been observed within the northern section of 103 Reid Street and have been the major contributor to the loss of habitat quality for SLL.
Rank growth (loss of inter-tussock spaces)	Loss of inter-tussock space may occur if noxious weeds, particularly Serrated Tussock and Chilean Needle grass is not controlled and biomass across the offset site is not managed. General biomass will be managed through ecological burning (Section 5.5.7).

5.5.2 Spiny Rice-flower

A total population of 176 Spiny Rice-flower individuals have been recorded within the proposed offset area. Along with this, a further five individuals are proposed to be translocated into a recipient area of the offset site (Ecology and Heritage Partners 2024). The management of the offset area should be undertaken in a manner which is sensitive to the Spiny Rice-flower, this includes burning, weed control and access. The management of the recipient site will be complimentary to that of the offset site and is expected to benefit the site though the improvement of degraded areas.

This management plan has been formulated to address several priority actions outlined within the Conservation Advice for the species (TSSC 2016b):

- Protect key populations from vegetation clearing and degradation through the establishment of formal reserves and conservation agreements with landholders;
- Ensure that strategic planning for prescribed burning accounts for the needs of SRF in determining fire regimes, in order to support habitat, germination and growth of SRF;
- Control the spread of weeds by reducing disturbance, e.g. through reducing stock, vehicle or public access;
- Control the impact of feral herbivores at key sites, particularly rabbits and hares, through exclusion fencing and/or caging plants; and,

- Establish new populations in suitable habitat adjoining or near existing populations on secure land (reserves or covenanted properties), using the recommended translocation measures and genotypes deemed to be suitable for the area.

Existing Threats

The main threats to the offset site are unapproved impacts such as dumping and/or stockpiling. Other threats include the expansion of the existing high threat weed populations that are present within the surrounding area, weed invasion in general and the accumulation of ground cover biomass. High threat weeds are defined as those introduced species (including non-indigenous natives) with the ability to outcompete and substantially reduce one or more indigenous life forms in the longer terms assuming on-going current site characteristics and disturbance regime.

This OMP details the prescribed actions and outlines the relevant timing for implementation. These actions will be applied to the entire offset area identified in Figure 2.

Maintenance and protection of the offset site will be achieved by:

- Fencing around the boundary of the offset site;
- Weed control through active management;
    - Eliminating all woody environmental weeds to < 1% cover;
    - Reducing cover of exotic grass to <20% cover;
    - Controlling all herbaceous weeds to reduce cover;
- Biomass control through ecological burns;
- Monitoring and controlling pest animals, particularly rabbits; and,
- Managing native species understorey diversity and recruitment.

Threats specific to Spiny Rice-flower

The key threats to SRF, as identified in the national recovery plan for the species are outlined below (Table 6) (DCCEEW 2024) and addresses the management action that will be applied to the offset site to mitigate the threat. Further details regarding each mitigation measure are provided in Section 5.5.2 to Section 5.5.9, and a table of recommended management actions for each year in Section 5.6.

Table 7. Key threats to Spiny Rice-flower.

Key threat to SRF (DCCEEW 2024)	Mitigation measure
Habitat loss and fragmentation	Habitat for SRF within the offset site will be protected by fencing (Section 5.5.) and will protected through a Section 173 Agreement and a Trust for Nature Covenant. Without this protection, the site may be used for cropping purposes or cleared for other reasons.
Habitat loss associated with land tenure	Habitat for SRF within the offset site will be protected by fencing (Section 5.5.4) and will protected through a Section 173 Agreement and a Trust for Nature Covenant. Without this protection, the site may be used for cropping purposes or cleared for other reasons.

Key threat to SRF (DCCEEW 2024)	Mitigation measure
Increased frequency and duration of reduced rainfall, or severe rainfall deficiencies induced by climate change	Biomass management will be critical in the event there is increased frequency and duration of reduced rainfall. Biomass and weed management will adaptive and targeted to ensure that SRF plants are not unnecessarily burnt / grazed during a drought and do not face additional competition from weed species during this period.
Fire regimes that cause declines in biodiversity	Ensure biomass is maintain at low levels to reduce fuel loads across the site, as well as maintain suitable habitat structure for SRF (Section 5.5.5). The biomass level monitoring will also aid in the prevention of a damaging wildfire through fuel reduction management.
Weeds	Two main weeds; Serrated Tussock and Chilean Needle Grass, pose a threat of invasion and reducing the native grasses present within the offset site. The species' will be prioritised for control, with target levels set to achieve within the 10-year management plan (Section 5.5.5). Without the control of Toowoomba Canary-grass, it is likely the species would dominate the site, and reduce the suitable habitat available to SRF. Therefore, efforts will be focused on reducing the cover of the two grasses across the offset area.
Herbivory and grazing	The offset site currently does not show signs of establishment of the pest fauna species European Rabbit, however warrens have been observed within the development site and have been a contributor to the loss of habitat quality for SRF. Grazing to reduce biomass at the offset site will applied sparingly to ensure trampling and grazing of SRF does not cause a decline of SRF at the offset site.

5.5.3 *Natural Temperate Grassland of the Victorian Volcanic Plain*

- To protect and manage the NTGVVP community to maintain its natural geographical range.
- Protect and prevent impacts to habitat critical to the persistence of the community in the planning, construction and post construction phases of developments.
- Negotiate and implement conservation agreements or reserves for NTGVVP on privately owned land which do not allow high intensity grazing, cropping and pasture improvement activities and involve ongoing management.
- Identify, control and reduce the spread of invasive grasses including escaped pasture species.
- Work with fire authorities and private landholders to plan and undertake any burns proposed in areas of habitat critical to the persistence of the community in a way that will maintain or improve the habitat.

Existing Threats

The main threats to the offset site include the expansion of the existing high threat weed populations that are present within the surrounding area, weed invasion in general and establishment of pest fauna species (rabbits) and the accumulation of ground cover biomass.

This OMP details the prescribed actions and outlines the relevant timing for implementation. These actions will be applied to the entire offset area identified in Figure 2.

