Western Renewables Link

Report 1 on Ecological Surveys Required by EPR-BD1

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Contents

Appendix B. Native Vegetation Removal report

Appendix C. Vegetation Quality Assessment (VQA) results

Table of Figures

Table of Tables

Executive summary

Overview

This report (referred to as BD1 Report) provides additional information to what was provided in the Western Renewables Link EES Technical Report A: Biodiversity Impact Assessment (Biodiversity IA). It responds to instructions from AusNet to progress work to address the Environmental Performance Requirement (EPR) BD1 outlined in the exhibited Biodiversity IA. The requirements of EPR BD1 include conducting additional ecological surveys, including for previously inaccessible land parcels, defining no-go zones within the Easement Corridor Construction Footprint, and assessing impacts to notional root zones (NRZs)[1].

The Biodiversity IA was based on modelled data in areas where field survey was not able to be undertaken due to land access constraints (which applied to 24 per cent of Project Area) and adopted a series of assumptions about impacts within the Easement Corridor and around the Vegetation Clearance Construction Footprint.

The purpose of this BD1 Report is to present the findings of additional work that has been undertaken to address the requirements of EPR BD1, noting that this work is ongoing as land access becomes available. In particular, this BD1 Report:

- Includes updated results of additional field survey that has been undertaken between July 2024 and May 2025 as a result of additional land access being provided. Where applicable, this updated field data has replaced modelled data where surveys were previously not completed.
- Incorporates no-go zones in the Easement Corridor Construction Footprint to reduce the extent of native vegetation impacted and the associated refinements of the Construction Footprint. The exhibited Biodiversity IA included a conservative approach that assumed direct impacts to all woody EVCs within the Easement Corridor (except for an area at Darley), when in fact not all areas within the Easement Corridor will be impacted. This was a worst-case scenario and not anticipated to be the actual impact of the Project.
- Assesses impacts to Notional Root Zones (NRZ) and canopy associated with the Construction Footprint.

Taking into account the additional field survey between July 2024 and May 2025 referred to above, 79% of the Project Area has now been surveyed and the state of knowledge in respect of the anticipated impacts arising from the Project has been refined, including a significant reduction of 52ha in the extent of impacts to native vegetation.

The overall area of impact to native vegetation has been reduced from 238.607ha to 186.264ha. With additional survey information and the introduction of no-go zones, the extent of impacts to native vegetation assessed using modelled data has been reduced from 64.90ha to 44.52ha. This BD 1Report presents a summary of the impacts taking into account the additional work that has been undertaken as described above (Table 3-53 and Table 3-54) and compares the results to the impacts set out in the Biodiversity IA. This BD 1Report also provides an update to the offsets required to address the residual impacts to biodiversity (Table 4-1 and Table 4-2).

Method

The approach adopted in this BD1 Report uses additional survey information, and applies no go zones that reduce the Project's impact where possible and increases accuracy of data utilised in the assessment of impacts. In summary, this BD 1Report adopts the approach of applying:

- **Modelled Data Exclusion Zones (MDEZ)** –Jacobs mapped areas where preliminary survey has been able to determine that native vegetation and/or Threatened Ecological Communities (TECs) do not occur. Modelled

[1] The Biodiversity IA uses the term Tree Protection Zone (TPZ) instead of Notional Root Zones (NRZ). Since the Biodiversity IA was produced the Assessor's handbook has been updated and the term NRZ is now used, this reflects the release of AS4970:2025 *Protection of trees on development sites* which replaced AS4970:2009.

Data Exclusion Zones have been applied and modelled data (either native vegetation and/or TECs) removed where appropriate.

- **No-go zones and Construction Footprint updates** – AusNet provided an updated Construction Footprint depicting access requirements and disturbance areas associated with vegetation removal activities where necessary within the Easement Corridor. This removes the conservative assumption that the entire Easement Corridor will be impacted. This included the provision of no-go zones where no works would be permitted in order to protect native vegetation, to be retained within the Easement Corridor.

- **Canopy and Notional Root Zone (NRZ) impacts** –This BD1 Report includes an assessment of NRZ impacts and adds this to the total vegetation impacts. Canopy and NRZ impacts are considered to only be associated with the Vegetation Clearance Construction Footprint (VCCF); as this is the only component of the Construction Footprint that results in significant ground disturbance and associated impacts to tree roots. In absence of data to assess NRZ impacts a method that incorporates conservative assumptions has been developed.

Impact assessment key findings

Overall, with the additional work undertaken as detailed in this BD1 Report, there is a reduction of 52ha in the extent of native vegetation proposed for removal from 238.607ha to 186.264ha (Table ES-1).

Table ES-1. Project impact to native vegetation

Native vegetation impacts		BD1 Report Totals	Exhibited Biodiversity IA
Patches		173.26ha	229.71ha
Large canopy trees in patches		1000	844
Scattered trees	Large	172	147
	Small	94	66
Total Native Vegetation Removal Report area[2]		**186.264ha**	**238.607ha**

The reduction in the extent of native vegetation removal flows through to a reduction in the removal of TECs and threatened species individuals and habitat. However, the reductions have not been evenly spread and some species and TECs have an increase to the extent of impact, although this has not resulted in a notable change in the significance of the impact to these values. The increased impact extent is primarily due to a conservative recalculation of the area impacted due to the inclusion of mapping the canopy of trees that have potential NRZ impacts, rather than an actual change in design. The reductions in impacts are more notable as they are due to the addition of no-go zones which result in a reduction of the impacts assessed in the Biodiversity IA. The progression of fieldwork has resulted in a reduction in the overall extent of native vegetation, which largely confirmed the findings in the Biodiversity IA, that the modelled data over-represented the extent of native vegetation, TECs and flora impacted.

With respect to matters considered under the EPBC Act, the outcomes of the significant impact assessments are unchanged from the Biodiversity IA. The same three TECs and four fauna species as assessed in the Biodiversity IA remain the MNES that may be significantly impacted. Similarly, the significance of the impacts to the FFG Act listed TECs and species remains consistent or decreased compared with the Biodiversity IA. The key findings for flora and fauna values are outlined below, with detail provided in Table 3-54 and Table 3-55:

- TECs generally saw a decrease in impacts as no-go zones and fieldwork have primarily reduced the extent of impacts to modelled habitat compared to the Biodiversity IA.

[2] A total of 186.264ha of native vegetation is to be impacted by the Project (as presented within the Native Vegetation Removal report). Of this 186.264ha, 173.260ha consists of patches and 13.004ha consists of the extent of scattered trees.

- Grassland fauna (e.g., Golden Sun Moth, Striped Legless Lizard, Victorian Grassland Earless Dragon, Tussock Skink) have had little change in impacts as field data was used (as opposed to modelled data) for these species in the Biodiversity IA, and in the Biodiversity IA, Project activities within the Easement Corridor Construction Footprint (ECCF) were assumed to not impact habitat for these species. So the fieldwork did not result in significant changes to extent of mapped habitat as the existing data was accurate (compared with other taxa assessed with less accurate modelled data) and the addition of no-go zones to the ECCF did not result in a reduction of impacts. Their habitat is not affected by NRZ impacts, so there was no increase in impacts to their habitat associated with the NRZ assessment.

- Fauna that use treed environments generally saw an increase in potential impact extent because the assessment now includes NRZ impacts. In addition to this, the inclusion of the no-go zones within the Easement Corridor Construction Footprint could not generally be applied to their habitat given trees will be removed from the Easement Corridor due to transmission line clearance safety requirements. However, the increase in impact did not result in a notable change in the significance of the impact to these species. The change was a result of a conservative recalculation of the area impacted by mapping the canopy of potential NRZ impacts.

- Flora that are not trees generally had reduced impacts, as no-go zones and fieldwork ruled out modelled habitat resulting in decreased impacts.

- Threatened tree species have seen a small increase in the extent of impacts due to NRZ impacts being assessed but impacts to modelled habitat have been reduced due to the progression of fieldwork and inclusion of no-go zones.

- There has been an increase in large patch trees and scattered trees impacted. This is in part due to it being difficult to estimate large patch trees and scattered trees in areas where surveys have not occurred due to land access constraints. Both large trees in patches and scattered trees have been indicatively mapped via a desktop approach in areas yet to be surveyed. However, this is an estimate only and the results of this BD1 Report indicate that the desktop mapping of large patch trees under-estimates the number present. Fieldwork is required to confirm the actual number and location of large patch trees. Additionally, often areas initially modelled as native vegetation patches were identified to only be comprised of scattered trees during fieldwork, hence as fieldwork is completed and the extent of modelled patches is reduced, the number of scattered trees may increase. Impacts to large patch trees and scattered trees have also increased due to the assessment of NGZs impacts included within this BD1 Report. Large patch trees and scattered tree impact numbers may continue to trend upwards as more fieldwork is completed and trees continue to be mapped, however the modelled patch extents will likely continue to trend downwards, especially given it is likely that fieldwork will continue to reveal that areas modelled as patches only contain scattered trees.

