APPENDIX 4 - BIODIVERSITY IMPACT AND OFFSET REQUIREMENTS REPORT

Appendix 4.1 – Biodiversity Impact and Offset Requirements (BIOR) report, DELWP

Biodiversity impact and offset requirements report

This report **does not represent an assessment by DELWP** of the proposed native vegetation removal. It provides additional biodiversity information to support moderate and high risk-based pathway applications for permits to remove native vegetation under clause 52.16 or 52.17 of planning schemes in Victoria.

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Note: This report has been generated based on information for proposed removal of native vegetation and other native vegetation that was permitted to be removed on the same property with the same ownership as the native vegetation to be removed in the past five years, as shown in Appendix 3 of this report. The risk-based pathway and the specific-general offset test have been calculated on the combined area of the proposed and past native vegetation removal.

Summary of marked native vegetation (past and proposed removal of native vegetation, where past = areas to be removed in the MSA Biodiversity Conservation Strategy)

Risk-based pathway	**High**
Total extent	21.196 ha
Remnant patches	18.947 ha
Scattered trees	32 trees
Location risk	C

Summary of marked native vegetation proposed to be removed

Total extent	9.143 ha
Remnant patches	7.386 ha
Scattered trees	25 trees

Strategic biodiversity score of all marked native vegetation	0.635

Offset requirements if a permit is granted

If a permit is granted to remove the marked native vegetation, a requirement to obtain a native vegetation offset will be included in the permit conditions. The offset must meet the following requirements:

Offset type	**General offset**
General offset amount (general biodiversity equivalence units)	0.456 general units
General offset attributes	
Vicinity	Corangamite, Port Phillip and Westernport Catchment Management Authority (CMA) or Melton City, Moorabool Shire Council
Minimum strategic biodiversity score	0.263[1]
Offset type	**Specific offset(s)**
Specific offset amount (specific biodiversity equivalence units) and attributes	2.339 specific units of habitat for Red-chested Button-quail 2.711 specific units of habitat for Rye Beetle-grass 2.355 specific units of habitat for Spiny Rice-flower

See Appendices 1 and 2 for details in how offset requirements were determined.

NB: values presented in tables throughout this document may not add to totals due to rounding

[1] Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Next steps

Any proposal to remove native vegetation must meet the application requirements of the high risk-based pathway and it will be assessed under the high risk-based pathway.

If you wish to remove the marked native vegetation you are required to apply for a permit from your local council. Council will then refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

The biodiversity assessment report from NVIM and this biodiversity impact and offset report should be submitted with your application for a permit to remove native vegetation you plan to remove, lop or destroy.

The Biodiversity assessment report generated by the tool within NVIM provides the following information:

- The location of the site where native vegetation is to be removed.
- The area of the patch of native vegetation and/or the number of any scattered trees to be removed.
- Maps or plans containing information set out in the *Permitted clearing of native vegetation – Biodiversity assessment guidelines*
- The risk-based pathway of the application for a permit to remove native vegetation

This report provides the following information to meet application requirements for a permit to remove native vegetation:

- Confirmation of the risk-based pathway of the application for a permit to remove native vegetation
- The strategic biodiversity score of the native vegetation to be removed
- Information to inform the assessment of whether the proposed removal of native vegetation will have a significant impact on Victoria's biodiversity, with specific regard to the proportional impact on habitat for any rare or threatened species.
- The offset requirements should a permit be granted to remove native vegetation.

Additional application requirements must be provided with an application for a permit to remove native vegetation in the moderate or high risk-based pathways. These include:

- A habitat hectare assessment report of the native vegetation that is to be removed
- A statement outlining what steps have been taken to ensure that impacts on biodiversity from the removal of native vegetation have been minimised
- An offset strategy that details how a compliant offset will be secured to offset the biodiversity impacts of the removal of native vegetation.

Refer to the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* and for a full list and details of application requirements.

Authorised by the Victorian Government, 8 Nicholson Street, East Melbourne.

For more information contact the DELWP Customer Service Centre 136 186

Appendix 1 – Biodiversity impact of removal of native vegetation

Habitat hectares

Habitat hectares are calculated for each habitat zone within your proposal using the extent and condition scores in the GIS data you provided.

Habitat zone	Site assessed condition score	Extent (ha)	Habitat hectares
1-1-AC	0.240	0.046	0.011
2-2-AD	0.210	0.019	0.004
3-3-E	0.240	0.007	0.002
4-4-E	0.240	0.022	0.005
5-5-P	0.190	0.011	0.002
6-6-P	0.190	0.011	0.002
7-7-M	0.240	0.209	0.050
8-8-P	0.190	0.032	0.006
9-9-M	0.240	0.125	0.030
10-10-P	0.190	0.023	0.004
11-11-P	0.190	0.040	0.008
12-12-M	0.240	0.105	0.025
13-13-P	0.190	0.185	0.035
14-14-O	0.190	0.050	0.009
15-15-O	0.190	0.118	0.022
16-16-P	0.190	0.012	0.002
17-17-P	0.190	0.170	0.032
18-18-O	0.190	0.102	0.019
19-19-O	0.190	0.150	0.028
20-20-E	0.240	0.046	0.011
21-21-U	0.240	0.000	0.000
22-22-P	0.190	0.056	0.011
23-23-P	0.190	0.013	0.002
24-24-P	0.190	0.028	0.005
25-25-P	0.190	0.017	0.003
26-26-P	0.190	0.052	0.010
27-27-E	0.240	0.023	0.005
28-28-E	0.240	0.014	0.003
29-29-P	0.190	0.020	0.004