Maintenance and protection of the offset site will be achieved by:

- Fencing around the boundary of the offset site;
- Weed control through active management;
    - Eliminating all woody environmental weeds to < 1 % cover;
    - Controlling all weeds to reduce cover;
- Biomass control through ecological burns;
- Controlling pest animals, particularly rabbits; and
- Managing native species understorey diversity and recruitment.

5.5.4 *Fencing and Access*

An existing permanent fence currently exists around the perimeter of the broader offset property. Under this agreement the fencing is required to be upgraded around the perimeter to ensure unauthorised access and establishment of rabbits is prevented.

The offset site and broader property remain private property and access or disturbance to the offset site by unauthorised persons is prohibited. Adequate access and security (locked gates) must be established at the end of Reid Street to service the access requirements for management of the offset site.

Actions

- Establish a rabbit-proof fence;
    - Minimum standard for rabbit proof fence netting is 1 050 mm wide, 30-40 mm mesh diameter and 1.4 mm wire diameter;
    - Fix rabbit netting so that it reaches at least 900 mm above the ground and is either buried (to 150 mm depth) or laid down to a width of 300 mm on the ground and secured with pegs, rocks or timber; and
    - Support the fence to withstand stock or native animal forces.
- Control access and any passive use of the offset site to minimise impacts on native vegetation;
- No additional vehicle/person access is to be established without the approval of the landowner, TfN and DCCEEW.

Performance Indicators

- Pest fauna excluded from offset site;
- Access to the offset site is appropriately controlled;
- Rabbit proof fencing is maintained in good repair; and,
- All fencing activities and repairs are effectively documented.

Adaptive Management

- Fencing requirements must be effective in the prevention access of pest fauna species. If the established fencing is not effective additional measures should be investigated and implemented.

5.5.5 Weed Control

Objectives

The objective of weed control within the offset site is to improve the existing quality of SLL, SRF habitat and NTGVVP by reducing/minimising future invasion by exotic flora. This will be achieved through a combination of controlled burning, and through on-ground management activities.

Woody weeds

No woody weeds have previously been recorded within the offset area. Monitoring for new and emerging woody weeds must be conducted throughout the year for the term of the agreement, and any new and emerging woody weeds eliminated.

Herbaceous weeds

The aim of management is to reduce cover below current levels. Current herbaceous weed cover within the offset site is estimated to be around 30-40% throughout the offset area. Weeds listed in Table 8 were found within offset site. These weeds will be controlled and monitored each year to ensure their cover is reduced, with a VQA weed score of 9/15 achieved by the end of the 10-year management period. Weeds must be treated using methods listed in Table 8 before the plant has flowered and set seed. Indigenous plants must not be impacted during treatment of weeds.

Annual weeds within the offset site are not considered to be a significant threat and will be managed using grazing to reduce their prominence.

Spot spraying with appropriate herbicide is the main method for reducing weed cover. Spot spraying will be undertaken regularly, particularly in spring and early summer, with a focus on killing weed plants prior to seed set. Spot spraying will be completed in a manner which minimises non-target damage. Spot spraying will not occur during high wind days or in proximity to threatened flora without protective measures in place (i.e. physical shielding). Biomass control is also considered to be an effective method for controlling and reducing weed levels and will include controlled livestock grazing (sheep).

Weed control methodology for eradicating graminoid and herbaceous weeds will comprise manual removal and/or targeted spot spraying with an appropriate herbicide. Care must be taken when spraying herbicide to ensure that the poison does not affect native vegetation in the local application area. Weed species must be treated before seed is set, which may involve localised slashing if spot-spraying proves ineffective. A dye will be used in the spray to mark where spraying has been utilised.

The composition and distribution of vegetative cover across the offset site is likely to change over time in response to seasonal conditions or pulse grazing. Therefore, weed cover and species will be continually monitored and management activities adapted to ensure the desired outcomes outlined in this OMP are achieved.

New and emerging herbaceous weeds

Monitoring for new and emerging herbaceous weeds will be conducted throughout the year for the term of the agreement, and any new and emerging weeds eliminated (<1% cover) (Table 8).

Any other significant environmental weeds identified within the broader property during monitoring will also be controlled. The landowners may consult with a qualified ecologist regarding appropriate control techniques for any new or emerging weeds identified within the offset area.

Table 8. Herbaceous weeds to be controlled – method and timing.

Common name	Scientific name	% total cover at inception	Method	Timing
Annual Grasses	Hordeum spp., Avena fatua, Aira spp., Briza spp., Bromus spp.	25%	Controlled burn; spot spraying of herbicide; hand held weed burner to scorch seedlings.	Generally, early Spring
Cat's-ear	Hypochaeris radicata		Pulse-grazing and targeted spot spraying with appropriate herbicide.	Generally, early Spring. Spot-Spray: Spring and early summer
Chilean Needle Grass	Nassella neesiana		Targeted spot spraying with appropriate herbicide.	Spot-Spray: Spring and early summer
Serrated Tussock	Nassella trichotoma	0%	Targeted spot spraying with appropriate herbicide.	Spot-Spray: Spring and early summer
Spear Thistle	Cirsium vulgare	<1%	Hand chip, or targeted spot spraying with appropriate herbicide.	Spot-Spray: Spring and early summer

Spot Spraying

The application of herbicides is an effective and efficient control technique for a range of woody, herbaceous and grass weeds. The correct use and application of herbicides can provide targeted control of a range of species. However, all herbicides must be used in accordance with the manufacturer's specifications and occupational health and safety policies.

Application methods for herbicides include: spot spraying with a knapsack, dabbing of weeds in sensitive areas with a foam-tipped application device, rig spraying with a pump for larger areas, dabbing of cut stumps and injection of woody weeds.

Timing of the interval of spot spraying is dependent upon many factors such as plant age and growth seasons, plant stress levels and climatic factors. All these factors need to be considered when develop methodologies for the application of herbicides to ensure successful outcomes. Surrounding native plants' susceptibility to herbicides and ongoing uses of the treated areas must also be considered when choosing the right herbicide to be used in a weed control program, as some herbicides are residual and may persist within the soil for varying durations.

