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Final Report

Annual Report (Year 3): Barry Road Offset Site, Thomastown, Victoria

Prepared for

YourLand Developments

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Ecology and Heritage Partners Pty Ltd

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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.

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1 INTRODUCTION

Background

Ecology and Heritage Partners Pty Ltd was commissioned by YourLand Developments (herein referred to as 'YourLand') to undertake the Year 3 ecological monitoring and oversee management works for the Barry Road offset site, located at 135-161 Barry Road, Thomastown, Victoria (Figure 1).

1.1 The Barry Road offset site, herein referred to as the ('Conservation Area') was established as a part of the approval conditions issued for EPBC 2014/7364 (date of decision 20/06/2018). The project was referred to the Department of Climate Change Energy, the Environment and Water (DCCEEW) (formerly the Department of the Environment and Energy [DoEE]) due to impacts proposed to one nationally significant ecological community, *Natural Temperate Grassland of the Victorian Volcanic Plain* (NTGVVP) and 36 Matted Flax-lily (MFL) *Dianella amoena* plants under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The project was deemed a Controlled Action due to the significant impact on 'Listed threatened species and communities' (Section 18 & Section 18A of the EPBC Act). In line with Condition 2 of the EPBC Approval 2014/7364, 5.01 hectares of NTGVVP was offset in accordance with the Melbourne Urban Development (MUD) Policy. The MFL offset obligation is to be achieved via the retention of 74 MFL plants, with 38 retained in-situ and 36 translocated to an area of non-native vegetation within the now established Conservation Reserve. The translocation process was undertaken in accordance with Condition 3 of the EPBC Approval 2014/7364 as per the approved and implemented Matted Flax-lily Translocation Plan (MTP) contained within the Environmental Management Plan (EMP) (Ecology and Heritage Partners 2024a).

The EPBC Approval 2014/7364 was varied on 14 February 2024 to allow for the removal of an additional 0.02 hectares of NTGVVP. To compensate for the loss of the additional 0.02 hectares of NTGVVP, an additional 0.13 hectares of native grassland vegetation which qualifies as NTGVVP is to be created within an area of predominately non-native vegetation within the existing Conservation Area (Proposed Natural Temperate Grassland of the Victorian Volcanic Plain Offset Area on Figure 1) (herein referred to as NTGVVP Offset Area). As part of the variation, Conditions 1 and 2 were updated and Conditions 2A, 2B and 2C were added. Further, in accordance with Condition 2A-d the EMP was updated to include the commitments to achieve on-site offset area outcomes by 1 January 2034 and thereafter maintained in perpetuity. The updated EMP (Ecology and Heritage Partners 2024a) and Annexure A and Annexure B of the varied EPBC Approval 2014/7364 provide a consolidated set of management actions to guide the management of the Barry Road Offset site and ensure the relevant on-site offset targets are achieved.

The established Conservation Reserve, as secured by a Section 173 agreement under the *Planning and Environment Act 1987*, also achieves the required state offsets and satisfies the Conditions of the Development Plan Overlay – Schedule 35 of the Whittlesea Planning Scheme. An additional third-party offset was established for the remaining State offset requirement.

In 2023, 0.011 hectares of Plains Grassland (PG) within the north-western corner of the Conservation Area was damaged during the installation of rabbit proof fencing. Rehabilitation and monitoring of this area is on-going and in accordance with the Remediation Plan for the Northern Boundary of the Barry Road Conservation Reserve developed for the area (Ecology and Heritage Partners 2024b) (Section 3.8).

The management, monitoring and auditing works required to be undertaken within the offset site are detailed in the EMP (Ecology and Heritage Partners 2024a). Specifically, the works relate to the protection and ecological monitoring of the quality of the native vegetation and significant ecological values present within the offset site, including two matters of National Environmental Significance (NES); NTGVVP and MFL.

Ecology and Heritage Partners subcontracted Aus Eco Solutions Pty Ltd (AES) to implement pest plant and animal control, biomass reduction and revegetation for the ecological management works for the Year 3 works.

This report outlines the results of the Year 3 annual monitoring and addresses all undertaken management actions, in accordance with the EMP, MTP and Year 2 Annual Report.

State Offset Strategy

1.2 To meet the State offset obligation and Condition 16 of Planning Permit 716769 PLN-38153 issued by the City of Whittlesea for the removal of 5.01 hectares of native Plains Grassland vegetation in support of the residential development, 0.731 General Biodiversity Equivalence Unit's (BEU's) are required to be secured. 0.248 General BEU's, with an Strategic Biodiversity Score (SBS) of 0.268, are to be achieved via Security gain, Maintenance gain and Improvement gain as detailed by the EMP. The Security gain (and as per Condition 9 of the City of Whittlesea Planning Permit 716769 PLN-38153, required by Development Plan Overlay – Schedule 35) has been achieved via the implementation of a Section 173 agreement under the *Planning and Environment Act 1987*. The Maintenance and Improvement gains will be met via the enhanced management of at least 3.062 hectares of Plains Grassland vegetation within the now established 4.151-hectare Conservation Area (1.833 hectares within private land and 2.318 hectares within Crown Land) (Figure 1). The remaining 0.483 General BEU's required to fulfill the remaining offset obligation were achieved via securing third-party offsets of 0.106 General BEU's (City of Whittlesea) and 0.377 (Port Phillip and Western Port CMA).

Public Reserve Offset Strategy

The offset obligation of 0.016 General BEUs associated with the removal of 5.157 hectares of native vegetation (including 5.01 hectares of past removals) to facilitate the stormwater pipeline installation was satisfied via securing existing credits registered with Department of Energy, the Environment and Climate Action's (DEECA) Native Vegetation Credit Register.

1.3 The proposed retarding basins will be located outside areas of native vegetation and will therefore generate no offset requirement.

Objectives

1.4 The overall objective of the EMP is to protect and improve the quality and extent of native vegetation and significant ecological values present within the on-site offset site. This includes the nationally significant species MFL, as well as the Critically Endangered ecological community NTGVVP listed under the EPBC Act.

Offset Site Security

Condition 9 of the Planning Permit approval specifies that the land identified as the on-site offset site (Conservation Area) identified in the EMP (Ecology and Heritage Partners 2024a) adjacent to the clearing

site, must be secured. A Section 173 agreement was entered into to fulfill the requirement of Section 3.0 of Schedule 35 to the Development Plan Overlay (DPO35) in the Whittlesea Planning Scheme (title secured and registered 27 September 2022).

2 MONITORING METHODS

Ecological monitoring in Year 3 was undertaken to monitor the quality and extent of PG and NTGVVP, as well as monitor the health and progress of the transplanted population of MFL residing within the offset site. The following section outlines the methods used to undertake the monitoring in Year 3, in accordance with the EMP (Ecology and Heritage Partners 2024a) and MFL Translocation Plan therein. Parentheses

Native Vegetation

The following methods have been undertaken in accordance with the EMP (Ecology and Heritage Partners 2024a), Remediation Plan for the Northern Boundary Area (Ecology and Heritage Partners 2024b) and
2.1 associated federal policy documents, *Nationally Threatened Ecological Communities of the Victorian Volcanic Plain: Natural Temperate Grassland & Grassy Eucalypt Woodland* (Department of Sustainability, Environment, Water, Population and Communities[DSEWPC] 2011) and *Commonwealth Listing Advice on Natural Temperate Grassland of the Victorian Volcanic Plain* (Threatened Species Scientific Committee [TSSC] 2008):

- To assess changes in quality and extent of PG and NTGVVP, the following monitoring was undertaken:
    - The extent of PG and NTGVVP was mapped and a Habitat Hectare assessment (as per the *Vegetation Quality Assessment Manual: Guidelines for applying the habitat hectares scoring method* (Department of Sustainability and Environment [DSE] 2004) was undertaken within the Conservation Area and NTGVVP Offset Area to determine the overall quality (i.e. condition). In Year 3, detailed vegetation monitoring was undertaken on 27th February, 7th of May, 22nd of July, 3rd of October and 1st of December 2025.
    - Photo point monitoring was undertaken at photo points established within the Conservation Area. Photo points were established in the first year of management prior to the commencement of management.
    - Photo point monitoring was also undertaken at photo points established in Year 2, including within the NTGVVP Offset Area and along the northern boundary (Figure 1).
- Weed Monitoring to determine the effectiveness of management:
    - 2.2 Record of cover, extent and composition (i.e. herbaceous, grassy, woody) of weeds within the offset site; and,
    - The cover and extent of all high threat weeds, as per the EMP, were recorded.

Matted Flax-lily

The following methods have been undertaken to monitor the MFL population in Year 3 in accordance with the EMP (Ecology and Heritage Partners 2024a):

- Monitoring was completed by suitably qualified botanists (i.e. botanists with prior survey experience and the ability to identify MFL);

- Monitoring looked for drought stress, pest plant and animal impacts, biomass and other site disturbances;
- Monitoring was conducted every three months;
- Water provided when required during monitoring and management visits;
- Survey Monitoring data taken consisted of:
    - Dimensions of the plants;
    - Number of “leaflets” or “tillers” associated with each plant;
    - Average tiller height; and,
    - If any, the number of flowering spikes or culms from that season present.

MFL monitoring will continue every 3-6 months for the remainder of the five-year monitoring period as per the EMP and MTP (Ecology and Heritage Partners 2024a; Ecology and Heritage Partners 2018a).

3 MONITORING RESULTS

3.1 Native Vegetation

In Year 3, detailed vegetation monitoring was undertaken on 27th February, 7th of May, 22nd of July, 3rd of October and 1st of December 2025 by a suitably qualified botanist. A Habitat Hectare assessment was undertaken on the 1st of December to quantify any changes in the vegetation quality and/or extent within the Conservation Area, including along the northern boundary, and the NTGVVP Offset Area. Three PG habitat zones were identified during the Year 3 vegetation monitoring, PG1, PG2 and PG3. A description is provided below for each habitat zone and the Habitat Hectare scores from the most recent site visit (1st December 2025) for each zone are provided in Appendix 1.

Plains Grassland 1 (PG1 a-c)

PG1 covered the majority of the Conservation Area and was in a similarly condition to that observed during Year 2 monitoring, with a similar extent, cover and diversity of native species. A reduction in the cover of woody weeds was again observed throughout Year 3 monitoring, resultant from the ongoing woody weed control works removing significant amounts of Sweet Briar *Rosa rubiginosa*. PG1 remained in moderate condition and was dominated by indigenous tussock grasses such as Kangaroo Grass *Themeda triandra* and Wallaby-grasses *Rytidosperma* spp. with occasional other indigenous grasses such as Common Wheat-grass *Anthosachne scabra* and Common Tussock-grass *Poa labillardierei* also present (Plate 1; Plate 2). This patch also contained a high diversity of native herbs such as Pale Vanilla-lily *Arthropodium milleflorum*, Slender Speedwell *Veronica filiformis*, Common Woodruff *Asperula conferta,* Blue Devil *Eryngium ovinum*, Common Onion Orchid *Microtis unifolia* and a high number of Chocolate Lily *Arthropodium strictum* (Plate 3; Plate 4).

Plate 1. PG1 dominated by Kangaroo Grass (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 2. Kangaroo Grass flowering within PG1 (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 3. Common Woodruff flowering within PG1 (Ecology and Heritage Partners Pty Ltd 03/10/2025).

Plate 4. Common Onion Orchid flowering within PG1 (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Biomass remained variable throughout PG1, with most areas supporting a moderate amount of short, but densely vegetated grasses, likely due to the Eastern Grey Kangaroo *Macropus giganteus* grazing observed throughout the Year 3 monitoring events. Portions which were dominated by larger tussock grasses, either the native Common Tussock Grass or exotic Toowoomba Canary Grass *Phalaris aquatica*, were of relatively higher biomass and generally supported little to no inter-tussock space.