Habitat zone	Site assessed condition score	Extent (ha)	Habitat hectares
30-30-P	0.190	0.014	0.003
31-31-H	0.190	0.023	0.004
32-32-P	0.190	0.007	0.001
33-33-F	0.280	0.027	0.008
34-34-P	0.190	0.009	0.002
35-35-P	0.190	0.003	0.001
36-36-R	0.160	0.022	0.003
37-37-R	0.160	0.016	0.003
38-38-W	0.240	0.012	0.003
39-39-Q	0.210	0.017	0.004
40-40-U	0.240	0.001	0.000
41-41-E	0.240	0.017	0.004
42-42-TR	0.200	0.070	0.014
43-43-TR	0.200	0.070	0.014
44-44-TR	0.200	0.070	0.014
45-45-TR	0.200	0.070	0.014
46-46-TR	0.200	0.070	0.014
47-47-TR	0.200	0.070	0.014
48-48-TR	0.200	0.070	0.014
49-49-TR	0.200	0.070	0.014
50-50-TR	0.200	0.070	0.014
51-51-TR	0.200	0.070	0.014
52-52-TR	0.200	0.070	0.014
53-53-TR	0.200	0.070	0.014
54-54-TR	0.200	0.070	0.014
55-55-TR	0.200	0.070	0.014
56-56-TR	0.200	0.070	0.014
57-57-TR	0.200	0.070	0.014
58-58-TR	0.200	0.070	0.014
59-59-TR	0.200	0.070	0.014
60-60-TR	0.200	0.070	0.014
61-61-TR	0.200	0.070	0.014
62-62-TR	0.200	0.070	0.014

Habitat zone	Site assessed condition score	Extent (ha)	Habitat hectares
63-63-TR	0.200	0.070	0.014
64-64-TR	0.200	0.070	0.014
65-65-TR	0.200	0.070	0.014
66-66-TR	0.200	0.070	0.014
67-78-TR	0.460	0.412	0.189
68-79-TR	0.460	0.675	0.310
69-80-TR	0.460	0.190	0.088
70-81-TR	0.460	0.097	0.044
71-82-TR	0.460	0.508	0.233
72-83-TR	0.460	0.075	0.034
73-84-TR	0.460	0.114	0.052
74-85-TR	0.460	0.972	0.447
75-86-TR	0.460	0.121	0.056
76-87-TR	0.460	0.195	0.090
77-88-TR	0.390	0.000	0.000
78-89-TR	0.190	1.039	0.197
79-90-TR	0.190	0.056	0.011
80-91-TR	0.190	0.006	0.001
81-92-TR	0.320	0.391	0.125
82-93-TR	0.580	0.256	0.149
83-94-TR	0.580	0.405	0.235
TOTAL			**3.004**

Impacts on rare or threatened species habitat above specific offset threshold

The specific-general offset test was applied to your proposal. The test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the specific offset threshold. The threshold is set at 0.005 per cent of the total habitat for a species. When the proportional impact is above the specific offset threshold a specific offset for that species' habitat is required.

The specific-general offset test found your proposal has a proportional impact above the specific offset threshold for the following rare or threatened species' habitats

Species number	Species common name	Species scientific name	Species type	Area of mapped habitat (ha)	Proportional impact (%)
10019	Red-chested Button-quail	Turnix pyrrhothorax	Dispersed	4.354	0.008 %
503455	Rye Beetle-grass	Tripogon loliiformis	Dispersed	5.184	0.005 %
504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	Dispersed	4.041	0.010 %

Clearing site biodiversity equivalence score(s)

Where a habitat zone requires specific offset(s), the specific biodiversity equivalence score(s) for each species in that habitat zone is calculated by multiplying the habitat hectares of the habitat zone by the habitat importance score for each species impacted in the habitat zone.

Habitat zone	Habitat hectares	Habitat for rare or threatened species					Specific biodiversity equivalence score (SBES)
		Proportion of habitat zone with specific offset	Species number	Species common name	Species scientific name	Habitat importance score	
67-78-TR	0.189	59.949 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.691	0.079
67-78-TR	0.189	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.671	0.127
67-78-TR	0.189	13.213 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.730	0.018
68-79-TR	0.310	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.602	0.187
68-79-TR	0.310	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.601	0.187
68-79-TR	0.310	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.663	0.206
69-80-TR	0.088	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.609	0.053
69-80-TR	0.088	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.599	0.052
69-80-TR	0.088	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.658	0.058