Actions

- Periodic spot spraying of weeds with appropriate herbicide will be undertaken, particularly through spring and early summer as detailed in Table 8;
- Any populations of new and emerging high threat weeds will be treated promptly and eliminated to <1% cover. This will be done in consultation with DCCEEW;
- During weed control, natural regeneration of indigenous flora will be protected from off-target damage;
- Undertake controlled burning within the offset site to reduce weed cover as per Section 5.5.7; and
- Annual monitoring will be undertaken to demonstrate the effectiveness of weed control works and the results are to be used to adapt future control works and targets.

Performance Indicators

- Eliminate all high threat and woody weeds (<1% cover) within Habitat Zone 1;
- Where herbicide application is employed, waterway sensitive products and non-residual herbicides are to be employed;
- Achieve a VQA weed score of at least 9/15 by the end of the 10 year management period;
- Maintain an understory score of at least 15/25 by the end of the 10 year management period;
- No off-target damage to indigenous plants; and
- No new or high threat weeds establishing within the offset site.

Adaptive Management

- Respond to the annual monitoring report and associated recommendations;
- If objectives and performance indicators are not being met:
    - Review burning regime;
    - Increase frequency of control activities; and
    - Raise any significant issues with DCCEEW as soon as they arise.

5.5.6 Pest Animals

Objectives

The objective of pest animal management is to control pest animals (e.g. rabbits, foxes) within the offset site, as required, to minimise negative impacts to the Plains Grassland communities, which provides habitat for SLL, SRF and the NTGVVP community. The *Catchment and Land Protection Act 1994* lists rabbits and foxes as established pest animals and requires that all landowners take reasonable steps to prevent the spread of, and as far as possible eradicate, established pest animals on their land.

No active rabbit warrens have been observed within the Offset area; however they are known to occur within the local area. An integrated approach in accordance with BushBroker Information Sheet 7 - Standards of Management – Rabbits, will be followed which will involve fumigation, hand collapsing of burrows and baiting. Any rabbit carcasses found within the offset site will be removed to prevent poisoning of native predators. These actions are in accordance with the Commonwealth's *Threat abatement plan for competition and land degradation by rabbits* (DAWE 2016).

Ripping of rabbit warrens within the offset site is not permitted. If any warrens develop within the offset site, they will be treated by low impact measures such as fumigation or collapsing. Installation of rabbit-proof fencing is proposed to prevent rabbits colonising the site.

Foxes are a threat to native fauna and must be controlled if identified within the offset site. If identified, fox dens will be destroyed through fumigation and hand collapse.

To reduce the likelihood of pest animals inhabiting the offset site on a regular basis, any artificial piles of logs and rocks that may be used as harbour by pest animals will be removed or dispersed.

Both rabbits and foxes will be controlled as detailed below (Table 9).

Table 9. Pest animals to be controlled – species, method and timing.

Common name	Method	Timing
Rabbits	Baiting. When baiting collect and dispose of carcasses to prevent poisoning of native predators.	Ongoing
Rabbits & Foxes	Fumigation and collapse of rabbit burrows and fox dens if identified. Remove or disperse surface harbour. Installation of rabbit-proof fencing.	Ongoing
New & Emerging pest animals	Monitor and control	Ongoing

Actions

- Control and seek to locally eliminate pest animals using appropriate control techniques, including poison baits, warren fumigation and collapsing, or similar methods, without soil disturbance; and,
- Fumigate rabbit warrens according to best practice management techniques. Fumigation works will be conducted by the landowner or a suitably qualified operator where rabbit activity is identified.

Performance Indicators

- Any rabbit warrens or fox dens are controlled immediately following detection;
- Reduction in the abundance of pest animals, and no detectable impacts to the native grassland community; and
- All monitoring and management activities are effectively documented.

Adaptive Management

- If pest animal management fails to achieve a reduction, or effectively control rabbit or fox numbers, or if impacts to NTGVVP community, SRF individuals and/or SLL habitat are attributable to an increase

in pest animals activities, a review of the current procedures and management measures will be undertaken;

- Review performance of pest animal contractor;
- Increase active monitoring of pest animal activity;
- Incorporate addition control measures (i.e. spotlighting and shooting); and
- Improve existing fencing of broader offset property to exclude pest fauna.

5.5.7 Biomass Control

Objectives

The objective of biomass control within the offset site is to promote and maintain floristic diversity, and inter-tussock spaces for germination and recruitment of SRF and native flora associated with the NTGVVP community. This will also have positive outcomes for managing SLL habitat. In addition, these actions will improve habitat quality for existing flora present within the offset site and assist with minimising the growth of weeds.

Biomass management is essential to enhance the ecological values throughout the offset site, including the maintenance and improvement of SLL habitat and NTGVVP, and proliferation of SRF. Biomass management is also required to maintain inter-tussock spaces and prevent excessive competition to grassland forbs. Biomass control will aim to maintain approximately 20% to 40% cover of bare ground or inter-tussock space to allow sufficient space for recruitment of herbs and grasses. If the SLL, SRF or NTGVVP offset area is found to be less than 20% bare ground then biomass reduction must be implemented at the earliest possible opportunity (with consideration of seasonality in order to minimise risk to ecological values, life and assets).

The site currently is not managed for biomass control.

Ecological burning

Ecological burning has benefits in controlling biomass and stimulating natural regeneration of native species present within the site.

The site should be burnt every 3 years depending on seasonal conditions and biomass loads via mosaic burning. Burning will avoid burning newly established SRF individuals (less than three years age) where possible.

Burning should be undertaken in autumn when soil cracks are visible to minimise impacts to SLL. The ecological burns must be undertaken by suitably qualified and experienced personnel.

Biomass loads are currently high across the offset site with the highest density observed within the western extent of the offset site.

Slashing may be considered as an alternative method to reduce biomass if burning is not possible.