Grassy weeds were abundant throughout PG1, with a seasonally higher cover of annual grasses such as Greater Quaking-grass *Briza maxima* and Squirrel-tail fescue *Vulpia bromoides* observed throughout spring, and a reduction in cover of these species observed on 1st December as they died off throughout summer. Sweet Vernal-grass *Anthoxanthum odoratum* remained the highest cover perennial grassy weed, present throughout the entire Conservation Area. The cover of Chilean Needle-grass *Nassella neesiana* and Lobed Needle-grass *Nassella charruana* was significantly reduced when compared to Year 2, likely due to the intensive grassy weed control undertaken in Year 3. Targeted spraying of these species followed by a mosaic ecological burn to remove the dead plant matter has removed most of the Lobed Needle-grass from the Conservation Area (Plate 5). Scattered Lobed Needle-grass remain within discrete areas within the

Conservation Area, including within the middle of PG1 (Plate 6). However, the large infestation of Lobed Needle-grass which dominated the southern portion and MFL recipient site has been removed completely.

While Sweet Briar remained the dominant woody weed species within the Conservation Area, it's percentage cover in Year 3 was significantly lower, reduced from approximately 6% to 3%. Intensive weed control works to cut, paint, and remove the dead stems of Sweet Briar has been undertaken throughout Year 3. These works removed most of the remaining mature Sweet Briar from the offset site by targeting thickets throughout PG1, not previously treated. However, regenerating Sweet Briar stems from previously treated areas were observed throughout the Conservation Area, with the highest amount residing within the middle of PG1. In several places these resprouting specimens were beginning to flower and set seed throughout Year 3 (Plate 7; Plate 8).

Ongoing removal works are required in subsequent years to achieve the control targets for woody weeds and ensure that the scattered occurrences of Lobed Needle-grass and other high threat perennial grassy weeds do not proliferate throughout the Conservation Area.

Plate 5. Sprayed Lobed Needle-grass in the southern area of the Offset Site prior to ecological burn (Ecology and Heritage Partners Pty Ltd 03/10/2025).

Plate 6. Lobed Needle-grass scattered within PG1 (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 7. Resprouting Sweet Briar flowering within the offset sites central portion (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 8. Resprouting Sweet Briar flowering within the offset sites central portion (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plains Grassland 2 (PG2)

Habitat zone PG2 remained as one small patch on the eastern edge of the offset site and was relatively unchanged throughout Year 3. This habitat zone remained separate from the larger PG1 habitat zone due to moderately dense swathes of the perennial grassy weeds Toowoomba Canary-grass and Chilean Needle-grass, with these species defining the boundary of the PG2 patch. It was far smaller and less diverse than the nearby PG1, and consisted primarily of a cover of Kangaroo Grass and Common Tussock Grass with few other native species present (Plate 9).

Weed cover within PG2 remained relatively high (50%), with most of the weedy cover comprised of exotic perennial grasses, consistent with the Year 2 condition. As weed control works continue, it is expected that removal of the surrounding Toowoomba Canary-grass and Chilean Needle-grass will merge PG2 with the nearby PG1 to form a larger contiguous patch.

Plains Grassland 3 (PG3 a-b)

In Year 3, two patches of PG3 (a-b) were recorded in moderate condition within the southern portion of the Conservation Area, consistent with the results of Year 2. They supported a lower native species diversity when compared to PG1 and Wallaby Grasses such as Common Wallaby Grass *Rytidosperma caespitosum*, and Spear Grasses *Austrostipa* spp. remained the dominate species, with occasional swathes of Kangaroo Grass. Native herbs were also less abundant and less diverse when compared with PG1, however, several species were present throughout these patches including Blue Devil and Pink Bindweed *Convolvulus erubescens*. Weed cover was moderate to high within these patches and comprised a mixture of grassy and herbaceous weeds. Species included annual Greater Quaking-grass, Ribwort *Plantago lanceolata*, Sweet Vernal Grass and Cape Weed *Arctotheca calendula*.

In Year 2, the extent of PG 3a-b was largely defined by the boundary of the Lobed Needle-grass infestation within this area, which was removed during Year 3. The ecological burn completed in Year 3 has dramatically reduced the cover of Lobed Needle-grass in this area and has opened up a large amount of bare ground (Plate 10). These burnt areas have been subsequently direct seeded with Kangaroo Grass, so it is expected that the PG3 patches will expand north in future years.

While PG3 patches did not qualify as the NTGVVP ecological community in Year 3, the removal of the infestations of grassy weeds (i.e. Lobed Needle-grass) and direct seeding of Kangaroo Grass will promote the recovery of the ecological community. Follow up weed control works should be undertaken in the burn areas to ensure that they are not colonised with exotic species before the Kangaroo Grass can germinate and become dominant.

Plate 9. PG2 (Figure 1) dominated by Kangaroo Grass and Common Tussock Grass (Ecology and Heritage Partners Pty Ltd 03/10/2025).

Plate 10. PG3a (Figure 1) dominated by Wallaby Grasses with intermittent burning of Lobed Needle-grass (Ecology and Heritage Partners Pty Ltd 01/12/2025).

3.2 Matted Flax Lily

3.2.1 Monitoring Cohort

The MFL monitoring cohort remained unchanged from Year 2. The cohort includes 32 salvaged and translocated MFL from the proposed impact area. Each of these salvaged MFL was divided, with one third directly planted into the recipient site within the southern portion of the Conservation Area (Figure 1), and the remaining 2/3rds of each plant relocated to a nursery for care (as an insurance population). The overall cohort includes a further eight MFL, which were subject to, or potentially subject to, off-target weed spray damage during Year 1, and an additional four MFL which were planted into the translocated population within the southwest of the Conservation Area (Figure 1). The additional four MFL specimens were sourced from the reserve stock held at Western Plains Flora nursery to compensate for the potential removal of two MFL during the soil scraping of the northern boundary in Year 1, and the loss of MFL#2 and MFL#39. Thus, a total of 44 MFL were monitored throughout Year 3, the data from the most recent check (1st December 2025) is provided in Appendix 2.

3.2.2 Monitoring Results

Monitoring of the 44 MFL in Year 3 was undertaken by a suitably qualified botanist following the schedule outlined in the MTP (Section 4 of the EMP) (Ecology and Heritage Partners 2024a; Ecology and Heritage Partners 2018a). These checks were undertaken on 27th February, 7th of May, 22nd of July, 3rd of October, and 1st of December 2025.

The MFL performed well again throughout Year 3 (Plate 11). The total cohort achieved a 93% survival rate by the end of Year 3 (39/42, accounting for the two individuals which had previously died and been replaced) and remains on track to meet the 70% requirement by the end of Year 5, as specific in the MTP (Ecology and Heritage Partners 2024a; Ecology and Heritage Partners 2018a).

Initial Translocation Cohort

One translocated MFL (Plant ID #5 in Appendix 2), which was absent throughout Year 2 failed to resprout throughout Year 3 and is now assumed lost. Two additional MFL (MFL#8 and MFL#33) could not be located during the most recent monitoring event in December 2025. These individuals will continue to be monitored throughout Year 4 to determine if they will resprout from potentially living underground tissue.

The remaining 39 plants from the cohort were generally recorded in good condition during the December monitoring event. While many experienced dieback over the summer months, a high rate of resprouting was observed throughout winter and spring and throughout Year 3, and by the 1st of December monitoring event almost all (37) were recorded in good condition, with the remaining two recorded in moderate condition. Nine were also recorded flowering in the December monitoring event (Plate 12; Plate 13; Plate 14) (Appendix 2).

Off-target Damage Affected MFL

Six of the remaining seven MFL (accounting for the loss of MFL#39 in Year 2) that were impacted by the off target weed control works were in good health throughout Year 3. MFL#39 was still not observed throughout Year 3, despite checking its previous location. One additional MFL (MFL#33) was not located during the October and December checks in Year 3. However, 1st December monitoring observed a high biomass of grasses within the MFL#33 plant guard, which may have obfuscated the MFL specimens' presence. Only one from those identified was observed flowering (Plate 15; Plate 16), with the lower flowering rate attributed to environmental conditions such as the low rainfall experienced throughout winter 2025.

The site also continues to support a large population of remnant MFL and is expected to be on track to meeting the target population of 74 MFL as detailed in the EMP.

Plate 11. Translocated population of MFL in the study areas south (Figure 1) (Ecology and Heritage Partners 01/12/2025).

Plate 12. MFL#6.1 Flowering within the offset site (Ecology and Heritage Partners 01/12/2025).

Plate 13. MFL#24 in good condition but not flowering (Ecology and Heritage Partners 01/12/2025).

Plate 14. MFL#31 flowering and in good condition during the December monitoring event (Ecology and Heritage Partners 01/12/2025).

Plate 15. Healthy remnant MFL (#40) flowering within the offset site (Ecology and Heritage Partners 01/12/2025).

Plate 16. Remnant MFL (#37) re-emerging during the December monitoring check (Ecology and Heritage Partners 01/12/2025).

3.2.3 Contingency Measures Triggered

The translocated cohort of MFL have demonstrated good survivorship throughout Year 3. However, as per the MTP, any failed translocations are recommended to be replaced by a genetically identical clone from the reserve plants. Similarly, it is recommended that an additional MFL from the insurance population be transplanted into the recipient site to account for any dead MFL. Having not been observed throughout Year 3, MFL#5 is considered dead and should be replaced from the insurance population in Year 4. The two MFL which were not recorded as of October 2025 (MFL#8 and MFL#33) should continue to be monitored throughout Year 4 to check for resprouting and replaced between April to August if they are not observed recovering.

The four MFL which were added to the original transplant cohort as a contingency measure for previous losses in Years 1 and 2 were all recorded in good health during Year 3 with two also observed flowering (Appendix 2).

Weeds

Weed cover throughout the Offset site remained moderate within mapped patches of native vegetation, and high outside. Grassy and woody weeds were abundant throughout most of the site, with the dominant perennial species including Sweet Briar, Sweet Vernal-grass, Chilean Needle-grass, Fennel and Toowoomba Canary-grass.

3.3 While weed cover remained moderate due to management by AES, there was a significant reduction in the cover of the high threat weeds Sweet Briar and Lobed Needle-grass throughout Year 3. Almost all mature thickets of Sweet Briar were cleared, and the large swathes of Lobed Needle-grass within the southern portion of the Conservation Area had been treated and removed. African Weed Orchid *Disa bracteate*, which was newly recorded within the offset site in Year 2, was again recorded in Year 3 as scattered individuals. Weed cover remains highest in the central portions of PG1 where Sweet Briar stems emerging from previously cut thickets.

The overall percentage cover of all weeds recorded throughout the Conservation Area is provided below in Table 1.

Table 1. Weed Cover throughout the Conservation Area (December 2025).