Offset requirements

Key changes to Commonwealth offsets:

Specific *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) offsets are necessary for significant impacts to seven of the EPBC Act listed matters associated with the Project. The changes to these offsets include:

- The indicative offset area for Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia has decreased by 60ha compared to the Biodiversity IA, due to a large reduction in the area of impact. The indicative offset area based on the worst-case scenario is 73.01ha.

- The indicative offset area for Natural Temperate Grassland of the Victorian Volcanic Plain has increased by 17ha compared to the Biodiversity IA due to a small increase in the area impacted, combined with an increase in quality score from further fieldwork data. The indicative offset area based on the worst-case scenario is 61.56ha.

- The indicative offset area for White Box-Yellow Box-Blakely's Red Gum Grassy Woodland has increased by 14ha compared to the Biodiversity IA due to an increase in the quality score which was revised based on the further fieldwork. However, the area of impact has not increased. While the modelled habitat impact area was significantly reduced through further field survey, 5.00ha continues to be considered the credible worst-case to determine the potential offset. The indicative offset area based on the worst-case scenario is 55.16ha. The indicative offset area for Golden Sun Moth has increased slightly by 3ha compared to the Biodiversity IA, due to a slight increase in impacts to field mapped potential habitat. The indicative offset area is 125.22ha.

- The indicative offset area for the Southern Greater Glider has increased by 11ha compared to the Biodiversity IA due to inclusion of NRZ impacts. The indicative offset area is 88.28ha.

- The indicative offset for Victorian Grassland Earless Dragon and Striped Legless Lizard remain unchanged in the BD1 Report. The indicative offset area is 28.80ha and 6.30ha respectively.

Key changes to state offsets:

State offsets required under Victoria's *Guidelines for the removal, destruction or lopping of native vegetation* have generally decreased due to a reduction in the extent of native vegetation removal compared with the Biodiversity IA. The number of large trees to be offset has increased due to the progression of field surveys and consideration of NRZ impacts. There have been some changes to the number and variety of species offsets required compared to the Biodiversity IA, however all species offsets are still able to be sourced by the Project either through currently unregistered sites or the Native Vegetation Credit Register.

Conclusion

This BD1 Report sets out the findings of work that has been commenced to respond to EPR BD1. This BD1 Report demonstrates that further survey work, development of design and mitigation measures (such as micro-siting) can enable AusNet to further avoid and minimise impacts to native vegetation, TECs and threatened species. The implementation of measures to comply with EPR BD1 will continue to progress as land access becomes available.

Overall, with this additional work undertaken there is a reduction of 52.343ha in the extent of native vegetation proposed for removal from 238.607ha to 186.264ha and this general trend applies to the removal of TECs and most threatened species and their habitat. However, the reductions have not been evenly spread and some species and TECs have an increase to the impact extent. This has not resulted in a notable change in the significance of the impact to these values.

1. Purpose of this BD1 Report

This BD 1Report provides additional information to what was provided in the Western Renewables Link EES BD1 Report A: Biodiversity Impact Assessment (Biodiversity IA). Since finalising the Biodiversity IA, Jacobs were instructed by AusNet to commence work on tasks identified by Environmental Performance Requirement (EPR) BD1 *Complete ecological surveys and finalise design*.

EPR BD1 (item 1) states:

Prior to the finalisation of the development plan for an area, complete ecological survey of the area if yet to be surveyed (additional surveys) and identify native vegetation and threatened species habitat that may be impacted by the project.

At the time of writing, the Biodiversity IA was based on field surveys completed up until July 2024. While fieldwork progressed (as access became available) during the preparation of the Biodiversity IA, the data within the Biodiversity IA was kept at this point in time to keep consistency throughout all the EES documents. This BD1 Report includes results of field surveys completed up until May 2025. The extent of modelled data in the Biodiversity IA compared with this BD1 Report has been reduced from 64.90ha to 44.52 ha, with 79 per cent of the Project Area now having been accessed.

EPR BD1 (item 3) states:

Reduce the extent of vegetation that has been identified as being required to be removed in the Easement Corridor (the Easement Corridor Construction Footprint) by:

a) identifying any areas of disturbance to enable removal of vegetation identified in the Vegetation Clearance Risk Footprint in the Easement Corridor; and

b) undertaking further design to identify no-go zones within the Easement Corridor – being the native vegetation and habitat that can be avoided and that does not need to be removed within the Easement Corridor and is to be retained

As set out in the method section of the Biodiversity IA, in particular Section 5.14.2.1 *Components of the Construction Footprint*, the Easement Corridor Construction Footprint was included for the following reasons:

- The methods used to remove vegetation identified in the Vegetation Risk Clearance Footprint may result in some additional disturbance to the immediate adjacent area associated with getting access to the vegetation to be removed and during removal of vegetation in these areas.
- The activities associated with stringing of conductors will require access along the easement which may disturb vegetation not requiring direct removal. This is a one-off activity during the construction stage, so may only have a minimal impact.
- Including the whole Easement Corridor (except for an area at Darley) is highly conservative as it assumes vegetation in these areas will be impacted when in fact, there may be no or minimal impact to many areas of the Easement Corridor Construction Footprint. This is a worst-case scenario.

The Biodiversity IA was conservative and included all of the Easement Corridor (except at Darley) in the Construction Footprint and did not define all access areas with the Easement Corridor. AusNet has reviewed the alignment and the outcomes of the Biodiversity IA to consider how access would be provided within the Easement Corridor to facilitate removal of vegetation where necessary. To support this, no-go zones were developed that identify vegetation within the Easement Corridor Construction Footprint to be protected, which is not to be impacted by the Project. This enables a more accurate assessment of the vegetation removal associated with the Easement Corridor, rather than the assumption (within the Biodiversity IA) that the whole Easement Corridor will be impacted.

The highly conservative approach of including the whole Easement Corridor (except for an area at Darley) as an area of impact in the Biodiversity IA, generally offsets the impacts to Notional Root Zones (NRZ, refer to Section 2.5 for further detail) and canopy outside of the Construction Footprint that had not been included in the area of vegetation loss in the Biodiversity IA. In this BD1 Report, an assessment of these impacts (NRZ and canopy outside of the Construction Footprint) has been undertaken and these areas are included in the extent of vegetation loss given the extent of the Easement Corridor in the Construction Footprint is reduced and less conservative.

In summary, the purpose of this BD1 Report is to provide additional information to what was provided in the Biodiversity IA by:

- Including updated results of additional field survey that has been undertaken between July 2024 and May 2025 as a result of additional land access being provided. This data has replaced modelled data where applicable.
- Incorporating no-go zones in the Easement Corridor Construction Footprint to reduce extent of native vegetation impacted and the associated refinements of the Construction Footprint.
- Assessing impacts to NRZ and canopy associated with the Construction Footprint.

In completing the above tasks, this BD1 Report applies more field data to the assessment and an approach for assessing NRZ which changes some of the results presented in the Biodiversity IA. This report explains what those changes mean for the impacts assessed and shows a comparison of results with the Biodiversity IA. This BD1 Report should be read in conjunction with the Biodiversity IA. Table 1-1 provides a link between this BD1 Report and the Biodiversity IA.