Biodiversity impact and offset requirements report

Habitat zone	Habitat hectares	Habitat for rare or threatened species					Specific biodiversity equivalence score (SBES)
		Proportion of habitat zone with specific offset	Species number	Species common name	Species scientific name	Habitat importance score	
70-81-TR	0.044	48.091 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.620	0.013
70-81-TR	0.044	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.640	0.028
70-81-TR	0.044	48.091 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.710	0.015
71-82-TR	0.233	98.774 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.569	0.131
71-82-TR	0.233	98.774 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.583	0.135
71-82-TR	0.233	98.774 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.610	0.141
72-83-TR	0.034	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.566	0.019
72-83-TR	0.034	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.577	0.020
72-83-TR	0.034	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.626	0.022
73-84-TR	0.052	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.665	0.035
73-84-TR	0.052	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.695	0.036
74-85-TR	0.447	98.024 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.643	0.282
74-85-TR	0.447	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.657	0.294
74-85-TR	0.447	84.563 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.682	0.258
75-86-TR	0.056	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.588	0.033
75-86-TR	0.056	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.608	0.034
75-86-TR	0.056	74.396 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.637	0.026

Habitat zone	Habitat hectares	Habitat for rare or threatened species					Specific biodiversity equivalence score (SBES)
		Proportion of habitat zone with specific offset	Species number	Species common name	Species scientific name	Habitat importance score	
76-87-TR	0.090	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.628	0.057
76-87-TR	0.090	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.640	0.058
76-87-TR	0.090	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.674	0.061
77-88-TR	0.000	36.667 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.650	0.000
78-89-TR	0.197	65.746 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.660	0.086
78-89-TR	0.197	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.664	0.131
78-89-TR	0.197	58.692 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.745	0.086
79-90-TR	0.011	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.660	0.007
80-91-TR	0.001	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.610	0.001
80-91-TR	0.001	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.620	0.001
80-91-TR	0.001	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.690	0.001
81-92-TR	0.125	17.516 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.650	0.014
82-93-TR	0.149	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.598	0.089
82-93-TR	0.149	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.609	0.091
82-93-TR	0.149	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.652	0.097
83-94-TR	0.235	100.000 %	10019	Red-chested Button-quail	Turnix pyrrhothorax	0.597	0.140
83-94-TR	0.235	100.000 %	503455	Rye Beetle-grass	Tripogon loliiformis	0.608	0.143
83-94-TR	0.235	100.000 %	504823	Spiny Rice-flower	Pimelea spinescens subsp. spinescens	0.652	0.153

There are habitat zones in your proposal which are not habitat for the species above. A general offset is required for the(se) habitat zone(s).

The general biodiversity equivalence score for the habitat zone(s) is calculated by multiplying the habitat hectares by the strategic biodiversity score.

Habitat zone	Habitat hectares	Proportion of habitat zone with general offset	Strategic biodiversity score	General biodiversity equivalence score (GBES)
1-1-AC	0.011	100.000 %	0.989	0.011
2-2-AD	0.004	100.000 %	0.444	0.002
3-3-E	0.002	100.000 %	0.167	0.000
4-4-E	0.005	100.000 %	0.150	0.001
5-5-P	0.002	100.000 %	0.200	0.000
6-6-P	0.002	100.000 %	0.207	0.000
7-7-M	0.050	100.000 %	0.218	0.011
8-8-P	0.006	100.000 %	0.226	0.001
9-9-M	0.030	100.000 %	0.230	0.007
10-10-P	0.004	100.000 %	0.238	0.001
11-11-P	0.008	100.000 %	0.239	0.002
12-12-M	0.025	100.000 %	0.256	0.006
13-13-P	0.035	100.000 %	0.234	0.008
14-14-O	0.009	100.000 %	0.193	0.002
15-15-O	0.022	100.000 %	0.253	0.006
16-16-P	0.002	100.000 %	0.254	0.001
17-17-P	0.032	100.000 %	0.248	0.008
18-18-O	0.019	100.000 %	0.182	0.004
19-19-O	0.028	100.000 %	0.140	0.004
20-20-E	0.011	100.000 %	0.142	0.002
21-21-U	0.000	100.000 %	0.167	0.000
22-22-P	0.011	100.000 %	0.167	0.002
23-23-P	0.002	100.000 %	0.151	0.000
24-24-P	0.005	100.000 %	0.100	0.001
25-25-P	0.003	100.000 %	0.100	0.000
26-26-P	0.010	100.000 %	0.100	0.001
27-27-E	0.005	100.000 %	0.100	0.001
28-28-E	0.003	100.000 %	0.100	0.000
29-29-P	0.004	100.000 %	0.100	0.000
30-30-P	0.003	100.000 %	0.100	0.000