Scientific Name	Common Name	Existing / Emerging	Current Cover % within the offset site	EMP Target E (<1%) C (<5%)	EMP Target Achieved (Y/N)
WOODY WEEDS					
Lycium ferocissimum	African Box-thorn	Not observed	0%	E	Y
Rosa rubigonsa	Sweet Briar	Existing and Emerging	3%	E	N
Broom spp.	Brooms	Emerging	<1%	E	Y
HERBACEOUS WEEDS					
Anagallis arvensis	Pimpernel	Existing	<1%	C	Y
Arctotheca calendula	Cape Weed	Existing	<1%	C	Y
Centaurium Spp.	Common Centaury / Slender Centaury	Existing	<1%	C	Y
Cirsium vulgare	Spear Thistle	None observed	0%	E	Y
Cynara cardunculus	Artichoke Thistle	Emerging	<1%	E	Y
Disa bracteata	African Weed Orchid	Existing	<1%	C	Y
Echium plantagineum	Paterson's Curse	Existing	<1%	C	Y
Foeniculum vulgare	Fennel	Existing and Emerging	3%	C	Y

Scientific Name	Common Name	Existing / Emerging	Current Cover % within the offset site	EMP Target E (<1%) C (<5%)	EMP Target Achieved (Y/N)
Helminthotheca echioides	Ox-tongue	Existing	2%	C	Y
Hypochaeris spp. and *Brassica* spp.	Flat Weeds and Mustards	Existing	5%	C	N
Plantago spp.	Ribwort	Existing	15%	C	N
Romulea rosea	Onion Grass	Exisitng	3%	C	Y
Sonchus spp.	Sow-thistle	Existing	<1%	C	Y
Trifolium spp.	Clovers	Existing	5%	C	N
Vicia sativa	Common Vetch	Existing	<1%	C	Y
Xanthium spinosum	Bathurst Burr	Not observed	0%	C	Y
GRASSY WEEDS					
Aira caryophyllea	Silvery Hair Grass	Emerging	2%	C	Y
Avena spp.	Oats	Existing	3%	C	Y
Anthoxanthum odoratum	Sweet Vernal Grass	Existing	28%	C	N
Briza spp.	Quaking Grass	Existing	5%	C	N
Brome spp.	Brome	Existing	3%	C	Y
Dactylis glomerata	Cocksfoot	Existing	4%	C	Y
Holcus lanatus	Yorkshire Fog	Existing	1%	C	Y
Lolium rigidum / Lolium perenne	Wimmera Rye-grass / Perennial Rye-grass	Existing	2%	C	Y
Nassella charruana	Lobed Needle-grass	Existing/ Emerging	1%	E	N
Nassella neesiana	Chilean Needle-grass	Existing/ Emerging	2%	E	N
Nassella trichotoma	Serrated Tussock	Not observed	0%	E	Y
Paspalum dilatatum	Paspalum	Existing/ Emerging	1%	C	Y
Phalaris aquatica	Toowoomba Canary-grass	Existing	5%	C	N

Notes: C = Control (<5% Cover), E = Eliminate (<1% Cover), Y = Yes, N = No.

3.3.1 *Woody Weeds*

The total coverage of woody weeds through the Conservation Area remains high, however the cover has been significantly reduced in Year 3.

Despite being previously eliminated during Year 2, several new individuals of Cape Broom *Genista monspessulana* were observed emerging within the eastern portion of the Conservation Area. The remainder of the woody weed coverage comprised Sweet Briar which remains the dominant woody weed within the site. A reduction, by approximately half, in the coverage of Sweet Briar was observed during the Year 3 monitoring, with the coverage reduced from 6% in Year 2 to 3% in Year 3.

Sweet Briar has been treated via the cut and paint method, with dead stems piled primarily on two tarps within the southern portion of the Conservation Area (Plate 17). The Sweet Briar stems were subsequently taken to the rubbish tip in accordance with the EMP (Ecology and Heritage Partners 2024a). Similar to previous years, woody weed control efforts continued to prioritise the removal of Sweet Briar by systematically treating the fringe areas before working inwards toward the dense thicket areas within the sites centre.

While the cover of dense mature thickets of Sweet Briar has been significantly reduced in Year 3, Sweet Briar has continued to resprout from previously treated areas, many of which were seen flowering during Year 3 (Plate 18). Woody weed management targets were thus still not achieved in Year 3, and a relatively high cover of woody weeds persist within the Conservation Area, primarily as resprouting stems. Ongoing woody weed control works are required in Year 4 to eliminate Sweet Briar and prevent its re-establishment within the Conservation Area.

Plate 17. Two large tarps collecting cut Sweet Briar stems for removal from the offset site (Ecology and Heritage Partners Pty Ltd 31/10/2025).

Plate 18. Resprouting Sweet Briar flowering within the offset sites central portion (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Table 2 provides a summary of the management targets detailed by the EMP for Year 3 and the recommended management measures to be undertaken in Year 4 to ensure Year 4 targets are met.

Table 2. Year 3 Woody weed targets, as per the EMP.

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.1	Undertake control of woody weeds	Ensure cover of woody weeds is <1%.	No	Continue intensive woody weed control works to eliminate Sweet Briar in Year 4.

Note: EMP = Environmental Management Plan (Ecology and Heritage Partners 2024a).

3.3.2 Grassy Weeds

The cover of grassy weeds (perennial and annual) remained high throughout the offset site in Year 3, however a significant reduction in cover was seen in the southern portion of the offset site. Throughout most of the site, weed control works in Year 3 focused on the removal of woody weeds. As such, perennial grassy weed cover throughout most of the offset site (i.e. PG1 on Figure 1) remained relatively unchanged from Year 2 and primarily comprised of Toowoomba Canary-grass, Sweet Vernal and Cocksfoot *Dactylis glomerata*, with other species occasionally present, such as scattered Lobed Needle-grass individuals which were present in the northern portion of the site (Plate 19).

However, the large Lobed Needle-grass and Chilean Needle-grass infestation in the southern portion was treated resulting in a significant drop in cover of these species. Several large swathes of these species were present south and east of the Mated Flax-lily translocation area, with dense Lobed Needle-grass to the exclusion of all other species. During Year 3, these swathes were targeted with herbicide application. The dead tussocks were subsequently removed from the offset site during the mosaic ecological burn in November 2025 (Plate 20). The removal of these swathes significantly reduced the cover of Lobed Needle-grass (from approximately 6% in Year 2 to approximately 1% in Year 3). The cover of Chilean Needle-grass was also substantially reduced throughout during this burn (from approximately 5% in Year 2 to approximately 2% in Year 3). However, the ecological burn primarily burnt the dead Lobed Needle-grass tussocks, with other areas not burning as well due to the presence of green annual grasses. As such, areas of Chilean Needle-grass persist around the translocation area in areas which were not burnt. The scattered instances of Lobed Needle-grass (Plate 21; Plate 22) and remaining individuals of Chilean Needle-grass should be controlled throughout Year 4 to prevent their spread.

Annual grasses such as Squirrel-tail Fescue and Quaking-grasses were seasonally abundant throughout much of the offset site, remaining consistent with the results from Year 2. However, the mosaic ecological burn also resulted in reduced cover of annual grasses in the southern portion of the study area.

Consistent with Year 2, patches in the southern portion of the offset site (PG2 and PG3 patches on Figure 1) were largely defined in extent by the high cover of Lobed Needle-grass and Chilean Needle-grass in the surrounding areas. While scattered individuals were present in Year 2, these individuals were controlled in Year 3 during the ecological burn.

Consistent with Year 2, Serrated Tussock *Nassella trichotoma* was not observed throughout the site in Year 3, however, ongoing monitoring will continue to check for reoccurrence to prevent incursion into the offset site.

Plate 19. High cover of Toowoomba Canary-grass on the eastern edge of the offset site (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 20. Southern infestation of Lobed Needle-grass burned away (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 21. Scattered Lobed Needle-grass remaining within the offset sites northern portion (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 22. Lobed Needle-grass within resprouting Sweet Briar in PG1 (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Table 3 contains a summary of the management targets as set out by the EMP and the corresponding management recommendations to ensure Year 3 targets are achieved.

Table 3. Year 2 Grassy Weed Targets as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.2	Undertake control of perennial exotic grasses. Six visits per year.	Reduce perennial grass cover to <50%.	Yes	Continue grassy weed control throughout Year 4.
3.3	Undertake control of annual exotic grasses. Four visits per year.	Reduce annual exotic grasses to <20%.	Yes	Continue grassy weed control throughout Year 4.

3.3.3 *Herbaceous Weeds*

The overall cover of herbaceous weeds was low to moderate in Year 3, remaining consistent with the Year 2 results. Despite being eliminated from the site in Year 2, one broad leaf species (Artichoke Thistle *Cynara cardunculus*) was observed in Year 3 with several small individuals recorded in the northern portion of the Conservation Area (Plate 23). Similarly, Paterson's Curse *Echium plantagineum* was recorded flowering throughout the Conservation Area, with most individuals observed along the eastern boundary (Plate 24). While the overall cover of high threat herbaceous weeds remains negligible (<1%), high threat herbaceous weeds should be controlled throughout the offset site to prevent proliferation during Year 4.

Areas of mapped native vegetation generally had a lower herbaceous weed cover which primarily consisted of species such as Ribwort, Ox-tongue *Helminthotheca echioides* and Mustard weeds *Brassica* spp., however they also contained high threat herbaceous weeds such as Patterson's Curse and Fennel, albeit at low cover. The dominant herbaceous weed species remain consistent with previous years and include Ribwort, Clovers *Trifolium* spp. Flatweed *Hypochaeris radicata* and Fennel. African Weed Orchid was again recorded in Year 3, with control efforts undertaken by AES along the eastern boundary of the Conservation Area in Year 3. However, the species was also observed flowering in the central portion of the Conservation Area.

Plate 23. Artichoke Thistle emerging within PG1 (Ecology and Heritage Partners Pty Ltd 03/10/2025).

Plate 24. Paterson's Curse flowering within PG1 (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Table 4 contains a summary of the management targets as set out by the EMP and the corresponding management recommendations to ensure Year 4 targets are achieved.

Table 4. Year 3 Herbaceous weeds targets, as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.4	Undertake exotic herbaceous broadleaf control, at least four visits per year.	Reduce herbaceous board leaves to <5% by the end of Year 3;	No	Ongoing herbaceous broad leaf weed control throughout Year 4.

Pest Animals

No evidence of pest animals was recorded during the monitoring throughout Year 3, and no fencing issues are expected to have allowed entry of any pest species (particularly of European Rabbit *Oryctolagus cuniculus*) from the surrounding area into the offset site. The offset site is presumed pest animal free, however the ongoing monitoring for evidence of pest animals within the offset site will continue throughout Year 4 to ensure it no pest animals gain access into the site.

3.4

Table 5 contains a summary of the management targets as set out by the EMP and the corresponding management recommendations to ensure Year 4 targets are achieved.

Table 5. Year 3 pest animal targets, as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.5	Conduct rabbit control if required.	Significant reduction in the number/signs of rabbits.	Yes	No rabbit control required. Continue to monitor offset site for pest animals and control as required throughout Year 4.

Fencing / Stock Exclusion

3.5

The Conservation Area perimeter fencing remained in good condition for most of Year 3 and no gaps underneath the fence are present for pest animal invasion into the Conservation Area. The external signage remained in place and in good condition along the Conservation Area fences (Plate 25; Plate 26). One panel along the northern fence line was bent out of shape on the 1st December monitoring event (Plate 27), likely caused by the population of Eastern Grey Kangaroos which inhabit the open space to the north of the Conservation Area between the Whittlesea Public Gardens and the Conservation Area. The damaged fence panel along the northern fence line was rectified on 2nd December (Plate 28).

Plate 25. Good condition perimeter fencing along the western boundary (Ecology and heritage Partners 01/12/2025).

Plate 26. Good condition fencing and signage along the northern boundary (Ecology and heritage Partners 01/12/2025).

Plate 27. Warped fence along the northern boundary (Ecology and Heritage Partners Pty Ltd 03/10/2025).

Plate 28. Repaired fence along the northern boundary (Ecology and Heritage Partners Pty Ltd 03/10/2025).

Table 6 contains a summary of the management targets as set out by the EMP and the corresponding management recommendations to ensure Year 4 targets are achieved.

Table 6. Year 3 Fencing/Stock exclusion targets, as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.6	Maintain perimeter fence.	Fence is maintained and fixed if broken.	Yes	Continue to monitor fences and repair as damage occurs in Year 4.

3.6

Biomass Management

An Ecological Burn was undertaken within the southern portion of the Conservation Area, around the MFL recipient site (Figure 1) (Plate 29). The burn area targeted the dense swathes of Lobed Needle-grass and Chilean Needle-grass which had previously been targeted and killed by herbicide application. While surrounding areas (such as those dominated by annual grasses and untreated Chilean Needle-grass) did not burn as well, the dead Lobed Needle-grass tussocks were successfully removed from the Conservation Area. The translocated population of MFL were effectively avoided during the ecological burn (Plate 30).