Table 1-1. Relationship between Biodiversity IA and this BD1 Report

BD1 Report section		**Technical Report A: Biodiversity Impact Assessment section**	
2.1	Field survey coverage	5.8	Field survey determination and coverage
2.2	Additional field survey eDNA	5.11.2	Targeted fauna survey
2.3	Modelled Data Exclusion Zones	5.12.2	Integrated Native Vegetation assessment
2.4	No-go zones and Construction Footprint updates	5.14.2.1	Components of the Construction Footprint
2.5	Canopy and Notional Root Zone impacts	5.14.2.3	Calculation of native vegetation loss
3.1	Impacts to Matters of National Environmental Significance	9.1	Impacts to Matters of National Environmental Significance
3.2	Impacts to state significant matters	9.2	Impacts to state significant matters
3.3	Impacts to native vegetation (EVCs and scattered trees)	9.3	Impacts to native vegetation (EVCs and scattered trees)
3.4	Summary of Project impacts	9.6	Summary of Project impacts
Appendices			
A	Impact to native vegetation and habitat mapbooks	O	Impact to native vegetation and habitat mapbooks
A.1	Impact to native vegetation (field mapped and modelled)	O.1	Impact to native vegetation (field mapped and modelled)
A.2	Impact to threatened flora habitat (field mapped and modelled)	O.2 0.3	Impact to threatened flora habitat (modelled) Impact to threatened flora (field mapped)
A.3	Impact to threatened flora habitat (field data detailed view)	0.3	Impact to threatened flora habitat (modelled)

BD1 Report section		Technical Report A: Biodiversity Impact Assessment section	
A.4	Impact to threatened fauna habitat (field mapped and modelled)	O.4 O.5	Impact to threatened fauna habitat (field data) Impact to threatened fauna habitat (modelled)
B	Native Vegetation Removal report	P	Native Vegetation Removal report
C	Vegetation Quality Assessment (VQA) results	Q	Vegetation Quality Assessment (VQA) results

2. Method

This section details the extent of field survey completed and methods used for this BD1 Report in addition to the Biodiversity IA. Table 1-1 provides a link between the methods presented in this BD1 Report and the Biodiversity IA.

2.1 Field survey coverage

This section explains the additional survey completed compared to *Section 5.8 Field survey determination and coverage* of the Biodiversity IA. Additional land access continues to be obtained over time, and field surveys have been undertaken to replace modelled data previously used for impact assessment in areas where survey had not been completed. Field survey methods were consistent with those detailed in the Biodiversity IA and where possible field data was updated to respond to peer review comments provided in association with the Biodiversity IA.

In addition, for parcels identified as partially surveyed in the Biodiversity IA, modelled data was applied to the whole of the parcel. For this BD1 Report, where there were portions of land parcels that had been surveyed, further work was undertaken to split parcels based on where survey had occurred to better reflect area surveyed. For example, if a full survey of the eastern extent of a parcel was completed, the parcel was split so the eastern extent was 'all surveys complete' and then the western portion was either 'not surveyed' or 'partially surveyed'. If only a proportion of a parcel was surveyed, this was either due to changes in land access availability or a change to project design after survey was completed requiring revisiting of a parcel to assess additional areas included in the updated design. This enabled field data to be used where available, excess modelled data was not used in areas assessed, and the associated proportions of the Project Area were more accurately reported on.

The proportions of the field survey status within the Project Area is shown below in Table 2-1 and Figure 2-1. The Project Area is 2407.26ha, of this, 79 per cent or 1895.81ha has been assessed (All surveys complete or No survey required), and the remainder, 21 per cent or 511.45ha still requires survey (Not surveyed or Partially surveyed).

Table 2-1. Field survey status by area (ha) and proportion of Project Area

Survey Status	Total Project Area (ha)*		Proportion of Project Area (%)	
	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA
No survey required	132.16	222.75	5.49	9.20
All surveys complete	1763.65	1618.15	73.26	66.87
Partially surveyed	59.22	109.68	2.46	4.53
Not surveyed	452.23	469.41	18.79	19.40
Total	2407.26	**2419.99**	100	100

*Total Project Area differs between BD1 Report and Biodiversity IA as Project Area has changed.

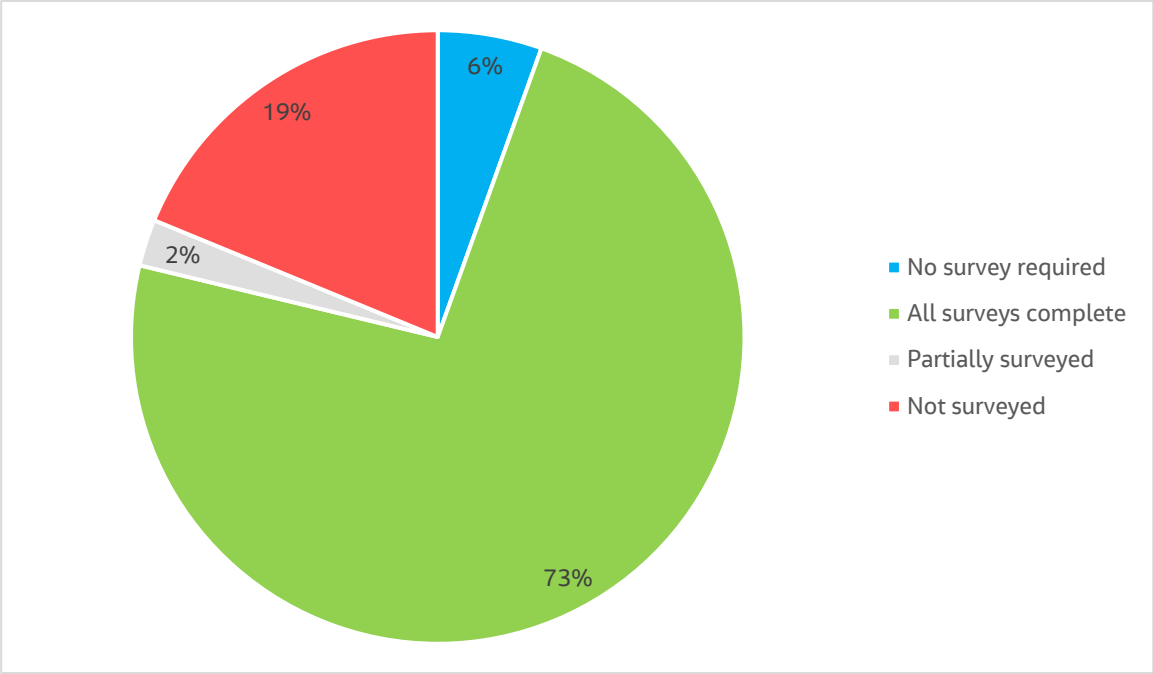


Figure 2-1. Proportion of field survey status within the Project Area

The remaining 511.45ha of partially surveyed or not surveyed parcels have subsequently been prioritised for survey based on the likely attributes present (Table 2-2). EPBC Act species and communities were considered a very high priority, followed by FFG species and native vegetation. Areas considered to potentially contain only scattered trees were given the lowest priority. While ecology survey was attempted to be scheduled as per these priorities, if access to a parcel was obtained for another technical discipline survey, then ecology survey would also take place if possible. This allowed survey to take place when access opportunities were available and minimised disturbance to land holders. Survey took place only under suitable conditions (i.e. seasonal or climatic conditions for targeted survey) and where opportunistic access did not compromise surveys standards. Notwithstanding the access constraints, the most ecologically sensitive parcels have generally been prioritised for survey, which means the remaining areas are generally of lesser ecological importance.

Table 2-2. Summary of survey priority for areas either 'partially surveyed' or not surveyed at all

Priority	Partially surveyed parcels		Not surveyed parcels	
	Total Project Area (ha)	Proportion of Project Area (%)	Total Project Area (ha)	Proportion of Project Area (%)
Very High	41.6	1.73	82.08	3.41
High	5.47	0.23	15.60	0.65
Moderate	7.29	0.30	303.23	12.60
Low	4.85	0.20	51.31	2.13
Total	**59.22**	**2.46**	**452.23**	**18.79**

For parcels that have not been surveyed or have been partially surveyed, the type of further survey required is presented in Table 2-3. Partial survey is defined as parcels that have previously had field survey completed but, due to changes to the Project Area, require additional areas of the property to be surveyed, as well as properties that have general field survey completed and require additional targeted surveys.

Table 2-3. Project Area with outstanding surveys and the required survey type

Ecology survey status	Further survey type	Total Project Area (ha)^
Partially surveyed	General field survey (including VQA)	12.76
	Targeted flora*	40.40
	Targeted fauna*	30.00
Not surveyed	General field survey (including VQA)	452.23
	Targeted flora	Unknown until general field survey completed
	Targeted fauna	Unknown until general field survey completed

*These values may change as more general field surveys are completed.

^The sum of these areas does not equal the total area of partially surveyed in Table 2-1 as some areas have been identified for both general and targeted survey.

2.2 Additional field survey - eDNA

This section includes the additional survey completed compared to that detailed in *Section 5.11.2 Targeted fauna survey* of the Biodiversity IA. Environmental DNA (eDNA) surveys are a non-invasive method used to detect the presence of organisms in an environment by analysing genetic material they leave behind – like skin cells, hair, or waste – in water, soil, or air samples. These surveys are especially useful for monitoring elusive or endangered species, tracking biodiversity, and detecting invasive species without needing to physically capture or observe the organisms. Because eDNA degrades over time, it provides a snapshot of recent biological activity. Water is generally the best medium for the capture of eDNA samples.

