

Native Vegetation Removal Report: Detailed Assessment Pathway

Native Vegetation Removal for

**Barnawartha Solar Farm at
1377 Plunkett Road,
Barnawartha, VIC 3688**

Version 3

Date: 18/7/22



94 Kirby Flat Road,
Yackandandah, VIC 3749
Phone: 0402 344 574
ABN: 797 823 838 29
damian.wall@red-gum.com.au



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EXECUTIVE SUMMARY

Southern Sustainable Electric (SSE Australia) (“the Proponent”) is proposing the development of a Solar Farm at 1377 Plunkett Road, Barnawartha, VIC 3688. The development is located within North East CMA and Indigo Shire Council Local Government Area (LGA).

Red-Gum Environmental Consulting Pty Ltd (‘Red-Gum’) was commissioned by the Proponent to develop this report, which addresses the application requirements for a planning permit to remove native vegetation in terms of the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines).

The losses were calculated to be **3.969 ha of native grassland across one Location Category**. A single line of revegetation will also be lost. I contend that while the lost trees are native, it is revegetation and approximately 15-25 years old and the majority are <40 cm Diameter at Breast Height (DBH). None of these trees exhibit any hollow bearing branches or trunk knots that may be used by woodland birds as nesting sites.

In accordance with the Exemptions from requiring a planning permit to remove, destroy or lop native vegetation (DELWP 2017), Exemption 2.22 states “*Native vegetation that is to be removed, destroyed or lopped that was either planted, or grown as a result of direct seeding.*” The guidance notes state that this exemption “*does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.*” (DELWP, 2017).

Whilst the origin of any *funds* used to establish the trees, or any formal agreement entered into by the landholder at the time couldn’t be established, I can confirm that the trees (as a functioning patch of native vegetation) are unlikely to improve rare and threatened species habitat, or improve the condition or extent of native vegetation in the region or immediate area. The lack of structure and other available habitat in the zone will ensure that these trees alone are unlikely to improve the functioning of an ecosystem, therefore they may not attract the need for a permit to remove under section 52.17 of the local planning scheme.

The loss site runs alongside Plunkett Road, within the Northern Inland Slopes (NIS) bioregion. After site inspection, it was determined that the most representative of the site is Rainshadow Grassy Woodland (EVC0175_62) which is listed as *Endangered* within the NIS bioregion.

The native vegetation is in an area mapped as a *endangered* Ecological Vegetation Class (EVC). Removal of less than 0.5 hectares of native vegetation in this Location Category (Location 2) will not have a significant impact on any habitat for a rare or threatened species, however because >0.5 hectares is currently proposed to be removed (3.969 ha ha) a *Detailed Assessment Pathway* is required.

The loss site is dominated by a thick swathe of Red leg grass (*Bothriochloa macra*) and fringes a connected Box-Gum Woodland to the west and south (which is unaffected by the development). The specific-general offset test was applied to the proposal. No (zero) specific offsets are required, as the species offset threshold was not exceeded for any of the listed rare or threatened species (**Appendix A**).

The NVR Report has calculated that a General Offset amount (in general habitat units) of **0.648** is required. The proponent also acknowledges that the strategic biodiversity score of the offset site must be a minimum of **0.362** and 0 large trees. The proponent will seek a third party offset via a registered broker.

This document provides supplementary information to the Native Vegetation Removal (NVR) Report for the site generated on 25/3/2022 (**Appendix A**) under the Guidelines and represents the base information that must be provided when applying for a permit to remove native vegetation, specifically, Tables 4 and 5 of the guidelines (**Appendix B & C**).

1 LOCATION

Southern Sustainable Electric (SSE Australia) (“the Proponent”) is proposing the development of a Solar Farm at 1377 Plunkett Road, Barnawartha, VIC 3688. The development is located within North East CMA and Indigo Shire Council Local Government Area (LGA).



Figure 1: Location of the site. Areas lost in yellow. Source: NVR Report, 25/03/22

2 DESCRIPTION OF THE NATIVE VEGETATION

The loss site runs alongside Plunkett Road, within the Northern Inland Slopes (NIS) bioregion. After site inspection, it was determined that the most representative of the site is Rainshadow Grassy Woodland (EVC0175_62) which is listed as *Endangered* within the NIS bioregion.

The losses were calculated to be **3.969 ha** of native grassland across one Location Category (**Map 2**). A single line of revegetation will also be lost. I contend that while the lost trees are native, it is revegetation and approximately 15-25 years old and the majority are <40 cm Diameter at Breast Height (DBH). None of these trees exhibit any hollow bearing branches or trunk knots that may be used by woodland birds as nesting sites.

In accordance with the Exemptions from requiring a planning permit to remove, destroy or lop native vegetation (DELWP 2017), Exemption 2.22 states “*Native vegetation that is to be removed, destroyed or lopped that was either planted, or grown as a result of direct seeding.*” The guidance notes state that this exemption “*does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.*” (DELWP, 2017).

Whilst the origin of any *funds* used to establish the trees, or any formal agreement entered into by the landholder at the time couldn’t be established, I can confirm that the trees (as a functioning patch of native vegetation) are unlikely to improve rare and threatened species habitat or improve the condition or extent of native vegetation in the region or immediate area.

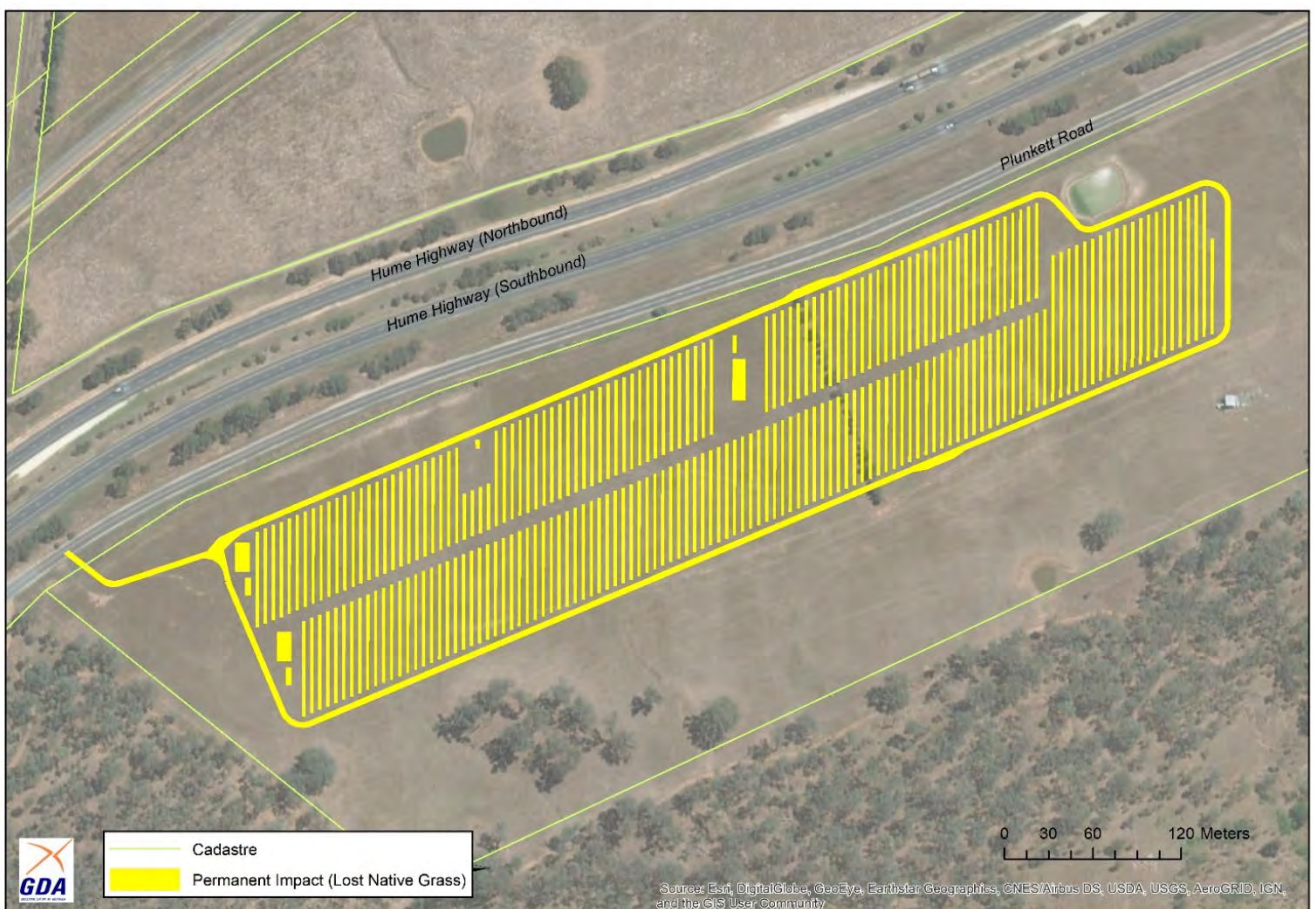
The lack of structure and other available habitat in the zone will ensure that these trees alone are unlikely to improve the functioning of an ecosystem, therefore they may not attract the need for a permit to remove under section 52.17 of the local planning scheme.