Habitat zone	Habitat hectares	Proportion of habitat zone with general offset	Strategic biodiversity score	General biodiversity equivalence score (GBES)
31-31-H	0.004	100.000 %	0.155	0.001
32-32-P	0.001	100.000 %	0.155	0.000
33-33-F	0.008	100.000 %	0.159	0.001
34-34-P	0.002	100.000 %	0.139	0.000
35-35-P	0.001	100.000 %	0.100	0.000
36-36-R	0.003	100.000 %	0.100	0.000
37-37-R	0.003	100.000 %	0.100	0.000
38-38-W	0.003	100.000 %	0.104	0.000
39-39-Q	0.004	100.000 %	0.100	0.000
40-40-U	0.000	100.000 %	0.239	0.000
41-41-E	0.004	100.000 %	0.186	0.001
42-42-TR	0.014	100.000 %	0.158	0.002
43-43-TR	0.014	100.000 %	0.162	0.002
44-44-TR	0.014	100.000 %	0.100	0.001
45-45-TR	0.014	100.000 %	0.100	0.001
46-46-TR	0.014	100.000 %	0.985	0.014
47-47-TR	0.014	100.000 %	0.985	0.014
48-48-TR	0.014	100.000 %	0.984	0.014
49-49-TR	0.014	100.000 %	0.984	0.014
50-50-TR	0.014	100.000 %	0.842	0.012
51-51-TR	0.014	100.000 %	0.851	0.012
52-52-TR	0.014	100.000 %	0.444	0.006
53-53-TR	0.014	100.000 %	0.100	0.001
54-54-TR	0.014	100.000 %	0.100	0.001
55-55-TR	0.014	100.000 %	0.100	0.001
56-56-TR	0.014	100.000 %	0.100	0.001
57-57-TR	0.014	100.000 %	0.103	0.001
58-58-TR	0.014	100.000 %	0.100	0.001
59-59-TR	0.014	100.000 %	0.100	0.001
60-60-TR	0.014	100.000 %	0.100	0.001
61-61-TR	0.014	100.000 %	0.106	0.001
62-62-TR	0.014	100.000 %	0.117	0.002
63-63-TR	0.014	100.000 %	0.115	0.002

Habitat zone	Habitat hectares	Proportion of habitat zone with general offset	Strategic biodiversity score	General biodiversity equivalence score (GBES)
64-64-TR	0.014	100.000 %	0.109	0.002
65-65-TR	0.014	100.000 %	0.108	0.002
66-66-TR	0.014	100.000 %	0.104	0.001
71-82-TR	0.233	1.226 %	0.702	0.002
77-88-TR	0.000	63.333 %	0.992	0.000
81-92-TR	0.125	82.484 %	0.993	0.103

Mapped rare or threatened species' habitats on site

This table sets out the list of rare or threatened species' habitats mapped at the site beyond those species for which the impact is above the specific offset threshold. These species habitats do not require a specific offset according to the specific-general offset test.

Species number	Species common name	Species scientific name
10045	Lewin's Rail	Lewinia pectoralis pectoralis
10050	Baillon's Crake	Porzana pusilla palustris
10154	Wood Sandpiper	Tringa glareola
10170	Australian Painted Snipe	Rostratula benghalensis australis
10174	Bush Stone-curlew	Burhinus grallarius
10177	Brolga	Grus rubicunda
10186	Intermediate Egret	Ardea intermedia
10187	Eastern Great Egret	Ardea modesta
10195	Australian Little Bittern	Ixobrychus minutus dubius
10197	Australasian Bittern	Botaurus poiciloptilus
10212	Australasian Shoveler	Anas rhynchotis
10214	Freckled Duck	Stictonetta naevosa
10215	Hardhead	Aythya australis
10216	Blue-billed Duck	Oxyura australis
10217	Musk Duck	Biziura lobata
10220	Grey Goshawk	Accipiter novaehollandiae novaehollandiae
10230	Square-tailed Kite	Lophoictinia isura
10238	Black Falcon	Falco subniger
10246	Barking Owl	Ninox connivens connivens
10248	Powerful Owl	Ninox strenua
10498	Chestnut-rumped Heathwren	Calamanthus pyrrhopygius
10598	Painted Honeyeater	Grantiella picta
11017	Brush-tailed Phascogale	Phascogale tapoatafa
12159	Striped Legless Lizard	Delma impar
12177	Bearded Dragon	Pogona barbata
12283	Lace Monitor	Varanus varius
13117	Brown Toadlet	Pseudophryne bibronii
13207	Growling Grass Frog	Litoria raniformis
15021	Golden Sun Moth	Synemon plana
500044	Sticky Wattle	Acacia howittii

Species number	Species common name	Species scientific name
500217	Buloke Mistletoe	Amyema linophylla subsp. orientale
500798	Small Milkwort	Comesperma polygaloides
501326	Yarra Gum	Eucalyptus yarraensis
501456	Clover Glycine	Glycine latrobeana
501530	Golden Grevillea	Grevillea chrysophaea
502709	Maroon Leek-orchid	Prasophyllum frenchii
502746	Snowy Mint-bush	Prostanthera nivea var. nivea
502773	Small Scurf-pea	Cullen parvum
502776	Tough Scurf-pea	Cullen tenax
502929	Fragrant Saltbush	Rhagodia parabolica
503624	Plump Swamp Wallaby-grass	Amphibromus pithogastrus
503984	Heath Spear-grass	Austrostipa exilis
504066	Rosemary Grevillea	Grevillea rosmarinifolia subsp. rosmarinifolia
504206	Purple Blown-grass	Lachnagrostis punicea subsp. punicea
504655	Pale Swamp Everlasting	Coronidium scorpioides 'aff. rutidolepis (Lowland Swamps)' variant
504659	Swamp Fireweed	Senecio psilocarpus
505084	Matted Flax-lily	Dianella amoena
505337	Austral Crane's-bill	Geranium solanderi var. solanderi s.s.