Supplementary planting/seeding

To increase diversity and reduce establishment of weedy species, areas of high weed cover (eastern extent) following an ecological burn should be intensively sprayed followed by micro-scalping and planting of tube-stock or direct seeding of a mix of locally sourced species indigenous to the site.

Actions

- Undertake mosaic ecological burns every 3 years across the site during autumn as to avoid detrimental impacts to MNES; and,
- Scalp, plant/direct seed areas of high weed cover following ecological burn (eastern extent)

Performance Indicators

- Maintain or improve species richness and improve species diversity;
- Improve species recruitment through improvement and maintenance of suitable vegetation structure throughout the site; biomass is reduced to moderate, and suitable inter-tussock spaces for natural recruitment maintained/provided (through transect monitoring and photo-points – see below);
- Reduce areas of high weed cover in the east of the offset site;
- Achieve a VQA understory score of at least 15/25 by the end of the 10-year management period;
- Achieve a VQA recruitment score of at least 6/10 by the end of the 10-year management period;
- Establishment of 14 x 1m2 quadrats throughout the offset site to monitor density of biomass;
- Weed biomass does not increase in areas of remnant vegetation;
- Minimum of 20% of total offset site cover will comprise inter-tussock space; and,
- All burn events effectively documented.

Adaptive Management

Highly seasonal conditions are not uncommon across western Victoria and can result in variable conditions from year to year. This is acknowledged within the OMP by allowing for a flexible approach to the timing of burning actions at the discretion of the Landowner.

5.5.8 Monitoring and Reporting

This Offset Management Plan requires the approval holder to submit a report annually to DCCEEW for each year of the 10 Years of this Offset Management Plan and continue monitoring every year following for the life of the project approval under the EPBC Act. The reports will include a review of past management works against the performance targets and objectives contained within this OMP. Future management priorities will also be detailed in these reports.

The Landowner will establish eight permanent photo-points in the offset site. These points will be marked via GPS and shown on a Figure. Photographs taken from these points will be representative of the vegetation and objectives of the OMP (e.g. areas of high threat weed invasion). Photographs will be taken in October each year and clearly labelled. Each photo will be taken from as near to the same point each year and will use the same direction, trajectory and camera settings as is practicable.

Photographs and Annual Reports are to be submitted at least 2 months prior to the anniversary date of the execution of the agreement to allow time for compliance to be assessed before the anniversary date.

The Annual Report addresses progress against the commitments set out in this agreement. Annual Reports must provide enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of/progress against the commitments for each zone.

The template for a landowner monitoring and reporting form is shown in Table 10. Information to be provided in the reporting form includes:

- A copy of the Management Action Table from the OMP with information on which actions have been completed for year/s of this reporting period;
- A description of the specific monitoring results from surveys undertaken (i.e. NTGVVP condition assessment);
- Success of weed and pest animal control work;
- Successful management tools (i.e. techniques used to control weed species, protection of new plants, monitoring technique, etc.);
- Any problems or issues experienced (i.e. new infestation of weed species, etc.); and,
- Provide photographs showing evidence of works.

If any agreed management actions or commitments are incomplete or have not been undertaken in the times specified, the landowner is to document the justification and the actions that will be action/s will be undertaken to implement the requirement.

All records/evidence of management actions must be maintained and be submitted to TfN and/or DCCEEW upon request, and any proposed changes to management must be submitted to TfN and/or DCCEEW prior to the changes being undertaken.

Table 10. Template for a Landowner Monitoring and Reporting Form.

Landowner of offset site	
Location and address of offset site	
Offset site number (if applicable)	
Offset plan reference number (if applicable)	
Responsible Authority	
Report #	
Signature	
Date	

Details of works undertaken	

5.5.9 *Offset Management Plan Review*

The protection and management of the nominated offset area is for perpetuity. The OMP will be reviewed by a suitably qualified Ecologist, in consultation with the Landowner, five years from the date of approval. The focus of the review will be to determine its effectiveness in managing the SLL habitat, SRF population and NTGVVP community.

The 5-year review of the OMP will be submitted to TfN and DCCEEW for approval prior to any recommendations regarding management of the offset site being implemented.

5.6 Management Actions Table

Management actions proposed to compensate for the loss of native vegetation and habitat under Commonwealth legislation at the offset site are presented in Table 11. The actions constitute the minimum management requirements for the offset site over the mandatory 10-year management period and are appropriate for the management of the SLL habitat, SRF population and NTGVVP community.

Table 11. Management Actions Table.

Year from Commencement	Area	Management Action Description	Timing	Environmental outcome to be achieved
Fencing				
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Maintain fencing in good condition around entire boundary of all sites where fencing exists or is required Refer Section 5.5.4	Ongoing	Maintain fencing to DEECA rabbit fencing standards in BushBroker Information Sheet 12 - Standards for Management – Fencing
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	If a threat arises erect an additional fence immediately around the entire boundary of the offset site Refer Section 5.5.4	Immediately on identification of threat	Erect fencing to DEECA rabbit fencing standards in BushBroker Information Sheet 12 – Standards for Management – Fencing

Year from Commencement	Area	Management Action Description	Timing	Environmental outcome to be achieved
Woody Weeds				
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Eliminate all new and emerging woody weeds Refer Section 5.5.5	Ongoing	Eliminate woody weeds (<1% cover)
Herbaceous Weeds				
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Control all herbaceous weeds. Refer to Table 8 for list of herbaceous weeds, their control method and timing of actions Refer Section 5.5.5	Refer to Table 8	Eliminate all high threat weeds (<1% cover) within offset site. Minimise off-target damage (avoid all native plants)
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Eliminate all new & emerging herbaceous weeds Refer Section 5.5.5	Ongoing.	<1% cover of all new and emerging herbaceous weeds at the end of Year 10
Pest Animals				
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Control rabbits and foxes. Refer to Table 9 for a list of control methods and timing of actions Refer Section 5.5.6	Refer to Table 9	No surface disturbance within the offset site; No active rabbit warrens to be present; No active fox dens to be present; No rubbish/artificial harbour present; Minimal artificial piles of logs and rocks;
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Monitor and control rabbits and foxes Refer Section 5.5.6	Ongoing	Reduction in the abundance of pest animals, and no detectable impacts to the native grassland