Environmental DNA sampling was undertaken in February 2025, targeting Growling Grass Frog and Platypus at four sites – Goodmans Creek, Birch Creek, Newlyn Reservoir and Kororoit Creek. While the survey was considered for all suitable habitat that had not received targeted survey, due to the dry conditions and ongoing access constraints only these sites were able to be sampled at the time. The surveys were undertaken to provide additional information about the presence of these species in the vicinity of the Project, however as eDNA can travel some distance through waterways they do not replace targeted surveys that provide confirmation of the species at specific locations. The use of eDNA is not yet included in EPBC Act guidelines for surveying Growling Grass Frog (DEWHA 2009).

Environmental DNA testing kits were sourced from EnviroDNA who were also responsible for the laboratory analysis of the samples. EnviroDNA provided a method for sampling which involved collecting two to three replicate samples at each site by passing up to 855 ml of water (mean 524 ml) through a 1.2 μm disc filter. Filtration was undertaken on-site to reduce DNA degradation during transport of water samples. A preservative was added to the samples after filtering to minimise DNA degradation. Filters were stored out of sunlight and at ambient temperature before being transported to the laboratory for processing. A total of ten water samples were collected from the four sites, and the samples were analysed by EnviroDNA.

2.3 Modelled Data Exclusion Zones

Additional preliminary field survey has enabled the development of Modelled Data Exclusion Zones (MDEZ) to inform the Integrated Native Vegetation Assessment detailed in Section 5.12.2 of the Biodiversity IA.

Field survey validation shows that the modelled extent of Ecological Vegetation Classes (EVCs) and Threatened Ecological Communities (TEC) presented within the Biodiversity IA are a conservative estimation of impacts, frequently overestimating their extent. To enhance the accuracy of modelled data for areas yet to be surveyed, desktop and preliminary field survey was undertaken as detailed in the Biodiversity IA. This resulted in some parcels being identified as not containing any native vegetation and not requiring general field survey. These parcels were identified as 'no survey required' (see Section 5.9 of the Biodiversity IA). Modelled data was excluded from these parcels in the Integrated Native Vegetation Layer (INVL).

In a similar manner to how modelled data for whole parcels was excluded from the INVL, this BD1 Report has developed Native Vegetation Modelled Data Exclusion Zones (NV-MDEZ) for portions of parcels where desktop and preliminary survey has been able to determine that native vegetation is not present. These have been applied in areas of modelled EVC where native vegetation was able to be confidently ruled out, such as hardstand areas, actively cropped land or where preliminary survey noted native vegetation to be absent. Native Vegetation Modelled Data Exclusion Zones remove modelled data from occurring in these areas in the INVL.

Modelled Data Exclusion Zones have also been applied to areas modelled to contain TECs (TEC-MDEZ). The INVL assumes that the modelled occurrence of certain EVCs, referred to as EVC equivalents (see Table 6-6 of the Biodiversity IA for these EVCs) which equates to the modelled occurrence of TECs. For this BD1 Report where desktop and preliminary survey has been able to determine that the TEC does not occur, TEC-MDEZs have been applied. This excludes the area of modelled EVC from also being the modelled occurrence of the TEC. This does not exclude the modelled native vegetation from occurring in the INVL, it just excludes that modelled native vegetation from being a TEC. Areas subject to TEC-MDEZ will therefore still require general field survey to assess the native vegetation, however for these areas further field survey is not required to assess the presence of TECs.

The determination and mapping of MDEZ is ongoing as further land access is obtained and field work is completed.

2.4 No-go zones and Construction Footprint updates

The components of the Construction Footprint are detailed in Section 5.14.2.1 of the Biodiversity IA. The Construction Footprint includes three components:

- **Vegetation Clearance Construction Footprint (VCCF) –** includes all areas of potential ground disturbance associated with the Project where all vegetation (native and non-native) is presumed to be removed.
- **Vegetation Risk Clearance Footprint (VRCF) –** areas where vegetation removal is required to maintain clearances and manage potential bushfire risk to conductors and towers.
- **Easement Corridor Construction Footprint (ECCF) –** represents areas within the Easement Corridor that are outside of the VCCF and VRCF, and may be impacted in areas associated with vegetation removal activities defined with the VRCF.

The Biodiversity IA was conservative and included all of the Easement Corridor (except at Darley) in the Construction Footprint and did not define all access areas with the Easement Corridor[3]. AusNet reviewed the alignment and the outcomes of the Biodiversity IA to provide an updated Construction Footprint depicting how access would be provided within and to the Easement Corridor to remove vegetation. This removes the need to include the entire Easement Corridor in the Construction Footprint.

The updated Construction Footprint included the provision of no-go zones where no works would be permitted in order to protect native vegetation, resulting in a reduction to the ECCF (as shown in Table 2-4). The area of impact and vegetation removal has been calculated in this BD1 Report taking into account the revised Construction Footprint and application of the no-go zones. The impacts are presented in Section 3 of this BD1 Report.

Table 2-4 shows the extent of the various components of the Construction Footprint, which encompasses an area of 1,388.67ha. The areas presented in the table are the extents of the different components of the

[3] Note that in the Biodiversity IA non-woody EVCs (Plains Grassland (EVC 132), Plains Grassy Wetland (EVC 125), Aquatic Herbland (EVC 653)) in the Easement Corridor Construction Footprint were not considered impacted as it was assumed vegetation clearance would not be required for fuel risk and / or clearance for operation of the transmission line. Along with DEECA wetlands, these areas have been reviewed and impacts included in this BD1 Report where access through native vegetation or modelled areas of native vegetation is required to implement vegetation clearance activities. For DEECA wetlands, where survey has been completed and no native vegetation found there is assumed to be no impact to the DEECA wetland where it occurs in the Easement Corridor Construction Footprint as it is assumed access through this area will only impact non-native vegetation. Where survey has not been completed no-go zones have been applied to protect potentially occurring native vegetation in DEECA wetlands or other non-woody EVCS.

Construction Footprint and do not represent the extent of native vegetation removal as it includes a mixture of native vegetation, non-native vegetation and hardstand areas.

Table 2-4. Construction Footprint component extents

Impact area (Construction Footprint)	Area (ha)[1]	
	BD1 Report[2]	Biodiversity IA
Vegetation Clearance Construction Footprint (VCCF)	478.75	561.1
Vegetation Risk Clearance Footprint (VRCF)	107.55	109.1
Vegetation Risk Clearance Footprint – partial clearance	4.0	4.0
Easement Corridor Construction Footprint	796.36	937.1
Easement Corridor Construction Footprint – partial clearance	2.01	2.73
Total	**1388.67**	**1614.03**

[1]The areas presented in this table are the extents of the Construction Footprints, not the extent of native vegetation removal. Areas within the Construction Footprint include a mixture of native vegetation, non-native vegetation and hardstand areas.

[2]The decrease in the Vegetation Clearance Construction Footprint is predominantly attributed to a legacy laydown area at Mount Lonarch that was initially included in both the Project Area and Construction Footprint provided. This area was not intended to form part of the assessment, as such for the purposes of the Biodiversity IA no field or modelled data was attributed to this area. For clarity and to improve accuracy of the Construction Footprint extents assessed, this area has been excluded from both the Project Area and Construction Footprint within this BD1 Report. There have been some other minor changes to the VCCF, including removal of a portion of Vances Crossing Road at Joel Joel.

2.5 Canopy and Notional Root Zone impacts

In accordance with the *Guidelines for the removal, destruction or lopping of native vegetation* (the Guidelines) (DELWP 2017), when calculating the total extent of native vegetation removal for a Project, all areas of native vegetation removal must be mapped in GIS data and submitted to DEECA (referred to as native vegetation removal (NVR) layers). The data is processed by DEECA in the native vegetation removal tool (NVR Tool) to generate a Native Vegetation Removal Report (NVRR).

Mapping the extent of native vegetation removal requires consideration of direct and indirect impacts to native vegetation. Indirect impacts include native vegetation that may not be directly removed by the Project but may still be impacted (i.e. assumed losses). Assumed losses include encroachment into Notional Root Zones (NRZ[4]) of trees with a trunk outside of the construction footprint, where trees may not be directly removed but their roots may be impacted and the tree health suffers. Unless an arborist determines otherwise, if 10 per cent or more of the NRZ is impacted, the tree is deemed lost. Assessment of NRZ impacts is a requirement as part of approval to remove native vegetation under Victorian planning schemes.

