



Victorian Biodiversity Offsets

A tale from direct
experience.

Taylor Gundry, PhD

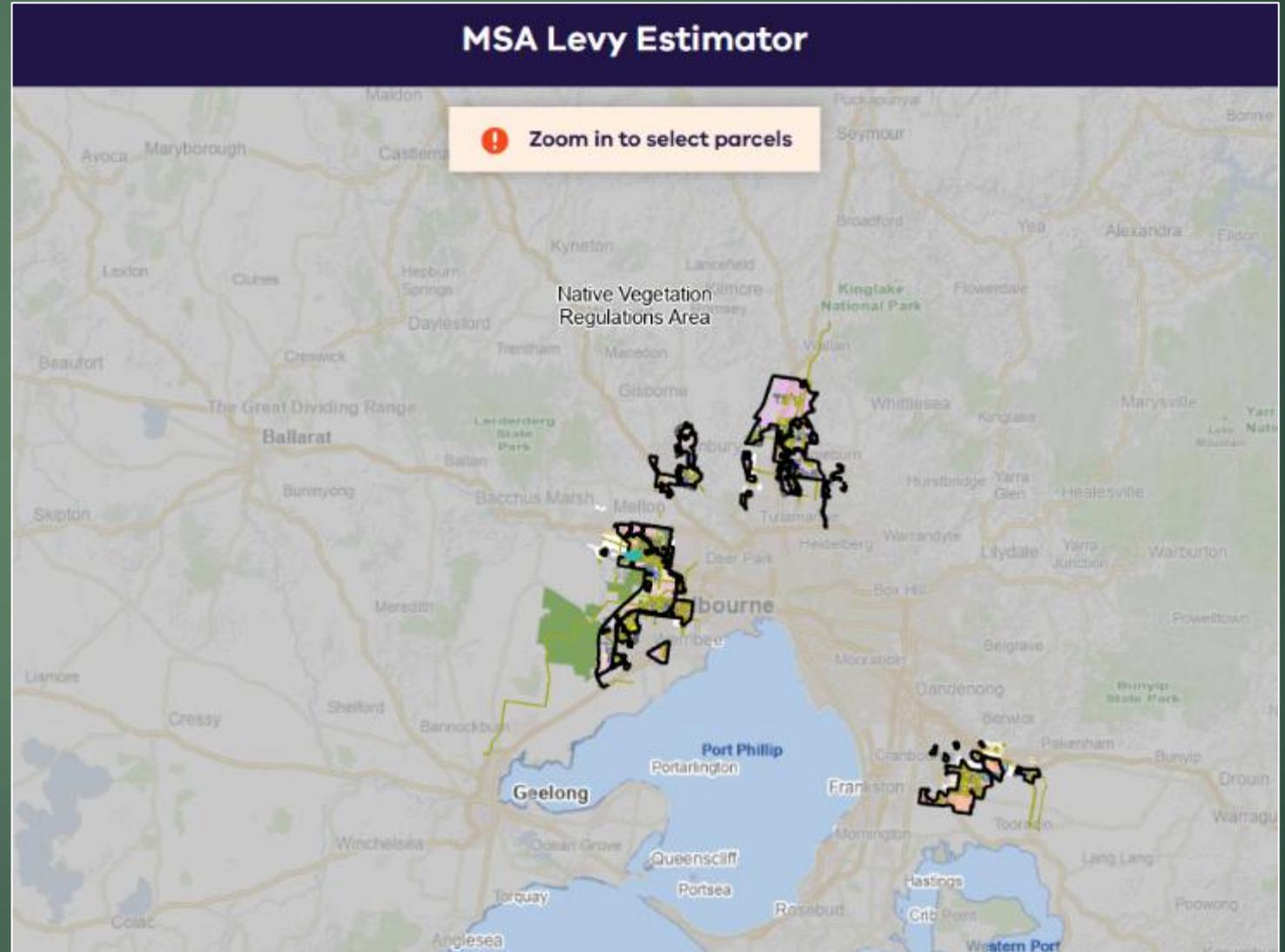
Victorian Biodiversity Offsets

Method 1

Melbourne Strategic Assessment (MSA)

How it works in theory:

1. Developers in the Growth Areas pay a levy per block.
2. Money goes to State Government to buy private land to create the Western Grasslands Reserve and fund Parks Vic to manage it.
3. Responsibility held by the State.