Year from Commencement	Area	Management Action Description	Timing	Environmental outcome to be achieved
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Monitor and control all new and emerging pest animals Refer Section 5.5.6	Ongoing	Control numbers of any new & emerging pest animals
Biomass Management				
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Ecological Burning Refer Section 5.5.7	The offset site should be burnt every 3 years as required depending on seasonal variability. Burns to be conducted in autumn when cracking clay is present to preserve SLL. Burns should avoid areas of SRF younger than three years established.	Biomass to be managed at moderate levels. Sufficient bare ground (approximately 20% to 40% cover) maintained in order to maintain space for recruitment of herbs and grasses. No loss of native plant diversity. Reduction in weed cover.
Detailed native vegetation and SLL monitoring				
Years 1-4, 6, 8 and 10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Monitoring Refer Section 8.2 and 8.3	Spring/Summer	Allow for ongoing auditing of the effectiveness of management. Reports will include a review of past management works against the performance targets and objectives contained within this OMP.

Year from Commencement	Area	Management Action Description	Timing	Environmental outcome to be achieved
Annual reporting				
1-10	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Prepare and submit an annual report and photo monitoring to DEECA and DCCEEW. Refer Section 5.5.9 and 8.1	Submit at least 2 months prior to on-title agreement anniversary date	Annual report is signed, dated and submitted by the Landowner at least 2 months prior to the anniversary date of on-title agreement registration Report provides enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of / progress against the commitments for the offset site. Allow for ongoing auditing of the effectiveness of management. Reports will include a review of past management works against the performance targets and objectives contained within this OMP. Future management priorities will also be detailed in these reports. Obligations of the Landowner have been met and the obligations form is signed, dated and submitted with the annual report
5	4.77 ha of SLL habitat; 4.54 ha of NTGVVP; and, SRF population.	Review effectiveness of OMP. Refer Section 5.5.9 and 8.1	End of Year 5.	If existing OMP is not leading to the ongoing maintenance and improvement of the NTGVVP community, a review will be undertaken, and a new management plan prepared for the remaining 5 years of management.

6 CONTINGENCY RESPONSE AND CORRECTIVE ACTIONS

The landholder will use an Adaptive Management Approach to allow the flexibility to respond appropriately and effectively to the uncertainties involved in ecological processes. This will ensure that management objectives are being met while allowing for altered circumstances to be included in the management of the site.

If after Year 5 of management, the actions detailed in this OMP are not leading to the ongoing maintenance and improvement of the SLL habitat, SRF population and NTGVVP community, the approval holder will instigate a review of the OMP, and a new management plan will be prepared for the remaining five years of management.

Highly seasonal conditions are not uncommon across western Victoria and can result in variable conditions from year to year. This is acknowledged within the OMP by allowing for a flexible approach to the timing of grazing actions at the discretion of the Landowner.

Any proposed changes to the management contrary to that specified within this plan must be approved by DCCEEW, prior to implementation. Any proposed uses or development of the site which conflict with the landowners' commitments or maintenance/improvement of the SLL habitat, SRF population and/or NTGVVP community are not permitted under this plan.

Alternative management measures, as part of an adaptive management approach, may be implemented if:

- The management outcomes outlined within Section 5 are unable to be met based on methods outlined within this plan;
- A new management technique has been identified which is considered to be more effective in meeting the objectives of this OMP, and relevant recovery plans, threat abatement plans, conservation advices and does not increase risk of impacts to SLL habitat, SRF population, and NTGVVP communities. A review of the benefits and risks of the proposed management technique must be prepared and submitted to DCCEEW; and,
- The proposed management technique has been approved by DCCEEW.

Where management outcomes outlined within Section 5 have not been met during any monitoring event (Section 8) corrective actions must be identified upon submission of the monitoring report.

Where an adaptive management approach has been implemented, the success, or failure, of the approach must be outlined within subsequent monitoring reports. The monitoring report must make recommendations on whether the approach should be continued, or whether subsequent alternative management is recommended.

6.1 Managing Uncertainty

An assessment of potential risks associate with the objectives of this plan are outlined within Table 1. All risks are considered manageable and actions within subsequent sections of this OMP address relevant risks.

7 EMERGENCY CONTACTS AND PROCEDURES

Should any environmental emergency occur on-site that poses a risk to the objectives of this OMP, the relevant contacts (Table 12) must be notified as soon as possible, and no later than 12 hours following the event. At a minimum, DCCEEW, and the landholder must be notified; CFA and Victoria Police should be notified if assistance is required from these emergency services (e.g. control of wildfire). Emergency services must be advised of the on-site protections to avoid inadvertent damage to ecological values (e.g. creation of graded earthen fire breaks within the site, which unless absolutely necessary, must be avoided).

Table 12. Emergency contacts.

Contact	Role	Telephone
Country Fire Authority (CFA)	Bushfire emergency	000
Victoria Police	Various (e.g. unauthorised access)	000
DCCEEW	Offset Monitoring Responsibility	1800 803 772
TfN	Offset Monitoring Responsibility	(03) 8631 5888
Landholder	P.D.S.D Mazzei	Undisclosed

8 MONITORING AND REPORTING

Ongoing monitoring is required to determine whether the SLL habitat, SRF population, and NTGVVP community quality persists and remain viable over time and to ensure that management actions improve habitat.

Site monitoring must include:

- General habitat monitoring (i.e. as described in Section 5.5.9) by the landholder (or an appointed entity on behalf of the landowner) annually; and,
- Detailed monitoring to be conducted by a qualified ecologist for an initial four-year period, and then in Years 6, 8 and 10 of this management plan. This will include a detailed habitat hectares assessment in each year of the detailed monitoring.

Further details on the monitoring actions is outlined below.