The Assessor's handbook (DEECA 2025) provides additional guidance on how to assess and account for native vegetation impacts including direct removal and assumed losses. This includes:

- Defining the NRZ - an area around the trunk of the tree which has a radius of 12 times the Diameter at Standard (1.4m) Height (DSH) to a maximum of 15 metres but no less than 2 metres.

- Calculating indirect impacts to trees - if the trunk of the tree is outside of the construction footprint, the percentage of the NRZ impacted is calculated to determine if the tree should be considered lost. Unless an arborist determines otherwise, if 10 per cent or more of the NRZ is impacted, the tree is deemed lost and included as native vegetation to be removed. This is a conservative approach until an arborist

[4] The Biodiversity IA uses the term Tree Protection Zone (TPZ) instead of Notional Root Zones (NRZ). Since the Biodiversity IA was produced the Assessor's handbook has been updated and the term NRZ is now used, this reflects the release of AS4970:2025 *Protection of trees on development sites* which replaced AS4970:2009.

assesses tree impacts in more detail, as often trees with more than 10 per cent NRZ incursion do not have significant health impacts and can be retained, and are therefore not required to be offset.

- Mapping direct and indirect impacts - includes a requirement to map the area of tree canopy for native vegetation to be removed (refer to Figure 2-2).

This figure is Figure 8 from Appendix 6 of the Assessor's handbook (DEECA 2025) showing how to map native vegetation to be removed. The dotted red line is the construction footprint, and the yellow outline shows how to map the extent of native vegetation to be removed; it includes the canopy of impacted trees and is hence larger than the construction footprint. At the bottom right corner of the construction footprint is a tree that falls outside of the construction footprint but is deemed lost due to NRZ impacts; the canopy of this tree is also mapped around and included within the area of vegetation to be removed.

Figure 2-2. Mapping native vegetation to be removed

As reported in the Biodiversity IA, the indirect loss of trees outside the Project's Construction Footprint along access tracks and other Project components such as tower assembly areas and stringing pads had not been directly assessed as part of the Project's overall native vegetation removal extent. This was due to the conservative approach of including all of the Easement Corridor in the Construction Footprint. The Vegetation Risk Clearance Footprint (VRCF) indirectly captured much of the likely NRZ impacts due to the trees within the Easement Corridor being identified for removal in the VRCF. For example, towers occur in the centre of the Easement Corridor and adjacent trees will generally be removed as part of the VRCF. Similarly, tracks are often near the centre of the Easement Corridor and as such for these tracks, most of the trees that have their NRZ impacted have been captured as part of the VRCF. Formal assessment of NRZ impacts was not undertaken in the Biodiversity IA but was required as part of EPR BD1.

Now that no-go zones have been applied to the Easement Corridor Construction Footprint and there is further detail on the areas required for access to facilitate vegetation removal, this BD1 Report includes an assessment of NRZ impacts and adds this impact to the Project's total vegetation impacts. Because not all of the relevant native vegetation has been surveyed at this stage, a conservative methodology for the assessment of NRZ impacts was developed, as set out below.

NRZ impacts were assessed for the entirety of the Vegetation Clearance Construction Footprint (VCCF), as this is the only component of the Construction Footprint that will result in significant ground disturbance and associated impacts to tree roots. However, assuming all areas of the VCCF will result in ground disturbance that could damage NRZs is a conservative approach, likely to overestimate impacts.

Other Construction Footprint components (VRCF and ECCF) were not assessed for NRZ impact as it is presumed that NRZs can be protected from activities in these areas. In these areas, only vegetation removal or temporary access to facilitate vegetation removal is required and it is possible to avoid ground impacts while undertaking these activities. This will need to be confirmed when the design and construction method, including methods for vegetation removal, are finalised (as required by EPR BD1 and BD2; and the proposed planning scheme amendment).

In instances where tracks are on the edge of or leave the Easement Corridor, trees additional to those in the VRCF may have their NRZs impacted and these need to be captured in the mapping of the vegetation loss. The width of access tracks is shown within the Construction Footprint to range from 8m to 16m (based on topography) and in this assessment this whole area is assumed to be impacted. However, given the current stage of design, it is unclear if this whole width, if any, will be impacted as access tracks will generally fall into the following types:

- Existing – maintenance only required
- Existing – widening or upgrading required
- New access track.

Hence there is considerable conservatism in the assumed impacts associated with tracks where essentially each track included in the VCCF is treated as a new track to be constructed and therefore it is assumed that the entire width of the proposed track will be subject to ground disturbance that could impact NRZs. This aligns with the conservative approach taken for assessing NRZs associated with the VCCF.

Due to a lack of tree data (i.e. not every tree along and adjacent to the 190km alignment has been mapped and had its NRZ determined to assess if it overlaps with the VCCF), an alternate approach to assessing NRZ impacts associated with the Project is required.

The Assessor's handbook provides three methods for mapping NRZ impacts. Two of these methods ('accurate mapping' and 'Option 1') require all trees that have NRZ impacts to be mapped in the field. As the Project does not have this data, these methods could not be used.

The third method in the Assessor's handbook (Option 2), is provided as an option where tree data is incomplete. Option 2 applies an additional area of loss by buffering the construction footprint between 17m and 25m depending on the percentage of large trees present within 25m of the construction footprint. Again however, the required tree data is not available to support this option. An alternate approach to assessing NRZ impacts has been developed for the Project based on the data available and consideration of the methods in the Assessor's handbook and is described below.

Where trees have been individually mapped in the field the method follows the Assessor's handbook and calculates the percentage of NRZ impact for each tree to determine if the tree is considered removed. Where field collected data is not available the method uses a worst-case scenario to identify the potential location of trees that have NRZ impacts. However, the mapping of impacted tree canopy extent at these potential locations provides a more moderated approach that is informed by the 'accurate mapping' method from the Assessor's handbook (and shown in Figure 2-2 of the handbook).

This approach incorporates the Vicmap Tree Extent layer (DTP 2022) (which provides a picture of statewide tree canopy cover (to a minimum 20cm pixel resolutions) to determine tree canopy cover within mapped and modelled patches). To map tree impacts, the standardised 10m and 15m radius circles to represent the canopy for small and large patch trees respectively have been clipped to only include the extent that overlaps with the Vicmap Tree Extent layer. As a result, the method to map tree canopy extent is conservative but not excessively so and seeks to calculate impacts within the same magnitude as impacts that would be calculated using the 'accurate mapping' method detailed in the Assessor's handbook.

There are three scenarios associated with the Project in which assessment of impacts to NRZs is required:

1. Scattered trees (field and desktop mapped)
2. Trees in field mapped patches
3. Trees in modelled patches

1. Scattered trees (field and desktop mapped)

Scattered trees have been mapped in the field and their DSH recorded when general field survey was undertaken. This enabled the accurate calculation of the NRZ of each of these trees. For areas not yet surveyed, if trees were not included in modelled patches, and they were visible on aerial imagery, then they were mapped via desktop and presumed to be a large tree with a NRZ of 15m. For these desktop mapped trees, this is a highly conservative assumption that represents the worst-case NRZ impacts possible.

All scattered trees that have been mapped either in the field or via desktop have been assessed to determine if more than 10 per cent of their NRZ is impacted by the VCCF.

Scattered trees (field and desktop mapped) that had more than 10 per cent of their NRZ impacted by the VCCF are provided as point data to DEECA for assessment in the NVR Tool. The NVR Tool represents the area of the canopy of a large tree as a circle with a15m radius and for small trees a circle with a 10m radius is used.