The burn successfully removed the Lobed Needle-grass infestation from the southern portion of the offset site, as well as scattered individuals of Lobed Needle-grass and sprayed areas of Chilean Needle-grass (Plate 31). The resulting areas of bare ground in this area were direct seeded with Kangaroo Grass seed to promote recruitment of native vegetation in these areas which were previously devoid of native species (Plate 32).

Follow up weed control works should be undertaken to ensure that grassy and herbaceous weeds do not become established within the burn area and that the Kangaroo Grass can become established.

Plate 29. Ecological burn in the study areas southern portion (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 30. Ecological burn undertaken between the translocated MFL population (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 31. Mosaic burn of lesser Lobed Needle-grass infestations (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 32. Kangaroo Grass seed (brown stems) spread in burn area (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Table 7 contains a summary of the management targets as set out by the EMP (Ecology and Heritage Partners 2024a) and the corresponding management recommendations to ensure Year 3 targets are achieved.

Table 7. Year 3 Inter-tussock space (Biomass) targets, as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.7	Undertake biomass reduction (weeding or mosaic burn) in selected areas.	Create a 5% cover of inter-tussock space to allow recruitment.	Yes	Monitor biomass in Year 4 and perform further hand weeding or mosaic ecological burns as required.

Direct Seeding

All land use and management actions undertaken in Years 1-3 which manage vegetation within the Conservation Area, including weed control and biomass management such ecological burns, brush cutting and hand weeding, have supported the direct seeding effort undertaken in Year 3. Vegetation management works to date have opened areas of bare ground, reduced competition for space and nutrients and reduced weed seed load within the soil.

3.7

As directed by the EMP (Ecology and Heritage Partners 2024a), direct seeding efforts in Year 3 have primarily focussed on areas of bare ground at the MFL recipient site, within the southern portion of the Conservation Area (Figure 1). Direct seeding of 'warm' season flora species characteristic of the NTGVVP ecological community (i.e. Kangaroo Grass) was undertaken post-burn on 18th November 2025. Kangaroo grass seed was spread by hand through the entire southern area with additional focus on larger areas of bare ground (Plate 33) and the MFL recipient site area (Plate 34).

Follow-up weed control was undertaken on 2 and 5 December 2025 to further manage the presence of grassy weeds such as Chilean Needle-grass in the MFL recipient site. Follow-up weed control in this area is planned for early Year 4 (January 2026) and will focus on supporting successful germination and proliferation of native grasses, with a particularly focus on the directly seeded Kangaroo Grass.

Plate 33. Western portion of scraped area dominated by Wallaby Grass (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 34. Wallaby Grass flowering within the western portion of the soil scraping area (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Table 8 contains a summary of the management targets as set out by the EMP (Ecology and Heritage Partners 2024a) and the corresponding management recommendations to ensure Year 4 targets are achieved.

Table 8. Year 3 Fencing/Stock exclusion targets, as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.8	Undertake direct seeding with native grasses in bare areas (MFL Recipient Site – Figure 1)	Areas prepared in Years 1 & 2 are direct seeded.	Yes	Continue to monitor and manage exotic weeds as they emerge and direct seed with 'cool' season flora species in Year 4 (Autumn 2026).

Rubbish

Rubbish within the Conservation Area was observed in low abundance but is an ongoing threat to the Conservation Area. Litter has been continually observed throughout the Conservation Area in Year 3, both windblown (Plate 35) from the surrounding landscape and discarded by people from the adjacent residential subdivision construction site and from people illegally accessing the Conservation Area.

3.8

Most discarded litter was observed along the eastern boundary, adjacent to the existing residential subdivision and generally consisted of bottles and cans (Plate 36). Further litter was observed throughout the Conservation Area indicating illegal activity, such as hunting of the resident population of Eastern Grey Kangaroo (Plate 37; Plate 38). Rubbish has been continually removed by AES throughout Year 3 as required, with ongoing monitoring required in Year 4 to identify and remove rubbish as it occurs within the Conservation Area.

Plate 35. Windblown rubbish within the offset site (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 36. Thrown bottle along the eastern edge of the offset site (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 37. Drug paraphernalia found within the offset site (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 38. Hunting arrow found within the offset site (Ecology and Heritage Partners Pty Ltd 22/07/2025).

Table 9 contains a summary of the management targets as set out by the EMP (Ecology and Heritage Partners 2024a) and the corresponding management recommendations to ensure Year 3 targets are achieved.

Table 9. Year 3 rubbish targets, as per EMP (Ecology and Heritage Partners 2024a).

Action No.	Land Use and Management Action	EMP Key Performance Target	Target Achieved (Y/N)	Recommendation
3.10	Removal of all existing rubbish from the offset site.	Rubbish removed immediately if dumping occurs.	Yes	Continue to monitor for new rubbish that is blown/dumped into the offset site and remove as required throughout Year 4.

Off-target Damage to Remnant Matted Flax-lily

3.9 In January of Year 1, the City of Whittlesea (CoW) notified YourLand Developments that they had undertaken a site inspection and observed off-target damage to native vegetation from inappropriate weed control works within the offset site. AES had removed large areas of woody weeds (primarily Sweet Briar) by brush cutting and spraying the stems with a non-selective herbicide. The non-selective herbicide was applied to a large area, damaging the surrounding vegetation within a radius of 1-2 metres from the target plant.

Seven MFL specimens were recorded as impacted by this event, with one additional MFL unimpacted but near the damaged area. These plants were added to the monitoring schedule and regularly checked throughout Year 1, and this monitoring continued throughout Year 2 and 3, the results of which are presented in Appendices 2 and 3. Six of the eight plants monitored remained in good health throughout Year 3. One plant (MFL#39) could not be located during Year 2 and was previously replaced with nursery stock.

3.10 In Year 3 one additional plant (MFL#33) was not identified during the October and December monitoring events. It will continue to be monitored during Year 4 to see if it resprouts again. If it does not resprout again, a replacement will be planted into the offset site between April and August. The remaining six plants will continue to be included in the ongoing monitoring schedule.

Damage to Offset Site During Construction Works

3.10.1 Soil Scraping Incident

Throughout construction of the rabbit proof fence along the northern boundary of the Conservation Area (Figure 1), 0.011 hectares of PG within the north-western corner of the Conservation Area was scraped away by civil contractors in June 2023. To remediate this, seed collection and direct seeding of native grasses was carried out by AES in the damaged area in August 2023 using a seed mix of Kangaroo Grass, Wallaby-grasses and Spear-grass species present within the offset area.

After a low uptake of native species throughout Year 1, follow-up weed control works, site preparation, and direct seeding were conducted by AES throughout Year 2, which resulted in the area being dominated by Wallaby Grasses (Plate 39). In Year 3, Wallaby Grasses were again observed in this area above 50% relative cover and as such, the extent of PG1 and NTGVVP has been expanded to cover this area (Figure 1) (Plate 39; Plate 40). However, the eastern portion of the impact area remains dominated by exotic species including

perennial grasses such as Toowoomba Canary-grass and Sweet Vernal Grass and herbaceous weeds such as Quaking Grasses *Briza* spp., Ribwort, Ox-tongue and Mustard weeds. As such, this portion of the impacted area is still not considered Plains Grassland EVC (Figure 1). To aid with remediation of this area, AES spread Kangaroo Grass seed throughout the area on 18th November 2025. Ongoing weed control works and direct seeding may be required throughout Year 4 to facilitate the reestablishment of native vegetation in this area.

Plate 39. Western portion of scraped area dominated by Wallaby Grass (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 40. Wallaby Grass flowering within the western portion of the soil scraping area (Ecology and Heritage Partners Pty Ltd 01/12/2025).

3.10.2 Erosion Along Eastern Fence Line

Throughout Year 1, groundworks outside of Conservation Area as part of the adjacent residential development occurred along portions of the south-eastern boundary of the Conservation Area. The removal of large rocks from outside the Conservation Area resulted in soil erosion inside the Conservation Area boundary. The erosion resulted in some loss of native species and mapped PG from within the Conservation Area.

These areas were remediated throughout Year 2, with actions including infill of weed free soil in newly opened holes and depressions, tube stock planting of native grass species, such as Common Tussock Grass, into impacted areas, and weed control to prevent the incursion of weeds.

Native vegetation has successfully established in this area and in Year 3 it was dominated by Common Tussock Grass and Kangaroo Grass, contiguous with the surrounding PG1 patch of native vegetation.

4 NTGVVP OFFSET AREA

The NTGVVP Offset Area (Natural Temperate Grassland of the Victorian Volcanic Plain Offset Area on Figure 1) was established in February 2024 and has been subject to all relevant management actions in accordance with the Management Action Plan (Table 11) of the EMP (Ecology and Heritage Partners 2024a). Additionally, to guide the management of this area and to establish NTGVVP as required by the varied EPBC Approval, Section 3.9 was added to the EMP and additional management actions for the NTGTVVP Offset Area were established (Ecology and Heritage Partners 2024a).

The EPBC Approval requires the NTGVVP Offset Area;

1. Meet the NTGVVP Community Description and Condition Thresholds (TSSC 2008) to qualify as NTGVVP;
2. Achieve a Habitat Hectare quality score of at least 0.45 (45/100); and,
3. A ground layer comprising at least 70% coverage of native grass genera characteristic of the NTGVVP ecological community.

Improvements to the vegetation condition of the NTGVVP Offset Area were observed throughout Year 3. The cover of Kangaroo Grass within this area increased from that recorded in Year 2, becoming contiguous in several areas with the adjacent PG1 patch (Figure 1). These areas remain dominated by a high cover of Kangaroo Grass (Plate 41). Few other native species were recorded in this area. However, as it becomes increasingly connected to the wider PG1 patch and the cover of perennial grassy weeds is reduced, it is expected that additional native species from the abutting areas of Conservation Area will continue spread into the NTGVVP Offset Area.

Weed cover within the NTGVVP Offset Area was lower in Year 3 when compared to Year 2, with woody weed control efforts significantly reducing the cover of Sweet Briar. However, resprouting Sweet Briar was also observed, and will require follow-up management in Year 4. The total cover of all weed types in the NTGVVP Offset Area remains high outside mapped patches of native vegetation, with Toowoomba Canary-grass still present in several dense swathes, previously growing under Sweet Briar thickets (Plate 42).

Plate 41. Area dominated by Kangaroo Grass within the NTGVVP Offset Area (Ecology and Heritage Partners Pty Ltd 01/12/2025).

Plate 42. Larger exotic grasses (left) adjacent to the NTGVVP Offset Area (Ecology and Heritage Partners Pty Ltd 01/12/2025).

An assessment of the current quality and extent of native vegetation within the NTGVVP Offset Area against the management objectives as described by Table 11 of the EMP (Ecology and Heritage Partners 2024a) has been provided in Table 10 below.

Table 10. Objectives to be achieved by 1 January 2034 (Varied EPBC Approval 2014/7364) for NTGVVP Offset Area.

Objective	Management Action and Timing	Target Achieved (Y/N)	Comments and Corrective Action
At least 50% of life forms present.	Plant native species tube stock in year 4 and year 5 (if required).	NA in Year 3	Few lifeforms are present, with the vegetation comprising entirely of Medium Tufted Graminoid species, representing one of seven total lifeforms (14%) for the EVC. Native seeding and tube stock planting have not occurred yet. Reseed with a mixture of the four key grass genera characteristic of NTGVVP and MNG life forms. Replace native species by planting additional tube stock.
Total perennial tussock cover represented by at least one of *Themeda, Rytidosperma, Austrostipa* or *Poa* is at least 50%.	Reseed with a mixture of the four key characteristic grass genera in year 4 and year 5.	NA in Year 3	Increases in the cover of Kangaroo Grass were observed throughout Year 3, with the total cover being approximately 18%. Native seeding and tube stock planting have not occurred yet. Reseed with a mixture of the four key characteristic grass genera (if required).
Total perennial weed cover less than 25%.	Control weeds as per the EMP.	No	While woody weed control in this area reduced the cover of perennial weeds, perennial grasses remain the dominant exotic species in this area. Continued weed control in accordance with the EMP.
Minority cover of High Threat weeds.			
Control exotic grasses and herbaceous broadleaves in preparation for direct seeding in Year 4.	Control weeds and biomass as per the EMP.	No	While grassy and herbaceous weed control has occurred in Year 3, the cover of perennial grasses such as Toowoomba Canary-grass remains too high and the dominant weed in this area.