The site assessment included a Habitat Hectare assessment of the single patch of native grass in a single habitat zone (**Appendix E**). The assessment was undertaken by Damian Wall (Red-Gum Environmental Consulting) who is an accredited native vegetation assessor listed on the competency list managed by DELWP.

As the removal is in an area mapped as an *Endangered* Ecological Vegetation Class (Rainshadow Grassy Woodland (EVC0175_62) and removal of greater than 0.5 hectares of native vegetation may have a significant impact on habitat for a rare or threatened species, native vegetation in this Location Category requires a report prepared under the *Detailed Assessment Pathway*.

Table 1: Lost Vegetation – EnSym Report

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
1-A	Patch	nis_0175_62	Endangered	0	no	0.150	3.969	3.969	0.452		0.648	General



Map 1: Loss area t 1377 Plunkett Road, Barnawartha, VIC. Source: Nearthmap, 2021

3 MAPS, PLANS & PHOTOGRAPHS

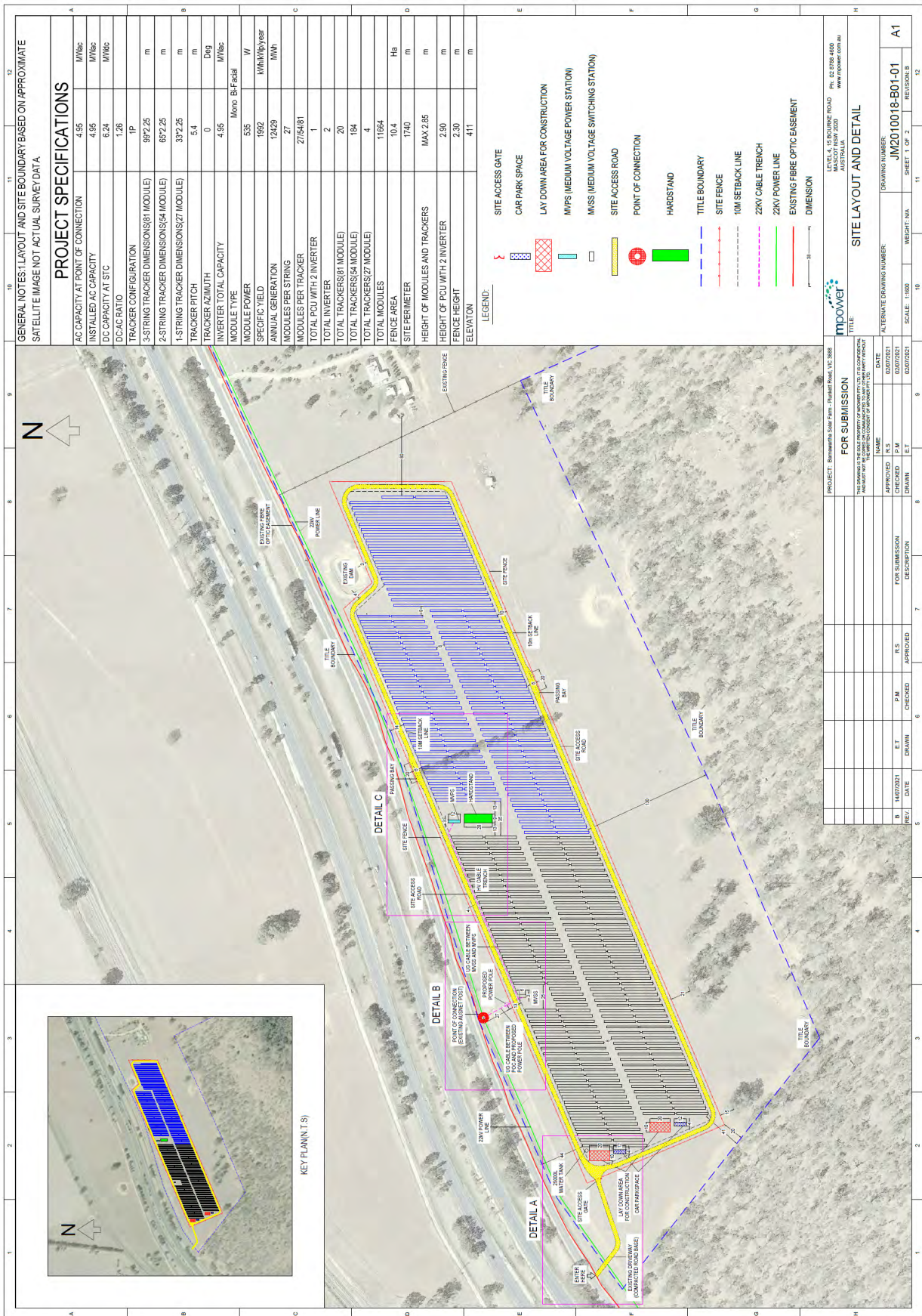


Figure 2: Development plan. Source: Chris Smith & Associates, 2021

3.1 Lost Vegetation

The losses were calculated to be 3.969 ha, comprising a single patch of native vegetation, across one (1) Location Category (Location 2). The following photo captions refer to each patch as noted in the Native Vegetation Removal Report (RGE-2021-010).



Photo 1: Zone 1-A – Mid site, south orientation, planted vegetation over Red Leg Grass (*Bothriochloa macra*) dominated ground cover. Photo: D.Wall



Photo 2: Zone 1-A – Mid site, west orientation, Red Leg Grass (*Bothriochloa macra*) ground cover. Photo: D.Wall



Photo 3: Zone 1-A – Clear delineation between exotic grass on the roadside and native grass in the site, east orientation. Photo: D.Wall



Photo 4: Zone 1-A – Mid site, east orientation, Red Leg Grass (*Bothriochloa macra*) ground cover. Photo: D.Wall

4 ASSESSMENT PATHWAY OF THE APPLICATION

The losses were calculated to be 3.969 ha, comprising of a single patch of native vegetation (grasses), across one (1) Location Category (Location 2). The native vegetation is in an area mapped as an *Endangered Ecological Vegetation Class*. Removal of less than 0.5 hectares of native vegetation in this Location Category (Location 2) will not have a significant impact on any habitat for a rare or threatened species, however because more than 0.5 hectares is currently proposed to be removed, a *Detailed Assessment Pathway* is required.

Assessment pathway	Detailed Assessment Pathway
Extent including past and proposed	3.969 ha
Extent of past removal	0.000 ha
Extent of proposed removal	3.969 ha
No. Large trees proposed to be removed	0
Location category of proposed removal	Location 2 The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

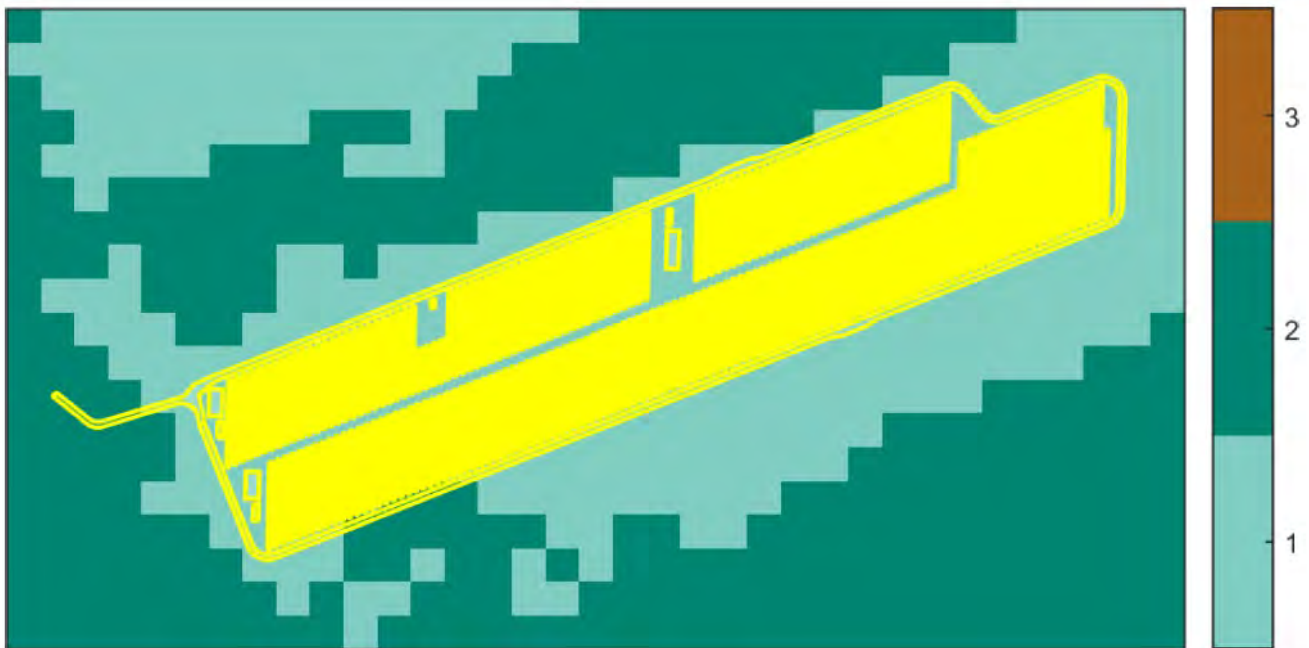


Figure 3: Native Vegetation Location Category map from NVR report 25/3/2022

5 CLEARING FOR DEFENDABLE SPACE

The clearing is not required to create defendable space.