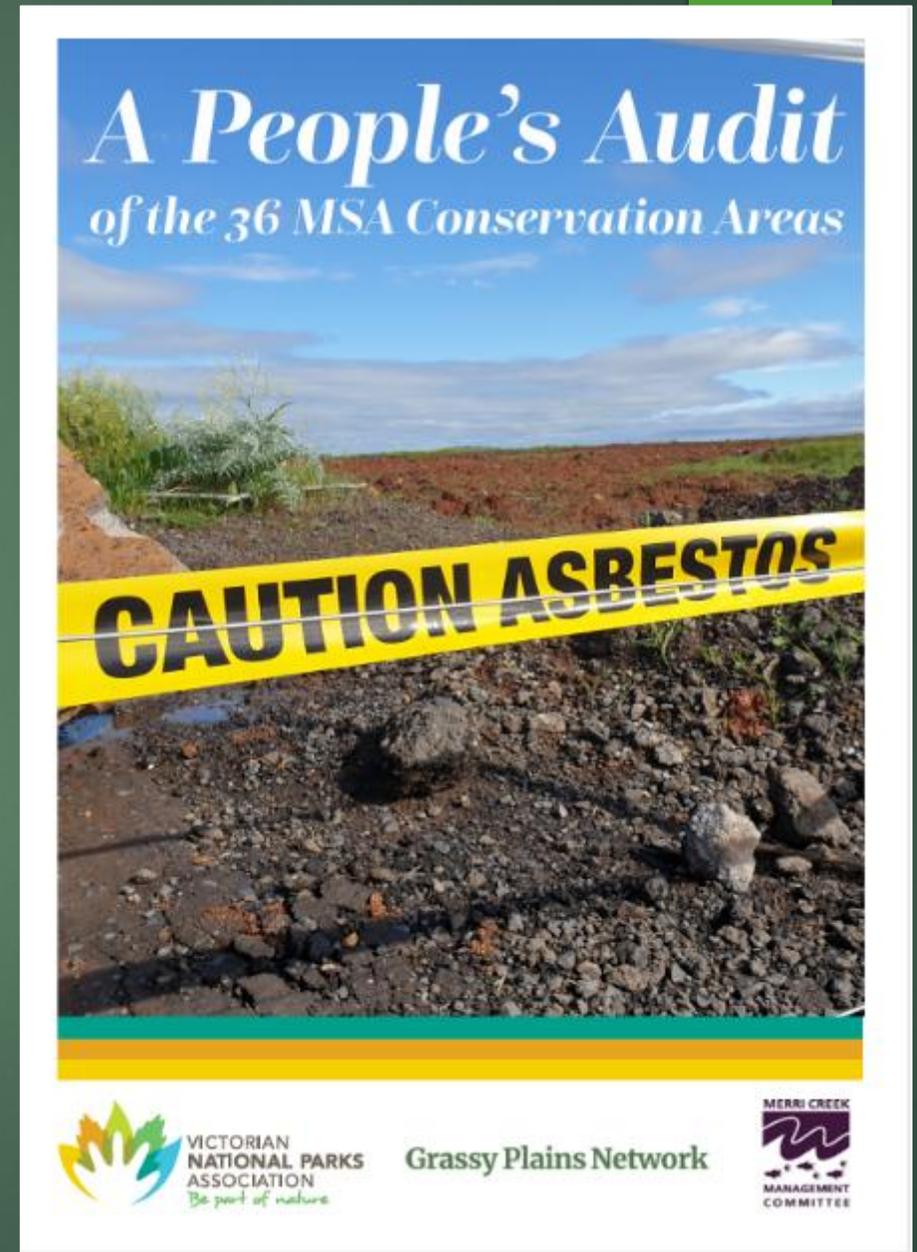


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Melbourne Strategic Assessment: The People's Audit (2024)

Key findings:

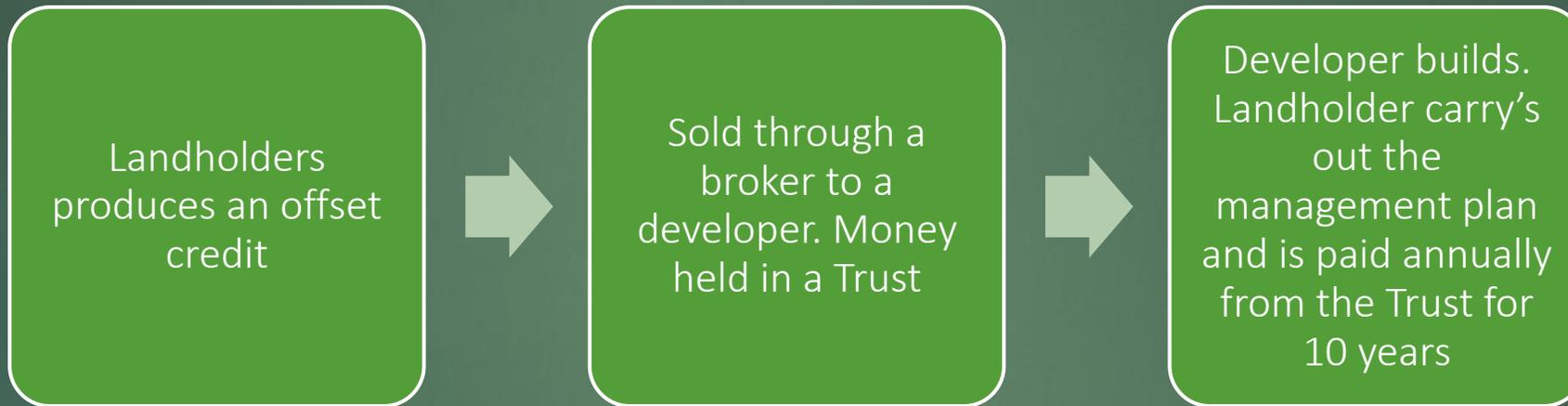
1. Only 7/36 areas currently protected.
2. 15 sites declining in condition. 17 unknown.
3. Severe issues include native vegetation clearing, illegal dumping and weeds.