8.1 Annual Monitoring of Habitat and Effectiveness of Management actions

The landowner undertakes to establish eight permanent photo-points across the offset site. These points will be marked via GPS and shown on a Figure. Photographs taken from these points will be representative of the vegetation and objectives of the OMP (e.g. areas of high threat weed invasion). Photographs will be taken in October/November annually and clearly labelled. Each photo will be taken from as near to the same point each year and will use the same direction, trajectory and camera settings as is practicable.

Annual monitoring must be undertaken by the landowner (or an appointed entity on behalf of the landowner), and must include an assessment of:

- Photographs taken at established photo-points;
- The extent, severity, trend and presence of current weed species and any new and emerging weed species.
- The extent, severity, trend and presence of pest animal activity;
- Biomass levels, visually assessed across the site;
- Evidence of unpermitted human/stock access; and,
- Any new threats.

The annual monitoring must be undertaken for each year of the 10 Years of this Offset Management Plan.

8.2 Detailed Vegetation Monitoring (Years 1-4, 6, 8 and 10)

Detailed vegetation monitoring will be instigated by the approval holder and conducted by a qualified ecologist for an initial four-year period, and then in Years six, eight and 10 of this management plan, and will document the following components:

- Overall assessment of the quality and quantity of vegetation and composition of species (i.e. Habitat Hectare assessment*);
- Biomass levels, assessed through 14 x 1 m^2 sampling plots equidistant along the offset site; and,
- The extent, severity, trend and presence of current weed species and any new and emerging weed species.

** Department of Sustainability and Environment 2004. Vegetation quality assessment manual: Guidelines for applying the habitat hectares scoring method. Version 1.3. Victorian Department of Sustainability and Environment, Melbourne Victoria*

8.3 Striped Legless Lizard Population Monitoring (Years 1-4, 6, 8 and 10)

In addition to annual monitoring outlined in Section 8.1, appropriate monitoring of SLL will be undertaken for an initial four year period, and then in years 6, 8 and 10 of this management plan, or thereafter upon written agreement with the Commonwealth Minister for Environment. If the results indicate a decline in the population size or habitat degradation becomes evident, actions within this management plan will be re-evaluated. If any changes to management are required in the landowners' view, a revised management strategy must be approved by DCCEEW prior to implementation. Monitoring of SLL habitat must be undertaken by a suitably qualified ecologist(s).

Specific survey procedures will follow those approved monitoring guidelines for SLL prepared by DCCEEW*. The following measures will be undertaken as part of population and habitat monitoring for SLL at the offset site:

- Surveys are to be conducted by suitably trained observers;
- Monitoring for SLL to be undertaken across the offset site area. with a minimum of three monitoring grids, containing 50 tiles each, must be located within the offset site outlined within this plan. These tile grids must be maintained and checked a minimum of two times between October – November;
- Shelter sites will be checked when ambient temperatures do not exceed 28°C. Grids may be checked during summer/autumn for the presence of shed skin; and,
- Checking more frequently than once or twice a week may lead to SLL abandoning the artificial shelters, as such, tile checks at this frequency should be avoided.

** Department of Sustainability, Environment, Water, Population and Communities 2011. Survey guidelines for Australia's threatened reptiles, EPBC Act survey guidelines 6.6.*

8.4 Spiny Rice-flower Population Monitoring (Years 1-4, 6, 8 and 10)

Monitoring by a qualified botanist will be undertaken to ensure all targets are being met and the responsible authority is being notified of the progress of works for the offset site in relation to SRF. Monitoring is will be undertaken at the offset site for SRF in accordance with the National Recovery Plan for the Spiny Rice-flower *Pimelea spinescens* subspecies *spinescens* (DCCEEW 2024).

Monitoring of Spiny Rice-flower at the offset site will involve the documentation of key threatening processes such as drought stress, the presence of pest plants and animals, biomass and other site disturbances, together with the growth and survival rates.

8.4.1 Quadrat Data Collection

42 permanently marked, randomly stratified 5m x 5m quadrats will be established throughout the offset site with a series of data to be gathered from within each quadrat location.

Specific survey procedures align with the PsRT 'Monitoring Protocol for Long term monitoring of *Pimelea spinscens* subsp. *spinescens* in Victoria (Reynolds 2014a), ''Guidelines for monitoring *Pimelea spinescens* – standard operating procedures' (Reynolds 2014b), and TSSC guidelines for survey and monitoring priorities (TSSC 2016).

The following data will be collected:

- Number of SRF individuals (alive/dead)
- Sex and subsequent ratio (male, female, bisexual or indeterminant if no flowers or seeds)
- Flowering count (presence/absence)
- Flowering effort (5 categories within the 0-100% range)
- Spatial structure (clustered: ≥ 2 SRF within 50cm of a SRF or random: appearance of no order)
- Biomass of each SRF (measured in cm with string around base of plant)
- Grazing pressure (signs of cut stems, including snail damage)
- Bare ground % cover within the quadrat (to nearest 5%)
- Litter (native/exotic) cover within the quadrat (to nearest 5%)
- Pests (presence/absence)
- Photopoint from a point 3 m south-west of the south-western quadrat corner looking north-east towards the quadrat.

8.4.2 General Observations

General observations of disturbances that may be impacting SRF and grassland condition were recorded.

8.4.3 Spiny Rice-flower Counts

The number of SRF plants will be recorded in each quadrat. Plants with less than 10 centimetres between emergent stems will be recorded as one plant, as stems are known to emerge at ground level up to 10 centimetres from the centre of a plant.

8.4.4 Spiny Rice-flower Population Estimates

Spiny Rice-flower plant population estimates will be calculated for spring (late August) annually.

The method uses random stratified sampling with quadrats stratified based on their plant densities. Each quadrat will be weighted according to the relative proportion that its plant density category to be established following the first year's count. The weightings will be used to estimate the mean number of SRF plants per quadrat; this number will be multiplied by the total number of quadrats occupied by SRF in the census to provide an estimate of the total population.

As an additional measure for population calculation, 5-metre transects will be walked across the site to capture the entire SRF population present in the offset site, and to record the general condition of the grassland.