6 PROPERTY VEGETATION PLAN

A Property Vegetation Plan (PVP) for the loss site is not required and has not been developed.

7 PREVIOUS CLEARING RELEVANT TO THE SITE

No previous Planning Permits have been granted for clearing at the same address.

8 AVOID & MINIMISE STATEMENT

8.1 Avoiding Impacts on Native Vegetation

After project inception Chris Smith & Associates engaged Red-Gum Environmental Consulting Pty Ltd to conduct a vegetation survey of the site which involved the collection of GPS points, species and DBH of any and all large trees within and adjacent to the site. The original survey was conducted in August 2021. No threatened flora or fauna was encountered at the time of inspection. The total assessed lost was deemed to be a 10.5 Ha patch of native vegetation.

Following review of the construction method (and consultation with DELWP) the construction footprint and associated losses were reduced from the anticipated 10.5 ha to 3.969 ha. The design of the array layout has assumed and incorporated the following to reduce the total impact/loss area:

- The solar farm will be installed with 'bifacial PV modules' mounted on a single axis tracker system. Single-axis trackers are used to increase the performance (output) of the system by allowing the PV modules to rotate on a single axis following the sun's path throughout the day reducing the amount of shade impacting the areas between the panels (**Figure 4**).
- The panels are 'bi-facial' which means they can capture light on the rear face of the module, reducing the need for more panels on site and allowing for a greater level of 'diffused & reflected light' to reach the surface under the panels (**Figure 5**). This level of reflected and diffused light allows vegetation below the PV modules to continue to grow even when the tracker is in a position that would shade the ground below from direct irradiance (**Figure 6**).
- All solar array lines are 2.25m wide (this is the 'shade loss' area by varying lengths across the site) with the actual spacing between the tracker rows (pitch) is 5.4m. This results in a minimum clear space between two arrays of approximately 3.3 metres (**Figure 7**) when the trackers are in the horizontal plane (0°); this is the trackers' position during the middle of the day when the sun is at its maximum elevation angle. At this time the ground between the tracker rows will receive direct irradiance, with zero shading.
- The 3.3m gap between array lines will also allow for construction vehicles (this area is not considered 'lost' if minimisation measures in **Section 8.2** are adhered to);

- 4m road widths for internal access (considered a 'loss' as these areas will be cleared, grubbed and dressed with imported road materials).
- The loss area accounts for the full suite of ground disturbance attributable to storage shed/s, site offices, passing bays, internal access tracks, cabling, fencing and assembly area/s as shown in **Map 1**. There are no anticipated losses along proposed fences or for fire breaks as the entire property will be under a set-stocking grazing regime (not dis-similar to how the site is already being managed).

In summary, there will be some inter-row shading in the early morning and late afternoon (the ground between the tracker rows will have shading from direct irradiance). However, as noted above, there will still be diffused and reflected irradiance. The 'agrivoltaic' industry is expanding worldwide based on the principles of integrating agriculture (grazing) and solar PV projects which, like this project, are essentially designed to take advantage of continued vegetation (grass) cover beneath the panels.

From approximately 8 am until 1 pm (exact times depend on the time of the year), the shaded area will continually move and decrease in size as the trackers move from an East facing angle of 60° to a horizontal position of 0°. From approximately 1 pm until 6 pm, the trackers will move from the horizontal position of 0° to a West facing angle of 60°; during this time, the shaded area between tracker rows will move and increase in size.

This rotation of the tracker axis and associated travel of the PV modules allows for direct irradiance to reach all areas of the ground below the PV system during the day, hence allowing the native grasses to persist on site (not unlike a part shade environment in a Grassy Woodland).

*For this reason, total and complete loss of native vegetation within the site bounds is not likely, rather, the anticipated losses have been minimised to that which will be damaged during construction and the 2.25m wide panel shade zone as shown in **Map 1**.*

The reduction in loss area is dependant on adherence to the Minimisation conditions, which will include very clear demonstration and requirements that the construction process can and will occur/be done in a manner that will not destroy or detrimentally impact the areas in between the arrays and that these areas are managed in a way that protects their current quality during and post construction.

The mitigation measures will require formalisation in the project Construction Environment Management Plan (CEMP) or equivalent, post approval by the determining authority. This will be critical to demonstrate that the proposal can in fact be implemented without exceeding the anticipated losses and creating impacts beyond these narrower linear impact areas.

The proponent also notes that consultation with DELWP identified that *'The southwestern most corner of the current proposed development is in an area identified as having high Strategic Biodiversity Value (SBV) (i.e. >0.8). This area may be avoided, whilst panel arrays could be located to the southeast...'*. Version 2 of the design has considered the movement of the array outside this area, however the landowner is unwilling to make additional land to the east is available.

The solar farm has been designed within the site, including positioning of arrays and other infrastructure based on many factors, not only avoiding native vegetation. Physical limitations (like the dam in the eastern corner) also need to be avoided and shifting eastward would also move the array too far from the inverter, MVP and grid connection point. Additional length of cabling adds to construction cost and causes loss of energy, both of which affect project viability.

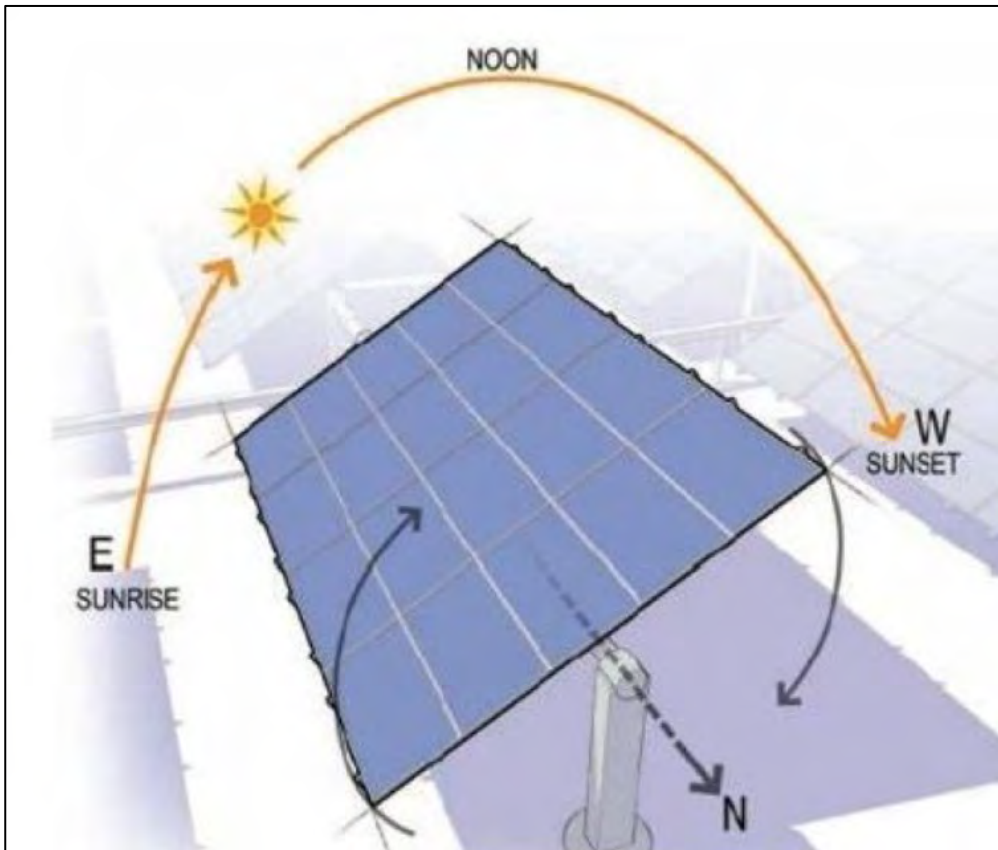


Figure 4: Example of a Single Axis Tracker PV System showing shading polygon that moves through day.