Objective	Management Action and Timing	Target Achieved (Y/N)	Comments and Corrective Action
Reduction in biomass in preparation for direct seeding in Year 4.	Autumn	Yes	Additional grassy and herbaceous weed control is required. Biomass generally low-moderate from combination of brush cutting and Eastern Grey Kangaroo grazing.

4.5 Management Action Plan

An assessment of completed actions to date against the Management Actions for the Conservation Area as outlined in Table 11 (Table 10 of the EMP in Ecological and Heritage Partners 2024a). Most management targets for Year 3 were successfully completed, with the maintenance of the permanent fencing preventing pest animal access to the Conservation Area and ongoing rubbish and biomass management completed by AES. However, the Conservation Area has not yet achieved the Year 3 targets for weed control, particularly with the cover of woody weeds remaining high throughout the Conservation Area via the reestablishing Sweet Briar in previously treated areas. Table 11 provides a summary of the actions required from the EMP, the Key Performance Targets and the actions undertaken within Year 3.

Table 11. Summary of Management Actions and Targets for Year 3 of Monitoring (Ecological and Heritage Partners 2024a).

Year		Action No.	Land use and management actions to be completed	Resource/ personnel required	Timing of action	Key performance target	Target Achieved (Y/N)	Comments and Actions Required in Year 3
		Year 3						
NTGVVP Offset Area	3	*3.0*	Complete 1 visit to control woody weeds.	Bushland Mgt Contractor/ Landowner	Before seed heads mature in spring/summer.	Total perennial weed cover less than 25%, where High Threat weeds are the minority.	N	While more than one visit to control woody weeds has occurred in year 3 (Table 1), the total perennial weed cover remains too high at approximately 40%. High threat weeds such as Toowoomba Canary-grass are the majority. Additional weed control is required.
	3	*3.01*	Complete 4 visits to control exotic grasses and herbaceous broadleaves.	Bushland Mgt Contractor/Landowner	Before seed heads mature in spring/summer.	Control exotic grasses and herbaceous broadleaves in preparation for direct seeding in Year 4.	N	While grassy and herbaceous weed control has occurred in Year 3, the cover of perennial grasses such as Toowoomba Canary-grass remain too high and the dominant weed in this area. Additional grassy and herbaceous weed control is required.

Year	Action No.	Land use and management actions to be completed	Resource/ personnel required	Timing of action	Key performance target	Target Achieved (Y/N)	Comments and Actions Required in Year 3
3	*3.02*	Complete 2 visits to reduce biomass and create open space (brush cutting).	Bushland Mgt Contractor/Landowner	Autumn	Reduction in biomass in preparation for direct seeding in Year 4.	Y	Biomass generally low-moderate from combination of brush cutting and Eastern Grey Kangaroo Grazing.
3	*3.1*	Undertake control of woody weeds.	Bushland Mgt Contractor/Landowner	Before seed heads mature in spring/summer.	Ensure cover of woody weeds is <1%.	N	Woody weed (Briar Rose and Brooms) cover remains too high (3%), primarily from areas of resprouting Briar Rose from cut thickets. Woody weed control works required.
3	*3.2*	Undertake control of perennial exotic grasses. Six visits per year.	Bushland Mgt Contractor/Landowner	Before seed heads mature in spring/summer.	Reduce perennial grass cover to <50%.	Y	Perennial grassy weeds at approximately 37% cover across the Conservation Area following the ecological burn.
3	*3.3*	Undertake control of annual exotic grasses. Four visits per year.	Bushland Mgt Contractor/Landowner	Before seed heads mature in spring/summer.	Reduce annual exotic grasses to <20%.	Y	Annual grasses below 20% cover. Ongoing weed control works required to reduce weed cover throughout the site.
3	*3.4*	Undertake control of exotic herbaceous broadleaves.	Bushland Mgt Contractor/Landowner	Before seed heads mature in spring/summer.	Reduce exotic herbaceous broadleaves to <5%.	N	Exotic Broadleaves are at approximately 20% coverage. Ongoing broadleaf weed control works are required to reduce weed cover throughout the site.
3	*3.5*	Conduct rabbit control if required.	Pest Mgt Contractor/Landowner	After peak breeding season - late summer/early autumn.	Significant reduction in number/signs of rabbits.	Y	No signs of rabbits within the Offset site. Continue to monitor and undertake control as required.
3	*3.6*	Maintain Perimeter Fence.	Landowner	Ongoing	Fence is maintained and fixed if broken.	Y	Permanent fence installed and generally in good condition,

Year	Action No.	Land use and management actions to be completed	Resource/ personnel required	Timing of action	Key performance target	Target Achieved (Y/N)	Comments and Actions Required in Year 3
							warping on the northern boundary and fence posts within the northeastern corner should be repaired. Continue to monitor and undertake repairs as required.
3	*3.7*	Undertake biomass reduction either weeding/mosaic burns in selected areas.	Bushland Mgt Contractor/Landowner	Autumn	Create a 5% cover of inter-tussock space to allow recruitment.	Y	An ecological burn was conducted on 14th November 2025, focussing on the MFL translocated area. Inter-tussock space remains adequate for recruitment.
3	*3.8*	Undertake direct seeding with native grasses in bare areas (MFL Recipient Site - Figure 2).	Bushland Mgt Contractor/Landowner	Winter	Areas prepared in Years 1&2 are direct seeded.	Y	Approximately 10 kilograms of Kangaroo Grass seed was spread in open ground within the MFL recipient site, NTGVVP Offset Area and along the northern boundary.
3	3.9	Monitor status of vegetation condition, and the status Matted Flax-lily and the condition of habitat within the reserves and provide annual report to relevant authorities.	Landowner/ Qualified Ecologist	Early Summer	Progress report to satisfaction of relevant authorities.	Y	Progress reports prepared by Ecology and Heritage Partners.
3	3.10	Removal of all existing rubbish from site and rubbish removed immediately if further dumping occurs.	Landowner/Contractor	At least every 2 months.	All rubbished removed and removed immediately if dumping occurs.	Y	Rubbish removal ongoing by AES as required.

4.6 Recommended Actions from Year 2

Following Year 2 of management, several additional measures were recommended to ensure that the native vegetation and habitat for MFL continued to improve throughout Year 3. These actions included:

- Repair the warped fence panel along the northern boundary;
- Continue weed control works along the northern boundary area where native vegetation has not yet recovered;
- Continue intensive woody weed, herbaceous and grassy weed control works to achieve the relevant Key Performance Targets; and,
- In addition to the EMP prescribed biomass control (i.e. hand weeding), a mosaic burn should also be undertaken within areas previously unburnt to support inter-tussock space development, weed management and indigenous flora species recruitment.

Many of these targets were achieved within Year 3, including the fence maintenance, grassy weed control and a mosaic burn in the southern portion to remove weedy grass infestations and open additional inter-tussock space. Although the Key Performance Targets were not met in Year 3, significant progress towards meeting the woody weed control targets occurred, reducing the cover from 6% to 3%.

5 CONCLUSION AND RECOMENDATIONS

Year 3 monitoring was undertaken as outlined in the EMP (Ecology and Heritage partners 2024a) to ensure compliance with the EPBC Act approval conditions. The Conservation Area has improved in overall condition since Year 2, however intensive weed control measures need to be maintained to achieve the outstanding Key Performance Targets, particularly the woody weeds target of <1% cover (Table 11).

Most native vegetation patches improved in extent and condition when compared to Year 2, with decreases in woody weed cover resulting from intensive management works undertaken by AES, and a high diversity of native species. While the extent of PG2 and PG3 patches remained relatively consistent with Year 2, given the ecological burn, which removed large infestations of Lobed Needle-grass, and the direct seeding of Kangaroo Grass, it is expected that native vegetation will increase in extent throughout the southern portion of the Conservation Area in Year 4.

The total extent of native Plains Grassland vegetaion within the Conservation Area is now 3.262 hectares, an increase of approximately 0.013 hectares since Year 2. Of this, 0.586 hectares now qualify as NTGVVP, an increase of approximately 0.013 hectares.

The overall cover of herbaceous and grassy weed species was reduced in Year 3, resultant from the removal of large Lobed Needle-grass and Chilean Needle-grass infestations from the southern portion of the Conservation Area. Woody weed cover decreased across the Conservation Area due to the intensive weed control works undertaken by AES. Sweet Briar was approximately halved in coverage, reduced from 6% to approximately 3%, most of which is comprised emerging stems from previously treated areas. Additionally, several new recruits of Cape Broom, which was previously eliminated from the offset site, were observed emerging within the central portion of PG1. As such, the Key Performance target (reduce woody weed cover <1%) has not been met and intensive woody weed control works are required in Year 4 to eliminate woody weeds.

Biomass is generally moderate throughout the Conservation Area, with biomass highest within PG1 where large perennial grassy weeds such as Toowomba Canary-grass and Cocksfoot persist. A large mosaic burn was undertaken in November of Year 3 which successfully removed the Lobed Needle-grass infestations from the southern portion and opened up this space for recruitment of native species.

Survivorship of the translocated MFL was again high (93%). Of the 44 MFL monitored (from both transplanted cohorts and in-situ MFL), 39 were reported in good-moderate health, 9 of which were flowering during the 1st of December 2025 monitoring. One individual (MFL#5) which was recorded as dead at the end of Year 2 failed to resprout throughout Year 3 and should be replaced from the insurance population during Year 4. Two additional individuals (MFL#8 and MFL#33) could not be located during the December 2025 monitoring event and should be monitored for re-emergence in Year 4. Should they not resprout, they should be replaced with individuals from the contingency population between April and August.

Remediation works for the incidents that occurred during Year 1 progressed well throughout Year 3. The erosion area remains dominated by native vegetation and contiguous with the PG1 patch. The northern boundary area in Year 3 was improved when compared to Year 2, however exotic species remain dominant within the eastern portion of this area and it is not yet considered contiguous with the adjacent PG1 patch.

To ensure that the native vegetation and habitat for MFL continues to improve within Year 4, the following works should be incorporated into the Year 4 land management and monitoring in addition to EMP management requirements (Ecology and Heritage Partners 2024a: Table 10):

- Continue weed control works within the northern boundary area where native vegetation has not yet recovered; and,
- Continue intensive woody weed, herbaceous and grassy weed control works to achieve the relevant Key Performance Targets (Table 11).

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Figure 1
Ecological values
135-161 Barry Road, Thomastown

Legend

- Conservation Area
- 135-161 Barry Road
- Construction boundary
- Ecological burn 2025
- Ecological burn 2024
- Translocated Matted Flax-lily 2023
- Translocated Matted Flax-lily 2022
- Remnant Matted Flax-lily
- Photo point
- Matted Flax-lily recipient site
- Proposed Natural Temperate Grassland of the Victorian Volcanic Plain offset area

Ecological Vegetation Class

- Plains Grassland (EVC 132)

EPBC Act Listed Community

- Natural Temperate Grassland of the Victorian Volcanic Plain

N

0 15 30
Metres

Map Scale: 1:1,500 @ A4
Coordinate System:
GDA 1994 MGA Zone 55

ecology & heritage partners

15695_Fig01_EcoFeatCA 8/12/2025 psorensen

15695_Fig01_EcoFeatCA 8/12/2025 psorensen

Aerial source: Nearmap 2025

APPENDICES

Appendix 1. Habitat Hectare Assessment

Table A1.1. Year 3 Monitoring - Habitat Hectare assessment.