8.4.5 Population Structure

Seedlings

The number of SRF seedlings (germinants) will be recorded in each quadrat. Seedlings are defined as infertile, soft-stemmed plants with a single main stem (the main stem may be woody or soft) and plants may be branched (Reynolds 2013). Adult plants typically have multiple woody stems and may be flowering.

Number of flowering plants

The number of flowering SRF plants will be recorded in each quadrat.

Flowering effort

The percentage of flowers on each SRF plant will be recorded and allocated to one of the following categories:

- 0-5%
- 6-25%
- 26-50%
- 51-75%
- 76-100%

These data will compared to baseline data established after year one.

Sex ratio

The sex of each SRF plant will be recorded as male, female or bisexual. If plants were infertile (no flowers or seeds) then they will be recorded as indeterminate. SRF plants are generally dioecious (male and female flowers on separate plants) with the occasional plant producing both male and female flowers.

Dead plants

The number of dead SRF plants will be recorded.

Dead plants are defined as those plants that had many attached brown, brittle leaves and branches suggesting rapid death rather than the slower shedding of leaves and branches that might be expected of a plant entering dormancy.

Spatial structure

Within all quadrats, each SRF plant and the number of SRF plants within 50 cm of it (including plants inside or outside the quadrat) will be assessed. Plants will be allocated to the following categories:

- Random – the appearance of no order in plant placement; or
- Clustered – two or more SRF plants within 50cm of an SRF plant.

Biomass

The biomass of each plant will be assessed to review the plant coverage and extent of foliage cover on each plant (e.g. bare/dead branches attached to the plant reduced the biomass cover). The biomass of each SRF plant in each quadrat will be determined by measuring the approximate circumference of the plant extent in centimetres with a tape measure.

In addition to this measure of biomass, biomass will be given a condition score based on foliage cover, scored on a scale of 0 - 5.

0: 0%

1: 1-5%

2: 6-25%

3: 26-50%

4: 51-75%

5: 76-100%

This measure will be included as an additional indicator of plant health.

8.5 Reporting

To demonstrate that the management measures are effective in meeting the environmental outcomes, this OMP requires the approval holder to submit a report annually DCCEEW for each year of the 10 Years of this Offset Management Plan.

Photographs and reports are to be submitted at least two months prior to the anniversary date of the execution of the agreement to allow time for compliance to be assessed before the anniversary date.

The report must address progress against the commitments set out in this agreement and the conditions of the EPBC Act referral (EPBC 2014/7358). Reports should provide enough detail in the form of written comments and supporting evidence that an assessor can easily determine the completion of/progress against the commitments for the offset site.

Information to be provided in the progress report includes:

- Detailing actions completed during the reporting period;
- Results of vegetation condition assessment (Habitat Hectare Assessment);
- Results of SLL, SRF population monitoring;
- A description of the specific monitoring results from ecological surveys undertaken;
- Results of weed and pest animal control work;

- Successful management tools (i.e. techniques used to control weed species, monitoring technique, etc.);
- Any problems or issues experienced (i.e. new infestation of weed species, drought stress, etc.);
- Any corrective actions and contingency measures where monitoring indicates that there has been a deterioration in the native vegetation;
- Photographs showing evidence of works; and,
- Assessment on how the site is on track to meet, or meets the conditions under the EPBC referral (EPBC 2014/7358), including an assessment against the EPBC offset gain calculator inputs.

If any agreed management actions or commitments (excluding third party monitoring) are incomplete or have not been undertaken in the times specified, the landowner is to document the justification and the substituted actions that will be undertaken in order to compensate and ensure the required outcomes are achieved.

All records/evidence of management actions must be maintained and be submitted to DCCEEW upon request.

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APPENDICES

Appendix 1. Risk Assessment and Management Definitions

Risk framework

		Consequence				
		Minor	Moderate	High	Major	Critical
Likelihood	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Likelihood and consequence

Qualitative measure of likelihood (how likely is it that this event/circumstances will occur after management actions have been put in place/are being implemented)	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Qualitative measure of consequences (what will be the consequence/result if the issue does occur)	
Minor	Minor risk of failure to achieve the plan's objectives. Results in short term delays to achieving plan objectives, implementing low cost, well characterised corrective actions.
Moderate	Moderate risk of failure to achieve the plan's objectives. Results in short term delays to achieving plan objectives, implementing well characterised, high cost/effort corrective actions.
High	High risk of failure to achieve the plan's objectives. Results in medium-long term delays to achieving plan objectives, implementing uncertain, high cost/effort corrective actions.
Major	The plan's objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies.
Critical	The plan's objectives are unable to be achieved, with no evidenced mitigation strategies.

Appendix 5 Offset Calculators

Offset Calculator for NTGVVP On-site Offset Area

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community (Clear row)	Yes	NTGVVP	Area	3.73	Hectares	Biodiversity assessment
			Quality	3	Scale 0-10	
			Total quantum of impact	1.12	Adjusted hectares	
Threatened species habitat						
Area of habitat (Clear row)	Yes		Area		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat tree (Clear row)	No					
Condition of habitat Change in habitat condition, but no change in extent (Clear row)	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 requirem	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes	1.12	Adjusted hectares	Onsite Offset	Risk-related time horizon (max. 20 years)	20	Start area (hectares)	4.54	Risk of loss (%) without offset	0%	Risk of loss (%) with offset	0%	0.00	80%	0.00	0.00	0.38	33.62%	No		
									Future area without offset (adjusted hectares)	4.5	Future area with offset (adjusted hectares)	4.5									
					Time until ecological benefit	10	Start quality (scale of 0-10)	5	Future quality without offset (scale of	4	Future quality with offset (scale of	6	2.00	80%	1.60	0.83					
Threatened species habitat																					
Area of habitat	Yes		Adjusted hectares		Time over which loss is averted (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset		Risk of loss (%) with offset		0.00		0.00	0.00	0.00	#DIV/0!	#DIV/0!		
									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)	0	Future quality without offset (scale of	0	Future quality with offset (scale of	0	0.00		0.00	0.00					
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 requirem**	**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																				