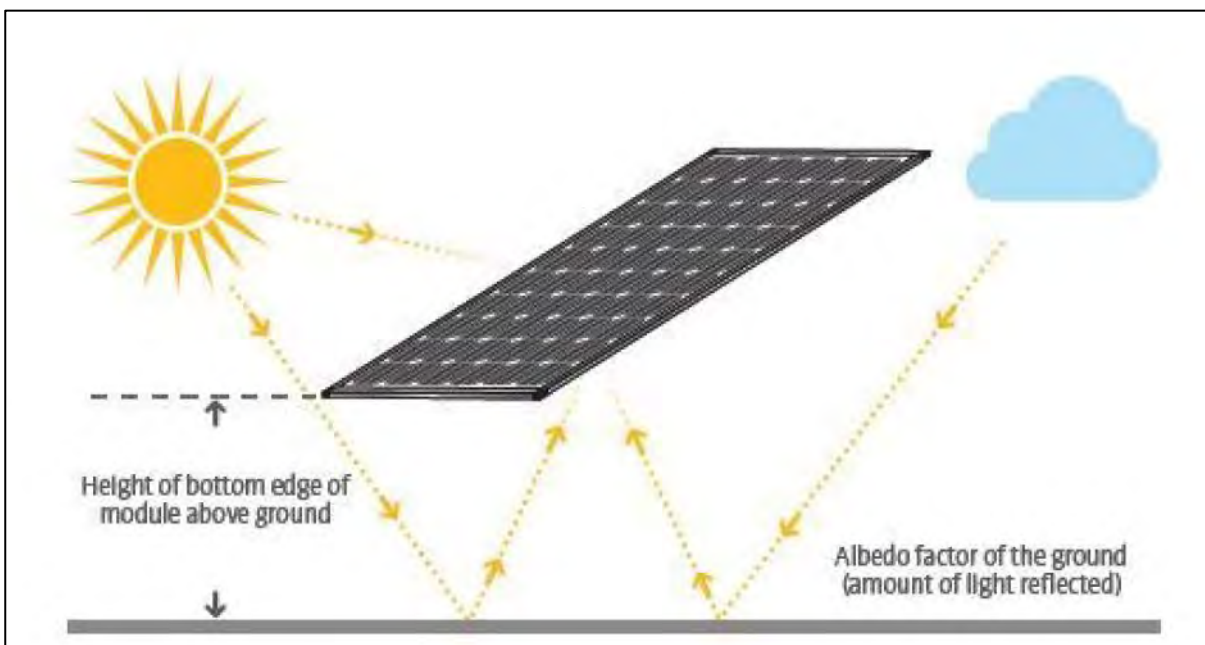


Figure 5: Example of diffused and reflected irradiance below a PV module

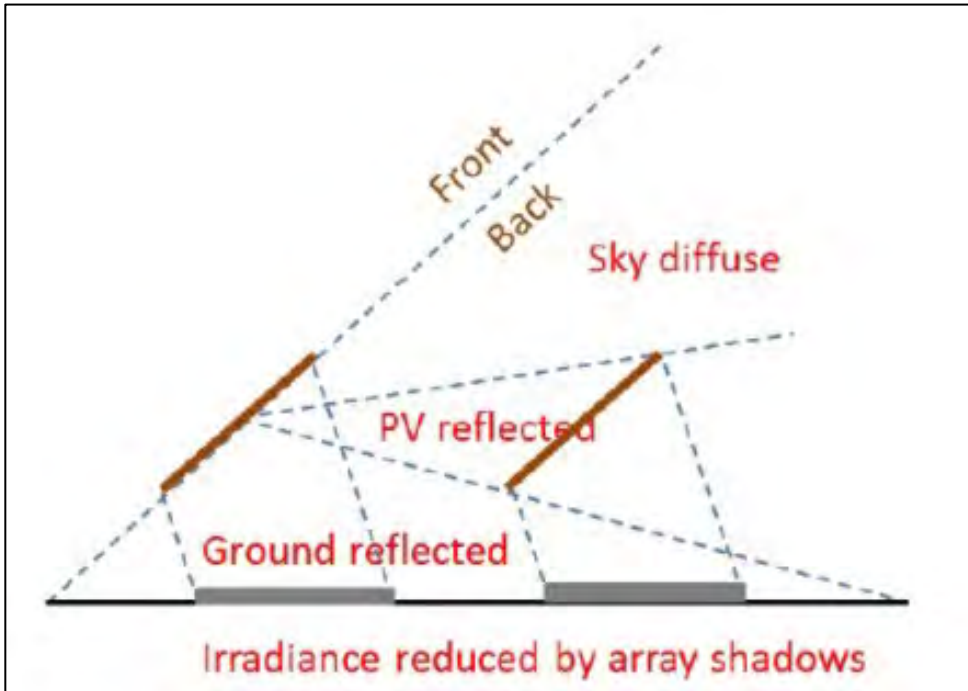


Figure 6 - Example of the irradiance components behind and below a ground-mounted PV system.

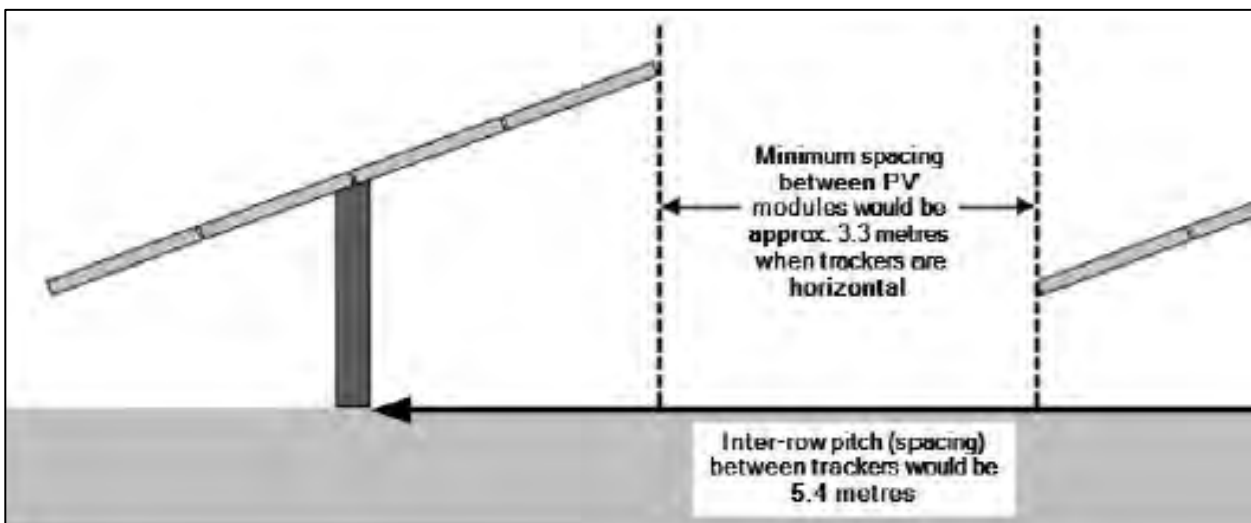


Figure 7: Illustration showing the difference between the inter-row spacing (pitch) and the minimum spacing between PV modules.

8.2 Minimising Impacts on Native Vegetation & Biodiversity

The following strategies are to be implemented to minimise the impacts of the operation on surrounding vegetation:

- Construction of the array layout by small (4t excavator), mini-piling rigs and soft tyred vehicles;
- Clear designation of No-Go Zones at the end of each array that are not used by construction traffic;
- Designation of Lay down areas and site amenities (temporary or permanent) outside the native grass zones.
- All personnel involved with any development on the site are to be 'tool-boxed' on the importance of minimizing their impact on retained vegetation, adherence to the defined extent of works and any permit conditions.
- Machinery to be used on the project shall be thoroughly cleaned before entering the site to remove all seeds of invasive weeds and non-natives could invade the site.
- The site extent will be clearly defined prior to the construction period commencing.
- No soil will be removed from site and low impact measures utilised to install the solar array so that native grass seed banks are not permanently compromised.
- Any noxious weeds within the loss area will be sprayed before works commence.
- Preparation of a Construction Environment Management Plan (CEMP) or equivalent, post approval by the determining authority. The CEMP is to highlight all the above harm minimisation strategies and provide clear and measurable environmental objectives that can be audited to ensure losses do not exceed those already anticipated.