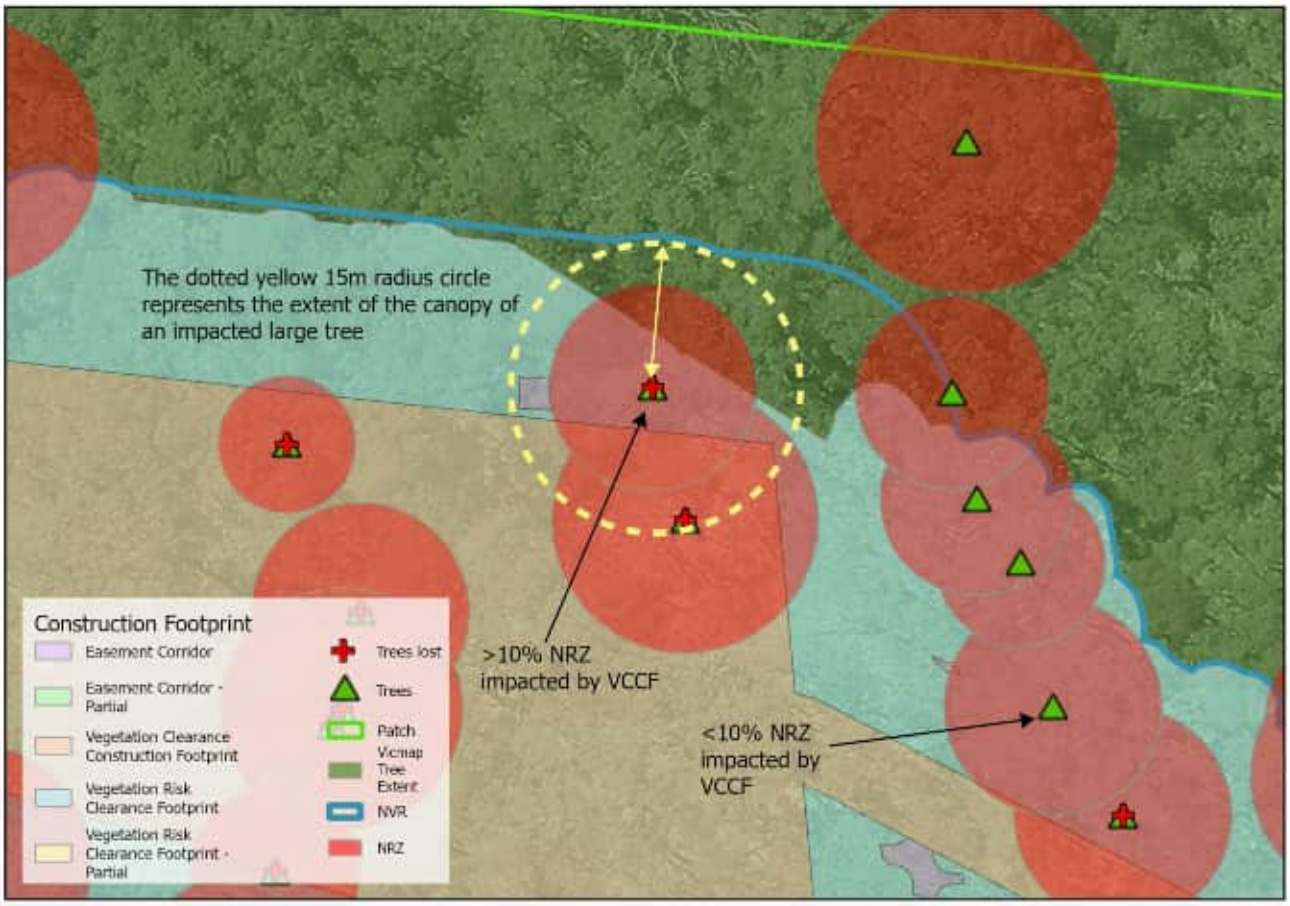
2. Trees in field mapped patches

Large trees

All large trees that occur within field mapped patches of native vegetation have been individually mapped and the DSH recorded as point data that shows the location of the trunk. The remainder of the trees in the patch are therefore small trees. The NRZ for these large trees has been calculated based on each tree's known DSH, up to a maximum of 15m (as per the Assessor's handbook). Where more than 10 per cent of the tree's NRZ is impacted, the tree is considered lost (Figure 2-3).

For impacted large trees that occur in field mapped patches of native vegetation, the Vicmap Tree Extent was used to identify the areas where tree canopy was present within a 15m radius circle around each impacted large tree. In the below example (Figure 2-3) the entirety of the 15m radius circle overlaps with the Vicmap Tree extent layer, and therefore the entirety of the 15m radius circle around the tree was included in the extent of the NVR layer (blue line in Figure 2-3 below).

In other instances where only a portion of the 15m radius intersected with the Vicmap Tree extent layer, only the portion of overlap was included in the NVR.



This figure shows a large tree that has more than 10% of its NRZ within the VCCF, consequently mapping the extent of native vegetation removal (NVR; and blue line in figure) is expanded by a circle of 15m radius from that tree. In this case that whole 15m area is included as it all contains tree canopy as per the Vicmap Tree Extent layer.

Figure 2-3. Mapping NRZ impacts for the tree canopy of large trees

Small trees

For the remaining areas of a field mapped patch that contains canopy as per the Vicmap Tree Extent layer (DTP 2022), it has been assumed that the canopy is from a row of small trees, that each have a DSH on the cusp of the large tree benchmark of the relevant EVC and are located the exact radius of their NRZ (8.4m in the example below in Figure 2-4) from the VCCF. This is because it represents the distance at which small trees would no longer have their NRZ impacted by the VCCF, so it is guaranteed there are no small trees further away from the VCCF that are impacted and need to be mapped in the NVR layer[5].

As these trees are small, the portion of a circle of 10m radius around their hypothetical trunk location that overlaps with the Vicmap Tree extent layer was included in the NVR layer to represent their canopy.

The steps taken to map the extent of impact included in the NVR are summarised as follows:

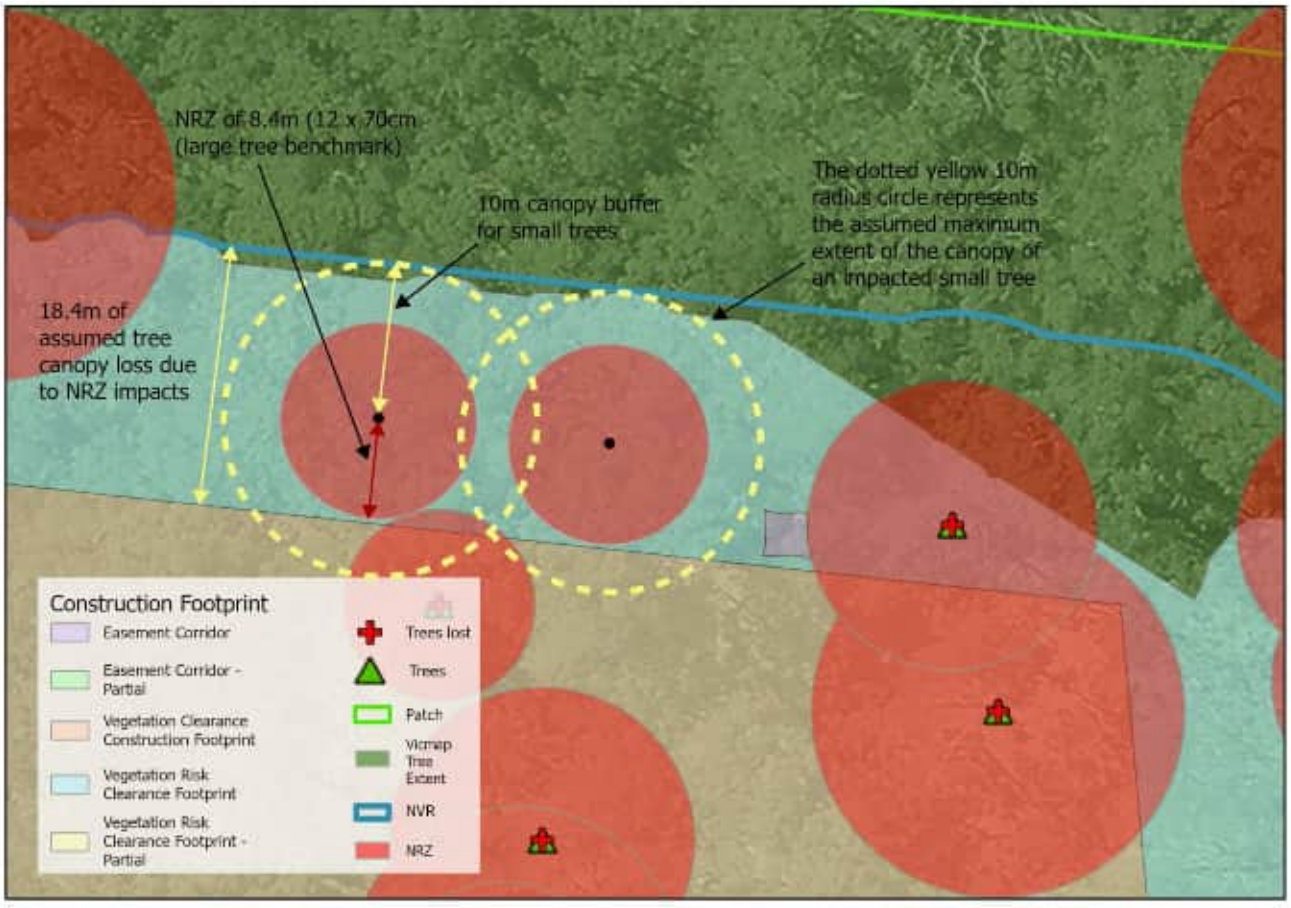
1. Assume the trunk of a row of small trees is positioned the maximum NRZ for a small tree from the outer edge of the VCCF. In the example in Figure 2-4 below the NRZ is 8.4m.