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Method 2

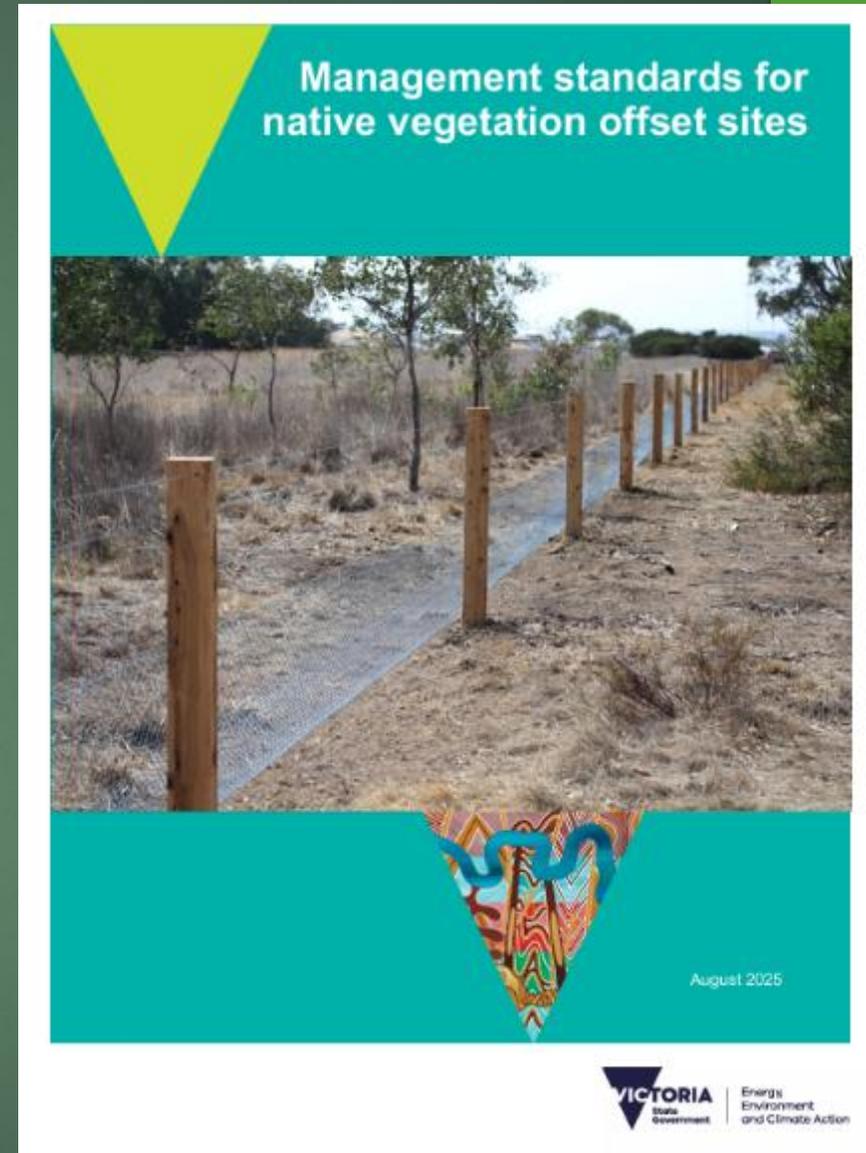
Offsets via brokerage



Victorian Biodiversity Offsets

Offset Agreements and Management Plans

- The Management Standards out lines all the options for Offset Agreements
- Each Offset Agreements has a specific Management Plans.



Victorian Biodiversity Offsets

Vegetation offsets critiques

1. Often fail in the objective of “No Net Loss”.
2. Responsibility held by the Landholder not Developer.



RESEARCH ARTICLE | [Open Access](#) | 

Evaluating the impact of biodiversity offsetting on native vegetation

[Sophus O. S. E. zu Ermgassen](#)  [Katie Devenish](#), [B. Alexander Simmons](#), [Ascelin Gordon](#), [Julia P. G. Jones](#), [Martine Maron](#), [Henrike Schulte to Bühne](#), [Roshan Sharma](#), [Laura J. Sontner](#) ... [See all authors](#) 

First published: 10 June 2023 | <https://doi.org/10.1111/gcb.16801> | [VIEW METRICS](#)



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Evaluation of averted loss gains under Victorian biodiversity offset policy

[Anna O'Brien](#)  [Ascelin Gordon](#)

First published: 05 January 2024 | <https://doi.org/10.1111/csp2.13070> | [VIEW METRICS](#)

The OSEY Conservation Fund

Method 3

Direct offsets

- OSEY Pty Ltd, a division of Resimax Group, was created to manage the vegetation offsets allowing for the expansion of the Eynesbury township.
- Currently over 1,000 hectares (spread over 10 properties) are managed by the Fund. Each site undergoes an annual audit by DEECA.
- Responsibility held by the Developer.