9 OFFSET STRATEGY

9.1 General Offset

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 a significant impact on habitat for any rare or threatened species. The NVR Report has calculated that a General Offset amount (in general habitat units) of **0.648** is required. The proponent also acknowledges that the strategic biodiversity score of the offset site must be a minimum of **0.362** and 0 large trees. The proponent will seek to secure the required offsets via a third party. A description and map of the site is described in **Appendix D**.

10 IMPACTS ON RARE OR THREATENED SPECIES HABITAT

The loss site runs alongside Plunkett Road, within the Northern Inland Slopes (NIS) bioregion. After site inspection, it was determined that the most representative of the site is Rainshadow Grassy Woodland (EVC0175_62) which is listed as Endangered within the NIS bioregion.

The losses were calculated to be 3.969 ha of native grassland across one Location Category. A single line of revegetation will also be lost. I contend that while the lost trees are native, it is revegetation and approximately 15-25 years old and the majority are <40 cm Diameter at Breast Height (DBH). None of these trees exhibit any hollow bearing branches or trunk knots that may be used by woodland birds as nesting sites.

The NVR report generated on 25/3/2022 identified 45 species (34 flora, 11 fauna) whose habitat may occur within the specified geographical region. It is highly unlikely that any threatened flora or fauna will be located within the site given the level of past disturbance and lack of trees in the areas proposed to be 'lost'. The following sections consider their likelihood of being affected by the works.

10.1 Database searches

A database search and literature review was undertaken. Relevant and available documents were reviewed for information on past land uses, presence of vegetation communities as well as flora and fauna. Relevant databases were searched for records of threatened species within a 1 km radius of the loss site.

This review was used to prepare a list of threatened flora and fauna species, ecological communities, migratory species and any significant habitat previously recorded or predicted to occur in the study area and the broader locality (listed and preliminary listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and Flora and Fauna Guarantee Act 1988 (FFG Act). The following sources of information were consulted:

- The Department of Environment, Land, Water and Planning (DELWP) NatureKit (DELWP 2019);
- The Victorian Biodiversity Atlas (DELWP 2019) – 1 km radius of each of the study areas;
- Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Protected Matters Search Tool – 1 km radius of the study areas (DoEE 2019);
- The Commonwealth Department of the Environment Species Profile and Threats Database;
- Victorian Rare or Threatened Species Advisory Lists.

10.2 Field assessment methodology

A variety of methods were employed during the field assessment stage. However, the nature of the proposal and construction methodology meant that some investigations were not warranted. **Table 2** provides a summary of methodologies used, those that were not and the reasons for both.

Table 2: Field assessment methods employed

Intended Target	Methodology
Diurnal Birds	Area search, where the observer walked the length of the site twice in its entirety.
	Point Count method, where observations were made from 2 points for 20 minutes each.
Nocturnal Birds	Day habitat search. Search habitat for pellets, and likely hollows.
	Stag-watching. Observing potential roost hollows for 30mins prior to sunset and 60mins following sunset.
Flying Mammals	Spotlighting on foot – 2hrs hour walking the site on 1 night.
	Stag-watching. Observing potential roost hollows for 30mins prior to sunset and 60mins following sunset.
Non-Flying Mammals	Search for scats and signs - 30 minutes searching relevant habitat, including trees for scratch marks.

10.3 Results

Table 3 considers their likelihood of occurring in the proposed site following site assessment and consideration of the database search results. Five categories for the 'likelihood of occurrence' of species has been used. The categories are based on recorded sightings listed in credible databases, the presence or absence of suitable habitat, other features of the site, results of the field survey and professional judgement. The 5 categories are:

'Yes'	The species/community was or has been observed on the site.
'Likely'	A medium to High probability that a species uses the site
'Potential'	A suitable habitat for a species occurs on the site, but there is insufficient information to categorise the species as 'likely' or 'unlikely' to occur.
'Unlikely'	A Very Low to Low probability that a species uses the site.
'No'	Habitat on the site and in the vicinity is unsuitable for the species.

Table 3: Rare or threatened species habitats on site, Protected Matters Search Tool (1 km radius of the site).

Scientific Name	Common Name	Conservation Status (EPBC Act)	Likelihood
Birds			
<i>Rostratula australis</i>	Australian Painted snipe	Endangered	No
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered	No
<i>Lathamus discolor</i>	Swift Parrot	Critically Endangered	Unlikely
<i>Anthochaera phrygia</i>	Regent honeyeater	Critically endangered	Unlikely
<i>Calidris ferruginea</i>	Curlew sandpiper	Critically endangered	No
<i>Falco hypoleucos</i>	Grey falcon	Vulnerable	No
<i>Grantiella picta</i>	Painted honeyeater	Vulnerable	Unlikely
<i>Hirundapus caudacutus</i>	White throated needletail	Vulnerable	No
<i>Numenius madagascariensis</i>	Eastern curlew	Critically endangered	No
<i>Polytelis swainsonii</i>	Superb parrot	Vulnerable	Unlikely
Reptiles			
<i>Aprasia parapulchella</i>	Pink-tailed Worm-lizard	Vulnerable	No
<i>Delma impar</i>	Striped Legless Lizard	Vulnerable	No
Frogs			
<i>Crinia sloanei</i>	Sloanes's Froglet	Endangered	No
<i>Litoria raniformis</i>	Growling Grass Frog	Vulnerable	No
Insects			
<i>Synemon plana</i>	Golden Sun moth	Critically endangered	No
Fish			
<i>Galaxias rostratus</i>	Flathead Galaxias,	Critically endangered	No
<i>Macquaria australasica</i>	Macquarie Perch	Endangered	No
<i>Nannoperca australis Murray-Darling Basin lineage</i>	Southern Pygmy Perch (Murray-Darling Basin lineage)	Vulnerable	No
Mammals			
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable	No
<i>Dasyurus maculatus maculatus (SE mainland population)</i>	Spot-tailed Quoll	Endangered	No
Flora			
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	Vulnerable	No
<i>Caladenia concolor</i>	Crimson spider-orchid	Vulnerable	No
<i>Glycine latrobeana</i>	Clover Glycine	Vulnerable	No
<i>Prasophyllum validum</i>	Sturdy Leek-orchid	Vulnerable	No
<i>Swainsona recta</i>	Small Purple-pea	Endangered	No

Table 4: Rare or threatened species habitats on site, the Victorian Biodiversity Atlas (1 km radius of the site) (DELWP 2021)

Scientific Name	Common Name	Conservation Status (Victorian advisory list)	Likelihood
<i>Ninox connivens</i>	Barking Owl	Endangered	Unlikely
<i>Varanus varius</i>	Lace Monitor	Endangered	Unlikely
<i>Digitaria divaricatissima</i> var. <i>divaricatissima</i>	Umbrella Grass	Vulnerable	No
<i>Swainsona galegifolia</i>	Smooth Darling-pea	Endangered	No

10.4 Assessment of Impacts on Threatened Species

The following section assesses whether the proposal (as discussed and reviewed in this assessment) is likely to have a significant effect on threatened biodiversity. *Physical* and *Biological* impacts have been considered.

10.4.1 Is the proposal likely to impact soil quality or stability?

Soil Quality – No. Land Stability - Yes. There is likely to be mobilisation of some soil given the nature of the proposal (construction). The site is susceptible to compaction by traffic immediately after periods of heavy rainfall. Mitigation measures are to extend (but not be limited to) the following:

- Development of an Erosion and Sediment Control Plan (ESCP) which is progressively implemented.
- Vehicle movements around the site will be restricted to clear areas and away from any existing trees and flagging exclusion fencing to be installed.
- When rain is predicted, an assessment will be made prior to works beginning. If heavy rain is predicted, work will not commence.
- No stockpiles will be established under native vegetation in any area on site or in within the study area.
- Maintenance and checking of the erosion and sedimentation controls will need to be undertaken on a regular basis. Sediment will be cleared from behind barriers on a regular basis and all controls will be managed in order to work effectively at all times.
- Rehabilitation of any disturbed areas should be completed as soon as possible after completion of works where practical to do so.

10.4.2 Is the activity likely to affect a waterbody, watercourse or wetland or natural drainage system?

No. If ESCP controls are implemented and length of slope guidelines are adhered to, then the risk to water quality is extremely low.

10.4.3 Is the activity likely to change flood or tidal regimes, or be affected by flooding?

No.

10.4.4 Does the proposal involve the use, storage or transport of hazardous substances or the use or generation of chemicals which may build up residues in the environment?

No. Some diesel will be stored in 'slip-on' tanks in the back of utility vehicles and they will not be left on-site outside of working hours.