Vegetation Zone		PG1 a-c	PG2a	PG3 a-b
Bioregion		Victorian Volcanic Plain	Victorian Volcanic Plain	Victorian Volcanic Plain
EVC		Plains Grassland (Heavier Soils)	Plains Grassland (Heavier Soils)	Plains Grassland (Heavier Soils)
EVC Number		132_61	132_61	132_61
EVC Conservation Status		Endangered	Endangered	Endangered
Site Condition /75	Large Trees /10	NA	NA	NA
	Tree Canopy Cover /5	NA	NA	NA
	Lack of Weeds /15	4	4	4
	Understorey /25	20	5	10
	Recruitment /10	6	3	3
	Organic Matter /5	3	3	3
	Logs /5	NA	NA	NA
	Treeless EVC Multiplier	1.36	1.36	1.36
	Subtotal =	44.88	20.40	27.20
Landscape Context /25	Patch Size /10	4	1	1
	Neighbourhood /10	3	1	1
	Distance to Core Area /5	3	3	3
	Subtotal =	10	5	5
Habitat Points /100		55	25	32
Habitat Score		**0.55**	**0.25**	**0.32**

Appendix 2. *Dianella amoena* (MFL) Monitoring Sheet Data (01/12/2025)

Table A2. MFL Monitoring Data Sheet and Monitoring Results.

Plant No.	Alive (Y/N)	Length (cm)	Width (cm)	Height (cm)	No. Flower Spikes	No. Leaflets/tillers	No. ramets	Overall Health (G/M/P)	Grazing damage (Y/N)
Initial 32 MFL Translocation Cohort									
1	Y	30	30	18	0	16	5	G	N
2	**N**	-	-	-	-	-	-	-	-
3	Y	3	3	15	0	4	1	G	N
4	Y	35	30	20	0	32	8	G	N
5	**N**	-	-	-	-	-	-	-	-
6	Y	10	15	15	0	10	3	G	N
7	Y	35	20	20	0	14	5	G	N
8	**N**	-	-	-	-	-	-	-	-
9	Y	30	30	20	0	30	8	G	N
10	Y	40	40	20	4	40	10	G	N
11	Y	20	20	15	0	9	3	G	N
12	Y	5	5	15	0	4	1	G	N
13	Y	20	20	25	0	9	4	G	N
14	Y	30	25	19	2	16	4	G	N
15	Y	22	30	24	1	16	5	G	N
16	Y	30	30	18	0	18	5	G	N
17	Y	40	30	15	0	13	5	G	N
18	Y	30	35	18	0	11	5	G	N

Plant No.	Alive (Y/N)	Length (cm)	Width (cm)	Height (cm)	No. Flower Spikes	No. Leaflets/tillers	No. ramets	Overall Health (G/M/P)	Grazing damage (Y/N)
19	Y	25	40	15	0	13	6	G	N
20	Y	20	35	14	0	14	4	G	N
21	Y	20	35	20	0	11	3	G	N
22	Y	20	15	19	0	14	4	G	N
23	Y	18	10	20	1	12	2	G	N
24	Y	40	100	20	0	100	30	G	N
25	Y	35	50	20	0	40	12	G	N
26	Y	40	40	17	0	20	6	G	N
27	Y	20	20	10	0	11	3	G	N
28	Y	35	15	18	0	15	4	G	N
29	Y	25	20	20	0	19	4	G	N
30	Y	15	30	15	1	12	4	G	N
31	Y	40	40	15	1	25	8	G	N
32	Y	10	10	10	0	7	4	M	N
Off-target Damage affected MFL									
33	**N**	-	-	-	-	-	-	-	-
34	Y	10	20	6	0	10	4	G	N
35	Y	60	80	15	0	40	10	G	N
36	Y	5	5	5	1	3	1	M	N
37	Y	15	55	10	0	15	5	G	N
38	Y	15	15	10	0	8	3	G	N
39	**N**	-	-	-	-	-	-	-	-

Plant No.	Alive (Y/N)	Length (cm)	Width (cm)	Height (cm)	No. Flower Spikes	No. Leaflets/tillers	No. ramets	Overall Health (G/M/P)	Grazing damage (Y/N)
40	Y	15	15	10	0	6	2	G	N
Remediation MFL for Scraping and MFL lost during Year 1									
41 (6.1)	Y	30	30	20	2	40	10	G	N
42 (23.1)	Y	30	35	20	0	25	6	G	N
43 (1.1)	Y	20	20	12	0	20	8	G	N
44 (10.1)	Y	40	40	15	3	40	10	G	N

Note: Y = Yes, N = No, G = Good, M = Moderate, P = Poor.

Appendix 3. Photo Points (December 2025)

A3.1 Year 3 Photo Points (Offset Site)

A3.1. Photo point 1 (Ecology and Heritage Partners 01/12/2025).

A3.2 Photo point 2 (Ecology and Heritage Partners 01/12/2025).

A3.3. Photo point 3 (Ecology and Heritage Partners 01/12/2025).

A3.4. Photo point 4 (Ecology and Heritage Partners 01/12/2025).

A3.5. Photo point 5 (Ecology and Heritage Partners 01/12/2025).

A3.6. Photo point 6 (Ecology and Heritage Partners 01/12/2025).

A3.7. Photo point 7 (Ecology and Heritage Partners 01/12/2025).

A3.8. Photo point 8 (Ecology and Heritage Partners 01/12/2025).

A3.9. Photo point 9 (Ecology and Heritage Partners 01/12/2025).

A3.2 Year 3 Photo Points (NTGVVP Offset Area)

A3.10. Photo point NTGVVP1 (Ecology and Heritage Partners 01/12/2025).

A3.11. Photo point NTGVVP2 (Ecology and Heritage Partners 01/12/2025).

A3.12. Photo point NTGVVP3 (Ecology and Heritage Partners 01/12/2025).

A3.13. Photo point NTGVVP4 (Ecology and Heritage Partners 01/12/2025).

A3.3 Year 3 Photo Points (Northern Boundary Area)

A3.14. Photo point RA1 (Ecology and Heritage Partners 01/12/2025).

A3.15. Photo point RA2 (East) (Ecology and Heritage Partners 01/12/2025).

A3.16. Photo point Ra2 (West) (Ecology and Heritage Partners 01/12/2025).

A3.17. Photo point RA3 (East) (Ecology and Heritage Partners 01/12/2025).

A 3.18. Photo point RA3 (West) (Ecology and Heritage Partners 01/12/2025).

A 3.19. Photo point RA4 (Ecology and Heritage Partners 01/12/2025).

A.3.2 Photo Point Data

Table A3.2.1. General site photo point data.

Date	Photo Point ID	Direction
01/12/2025	1	South-west
01/12/2025	2	South
01/12/2025	3	South-east
01/12/2025	4	East
01/12/2025	5	North
01/12/2025	6	North-west
01/12/2025	7	North-west
01/12/2025	8	West
01/12/2025	9	South

Table A3.2.2. NTGVVP Offset Area photo point data.

Date	Photo Point ID	Direction
01/12/2025	NTGVVP1	South-east
01/12/2025	NTGVVP2	East
01/12/2025	NTGVVP3	East
01/12/2025	NTGVVP4	North-west

Table A3.2.3. Northern scraping rehabilitation area photo points.

Date	Photo Point ID	Direction
01/12/2025	RA1	West
01/12/2025	RA2 (East)	East
01/12/2025	RA2 (West)	West
01/12/2025	RA3 (East)	East
01/12/2025	RA3 (West)	West
01/12/2025	RA4	East

Appendix 4. Summary of Year 2 Monitoring Activities within the Offset Site

Table A4.1. Summary table of the Year 2 Monitoring Activities under by Ecology and Heritage Partners.

Date	Activity
27/02/2025	MFL Monitoring Check
07/05/2025	Autumn Site Assessment MFL Monitoring Check
22/07/2025	Winter Site Assessment MFL Monitoring Check
03/10/2025	Site Walkover MFL Monitoring Check
01/12/2025	MFL Monitoring Check Summer Site Assessment PG and NTGVVP Monitoring

Aus Eco Solutions
restoring native ecosystems

A2970 P4545 Barry Rd Year 3 Land Management Annual Report 2025

Report for Ecology and Heritage Partners

--December 2025 -

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Contents

Pale Vanilla Lily (Arthropodium milleflorum) Found in the NTG VVP area 18th Nov 2025, Picture by Felipe Philippou, Senior Field Ranger Aus Eco Solutions.

Overview

1. Introduction

Aus Eco solutions were engaged by Ecology & Heritage Partners and YourLand Developments to deliver the Year 3 on ground works of the 10 year Environmental Management plan (EMP) developed by Ecology and Heritage Partners in 2024. This report is a summary of the work completed on the site by Aus Eco Solutions over the period of January - December 2025.

3. Project Objective

The objective of this project is to manage and enhance the biodiversity within the Barry's Road Conservation Reserve, in accordance with the EMP and the actions required for year 3 of management.

3. Project Background

The Barry Road Conservation Reserve is a 4.15-hectare parcel of ecologically significant land located 135–161 Barry Road in Melbourne's northern suburbs. The reserve is strategically positioned within a high urbanised context, bordered to the north and west by the Craigieburn Bypass, to the east by the YourLand residential development, and adjoining the City of Whittlesea Public Gardens along its northern boundary despite its relatively small size, the reserve plays a critical role in regional biodiversity conservation.

Ecologically, the reserve is situated within the Victorian Volcanic Plain Bioregion, one of Victoria's most depleted and fragmented bioregions due to past and ongoing urban and agricultural development. It supports vegetation belonging to the Ecological Vegetation Class (EVC) 132_61 Plains Grassland, a community that once covered vast areas of the state but now exists only in scattered remnants. The vegetation is characterised by a dominance native tussock grasses such as Themeda triandra (Kangaroo Grass), with a rich diversity of wildflowers and forbs, many of which are seasonally present and highly sensitive to changes in soil condition, hydrology, and disturbance regimes.