Appendix 2 – Offset requirements detail

If a permit is granted to remove the marked native vegetation the permit condition will include the requirement to obtain a native vegetation offset.

To calculate the required offset amount required the biodiversity equivalence scores are aggregated to the proposal level and multiplied by the relevant risk multiplier.

Offsets also have required attributes:

- General offsets must be located in the same Catchment Management Authority (CMA) boundary or Local Municipal District (local council) as the clearing and must have a minimum strategic biodiversity score of 80 per cent of the clearing.[2]
- Specific offsets must be located in the same species habitat as that being removed, as determined by the habitat importance map for that species.

The offset requirements for your proposal are as follows:

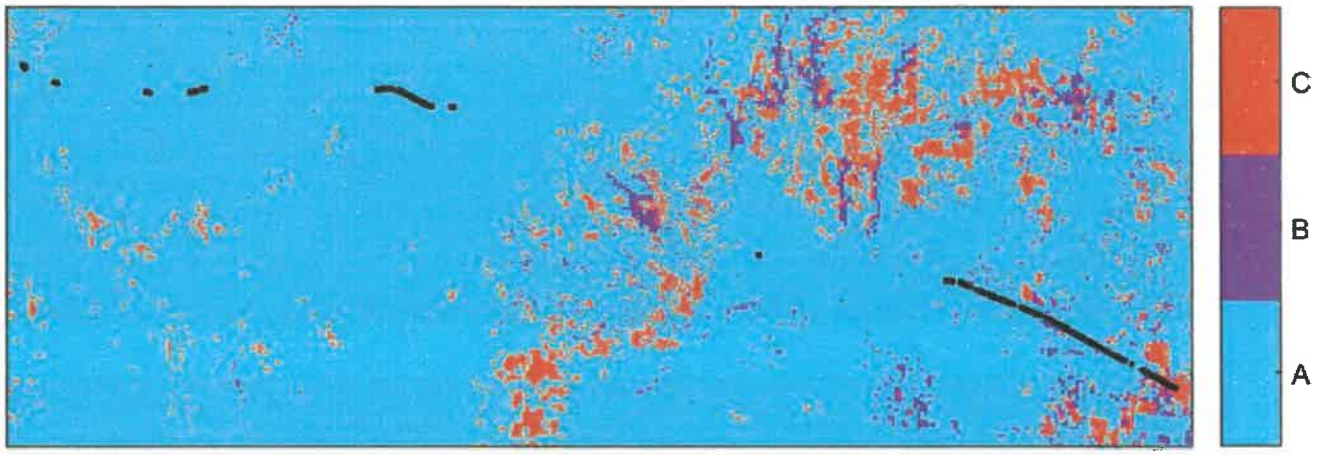
Offset type	Clearing site biodiversity equivalence score	Risk multiplier	Offset requirements	
			Offset amount (biodiversity equivalence units)	Offset attributes
Specific	1.169 SBES	2	2.339 specific units	Offset must provide habitat for 10019, Red-chested Button-quail, Turnix pyrrhothorax
Specific	1.355 SBES	2	2.711 specific units	Offset must provide habitat for 503455, Rye Beetle-grass, Tripogon loliiformis
Specific	1.177 SBES	2	2.355 specific units	Offset must provide habitat for 504823, Spiny Rice-flower, Pimelea spinescens subsp. spinescens
General	0.304 GBES	1.5	0.456 general units	Offset must be within Corangamite, Port Phillip And Westernport CMAs or Melton City, Moorabool Shire Councils Offset must have a minimum strategic biodiversity score of 0.263

[2] Strategic biodiversity score is a weighted average across habitat zones where a general offset is required

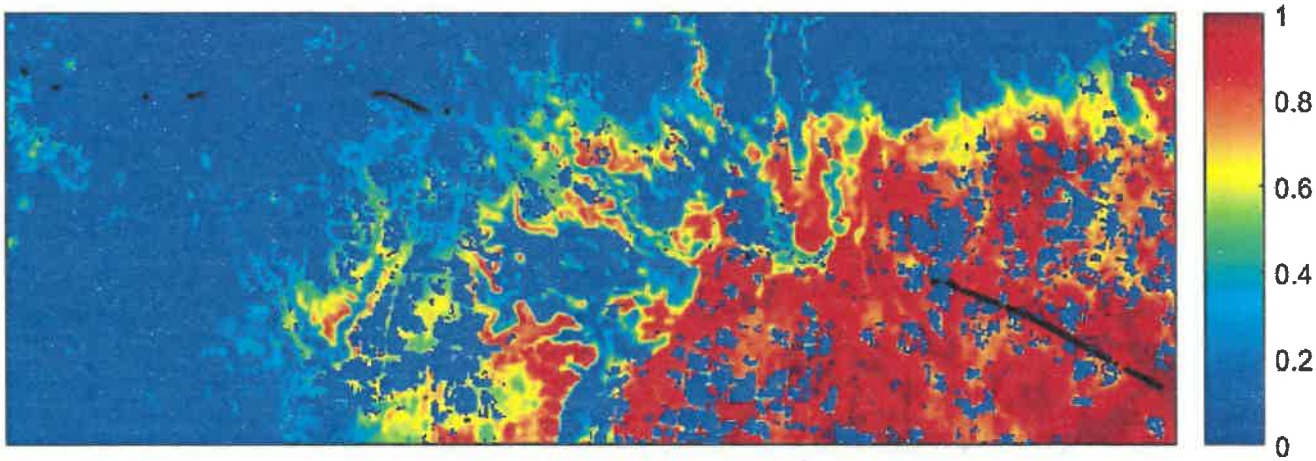
Appendix 3 – Images of marked native vegetation

Note: The images below include proposed and past removal of native vegetation.