10.4.5 Does the activity involve the generation or disposal of gaseous, liquid or solid wastes or emissions?

Yes. However only the operation of machinery should produce emissions, no further disposal of liquids, gases or solid wastes is expected.

10.4.6 Will the activity involve the emission of dust, odours, noise, vibration, or radiation in the proximity of residential/urban areas or other sensitive locations?

Yes. The project may emit some dust and noise but this is expected to be minimal and the time period short. Given the current level of disturbance and providing the recommendations contained within this report are adhered to, it is unlikely that the proposal will result in extensive or harmful outcomes regarding these activities.

10.4.7 Is any vegetation to be cleared or modified?

Yes, some native vegetation, the site is predominantly native grasses and introduced pasture grasses. No remnant native trees are proposed for removal.

10.4.8 Is the activity likely to have a significant effect on threatened flora or fauna species, populations, or their habitats, or critical habitat; or an endangered ecological community or its habitat?

No. Whilst a single patch of native vegetation are proposed to be 'lost', no (zero) remnant native trees are proposed to be removed. It is unlikely that the loss of the native grasses will displace any rare or threatened species that may be using the site opportunistically.

10.4.9 Does the activity have the potential to endanger, displace or disturb fauna (including fauna of conservation significance) or create a barrier to their movement?

Endanger – No.

Displace – No.

Disturb – Yes. Threatened and declining woodland dependent birds may be using the area opportunistically during winter, hence the construction activities may prove to disturb foraging activities for a short period. The construction activities will avoid all existing remnant native trees upslope of the developable area, however some native grasses are proposed for removal.

10.4.10 Is the activity likely to impact on an ecological community of conservation significance?

Yes. The site was likely (historically at least) part of endangered EVC and losses are predicted to be >0.5 ha, however no hollow bearing trees or other important habitat features are being removed. Therefore, theoretically, the EVC should not be impacted negatively. Mitigation measures should ensure that impacts are minimised.

10.4.11 Is the activity likely to cause a threat to the biological diversity or ecological integrity of an ecological community?

No. The current site has an extensive history of disturbance and is highly modified. Furthermore any areas of native vegetation that offer true harbor and feeding opportunities, will be un-affected by the works.

10.4.12 Is the activity likely to introduce noxious weeds, vermin, feral species or genetically modified organisms into an area?

Vermin – No.

Feral Species – No.

Noxious Weeds - Possible. The movement of vehicles, plant, equipment and people on and off the subject site/s has the potential to introduce noxious weeds to the area. The area is also impacted by several pasture grass weed species. Wherever possible, removal of weeds should be undertaken prior to seed developing, which for most species occurs during the warmer months (i.e. summer).

Additionally, the following strategies are to apply to weed management within the site:

- Minimal impact techniques are to be used, ensuring no native species are damaged during weed control activities.
- Soil disturbance by vehicle and pedestrian access is to be kept to a minimum outside the construction footprint.
- Herbicide application is to be administered by authorised personnel only (e.g. ChemCert Accreditation– AQF 3), in accordance with the directions on the container (application rates, MSDS requirements) and any applicable Workcover requirements.
- All machinery used within the site is to be thoroughly cleaned by removing all plant material, dust or soil, and any accumulation of grease from the machine prior to the commencement of the construction.
- Any weeds removed (particularly those bearing seeds) are to be disposed of appropriately at the nearest waste management facility.
- If required, only topsoil from areas with no noxious or highly invasive weed species should be re-used in rehabilitation (it is generally assumed that if there is no evidence of noxious or invasive weeds in an area, the topsoil in this area is not contaminated with the seeds of such weeds).

11 Conclusion

The factors considered when determining whether an action, development or activity is likely to significantly affect threatened species, populations or ecological communities, or their habitats are either:

1. **Direct impacts** that directly affect the habitat of species and ecological communities and of individuals using the study area. They include, but are not limited to, death through predation, trampling, poisoning of the animal/plant itself and the removal of suitable habitat; or
2. **Indirect impacts** that occur when project-related activities affect species or ecological communities in a manner other than direct loss within the subject site. Indirect impacts may sterilise or reduce the habitability of adjacent or connected habitats. Indirect impacts can include loss of individuals through starvation, exposure, predation by domestic and/or feral animals, loss of breeding opportunities and loss of shade/shelter, etc.


The losses were calculated to be 10.5 ha, comprising a single patch of native vegetation, in a single Location category (Location 2).

The site was likely part of an Endangered EVC historically, however it is now a native grassland. Given that zero large hollow bearing trees are to be removed as part of the project, it is unlikely that the project will displace any of the species potentially utilising the site opportunistically for foraging or passing through the site.

I am of the opinion that the activities as proposed will not have a significant effect on any of the identified threatened species and ecological communities and their conservation as noted within this report.

12 APPENDIX

Appendix A: Native Vegetation Removal Report



Native vegetation removal report

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report is **not an assessment** by DELWP of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Date of issue: 25/03/2022
Time of issue: 3:32 am

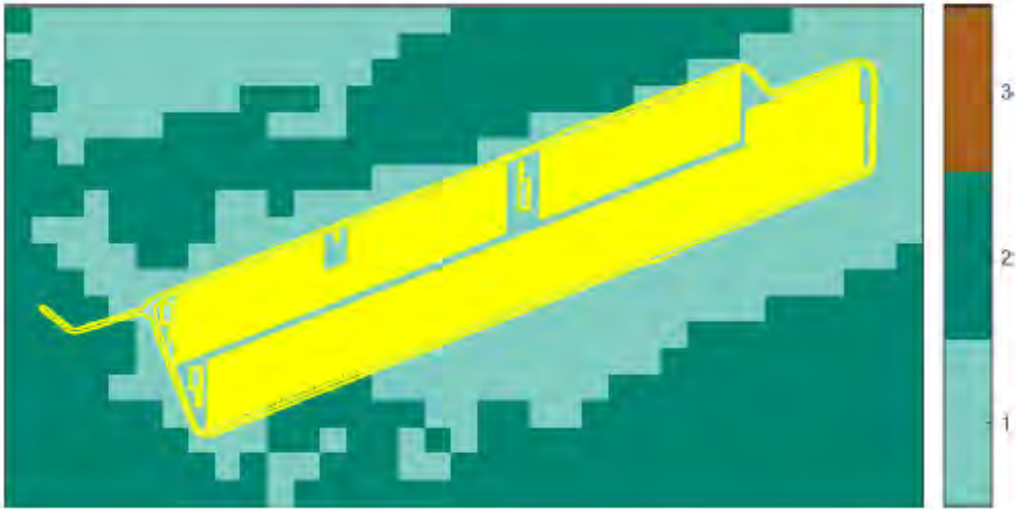
Report ID: RGE_2022_006


Project ID	Barnawartha_LostVeg_VicGrid94
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Assessment pathway

Assessment pathway	Detailed Assessment Pathway
Extent including past and proposed	3.969 ha
Extent of past removal	0.000 ha
Extent of proposed removal	3.969 ha
No. Large trees proposed to be removed	0
Location category of proposed removal	Location 2 The native vegetation is in an area mapped as an endangered Ecological Vegetation Class (as per the statewide EVC map). Removal of less than 0.5 hectares of native vegetation in this location will not have a significant impact on any habitat for a rare or threatened species.

1. Location map





Environment,
Land, Water
and Planning

OFFICIAL Page 1

Native vegetation removal report

Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

General offset amount ¹	0.648 general habitat units
Vicinity	North East Catchment Management Authority (CMA) or Indigo Shire Council
Minimum strategic biodiversity value score ²	0.362
Large trees	0 large trees

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 Includes information about the native vegetation to be removed

Appendix 2 Includes information about the rare or threatened species mapped at the site.

Appendix 3 Includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

¹ The general offset amount required is the sum of all general habitat units in Appendix 1.

² Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required.

Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{Species habitat units} = \text{extent} \times \text{condition} \times \text{species landscape factor} \times 2, \text{ where the species landscape factor} = 0.5 + (\text{habitat importance score}/2)$$

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

$$\text{General habitat units} = \text{extent} \times \text{condition} \times \text{general landscape factor} \times 1.5, \text{ where the general landscape factor} = 0.5 + (\text{strategic biodiversity value score}/2)$$

The general offset amount required is the sum of all general habitat units per zone.

Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	Type	BioEVC	BioEVC conservation status	Large tree(s)	Partial removal	Condition score	Polygon Extent	Extent without overlap	SBV score	HI score	Habitat units	Offset type
1-A	Patch	nis_0175_62	Endangered	0	no	0.150	3.969	3.969	0.452		0.648	General

out impacts to rare or threatened species' habitats on site

habitats mapped at the site.