4. Site Map

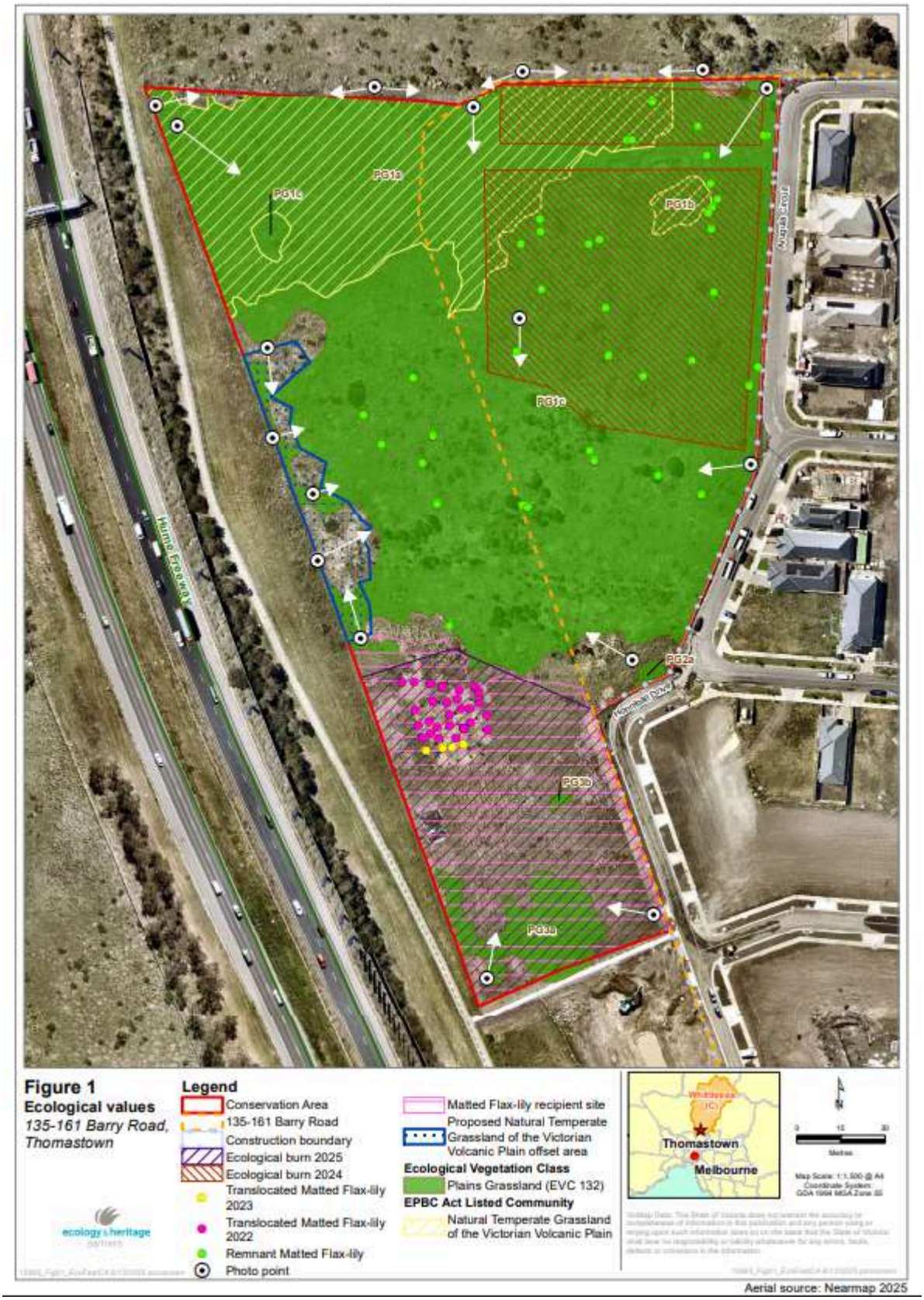

Figure 1: Barry Road Site Map

5. Significant Values

The Barry Road Conservation Reserve holds exceptional conservation significance due to the presence of two nationally and regionally threatened ecological values:

1. Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP)
This critically endangered ecological community is listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). It is recognised for its high biodiversity, structural complexity and vital role in supporting a range of threatened flora and fauna species. It is estimated that less than 5% of the original extent of the NTGVVP remains across Victoria, and most existing remnants are small, isolated, and at ongoing risk from weed invasion, altered fire regimes, and adjacent land use pressures.

2. Matted Flax-lily (Dianella amoena)
The reserve is also home to populations of the Matted Flax-lily, a perennial herbaceous plant listed as endangered under the Commonwealth EPBC Act, endangered on the Victorian Advisory List of Rare or Threatened Plants in Victoria (DSE 2013), and critically endangered under the Victorian Flora and Fauna Guarantee A1988 (FFG Act). This species is known for its clumped growth habit, delicate blue-purple flowers, and bright blue berries. It typically occurs in grassy woodland and grassland habitats and is highly vulnerable to habitat loss, fragmentation, and inappropriate disturbance. The presence of this species at Barry's Road further elevates the conservation value of the reserve and underscores the importance of ongoing site management and protection efforts

Figure 2 (right): Matted Flax Lily flower
Photo taken by Ky Von Burg, Senior Field Ranger
Aus Eco Solutions

6. 2025 Summary

2025 has seen the site progress with some key management actions being undertaken in the period of January - December 2025. A large focus was to reach the target of <1% of woody weeds as set out as a site goal in the management plan. This goal was achieved in relation to mature woody weeds, however many juvenile woody weeds remain which will need to be managed further to achieve total woody coverage of under 1%.

A second key focus was biomass reduction across the site, this was achieved through some brush cutting and hand weeding but predominantly with an ecological burn which was performed in November 2025 in the Matted Flax Lily recipient site . The burn covered almost 1 hectare and had a mosaic effect burning particularly well where Lobed Needle - Grass (*Nassella charruana*) had been previously treated, creating dry material to burn.

Other management activities included spraying invasive weeds throughout the site. The main priority weed for this year was Lobed Needle - Grass, unfortunately this weed has spread throughout the site in the last few years. The biggest infestation was sprayed and then burned, however, small patches throughout the site have also been found and treated. Species such as Chilean Needle - Grass (*Nassella neesiana*), Toowoomba Canary - Grass (*Phalaris aquatica*), Fennel (*Foeniculum vulgare),* Patersons curse (*Echium plantagineum*), Plantain (*Plantago spp*), have been treated and will continue to need further treatment in year 4. More recently an outbreak of African Weed Orchid (*Disa bracteata*) was treated on site.

General maintenance of the site was completed as needed. This included rubbish removal and minor fencing work.

Finally, Kangaroo Grass seeds were spread through the recently burnt Matted Flax Lily recipient site, the Northern boundary and the NTG VVP area. This will be complemented by direct seeding of a mix of grasses including Spear Grasses and Wallaby Grasses that will be direct seeded in late autumn early winter 2026.

7. Overview of work Completed 2025

The table below gives a breakdown of work completed on the Conservation Reserve at Barry Road over 2025. Over 50% of work completed was cut and paint treatment of Briar Rose. With this layer of biomass removed more attention can be given to reducing grassy weed biomass throughout the site in future visits.

Management Action	Total Days For 2025
Broadleaf Weed Spraying	4
Grassy Weed Spraying	10.5
Woody Weed Control -Briar Rose Cut & Paint	63
Dirt Pile Removal	2
Briar Rose Disposal Offsite	1.5
Handweeding	0.5
Spreading seed - Themeda triandra	1
Ecological Burn Notifications	0.5
Ecological Burn	5
Brushcutting	0.5
Matted Flax Lily Mapping	1
Hand Weeding Matted Flax Lilys	0.5
African Weed Orchid removal	1
Fencing	1.5
Rubbish Removal	0.5
Themeda Seed & Sand Purchase	0
Winter Seed Mix Purchase	0
Quarterly Reports	2
Monthly Updates	1
Annual Report	1
Total Days	97

Table 1: Management activities completed in 2025 and days spent per activity

Quarter 1

1. Woody Weed Control

Woody weed control was conducted across the reserve, targeting invasive species with a particular focus on Briar Rose (*Rosa rubiginosa*). Control works involved the removal of mature plants (>1m). These works were essential to prevent further spread and reinfestation, as Briar Rose can quickly form dense thickets that displace native grassland species and reduce available habitat for native fauna. Management techniques included manual removal and selective herbicide application (Cut and Paint), with efforts made to minimise soil disturbance and off-target impacts.

2. Grassy Weed Control

Grassy weed control was carried out site-wide to suppress and manage populations of invasive and high-threat weeds, particularly Lobed-Needle Grass (Nassella charruana) This weed species pose a serious risk to the integrity of the grassland by competing with native species for nutrients, water, and light. They also alter habitat structure and reduce the overall biodiversity value of the site. Control measures consisted of spot spraying with targeted herbicides, timed to coincide with key growth stages of the weeds for maximum effectiveness.

Figure 3: Mapping depicts area of mature Briar Rose infestation to be treated in year 3 program of works. Mature Briar Rose Parch shown in red.

3. Activity Timeline

Date	Activity	Crew (1 crew = 2 ops
11/12/2024	Weed density survey undertaken across site for annual report	1
05/02/2025	Spraying exotic grasses across the site - focusing on the patch of lobed needle grass in the south east corner around the MFL- this area was priority for the day.	1.5
06/02/2025	Spot spraying with knapsacks Lobed Needle Grass in the Western Section	1
12/02/2025	Briar rose control in zone 6, focusing on mature plants and leaving young plants for follow up treatment	1.5
14/02/2025	Focusing on Briar Rose in Zone 5 - starting at the fence line and working in, focusing on mature plants.	2
18/02/2025	Focusing on Briar Rose in Zone 7 - starting at the fence line and working in, focusing on mature plants only	3.5

Table 2: Management activities completed in Quarter 1 2025

Quarter 2

1. Herbaceous & Grassy Weed Control

Herbaceous and grassy weed control was implemented across the entire site to suppress and manage populations of invasive and high-threat species, with particular focus on:

- Lobed-Needle Grass (Nassella charruana)
- Plantago spp. (Plantago species)
- Spear Thistle (Cirsium vulgare)
- Paterson's Curse (Echium plantagineum)

2. Woody Weed Control

Woody weed control was conducted across the reserve, targeting invasive species with a particular focus on Briar Rose (Rosa rubiginosa). Control works involved the removal of mature plants (>1m). These works were essential to prevent further spread and reinfestation, as Briar Rose can quickly form dense thickets that displace native grassland species and reduce available habitat for native fauna. Management techniques included manual removal and selective herbicide application (Cut and Paint), with efforts made to minimise soil disturbance and off-target impacts.

Figures 4 & 5: Mature Briar Rose growing amongst native vegetation

3. Dirt Pile Removal - Northern Boundary

Ongoing efforts were being undertaken to remove and redistribute accumulated dirt piles located within the Northern Boundary of the site. These soil heaps, remnants from previous earthworks, are being carefully broken down and spread evenly across designated areas that have been direct-seeded as part of the restoration program.

Figure 6 (right): The Northern Boundary post dirt pile removal and soil spreading

4. Activity Timeline

Date	Activity	Crew (1 crew = 2 ops
11/04/2025	Briar Rose treatment throughout zone 8.	2
14/04/2025	Briar Rose treatment throughout zone 9 & 10.	3
15/04/2025	Briar Rose treatment throughout zone 11 & 12.	2.5
16/04/2025	Briar Rose treatment throughout zone 11 & 12.	2.5
17/04/2025	Transporting Briar Rose biomass found throughout the site onto tarps.	3
22/04/2025	Briar Rose treatment throughout zone 8.	2

Activity Timeline Continued

Date	Activity	Crew (1 crew = 2 ops
23/04/2025	Briar Rose treatment throughout zone 5.	2.5
24/04/2025	Briar Rose treatment throughout zone 3 & 4.	2
28/04/2025	Briar Rose treatment throughout zone 3 & 4.	2.5
29/04/2025	Dirt pile removal and scattering soil within the Northern Boundary	2
29/04/2025	Transporting Briar Rose biomass found throughout the site onto tarps.	2
30/04/2025	Transporting Briar Rose biomass found throughout the site onto tarps.	3
01/05/2025	Treatment for exotic grasses AND broadleaves in the NTG- VVP Offset area	1.5
05/05/2025	Transporting Briar Rose biomass found throughout the site onto tarps.	1.5
07/05/2025	Transporting Briar Rose biomass found throughout the site onto tarps.	2
12/04/2025	Briar Rose treatment throughout zone 7 & 8.	1
19/05/2025	Quarterly Report	0.5
20/05/2025	Quarterly Report	0.5

Quarter 3

1. Woody Weed Control

A large focus of this quarter was completing the woody weed removal of all mature Briar Rose on the site. This target has been achieved with all large patches of woody weeds being removed. Juvenile Briar Rose and regrowth remain to be treated.

Figure 7: An area of the Barry Rd Reserve following Briar Rose removal

2. Herbaceous and Grassy Weed Control

A total of 6.5 days were spent spraying herbaceous and invasive grasses throughout the Barry Road Conservation Reserve in quarter 3 . A particular focus was on spraying the Lobed Needle - Grass (Nassella charruana) in zones 13 & 14 (Matted Flax-lily translocation area). A total of 3.5 days were spent spraying in these zones. 1 day was spent spraying weedy grasses in the NTGVVP zone.

General spraying for herbaceous weeds across the entirety of the site was conducted over 2 days, Species such as Fennel, Thistle spp. and Patterson's Curse were treated on these days. The Fennel stalks were also cut down using a brushcutter.