What we manage

- 1.Parwan (3 properties): Mixed grey box woodland and grassland. 182 hectares together.
- 2.Eynesbury: Mixed Grassland, Woodland and Swamp. 13 Ha
- 3.Toolern Vale: Mixed C3 and C4 dominant grassland. 53 Ha
- 4.Little River: C3 dominant grassland. 75 Ha
- 5.Glenmore: Mixed remnant and reveged yellow box/ yellow gum woodland. 480 Ha.
- 6.Morrison's: Mixed dry messmate forest and grassland. 53 Ha
- 7.Buchan: Scrubby dry forest. 206 Ha
- 8.Murray River: River Redgum floodplain swamp. 91 Ha



The Crew

Greenville Environmental, with a crew of eight dedicated people, manage the native vegetation offset sites on behalf of the OSEY Conservation Fund.



Picture left to right: Lee Anderton, Joel Le Busque, Layne Offner, Taylor Gundry, Stella Ackland-Evans, Lilli Johnstone, Eric Eames and Thomas Ottenhoff.



GREENVILLE
ENVIRONMENTAL

Parwan. An overview

- Neighbours to the west also have ~32 Ha of biodiversity offsets, making a consolidated area of ~205Ha that is protected for nature.
- Grey box woodland, grassland and wetland EVCs.
- Our sites with the most intense work required in 2025/26
 - - Large scale burns
 - - Large scale weed control, mostly of boxthorns and serrated tussock.
 - - Mass plantings, 17,000 trees and shrubs required to be established in offsets. Predicted 15,000 on the 'new site'.
 - -Rabbit-proof fence complete for one property. Rabbit extermination begins.
- Potential release site for the Victorian Grassland Earless Dragon
- Native plants present: Werribee Blue Box, Buloke, Grey Box, Yellow Box, White Cypress Pine, small St John's Wort, Austral tobacco, Curved Riceflower, Yellow Rush lily, Blue Grass lily, Leek lily (*B. semibarbata*), Rock fern, Nine-awned grass.



Parwan. War against the African Boxthorns

Step one: Cut it out.



Mainly chainsawing, a tiny amount mulched by machine.

Parwan. War against the African Boxthorns

Step two: Burn it.



Parwan. War against the Serrated Tussock.

Step one: Burn it



Morning pre-burn meeting with the contractors Habitat Land Management (HLM).

Burn total 2024: ~26Ha

Burn total 2025: ~31 Ha

Parwan. War against the Serrated Tussock.

Step one: Burn it



Parwan. War against the Serrated Tussock.

Step one: Burn it



Parwan. War against the Serrated Tussock.

Step two: Spray it.



Burn follow up. Spraying serrated tussock with flupropanate using different methods depending on the density and presence of native grasses. Ute boom, knapsack booms, spot spraying with rigs and knapsacks.



Parwan. War against the Serrated Tussock.

Step two: Spray it.

- Missed lines while knapsack booming.
- Learning, the native box grass (*Paspalidium constrictum*) is susceptible to flupropanate.



Parwan. Plant it

- Close to 10,000 trees and shrubs planted in 2025.
- Hit hard by the January heat wave with no rain. Lost ~30%. Some areas fine, others devastated.
- Going forward, water crystals, up the summer watering regime and use jute mats / handful of topsoil for the worse areas.



Parwan. Plant it



Native sweat bee asleep in a copper-wire daisy.



Curved riceflower resprouting and germinating from seed after being burned in 2024.

Parwan. Other tasks



Great Green Wall of Parwan.

Parwan. Other tasks

Restoration thinning to recover habitat

Accelerating tree growth in Box-Ironbark forest

In short

- ARI's decade long Box-Ironbark forest study, has found that restoration thinning has the potential to benefit wildlife by accelerating tree growth and the formation of old-growth habitat characteristics.
- As of 1997, Box-Ironbark forests had declined to just 28% of their original pre-european extent.
- Thinning may be an important management option in accelerating the speed with which forests grow and develop desirable habitat characteristics.



Ecological thinning to help establish ground cover and shrubs.

Athur Rylah Institute study of benefits of selective thinning Box-Ironbark forest.

Parwan. Grants

Won a \$77,000 Green Links Grant, awarded by the DEECA in partnership with the Moorabool Landcare network and Friends of Hopetoun Park & Parwan Gorge. The grant is assisting us undertaking environmental work along the Werribee River escarpment (outside the covenant areas) across 3 properties, all with conservation overlays/covenants.