2. Apply a 10m buffer at this location to account for the canopy of the row of small trees.

[5] It is highly conservative to assume that trees of this exact size are located at this exact point. The method also does not account for trees having <10% NRZ impact. Hence these assumptions provide a worst-case scenario to identify the potential location of trees deemed lost due to NRZ impacts.

3. Overlay this 10m buffer with the Vicmap Tree Extent layer, and only retain areas where there is an overlap, i.e. canopy is present (in the example below the entirely of the buffer overlays the Vicmap Tree Extent layer).

The distance from Step 1 (8.4m) plus the 10m buffer from Step 3 add together to equal the additional extent of native vegetation (18.4m) included in the NVR layer as 1.6m of the 10m buffer overlaps with the VCCF (and any native vegetation that overlaps with the VCCF is already included in the NVR layer as a direct impact).



This figure shows the assumed location of small trees in a field mapped patch of native vegetation. As the large trees have been individually mapped and are shown in the figure, the worst-case assumption is made that elsewhere the canopy of the patch is due to an impacted row of small trees (note only two small trees in patches are shown, black dots) that have a DSH on the cusp of the relevant large tree benchmark, and are located the radius (8.4m in the example) of the associated NRZ from the VCCF. From this location a 10m buffer is applied to represent the extent of the canopy of the hypothetical row of trees. The mapping of the extent of native vegetation removal (NVR, the blue line in figure) is expanded to this distance where it overlaps with the canopy shown in the Vicmap Tree Extent layer (which in this case is all of the buffered area).

Figure 2-4. Mapping NRZ impacts for tree canopy within fieldwork mapped patches of native vegetation

3. Trees in modelled patches

For modelled patches that contain canopy, because they have not been assessed during field survey at all and hence the large trees have not been mapped, the worst-case assumption is that there is a row of large trees located the maximum NRZ extent (15m) from the VCCF. As this is the distance at which trees would no longer have their NRZ impacted by the VCCF, it is guaranteed there are no trees further away from the VCCF that can be impacted and need to be mapped in the NVR layer[6].

As these trees are large, a buffer of 15m from their assumed trunk location was applied. The portions in which this buffer overlapped with canopy as per the Vicmap Tree Extent layer (DTP 2022) are included in the NVR layer.

The steps taken to calculate the extent of impact included in the NVR layer are summarised as follows (see Figure 2-5 below):

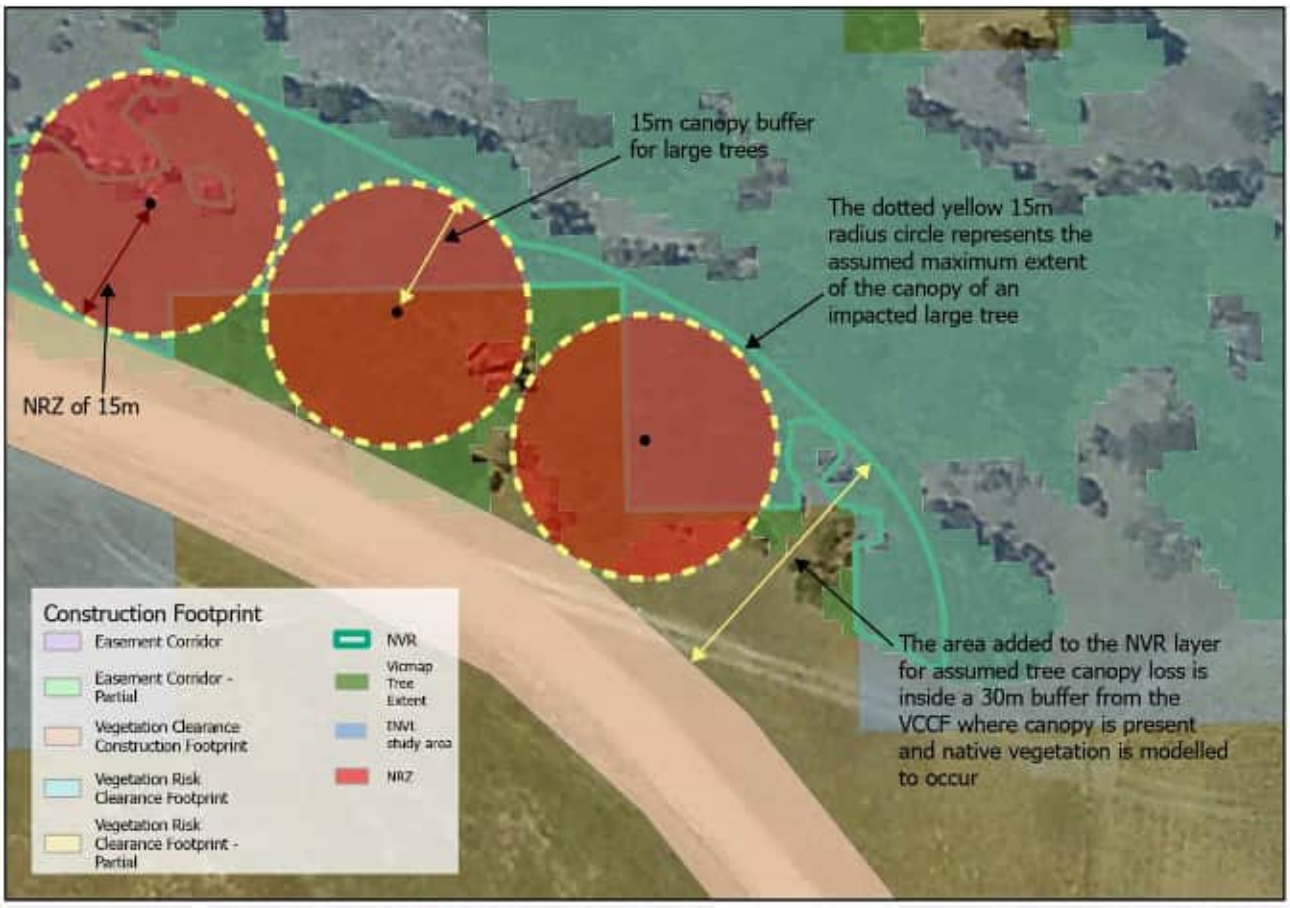
1. Assume the trunks of a row of large trees are positioned the maximum NRZ from the outer edge of the VCCF, this is 15m.

2. Apply a 15m buffer at this location to account for the canopy of the row of large trees.

3. Overlay this 15m buffer with the Vicmap Tree Extent layer and the INVL (which models the extent of native vegetation across the study area) only retain areas where there is an overlap, i.e. canopy and native vegetation is present.

4. The diameter of the canopy (30m) is the maximum additional extent of indirect native vegetation impact included in the NVR layer.

[6] It is highly conservative to assume that trees of this exact size are located at this exact point. The method also does not account for trees having <10% NRZ impact. Hence these assumptions provide a worst-case scenario to identify the potential location of trees deemed lost due to NRZ impacts.



This figure shows the hypothetical, but possible, location of trees in a modelled patch of native vegetation. The worst-case hypothetical assumption is that the canopy of the patch is due to a row of impacted trees (only three hypothetical trees are shown) that have a NRZ with a radius of 15m, and they are also located 15m from the VCCF. This equates to a 30m buffer applied to the VCCF and the mapping of the extent of native vegetation removal (NVR; and blue line in figure) is expanded to this distance where it overlaps with the occurrence of modelled native vegetation and the canopy shown in the Vicmap Tree Extent layer.

Figure 2-5. Mapping NRZ impacts for tree canopy within modelled patches of native vegetation

This assessment of NRZ impacts as described above is conservative due to the limited data currently available. As fieldwork progresses the reliance on modelled data will be reduced. AusNet may take the opportunity to conduct an arborist assessment to determine final tree impacts and associated extent of tree canopy loss in association with EPR BD1. Both processes are likely to reduce the extent of tree canopy loss conservatively calculated for the purposes of this BD1 Report.

3. Impact Assessment

This section provides an assessment of impacts based on the additional survey information and process adopted as described in the method section. This section also compares the impacts against what was assessed in Section 9 of the Biodiversity IA.