Figure 8 (Right): Fennel patch prior to being sprayed with herbicide.

Figure 9 (below): Dead Lobed - Needle Grass in the MFL recipient site after herbicide treatment

Figure 9 (above): Grassy weeds that have been sprayed with herbicide are coloured red

3. Fence Maintenance

The fence on the North-eastern corner of the site sustained damage in late June - early July . It appeared as though a car or other vehicle may have collided with the fence causing the wire to become bent and twisted and two posts to become uprooted out of the ground. . Yourland arranged for the fence to be fixed however the wire remains twisted and does not join in places. There are also posts that are loose. Aus Eco Solutions completed a day of minor fence repairs on the entire fenceline of the site. This included minor wire joins and reinstating the top wire.

4. Rubbish Removal

1 day was spent removing rubbish from site. It was observed that there seems to be more rubbish now that more construction is happening in the area.

Figure 10 & 11: Rubbish dumped on site was removed by Aus Eco Solutions. The fence damage sustained in July.

5. Matted Flax Lily Maintenance

Matted Flax Lilies were mapped throughout the site to ensure weed control activities do not adversely affect them. Translocated Matted Flax Lilies were hand weeded around.

6. Activity Timeline

Date	Activity	Crew
18/06/2025	Spot spray broadleaf weeds	1
23/06/2025	Woody weed control - zone 9 & 10	2.5
24/06/2025	Woody weed control - zone 9 & 10	2.5
25/06/2025	Woody weed control - zone 9 & 10	3
01/07/2025	*Nasella* spp. and broadleaf spray zone 3 -6	1
01/07/2025	Woody weed control - Briar Rose - zone 9 & 10	1
02/07/2025	Woody weed control - Briar Rose - zone 7 & 9	2.5
07/07/2025	Spraying LNG in zone 14 boundary	1.5
09/07/2025	Fence checks & rubbish removal	1
09/07/2025	Woody Weed control - Briar Rose - zone 7 & 9	2
11/07/2025	Mapping MFL's	1
05/07/2025	Woody weed control - Briar Rose - zone 12	2.5
16/07/2025	Woody weed control - Briar Rose - zone 9 & 10	2.5
18/07/2025	Woody weed control - Briar Rose tidy up - zone 12	1
18/07/2025	Spot spray LNG - zone 13 & 14	1

Date	Activity	Crew
01/08/2025	Spray LNG MFL area	1
04/08/2025	Woody weed control - Briar Rose tidy up - zone 12 & 13	2
05/08/2025	Fence repairs	1
05/08/2025	Hand weeding Matted Flax-lilies	0.5
05/08/2025	Woody weed control - Briar Rose - zone 13	0.5
06/08/2025	Woody weed control and brushcutting - NTGVVP area	1
07/08/2025	Weed spraying grasses NTG VVP area & Fennel spraying - zone 2 - 12	1

Quarter 4

1. Weed Control - Matted Flax Lily Recipient Site

The key focus of this quarter was preparing the site for an ecological burn and for direct seeding. To prepare the area the following management actions were undertaken:

- Lobed Needle - Grass (Nassella charruana) was sprayed a month prior to burning.
- Juvenile Briar Rose (Rosa rubiginosa) was cut and painted
- Cut woody weed material was taken off site for deep burial

Figure 12 & 13: Matted Flax Lily Recipient Site shaded in red. Pile of cut Briar Rose material that was transported offsite for deep burial.

2. NTG VVP Weed control

The NTGVVP area (shown in the map below) is an area of the site that receives more intensive weed management. Over quarter 4 the following management activities were undertaken in this area:

- Cut and paint of juvenile Briar Rose (Rosa rubiginosa)
- Spraying weedy grasses and broadleaf weeds
- Hand weeding in patches of higher coverage native vegetation

Figure 13 & 14: NTG VVP shaded in Yellow. Weedy grasses after being sprayed in the NTGVVP, the red dye is visible.

3. African Weed Orchid

African Weed Orchid (*Disa bracteata*) was identified on site while a crew was there completing other work. Due to the highly invasive nature of this weed it was acted upon swiftly to remove it before seed could spread. The main outbreak was thoroughly walked to dig up and collect all African weed orchid in the area. The weed orchid collected was bagged up and disposed of off site.

Figure 15 & 16: Map of African Weed Orchid infestation. African Wed Orchid at Barry Road.

4. Ecological Burn

The ecological burn in the Matted Flax Lily recipient site ocurred on Friday the 14th November 2025. Due to a high cover of annual grasses the burn did not reach all areas of the MFL zone, however the patches of dead Lobed Needle - Grass burned very well. The result was a mosaic style burn with large patches burnt to bare ground creating some good areas to apply native seed.

5. Post Burn Report

Once wet lines were put in place and the crew positioned as per the burn plan, a test patch was lit at 12.30 pm to observe fire behaviour in the conditions as well as to allow smoke to blow over the burn area and alert wildlife of the imminent burn. This went well and the burn at large went ahead. At 12.40 Spot ignitions were made on the North side of the burn area to let the fire move back into S wind. Wet line operators moved with the drip torch operators to re-enforce wet lines if needed during this time. A drip torch operator then moved along the western and eastern sides of the burn site moving southwards making spot ignitions. The fire was allowed to burn back into the wind to the southern boundary. Further spot ignitions were made to burn areas that didn't burn well initially. Flame height averages were half a metre high and 50 percent of the burn area burnt fully.

The burn was out at 2.15 pm when the crew commenced blackout. A crew with a slip-on unit with water stayed behind until 4.15 to monitor the burn area.
Once wet lines were put in place and the crew positioned as per the burn plan, a test patch was lit at 12.30 pm to observe fire behaviour in the conditions as well as to allow smoke to blow over the burn area and alert wildlife of the imminent burn. This went well and the burn at large went ahead. At 12.40 Spot ignitions were made on the North side of the burn area to let the fire move back into S wind. Wet line operators moved with the drip torch operators to re-enforce wet lines if needed during this time. A drip torch operator then moved along the western and eastern sides of the burn site moving southwards making spot ignitions. The fire was allowed to burn back into the wind to the southern boundary. Further spot ignitions were made to burn areas that didn't burn well initially.

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Figure 17: Aerial Drone photo of the Ecological Burn

6. Direct Seeding

On the 18th November 2025, a crew spread 10 kilograms of Themeda triandra seed across 3 locations on the Barry road site. Roughly 3 kilograms of this seed was spread along the Northern Boundary where remediation works have taken place. Seed was not spread in areas where further soil work is required. 6.5 kilograms of seed was spread throughout the recently burnt MFL recipient site in bare patches. The remaining 500 grams of seed were spread in smallpatches in the NTGVVP where previous weed control has left bare earth.

Figure 18: Kanagroo Grass seed spreading in the MFL recipient site post burn

7. Weed Spraying

Any remaining patches of Lobed Needle - Grass following the burn were identified and sprayed throughout the entire site. Fennel was sprayed with a broadlead selective throughout the site. Weedy grasses including Chilean Needle - Grass and Toowoomba Canary - Grass were sprayed in amongst the translocated Matted Flax Lilys where the burn did not reach. Inside the Matted Flax Lily guards was hand weeded.

Figures 19 & 20: Lobed Needle - Grass (left) and Fennel (right) was sprayed

8. Activity Timeline

Date	Activity	Crew
06/10/2025	Spot spray lobed needle grass MFL area	1
20/10/2025	Burn Plan	1
21/10/2025	Spot spray grassy weeds & herbaceous weeds, cut and paint briar rose NTGVVP	1.5
27/10/2025	Cut & paint briar rose in burn area Remove woody weed material off site	2
31/10/2025	Delivered burn notifications Removed woody weed material offsite	1
06/10/2025	Hand weeding & cut & paint NTGVVP	1
11/11/2025	African weed orchid removal	1
14/11/2025	Burn MFL area	4
18/11/2025	Spread Themeda triandra seed MFL area, Northern Boundary & NTGVVP	1
02/12/2025	Minor fence repairs in Northern boundary, sprayed Fennel & Lobed Needle Grass Northern Boundary zones 1 - 10	1
05/12/2025	Kangaroo Rescue, sprayed weedy Grasses in MFL area, Hand weeded Matted Flax Lilys	1

Observations

1. Kangaroos

There is a mob of resident kangaroos that are always present when crews are completing work at the Barry Road Conservation Reserve. There are between 15 - 20 kangaroos in the mob and they have most likely had their natural range restricted with the housing development being built. The kangaroos generally seem to be in good health however crews have reported seeing kangaroos that appear to be suffering neurological issues commonly displayed in kangaroos experiencing the phalaris staggers. Wildlife rescue have been called to the site twice by Aus Eco Solutions crews to assist kangaroos.

The most recent call out was for a Mother kangaroo with a joey in her pouch who was very slow moving and appeared to have been injured. The wildlife carer confirmed the kangaroo likely had a bone infection in both feet and it needed to be tranquilised and taken to the wildlife shelter. The wildlife carer expressed concern for the welfare of the mob due to having less grass available for them to eat, having fences to jump which may have been the cause of the bone infection, and having no water source close by especially coming into summer.

There has also been evidence of people shooting at kangaroos with arrows. A large kangaroo was found deceased on the site in July and its paws had been removed, this was reported to the relevant State for further investigation. The kangaroo presence is also evident in the grazed vegetation. There is high grazing pressure from the kangaroos which may be an issue for revegetation efforts on the site. It may be beneficial to have some exclusion plots that kangaroos cannot access to allow the grasses to grow.

Recommendations

1. Biomass Reduction

Biomass reduction continues to be a priority in managing the Barry Road Conservation Reserve, The burn, along with targeted spraying of Lobed Needle Grass has reduced biomass significantly however there is still a high presence and coverage of weedy grasses. Invasive grasses such as Phalaris can smother and out compete native grasses and are not grazed by the kangaroos when they are mature. The young phalaris shoots are eaten by kangaroos which unfortunately can lead to them developing the phalaris staggers. A targeted reduction in the coverage of phalaris both mature and new plants should be undertaken in the next phase of works. This would involve brush cutting back the mature plants and doing a follow up spray when the phalaris starts to grow back.

2. Nassella Species Treatment

While Lobed Needle - Grass has been targeted in 2025 the treatment of the grass will be ongoing. the burn area will need to be closely monitored for Lobed needle - Grass that grows back and treated accordingly. There is a high presence of Chilean Needle Grass throughout the site. This will need to be a focus of the next phase of work, buffer zones between patches of native grasses and patches of Chilean Needle - Grass should be created by brush cutting an edge around desired vegetation and spraying patches of Chilean Needle Grass and carefully spraying or hand pulling individual plants in amongst native vegetation. As Chilean Needle - Grass is a marching plant, it spreads in clumps so creating a buffer to stop further invasion into higher quality areas of vegetation should be prioritised.

3. Broadleaf Weed Control

Broadleaf weeds should continue to be treated through out the entire site regularly. Species such as Fennel and Patersons curse should be sprayed early in their growth cycle where possible to ensure overspray is limited by only needing to spray a small rosette or small plant. Broadleaf species such as plantain should be controlled however they are more difficult to control due to their long tap root, many herbicides will kill the top of the plant but not the entire plant. Metsulfuron herbicide will kill the tap root but it is residual and may affect native species such as lillies so it's use should be limited. Handweeding in highly desirable areas while time consuming may be beneficial to remove plantain.

4. Woody Weeds

While the mature Briar Rose has been removed from site, many Briar Rose patches remain. It is important that the effort to remove Briar Rose completely from the site continues in the management of the site as it will take over again if left unchecked.

5. Revegetation

Revegetation in the form of direct seeding and tubestock planting is recommended throughout the entire site. Reducing biomass and weeds across the site will result in patches of bare ground. Where there is bare ground weeds will regrow. Seeding and planting as much as possible will help to reduce weed cover and fill in the bare spaces with desirable species.