1. Native vegetation location risk map



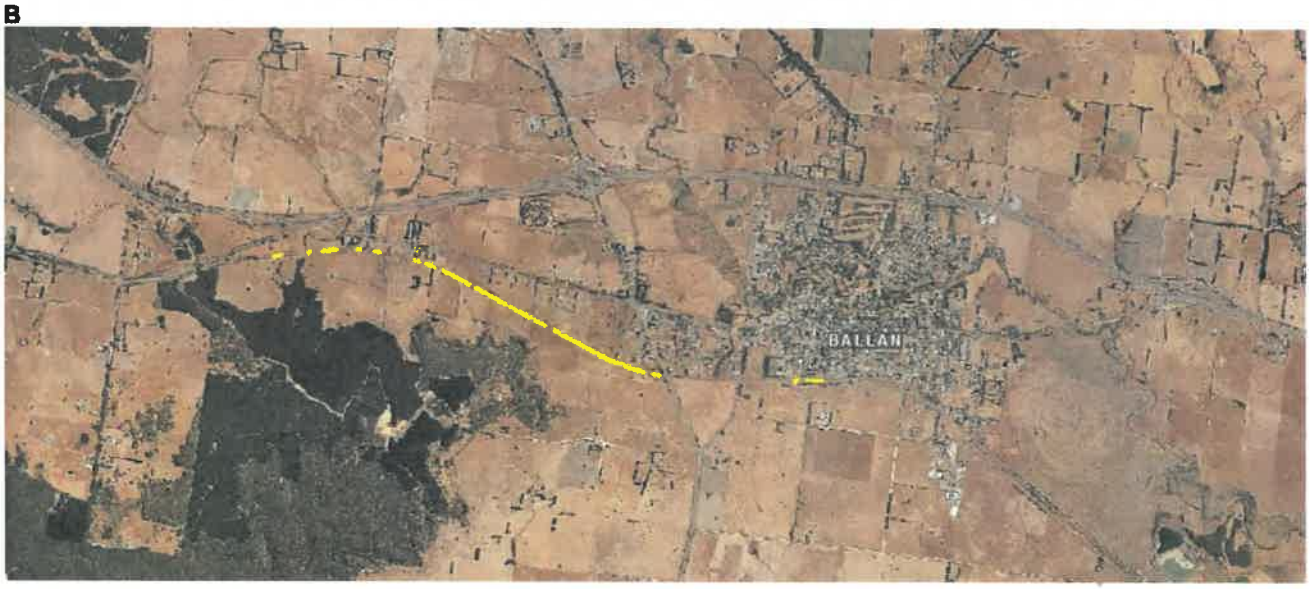
2. Strategic biodiversity score map



3. Aerial photograph showing marked native vegetation

A

B



C

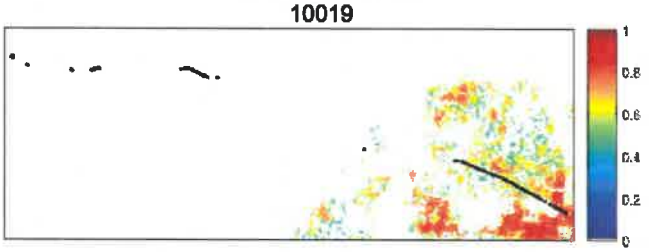
D

Yellow boundaries denote areas of proposed native vegetation removal that are either not covered by the Toolern NVPP or designated "to be retained" in the Toolern NVPP.

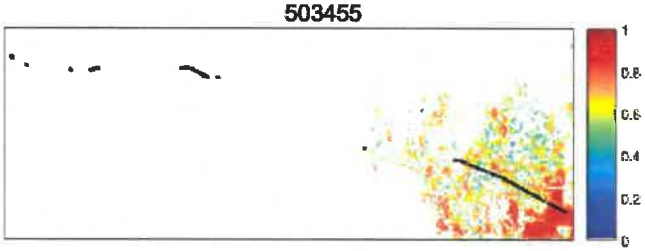
Red boundaries denote areas of proposed clearing designated "to be removed" in the MSA Biodiversity Conservation Strategy – obligations to be determined by MSA Habitat Compensation Team.