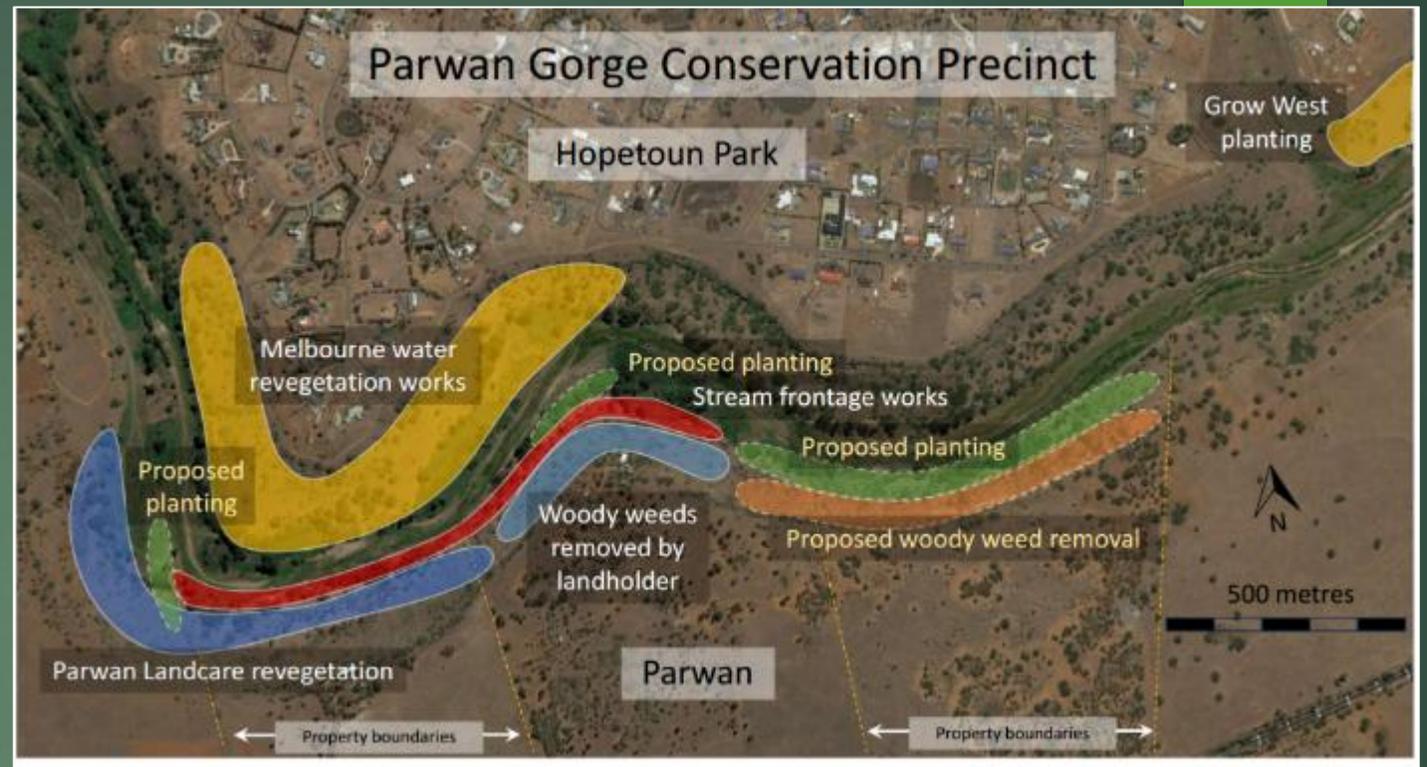
Aims-

Woody weed control

Native plantings and direct seeding

Rabbit control

Works conducted over 2024-2026.



Toolern Vale

- 53 Ha/130 Ac of diverse native grassland
- Not a registered offset yet, but we manage it as if it is one.
- A large ~ 13 Ha/32 Ac of solid kangaroo grass with native forbs including blue devils, lemon beauty heads, scurf peas, glycines, star cudweed, native St Johns wort, blue bells, pink bindweed, small vanilla lillies and tall feather heads.
- Mostly wallaby grass, windmill grass and spear grass throughout the rest of the site.
- Took over the site in January 2024. Have been focusing our weed control on Chilean Needle Grass, serrated tussock and thistles.
- Potential release site for the Grassland Earless Dragon
- Conducting ecological burns and crash grazing.



Toolern Vale. Spring burn 2024

- Cool burn
- Mosaic pattern
- Killed off weedy annual grasses such as squirrel-tailed fescue (*Vulpia sp.*)
- Strong regrowth and seed set of kangaroo grass.



Toolern Vale. Autumn burn 2025

- Partnership with the Toolern Vale CFA
- Cool burn
- Mosaic pattern
- Killed off weedy annual grasses such as *Vulpia sp.*