Scientific name	Species number	Conservation status	Group	Habitat impacted	% habitat value affected
<i>ubsp. deanei</i>	504238	Endangered	Dispersed	Habitat importance map	0.0002
<i>collinus</i>	505621	Vulnerable	Dispersed	Habitat importance map	0.0001
<i>ralegifolia</i>	503992	Endangered	Dispersed	Habitat importance map	0.0001
<i>lesmiifolia</i>	503780	Vulnerable	Dispersed	Habitat importance map	0.0001
<i>lichotoma</i>	501368	Vulnerable	Dispersed	Habitat importance map	0.0001
<i>arlandii</i>	505246	Endangered	Dispersed	Habitat importance map	0.0001
<i>iptera</i>	500097	Rare	Dispersed	Habitat importance map	0.0001
<i>rugosa</i>	13151	Endangered	Dispersed	Habitat importance map	0.0000
<i>atissima var. ssima</i>	501045	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>oxylon subsp. ylon</i>	504493	Rare	Dispersed	Habitat importance map	0.0000
<i>licaginea</i>	501518	Rare	Dispersed	Habitat importance map	0.0000
<i>sericea</i>	504946	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>folcensis</i>	11137	Endangered	Dispersed	Habitat importance map	0.0000

<i>is creber</i>	503228	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>macbarronii</i>	501513	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>ncoelatum</i>	503005	Endangered	Dispersed	Habitat importance map	0.0000
<i>grallarius</i>	10174	Endangered	Dispersed	Habitat importance map	0.0000
<i>foliolosa</i>	502848	Rare	Dispersed	Habitat importance map	0.0000
<i>scariosum</i>	501218	Rare	Dispersed	Habitat importance map	0.0000
<i>, aff. validum A</i>	505904	Endangered	Dispersed	Habitat importance map	0.0000
<i>thamnoides</i>	501560	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>ubsp. paucijuga</i>	504201	Rare	Dispersed	Habitat importance map	0.0000
<i>ne gracilis</i>	505494	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>poroniifolia</i>	501087	Rare	Dispersed	Habitat importance map	0.0000
<i>wainsonii</i>	10277	Endangered	Dispersed	Habitat importance map	0.0000
<i>oliiformis</i>	503455	Rare	Dispersed	Habitat importance map	0.0000
<i>ris aurea</i>	502651	Rare	Dispersed	Habitat importance map	0.0000
<i>istifolia s.s.</i>	503813	Rare	Dispersed	Habitat importance map	0.0000
<i>behrii</i>	501061	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>unctata</i>	501084	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>a tarda</i>	505085	Vulnerable	Dispersed	Habitat importance map	0.0000
<i>is temporalis</i>					

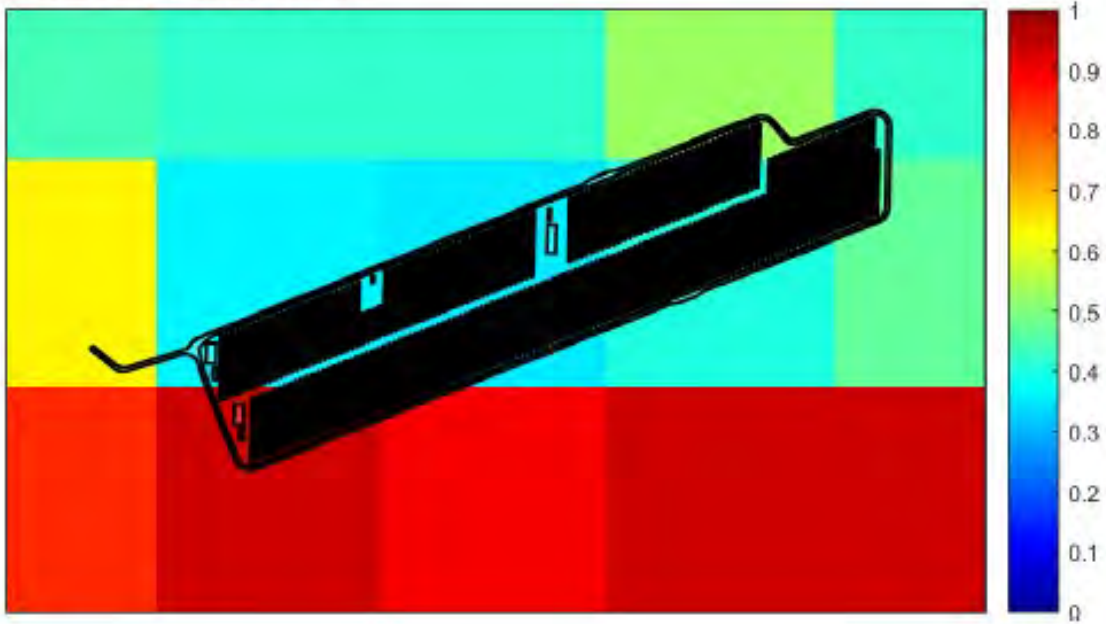
<i>glauca subsp. trifolia</i>	507229	Endangered	Dispersed	Habitat importance map	0.0000
<i>sagittatus</i>	10504	Vulnerable	Dispersed	Habitat importance map	0.0000

2000 hectares or less mapped habitat for the species
 than 2000 hectares of mapped habitat for the species

defined in the Guidelines that include all the mapped habitat for a rare or threatened species
 d in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed
 A records
 oria that represents a large population, roosting or breeding site etc.

Appendix 3 – Images of mapped native vegetation

2. Strategic biodiversity values map



3. Aerial photograph showing mapped native vegetation



4. Map of the property in context



↑ North

0 2 4
x100 metres

Yellow boundaries denote areas of proposed native vegetation removal.

Appendix B: Table 4 of the Guidelines

Number	Application requirement
1	<p>Information about the native vegetation to be removed, including:</p> <ul style="list-style-type: none"> • The assessment pathway and reason for the assessment pathway. This includes the location category of the native vegetation to be removed. • A description of the native vegetation to be removed that includes: <ul style="list-style-type: none"> - whether it is a patch or a scattered tree (or both) - the extent (in hectares) - the number and circumference (in centimetres measured at 1.3 metres above ground level) of any large trees within a patch - the number and circumference (in centimetres measured at 1.3 metres above ground level) of any scattered trees, and whether each tree is small or large - the strategic biodiversity value score - the condition score - if it includes endangered Ecological Vegetation Classes - if it includes sensitive wetland or coastal areas. • Maps showing the native vegetation and property in context and containing: <ul style="list-style-type: none"> - scale, north point and property boundaries - location of any patches of native vegetation and the number of large trees within the patch proposed to be removed - location of scattered trees proposed to be removed, including their size • The offset requirement, determined in accordance with section 5 of the Guidelines, that will apply if the native vegetation is approved to be removed. <p><i>Note: A report from DELWP systems and tools contains information required to address this application requirement.</i></p>
2	<p>Topographic and land information relating to the native vegetation to be removed, showing ridges, crests and hilltops, wetlands and waterways, slopes of more than 20 percent, drainage lines, low lying areas, saline discharge areas, and areas of existing erosion, as appropriate. This may be represented in a map or plan.</p>
3	<p>Recent, dated photographs of the native vegetation to be removed.</p>

Number	Application requirement
4	Details of any other native vegetation approved to be removed, or that was removed without the required approvals, on the same property or on contiguous land in the same ownership as the applicant, in the five year period before the application for a permit is lodged.
5	<p>An avoid and minimise statement. The statement describes any efforts to avoid the removal of, and minimise the impacts on the biodiversity and other values of native vegetation, and how these efforts focussed on areas of native vegetation that have the most value. The statement should include a description of the following:</p> <ul style="list-style-type: none"> • Strategic level planning – any regional or landscape scale strategic planning process that the site has been subject to that avoided and minimised impacts on native vegetation across a region or landscape • Site level planning – how the proposed use or development has been sited or designed to avoid and minimise impacts on native vegetation. • That no feasible opportunities exist to further avoid and minimise impacts on native vegetation without undermining the key objectives of the proposal.
6	A copy of any Property Vegetation Plan contained within an agreement made pursuant to section 69 of the <i>Conservation, Forests and Lands Act 1987</i> that applies to the native vegetation to be removed.
7	Where the removal of native vegetation is to create defensible space, a written statement explaining why the removal of native vegetation is necessary. This statement must have regard to other available bushfire risk mitigation measures. This statement is not required when the creation of defensible space is in conjunction with an application under the Bushfire Management Overlay.
8	If the application is under Clause 52.16, a statement that explains how the proposal responds to the Native Vegetation Precinct Plan considerations at decision guideline 8.
9	<p>An offset statement providing evidence that an offset that meets the offset requirements for the native vegetation to be removed has been identified, and can be secured in accordance with the Guidelines.</p> <p>A suitable statement includes evidence that the required offset:</p> <ul style="list-style-type: none"> • is available to purchase from a third party, or • will be established as a new offset and has the agreement of the proposed offset provider, or • can be met by a first party offset.