4. Habitat importance maps

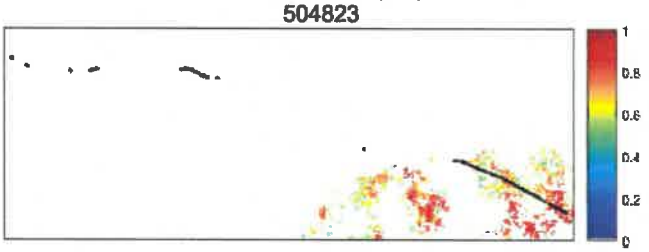
Red-chested Button-quail
Turnix pyrrhothorax
10019



Rye Beetle-grass
Tripogon loliiformis
503455



Spiny Rice-flower
Pimelea spinescens subsp. spinescens
504823



Glossary

Condition score

This is the site-assessed condition score for the native vegetation. Each habitat zone in the clearing proposal is assigned a condition score according to the habitat hectare assessment method. This information has been provided by or on behalf of the applicant in the GIS file.

Dispersed habitat

A dispersed species habitat is a habitat for a rare or threatened species whose habitat is spread over a relatively broad geographic area greater than 2,000 hectares.

General biodiversity equivalence score

The general biodiversity equivalence score quantifies the relative overall contribution that the native vegetation to be removed makes to Victoria's biodiversity. The general biodiversity equivalence score is calculated as follows:

$$\textit{General biodiversity equivalence score} = \textit{habitat hectares} \times \textit{strategic biodiversity score}$$

General offset amount

This is calculated by multiplying the general biodiversity equivalence score of the native vegetation to be removed by the risk factor for general offsets. This number is expressed in general biodiversity equivalence units and is the amount of offset that is required to be provided should the application be approved. This offset requirement will be a condition to the permit for the removal of native vegetation.

$$\textit{Risk adjusted general biodiversity equivalence score} = \textit{general biodiversity equivalence score clearing} \times 1.5$$

General offset attributes

General offset must be located in the same Catchment Management Authority boundary or Municipal District (local council) as the clearing site. They must also have a strategic biodiversity score that is at least 80 per cent of the score of the clearing site.

Habitat hectares

Habitat hectares is a site-based measure that combines extent and condition of native vegetation. The habitat hectares of native vegetation is equal to the current condition of the vegetation (condition score) multiplied by the extent of native vegetation. Habitat hectares can be calculated for a remnant patch or for scattered trees or a combination of these two vegetation types. This value is calculated for each habitat zone using the following formula:

$$\textit{Habitat hectares} = \textit{total extent (hectares)} \times \textit{condition score}$$

Habitat importance score

The habitat importance score is a measure of the importance of the habitat located on a site for a particular rare or threatened species. The habitat importance score for a species is a weighted average value calculated from the habitat importance map for that species. The habitat importance score is calculated for each habitat zone where the habitat importace map indicates that species habitat occurs.

Habitat zone

Habitat zone is a discrete contiguous area of native vegetation that:

- is of a single Ecological Vegetation Class
- has the same measured condition.

Highly localised habitat

A highly localised habitat is habitat for a rare or threatened species that is spread across a very restricted area (less than 2,000 hectares). This can also be applied to a similarly limited sub-habitat that is disproportionately important for a wide-ranging rare or threatened species. Highly localised habitats have the highest habitat importance score (1) for all locations where they are present.

Minimum strategic biodiversity score

The minimum strategic biodiversity score is an attribute for a general offset.

The strategic biodiversity score of the offset site must be at least 80 per cent of the strategic biodiversity score of the native vegetation to be removed. This is to ensure offsets are located in areas with a strategic value that is comparable to, or better than, the native vegetation to be removed. Where a specific and general offset is required, the minimum strategic biodiversity score relates only to the habitat zones that require the general offset.

Offset risk factor

There is a risk that the gain from undertaking the offset will not adequately compensate for the loss from the removal of native vegetation. If this were to occur, despite obtaining an offset, the overall impact from removing native vegetation would result in a loss in the contribution that native vegetation makes to Victoria's biodiversity.

To address the risk of offsets failing, an offset risk factor is applied to the calculated loss to biodiversity value from removing native vegetation.

$$\textit{Risk factor for general offsets} = 1.5$$

$$\textit{Risk factor for specific offset} = 2$$

Offset type

The specific-general offset test determines the offset type required.

When the specific-general offset test determines that the native vegetation removal will have an impact on one or more rare or threatened species habitat above the set threshold of 0.005 per cent, a specific offset is required. This test is done at the permit application level.

A general offset is required when a proposal to remove native vegetation is not deemed, by application of the specific-general offset test, to have an impact on any habitat for any rare or threatened species above the set threshold of 0.005 per cent. All habitat zones that do not require a specific offset will require a general offset.

Proportional impact on species

This is the outcome of the specific-general offset test. The specific-general offset test is calculated across the entire proposal for each species on the native vegetation permitted clearing species list. If the proportional impact on a species is above the set threshold of 0.005 per cent then a specific offset is required for that species.

Specific offset amount

The specific offset amount is calculated by multiplying the specific biodiversity equivalence score of the native vegetation to be removed by the risk factor for specific offsets. This number is expressed in specific biodiversity equivalence units and is the amount of offset that is required to be provided should the application be approved. This offset requirement will be a condition to the permit for the removal of native vegetation.

$$\textit{Risk adjusted specific biodiversity equivalence score} = \textit{specific biodiversity equivalence score clearing} \times 2$$

Specific offset attributes

Specific offsets must be located in the modelled habitat for the species that has triggered the specific offset requirement.