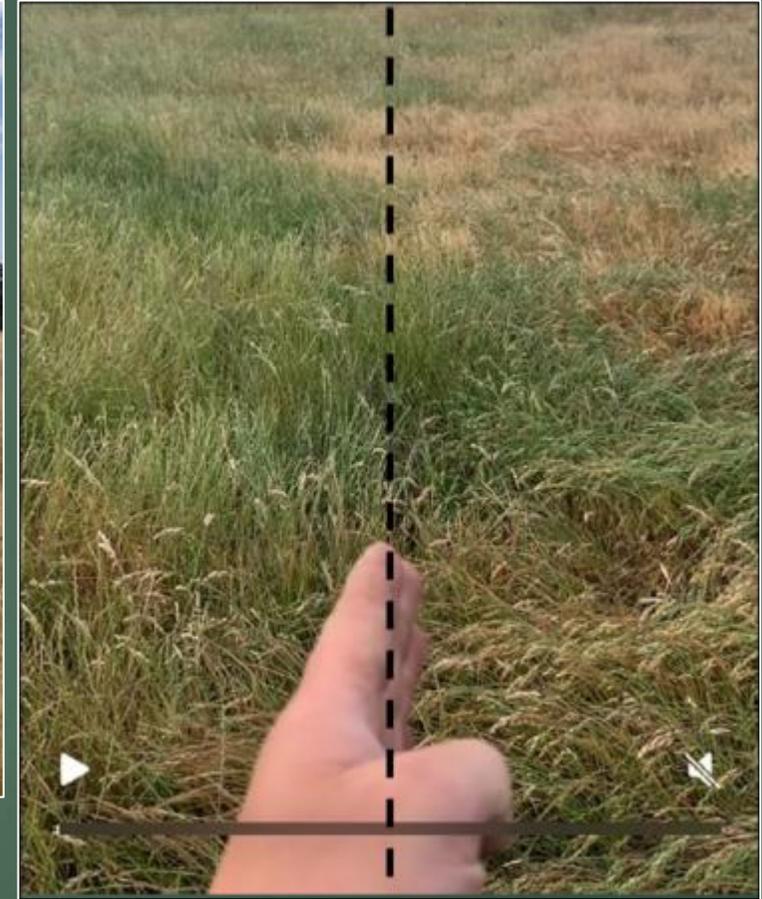


Toolern Vale. Herbicide Clodinafop trial

- Trialling the use of a grass specific herbicide, clodinafop (Group 1).
- Known to be effective against wild oats (low rate) while native spear grasses and wallaby grasses can tolerate it.
- Aim: Test the high rate to control annual rye grass and the effect on the native spear/wallaby grasses.



Eynesbury grassland. Field of spear grass setting seed.



Toolern vale. Left: Untreated, full of annual rye grass. Right: Treated, full of soft brome.

Toolern Vale. Native goodies



Native bees sleeping in a kangaroo grass seed head



Grassland copper butterfly



Lemon beauty heads



Tall feather heads



Small vanilla lily

Toolern Vale. Seed harvesting

- Obtaining native grass seed in bulk with suitable provenances is difficult, solution, harvest it ourselves!
- Native grass seed was spread onsite in areas where we undertook strong control steps on the Chilean Needle grass.
- Kangaroo grass seed was spread at the Parwan sites where burning the box-thorn piles had 'baked' the seed bank.
- 52kg harvested from sites and roadsides.



Native grass seed harvested using a Grass Grabber borrowed from the Moorabool Landcare Network.

Toolern Vale. Sheep grazing



Toolern Vale. Sheep grazing



Recovery and mass seed set of the kangaroo grass after being intensively grazed in early 2025. February 2026.

Toolern Vale. Sheep grazing



Constructing four internal paddocks

Sheep



Drenching the sheep



Clipping the sheep's feet

Sheep



Marking and vaccinating the lambs

Sheep



Our first sale.



Morrison's

- 70 acres of remnant forest within a 140-acre rabbit proof fenced area.
- Main management task, expand the registered offset within the rabbit proof fence area.
 - Maintaining the quality of the native grassland.
 - Reveging what would have been the historic woodland.