Appendix C: Table 5 of the Guidelines

Table 5: Additional application requirements for applications in the Detailed Assessment Pathway

Number	Application requirement
10	<p>A site assessment report of the native vegetation to be removed, including:</p> <ul style="list-style-type: none"> • A habitat hectare assessment of any patches of native vegetation, including the condition, extent (in hectares), Ecological Vegetation Class and bioregional conservation status. • The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any large trees within patches. • The location, number, circumference (in centimetres measured at 1.3 metres above ground level) and species of any scattered trees, and whether each tree is small or large.
11	<p>Information about impacts on rare or threatened species habitat, including:</p> <ul style="list-style-type: none"> • The relevant section of the <i>Habitat importance map</i> for each rare or threatened species requiring a species offset. • For each rare or threatened species that the native vegetation to be removed is habitat for, according to the Habitat importance maps: <ul style="list-style-type: none"> - the species' conservation status - the proportional impact of the removal of native vegetation on the total habitat for that species - whether their habitats are highly localised habitats, dispersed habitats, or important areas of habitat within a dispersed species habitat.

Note: A report from DELWP systems and tools contains information required to address this application requirement.

Appendix D: Offset Strategy



Our reference: VLO-7454-B
Your reference: Barnawartha

31 March 2022

Damian Wall
Red-Gum Environmental Consulting Pty Ltd
damian.wall@red-gum.com.au

Dear Damian

RE: Quotation for the supply of native vegetation credits

Vegetation Link is an accredited offset provider with the Department of Environment, Land, Water & Planning (DELWP). We offer a specialised brokerage service to enable permit holders and developers to identify suitable native vegetation credits to meet their planning permit offset requirements.

Based on the information you have provided, I understand you require the following native vegetation offset:

Offset type	Vicinity	General habitat units (GHU)	Min. strategic biodiversity value (SBV)	Large trees
General	North East CMA	0.648	0.362	0

To meet your offset requirements, you can purchase native vegetation credits from a third party as per the option quoted below¹. This quotation is valid for 14 days, subject to credit availability and landholder pricing.


CTA pathway – offset site located in the Towong Shire Council area (approx. 3-6 week turnaround from acceptance of quote)

Cost of native vegetation credits – invoiced by DELWP	\$87,480.00
Transaction fees – invoiced by Vegetation Link	\$1,020.00
Total (ex. GST)	\$88,500.00
Total (inc. GST)	\$97,350.00

If you would like to purchase credits, let us know that you accept the quote and return the attached purchaser details form by email. Upon receipt of the form, we will begin the trade process. Further details of the process for credit allocation is in the FAQ below.

Should you have any queries, please do not hesitate to contact us on 1300 VEG LINK (1300 834 546) or email offsets@vegetationlink.com.au.

Sincerely,



Tesha Mahoney
Biodiversity Offset Broker

¹ Note that the transaction fee includes DELWP NVDR transfer and allocation fees and a Vegetation Link fee

Vegetation Link Pty Ltd
ABN: 92 169 702 032
www.vegetationlink.com.au

1300 VEG LINK (1300 834 546) | offsets@vegetationlink.com.au | PO Box 10 Castlemaine VIC 3450

Appendix E: Habitat Hectare Sheets

Vegetation Quality Field Assessment Sheet Version 1.3 - October 2004

Department of Sustainability and Environment

Site Name/No. ...Plunkett Road..... Location ...Barnawartha..... Date ...12th August 2021.....
 Assessor(s) ...Damian Wall..... Map Name/No. AMG / MGAGDA94 Zone 55.....
 Tenure ...Private..... EVC ...EVC 175_62..... Bioregion NIS.....

'Site Condition Score'

Category & Description	Score		
	% Canopy Health*		
	> 70%	30-70%	< 30%
None present	0	0	0
> 0 to 20% of the benchmark number of large trees/ha	3	2	1
> 20% to 40% of the benchmark number of large trees/ha	4	3	2
> 40% to 70% of the benchmark number of large trees/ha	6	5	4
> 70% to 100% of the benchmark number of large trees/ha	8	7	6
≥ the benchmark number of large trees/ha	10	9	8

Score: 0

Large trees are defined by diameter at breast height (dbh) - see EVC benchmark.
 * Estimate proportion of an expected healthy canopy cover that is present (i.e. not missing due to tree death or decline, or mistletoe infestation).

Understorey Life forms

LF Code from EVC benchmark	# spp observed / Benchmark spp.	% cover observed / Benchmark % cover	Present (✓)	Modified (✓)
IT	- / -	- / 5		
T	- / 2	/ 10		
MS	- / 1	/ 5		
SS	/ 1	/ 1		
PS	/ 2	/ 5		
LH	1 / 2	<1 / 5	Y	
MH	5 / 13	10 / 20	Y	
SH	1 / 3	<1 / 5	Y	
LTG	1 / 1	1 / 1	Y	
MTG	7 / 15	30 / 40	Y	
MNG	1 / 3	5 / 5	Y	
BL	/	/ 10		
/	/	/		
/	/	/		
/	/	/		
/	/	/		

Category & Description	Score		
	% Canopy Health *		
	> 70%	30-70%	< 30%
< 10% of benchmark cover	0	0	0
< 50% or > 150% of benchmark cover	3	2	1
≥ 50% or ≤ 150% of benchmark cover	5	4	3

Score: 0

Tree canopy is defined as those canopy tree species reaching ≥ 80% of mature height - see EVC benchmark description.
 * Estimate proportion of an expected healthy canopy cover that is present (i.e. not missing due to tree death or decline, or mistletoe infestation).

Present
 For life forms with benchmark cover of < 10%, considered 'present' if:
 • any specimens are observed.
 For life forms with benchmark cover of ≥ 10%, considered 'present' if:
 • the life form occupies at least 10% of benchmark cover.

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

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

Score: 4

* proportion of weed cover due to 'high threat' weeds - see EVC benchmark for guide.
 High threat weed species are defined as those introduced species (including non-indigenous 'natives') with the ability to out-compete and substantially reduce one or more indigenous life forms in the longer term assuming on-going current site characteristics and disturbance regime.
 The EVC benchmark lists typical weed species for the EVC in the bioregion and provides an estimate of their 'invasiveness' and 'impact'. In general, those weed species considered to have a high impact are considered high threat regardless of their invasiveness.
 ** If total weed cover is negligible (<1%) and high threat weed species are present then score '13'.

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



Vegetation Quality Field Assessment Sheet Version 1.3 October 2004

Recruitment Score 0

Category & Description		High diversity**	Low diversity**
No evidence of a recruitment 'cohort'*	within EVC not driven by episodic events	0	0
	within EVC driven by episodic events^	0	0
	clear evidence of appropriate episodic event. no clear evidence of appropriate episodic event.	5	5
Evidence of at least one recruitment 'cohort' in at least one life-form	proportion of native woody species present that have adequate recruitment ^o	< 30%	3
		30 - 70%	6
		≥ 70%	10

* 'cohort' refers to a group of woody plants established in a single episode (can include suppressed canopy species individuals).
 ^ refer to EVC benchmark for clarification.
 o treat multiple eucalypt canopy species as one species.
 ** high diversity defined as ≥ 50% of benchmark woody species diversity.

Species Recruitment

Woody species recorded in habitat zone	Adequate Recruitment
Eucalypt canopy (combined species)	✓
number of woody spp. in EVC benchmark (SS and taller)	

Organic Litter Score 0

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

Logs Score 0

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

Large logs defined as those with diameter ≥ 0.5 of benchmark large tree dbh.
 * present if large log length is > 25% of EVC benchmark log length.
 # absent if large log length is < 25% of EVC benchmark log length.

'Landscape Context Score'

Patch Size Score 1

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

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

Distance to Core Area Score 1

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

* defined as per RFA 'Old Growth' analyses.

Neighbourhood Score 4

Radius from site	% Native vegetation*	Weighting	Score
100 m	40	0.03	1.2
1 km	40	0.04	1.6
5 km	60	0.03	1.8
subtract 2 if the neighbourhood is 'significantly disturbed'			
Add Values and 'round-off'			4

* to nearest 20%.
 Multiply % native vegetation x Weighting for each radius from the zone (eg. 40% x 0.03 = 1.2); then add values to obtain final Neighbourhood Value.

Final Habitat Score											
Component	'Site Condition Score'							'Landscape Context Score'			
	Large Trees	Tree Canopy Cover	Lack of Weeds	Understorey	Recruitment	Organic Litter	Logs	Patch Size	Neighbourhood	Distance to Core Area	Total
Score	0	0	4	5	0	0	0	1	4	1	15