Specific biodiversity equivalence score

The specific biodiversity equivalence score quantifies the relative overall contribution that the native vegetation to be removed makes to the habitat of the relevant rare or threatened species. It is calculated for each habitat zone where one or more species habitats require a specific offset as a result of the specific-general offset test as follows:

$$\textit{Specific biodiversity equivalence score} = \textit{habitat hectares} \times \textit{habitat importance score}$$

Strategic biodiversity score

This is the weighted average strategic biodiversity score of the marked native vegetation. The strategic biodiversity score has been calculated from the *Strategic biodiversity map* for each habitat zone.

The strategic biodiversity score of native vegetation is a measure of the native vegetation's importance for Victoria's biodiversity, relative to other locations across the landscape. The *Strategic biodiversity map* is a modelled layer that prioritises locations on the basis of rarity and level of depletion of the types of vegetation, species habitats, and condition and connectivity of native vegetation.

Total extent (hectares) for calculating habitat hectares

This is the total area of the marked native vegetation in hectares.

The total extent of native vegetation is an input to calculating the habitat hectares of a site and in calculating the general biodiversity equivalence score. Where the marked native vegetation includes scattered trees, each tree is converted to hectares using a standard area calculation of 0.071 hectares per tree. This information has been provided by or on behalf of the applicant in the GIS file.

Vicinity

The vicinity is an attribute for a general offset.

The offset site must be located within the same Catchment Management Authority boundary or Local Municipal District as the native vegetation to be removed.

Appendix 4.2 – Habitat Compensation Obligations Statement, DELWP

Habitat Compensation Obligations Statement

Statement of obligations under the Melbourne Strategic Assessment

Date of issue: 13 February 2017

Project Details	
Project Name	MS01-HC-00082 Ballarat Railway line upgrade (subject to the BCS area)
Project Location	Ballarat Railway line between Western Freeway and Toolern precinct
Data Source	Data submitted to DELWP on 9 February 2017 by Dr Monique Elsley, Ecology and Heritage Partners
Local Government Area	Melton City Council
Precinct	Rockbank, Mt Atkinson, and Ravenhall (Quarry Site)

Proponent Details	
Organisation	Ecology and Heritage Partners
Contact	Dr Monique Elsley (GIS Coordinator)
Email	melsley@ehpartners.com.au
Telephone	(03) 9377 0100
Address	292 Mt Alexander Road, Ascot Vale, VIC 3032

Habitat Compensation obligations

Summary of habitat compensation obligations and status

Habitat Type	Obligation	Status
Native Vegetation	11.326 ha	Obligations not met
Spiny Rice-flower	11.326 ha	Obligations not met
Golden Sun Moth	9.532 ha	Obligations not met
Growling Grass Frog	0.370 ha	Obligations not met

Salvage and translocation obligations

Habitat Type	Obligation
Spiny Rice-flower	DELWP records show there is Spiny Rice-flower present on the land, and salvage of the species is needed to support the MSA restoration program. If permission is granted, DELWP will undertake the required salvage activities on your behalf. If access to the land is not granted, salvage must be conducted in line with DELWP's standards at the landowner's expense. Please contact Msa.conservation@delwp.vic.gov.au for further information.
Striped Legless Lizard	DELWP has recently conducted an evaluation which outlines salvage and translocation of the Striped Legless Lizard (SLL) is not a feasible activity under the program. Salvage of SLL has been suspended pending the finalisation of the evaluation.

Appendix 4.3 – Biodiversity Offset Statement, DELWP

Biodiversity Offset Statement

Statement of biodiversity offset requirements under the Melbourne Strategic Assessment

Date of issue: 13 February 2017

Project Details	
Project Name	MS01-HC-00082 Ballarat Railway line upgrade (subject to the Toolern Precinct Structure Plan including Native Vegetation Precinct Plan)
Project Location	Ballarat Railway line upgrade within the Toolern precinct
Data Source	Data submitted to DELWP on 9 February 2017 by Dr Monique Elsley, Ecology and Heritage Partners
Local Government Area	Melton City Council
Precinct(s)	Toolern

Proponent Details	
Organisation	Ecology and Heritage Partners
Contact	Dr Monique Elsley (GIS Coordinator)
Email	melsley@ehpartners.com.au
Telephone	(03) 9377 0100
Address	292 Mt Alexander Road, Ascot Vale, VIC 3032

Biodiversity Offset Requirements

Summary of biodiversity offset requirements and status

Habitat Type	Obligation	Status
Scattered tree	Tree numbers 57, 58, 59, 61, 195, 106, 108 = 0 trees	n/a
Habitat zone	PW2.01 = 0.01Hha PW1.06 = 0.00Hha PW1.07 = 0.00Hha	Offsets not met

Note, any Habitat Zones and Scattered trees to be cleared that are identified as either *to be retained* or *to be protected* in the relevant Precinct Structure Plan and Native Vegetation Precinct Plan are subject to Victoria's native vegetation permitted clearing regulations.