Morrison's. Native goodies



Golden Moth orchids



Blue pincushion



Chocolate lily



Grass trigger plants
and scaly buttons



Hornet orchids



Matted bush pea



Yam daisy



Vanilla lily



Yellow stars



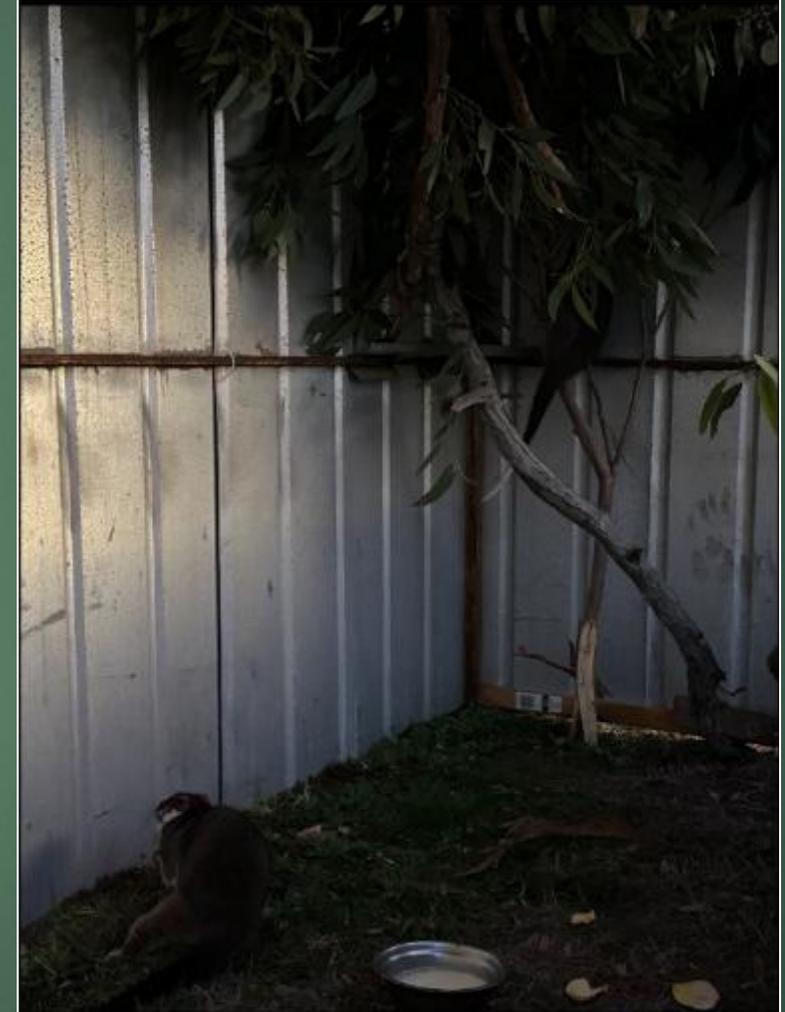
Greenhoods

Morrison's. Beyond the management plan

- Using the site for 'soft-releases' of injured animals.
- Constructing grazing exclusion fences around orchid colonies. Thanks to the Field Naturalist Club of Victoria for their Environment Fund grant.



Grazing exclusion cages



Ring tail possum.

Little River

- ~300-acre property.
- Eastern block, registered offset- basalt grassland, ~200 acres.
- Western block- granite from the You Yangs with 10 remnant large hollow tree offsets.
- The grassland has a low weed load, being mostly native spear and wallaby grasses, but it also has low biodiversity.
- As per the management plan we have the option of crash grazing when appropriate and to conduct ecological burns to assist with biomass control.
- Potential release site for the Grassland Earless Dragon.
- Site is being surveyed for the presence of Grassland Earless Dragons and Plains Wanderers.
- Main tasks: Kangaroo population control, serrated tussock, cane needle grass and thistles.



Little River. Fauna surveys

Arthur Rylah Institute and Zoos Victoria scientists conducting surveys searching for the endangered Grassland Earless Dragon and Plains Wander. Surveys were also conducted at our Parwan and Toolern Vale sites.