Offset Calculator for NTGVVP Off-site Offset Area

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community (Clear row)	Yes	NTGVVP	Area	3.73	Hectares	Biodiversity assessment
			Quality	3	Scale 0-10	
			Total quantum of impact	1.12	Adjusted hectares	
Threatened species habitat						
Area of habitat (Clear row)	Yes		Area		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Number of features e.g. Nest hollows, habitat tre (Clear row)	No					
Condition of habitat Change in habitat condition, but no change in extent (Clear row)	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 requirem	Cost ($ total)	Information source
Ecological Communities																				
Area of community	Yes	1.12	Adjusted hectares	Rokewood on site	Risk-related time horizon (max. 20 years)	20	Start area (hectares)	14	Risk of loss (%) without offset	0%	Risk of loss (%) with offset	0%	0.00	86%	0.00	0.00	0.76	67.89%	No	
									Future area without offset (adjusted hectares)	14.0	Future area with offset (adjusted hectares)	14.0								
					Time until ecological benefit	7	Start quality (scale of 0-10)	6	Future quality without offset (scale of	5	Future quality with offset (scale of	6	1.00	86%	0.86	0.54				
Threatened species habitat																				
Area of habitat	Yes		Adjusted hectares		Time over which loss is averted (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset		Risk of loss (%) with offset		0.00	0%	0.00	0.00	0.00	#DIV/0!	#DIV/0!	
									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)	0	Future quality without offset (scale of	0	Future quality with offset (scale of	0	0.00	0%	0.00	0.00				
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 requirem	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																			

Offset Calculator for Striped Legless Lizard On-site Offset Area

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community (Clear row)	Yes		Area		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat (Clear row)	Yes	SLL	Area	9.87	Hectares	Targeted surveys
			Quality	4	Scale 0-10	
			Total quantum of impact	3.95	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat tree (Clear row)	No					
Condition of habitat Change in habitat condition, but no change in extent (Clear row)	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 requirem	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes		Adjusted hectares		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	0.00		0.00	0.00	0.00	#DIV/0!	#DIV/0!		
					Time until ecological benefit		Start quality (scale of 0-10)		Future quality without offset (scale of		Future quality with offset (scale of		0.00		0.00	0.00					
Threatened species habitat																					
Area of habitat	Yes	3.95	Adjusted hectares	on site	Time over which loss is averted (max. 20 years)	20	Start area (hectares)	4.77	Risk of loss (%) without offset	0%	Risk of loss (%) with offset	0%									
									Future area without offset (adjusted hectares)	4.8	Future area with offset (adjusted hectares)	4.8	0.00	80%	0.00	0.00	0.75	18.95%	No		
					Time until ecological benefit	10	Start quality (scale of 0-10)	4	Future quality without offset (scale of	3	Future quality with offset (scale of	5	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 requirem**	**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																				

Offset Calculator for Striped Legless Lizard Off-site Offset Area

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact		Units	Information source
Ecological communities						
Area of community (Clear row)	Yes		Area		Hectares	
			Quality		Scale 0-10	
			Total quantum of impact	0.00	Adjusted hectares	
Threatened species habitat						
Area of habitat (Clear row)	Yes	SLL	Area	9.87	Hectares	Targeted surveys
			Quality	4	Scale 0-10	
			Total quantum of impact	3.95	Adjusted hectares	
Protected matter attributes	**Attribute relevant to case?**	**Description**	**Quantum of impact**		**Units**	**Information source**
Number of features e.g. Nest hollows, habitat tre (Clear row)	No					
Condition of habitat Change in habitat condition, but no change in extent (Clear row)	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 requirem	Cost ($ total)	Information source
Ecological Communities																					
Area of community	Yes		Adjusted hectares		Risk-related time horizon (max. 20 years)		Start area (hectares)		Risk of loss (%) without offset		Risk of loss (%) with offset		0.00		0.00	0.00	0.00	#DIV/0!	#DIV/0!		
									Future area without offset (adjusted	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		Future quality with offset (scale of		0.00		0.00	0.00					
Threatened species habitat																					
Area of habitat	Yes	3.95	Adjusted hectares	Rokewood on site	Time over which loss is averted (max. 20 years)	20	Start area (hectares)	19	Risk of loss (%) without offset	0%	Risk of loss (%) with offset	0%	0.00	86%	0.00	0.00	3.22	81.63%	No		
									Future area without offset (adjusted	19.0	Future area with offset (adjusted hectares)	19.0									
					Time until ecological benefit	7	Start quality (scale of 0-10)	6	Future quality without offset (scale of	5	Future quality with offset (scale of	7	2.00	86%	1.72	1.70					
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 requirem**	**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																				

Offset Calculator for Spiny Rice-flower On-site Offset Area

Impact calculator

Protected matter attributes	Attribute relevant to case?	Description	Quantum of impact	Units	Information source
Threatened species habitat					
Area of habitat Clear row	Yes	SRF	**Area**	Hectares	Targeted surveys
			Quality 0	Scale 0-10	
			Total quantum of impact 0.00	Adjusted hectares	
Threatened species					
Birth rate e.g. Change in nest success Clear row	No				
Mortality rate e.g Change in number of road kills per year Clear row	No				
Number of individuals e.g. Individual plants/animals Clear row	Yes	Loss of 5 plants within development site	5	Count	

Offset calculator

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 requirem	Cost ($ total)	Information source
Threatened species habitat																
Area of habitat	Yes		Adjusted hectares		**Time over which loss is averted (max. 20 years)**	**Start area (hectares)**	**Risk of loss (%) without offset** 0% / **Future area without offset (adjusted hectares)** 0.0 / **Future quality without offset (scale of**	**Risk of loss (%) with offset** 0% / **Future area with offset (adjusted hectares)** 0.0 / **Future quality with offset (scale of**	0.00		0.00	0.00	0.00	#DIV/0!	#DIV/0!		
					Time until ecological benefit	**Start quality (scale of 0-10)**			0.00		0.00	0.00					
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	Yes	5	Count	Onsite Offset Site	20	176	132	220	88	80%	70.40	18.89	377.73%	Yes		