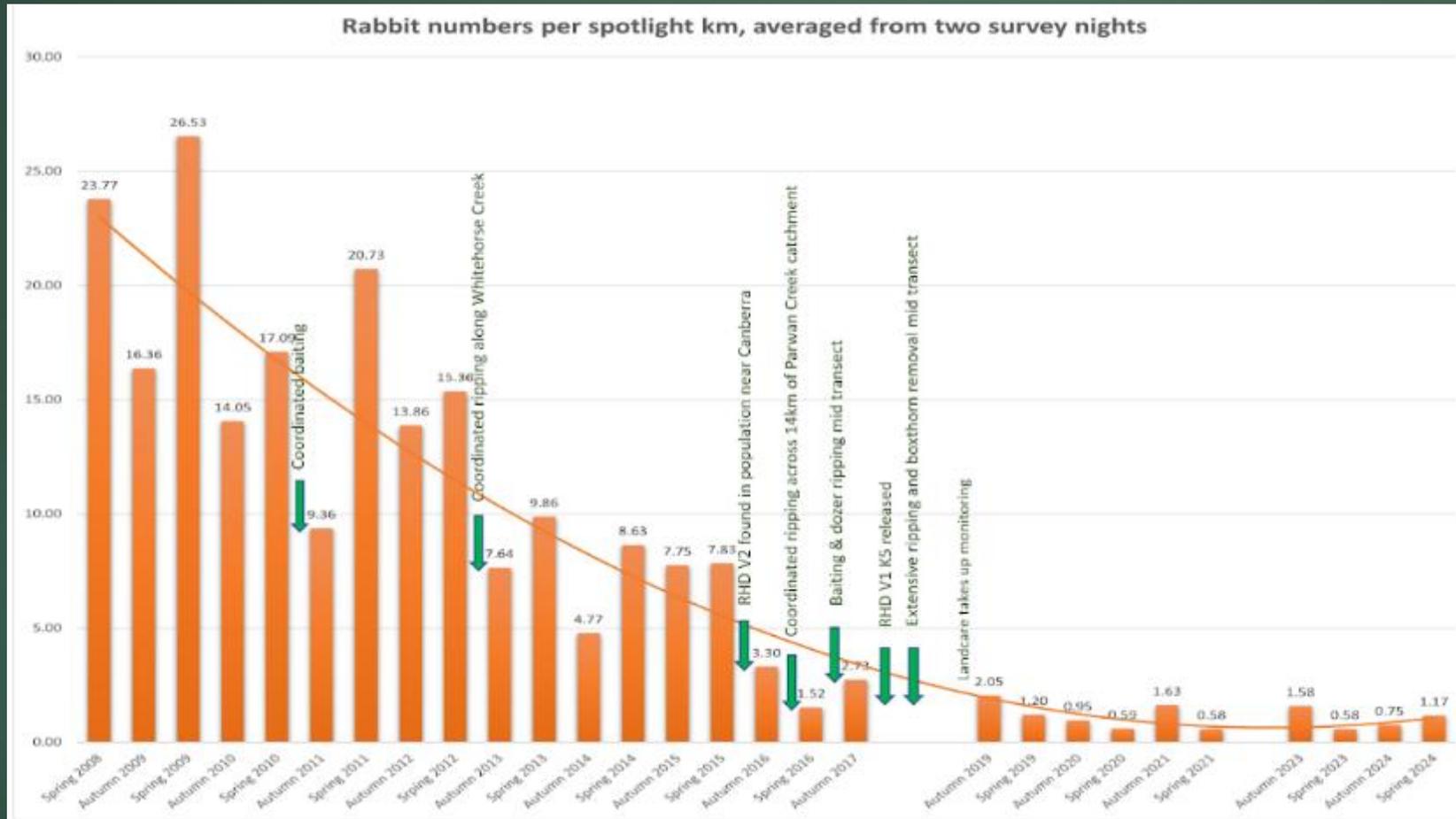


Glenmore. Biolink between the Brisbane Ranges and Werribee Gorge

- 480 hectares.
- Mainly Trust for Nature covenant and small Bush Broker covenants.
- 3 waterways, The White Horse creek, Spring creek and Parwan Creek.
- 3 dams are permanent sources of water. Several ephemeral dams.
- Vegetation: Remnant yellowgum and yellow box woodland. Mass plantings between 5-8 years of establishment. A bluegum plantation and several sugargum plantations.
- Sodic soils leading to elevated water EC levels which impede the chytrid fungus, allowing for a strong frog population including Growling Grass frogs.
- Nesting site for Rainbow Bee-eaters
- Significant Aboriginal Cultural Heritage present.
- Main tasks: War against the Sifton bush and serrated tussock. And maintenance of the plantings



Glenmore



Results of the rabbit surveys with the Moorabool Landcare Network throughout the whole Rowsley valley.



Harvested *Acacia sp.* seeds.

OSEY Native Nursery



OSEY. Going forward



Drone and image software.



Stump jack/pasture harrow.

Collaborations and Achievements

Projects

Athur Rylah Institute & Zoos Victoria:

1. Site habitat assessments for the Grassland Earless Dragon at our grassland sites.
2. Grassland Earless Dragon surveys using sniffer dogs.
3. Plains Wanderer audio monitoring at our Little River grassland.

Melbourne Water:

1. Site habitat assessments and audio monitoring for Bibron's Toadlet.

Friends of Forgotten Woodlands:

1. Exchanging Victorian Volcanic Plains woodland plant seeds from different genetic sources. (Generally, supply some seed to local native/indigenous plant nurseries).

Entomological Society of Victoria/ Dillon Matthews

1. Survey and habitat assessment of a suspected endangered bull ant (*Myrmecia nobilis*).

Moorabool Landcare Network

1. Large scale nestbox deployment
2. Field trials of native plants seeded with inoculum sourced from wallaby and bandicoot poo.
3. Eclipse Creek Blue Winged Parrot. Assisting with a grant application and supplying hardwood logs for artificial nest boxes
4. Long term biannual rabbit surveys of the Rowsley Valley

Ballarat Wildlife Hospital/ Wildlife Victoria

1. Soft release of ring-tailed possums
2. Wedge tailed eagles' recovery and release.

CFA

1. Burns training and experience.
2. Coming soon- Chainsaw training.

Greenville Studies

1. Bridal Creeper rust dispersing study (*Puccinia myrsiphylli*).
2. Efficacy of using the herbicide Clodinafop for treating annual rye grass in a native grassland.
3. Coming soon- Treating couch with grazing, burning, herbicide combinations.

Grants

DEECA- Green Links

Partnership with Friends of Hopetoun Park and Parwan Gorge, making the Parwan Conservation Precinct, carrying out environmental works along the Werribee River.

Melbourne Water- Liveable Communities, Liveable Waterways

Used to carry out weed control at our Glenmore and Parwan properties along the Parwan Creek and Werribee River. The Wadawurrung Traditional Owners Aboriginal Corporation's Gobata Dja crew has delivered most of these works.

Field Naturalist Club Victoria- Environment Fund

Used to create grazing exclusion cages around patches of orchids.

Site tours

1. DEECA
2. Melton Council
3. LandCare Group
4. Trust for Nature Warreen Beek Indigenous Ranger program

Permits

1. Seed collecting permit
2. Use of tiles for reptile surveys
3. Baited cameras

Open for Collaboration

ZOOS
VICTORIA



Melbourne
Water



Moorabool
Landcare
Network Inc.



We are open for collaboration on research, translocations/reintroductions, surveys for endangered species, suitable seed swaps, work experience for TAFE/Uni students, tours etc.

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