3.1 Impacts to Matters of National Environmental Significance

3.1.1 Threatened ecological communities

3.1.1.1 Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia

Proposed impacts

A total of 7.56ha of Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia may be impacted by the Project (Table 3-1). This includes 6.12ha of confirmed extent and 1.43ha of potential extent in areas yet to be surveyed. There is a low likelihood that these areas support the TEC (as per Table 6-6 of the Biodiversity IA), however field survey is required to confirm it is absent from these areas. As such, under a precautionary approach, a total impact of 7.56ha has been assessed for the Project. This is a reduction of 9.05ha from 16.61ha assumed to be impacted in the Biodiversity IA. The reductions in impacts are due to the inclusion of no-go zones and the progression of fieldwork resulting in bigger reductions than the addition of NRZ impacts.

Table 3-1. Summary of Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derive Native Grasslands of South-eastern Australia TEC habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha) – Low likelihood of occurrence	Total impacts
Vegetation Clearance Construction Footprint	Yes	1.09	0.56	**1.64**
Vegetation Risk Clearance Footprint	Yes	1.62	0	**1.62**
Vegetation Risk Clearance Footprint – partial clearance	Yes	2.41	0	**2.41**
Easement Corridor Construction Footprint	Yes	0.27	0.01	**0.28**
Easement Corridor – partial clearance	Yes	0.47	0	**0.47**
Canopy and NRZ impacts associated with VCCF	Yes	0.27	0.87	**1.14**
BD1 Report Totals		**6.12 (6.12 impacted)**	**1.43 (1.43 impacted)**	**7.56**
Biodiversity IA totals		**6.79 (6.79 impacted)**	**9.82 (9.82 impacted)**	**16.61**
Difference in impacts		**0.67 decrease**	**8.39 decrease**	**9.05 decrease**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation layer in areas not yet surveyed.

Significance of Impacts

The Biodiversity IA determined that a significant impact is likely, based on an impact to 16.61ha (6.79ha field mapped and 9.82ha modelled). This BD1 Report identifies an impact of 7.56ha which includes a slight reduction

(0.67ha) in field mapped extent and a substantial reduction (8.39ha) in modelled extent of the impacts to this TEC. While the extent of the impacts assessed in this BD1 Report are reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is likely.

3.1.1.2 Natural Temperate Grassland of the Victorian Volcanic Plain

Proposed impacts

A total of 5.58ha of Natural Temperate Grassland of the Victorian Volcanic Plain may be impacted (Table 3-2) by the Project. This includes 5.00ha of confirmed extent and 0.58ha of potential extent in areas yet to be surveyed. Desktop review indicates there is a low likelihood that these areas support the TEC, however field survey is required to confirm it is absent from these areas. As such, under a precautionary approach, a total impact of 5.58ha has been considered for the Project. This is a small increase of 0.21 from 5.37ha assumed to be impacted as reported in the Biodiversity IA.

Impacts to this community in the Biodiversity IA were limited to unavoidable impacts associated with construction of tower structures and access tracks within the Vegetation Clearance Construction Footprint. However, with the inclusion of no-go zones in this BD1 Report, the areas of the Easement Corridor Construction Footprint confirmed to contain this TEC that are not included in no-go zones have now been considered impacted as these are required to access adjacent areas for vegetation risk clearance. This has resulted in an increase in impacts to the confirmed extent for this TEC in this BD1 Report compared with the Biodiversity IA. Fieldwork progression has resulted in a decrease in impacts to areas of potential extent. Impacts associated with potential habitat in areas of canopy and NRZs impact have not been included for this community due to it generally not containing trees.

Table 3-2. Summary of Natural Temperate Grassland of the VVP TEC habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha) – low likelihood of occurrence	Total impacts
Vegetation Clearance Construction Footprint	Yes	4.53	0.58	**5.11**
Vegetation Risk Clearance Footprint	Yes	0.24	0	**0.24**
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	**0**
Easement Corridor Construction Footprint	Yes	0.23	0	**0.23**
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	**0**
Canopy and NRZ impacts associated with VCCF	No	0	0.07	**0**
BD1 Report Totals		**5.00 (5.00 impacted)**	**0.66 (0.58 impacted)**	**5.58**
Biodiversity IA totals		**24.03 (4.47 impacted)**	**1.66 (0.90 impacted)**	**5.37**
Difference in impacts		**0.53 increase**	**0.32 decrease**	**0.21 increase**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation layer in areas not yet surveyed.

Significance of Impacts

The Biodiversity IA determined that a significant impact is likely, based on impact to 5.37ha (4.47ha field mapped and 0.90ha modelled). This BD1 Report identifies an impact of 5.58ha which includes a slight increase (0.53ha) in field mapped extent and a slight reduction (0.32ha) in modelled extent of the impacts to this TEC, leading to a net increase of 0.21ha. While the extent of the impacts assessed in this BD1 Report are increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is likely.

3.1.1.3 White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

Proposed impacts

A worst-case scenario of 5.00ha of impact to White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland was identified in the Biodiversity IA. This did not include any field mapped TEC but was determined considering the extent of unsurveyed habitat (i.e. modelled EVC equivalents) and the potential for these areas to support the TEC. This BD1 Report has identified 0.81ha of confirmed extent of TEC will be impacted and the impacted potential habitat that is yet to be surveyed is 5.24ha (Table 3-3). This is a reduction from the 17.00ha of impact to potential habitat identified in the Biodiversity IA. Desktop and preliminary survey identifies only a small portion, if any, of the 5.24ha of unsurveyed potential habitat is likely to support the TEC and the identification of 5.00ha as a worst-case impact as detailed in the Biodiversity IA is consistent with the findings of this BD1 Report.

Table 3-3. Summary of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential habitat (ha) – low likelihood of occurrence	Total impacts
Vegetation Clearance Construction Footprint	Yes	0.47	1.78	**2.25**
Vegetation Risk Clearance Footprint	Yes	0.09	1.13	**1.23**
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	**0**
Easement Corridor Construction Footprint	Yes	0.04	0.16	**0.20**
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	**0**
Canopy and NRZ impacts associated with VCCF	Yes	0.20	2.16	**2.36**
BD1 Report Totals		**0.81 (0.81 impacted)**	**5.24 (5.24 impacted)**	**6.04 (worst-case of 5.00ha of TEC impacted)**
Biodiversity IA totals		**0.00**	**17.00 (worst-case of 5.00ha of TEC impacted)**	**17.00 (worst-case of 5.00ha of TEC impacted)**
Difference in impacts		**0.81 increase**	**11.76 decrease**	**10.96 (No change in worst-case)**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential habitat is the extent of modelled EVC equivalent from the Integrated Native Vegetation Layer in areas not yet surveyed. Desktop review and field knowledge from completed survey shows that up to 5ha of the Construction Footprint qualifying as the TEC is worst-case scenario.

Significance of Impacts

The Biodiversity IA determined that a significant impact was possible based on the assumption that up to 5ha of the TEC may be impacted. Within the Biodiversity IA, 17.00ha of potential habitat occurred within the Construction Footprint and as the TEC had not been recorded following survey of 145ha of potential habitat it was estimated that no more than 5.00ha of this 17.00ha was likely to qualify as the TEC , as such 5.00ha was used as a credible worst-case area of impact to determine potential offset requirements. In this BD1 Report the extent of potential habitat in the Construction Footprint has been reduced to 5.24ha and additional field survey has resulted in a confirmed extent of the TEC in the Construction Footprint of 0.81ha.

While field assessments have now confirmed the presence of this TEC and the extent of potential habitat impacted has significantly reduced, the significance of impacts as reported in the Biodiversity IA remain consistent with the findings of this BD1 Report, and 5.00ha continues to be considered the credible worst-case to determine potential offset requirements, and a significant impact is possible.

3.1.2 Threatened flora

3.1.2.1 Matted Flax-lily (*Dianella amoena*)

Proposed impacts

No Matted Flax-lily individuals have been recorded within the Project Area to date and hence none are currently proposed to be impacted. A total of 15.88ha of modelled potential habitat is anticipated to be impacted in areas yet to be surveyed (Table 3-4 and Appendix A.2). This is a reduction of 24.37ha from 40.25ha assumed to be impacted in the Biodiversity IA.

Table 3-4. Summary of Matted Flax-lily individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted[7]	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	7.68
Vegetation Risk Clearance Footprint	100	0	7.19
Vegetation Risk Clearance Footprint – partial clearance	50	0	0
Easement Corridor Construction Footprint	100	0	1.01
Easement Corridor Construction Footprint – partial clearance	50	0	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**0**	**15.88**
Biodiversity IA totals		**0**	**40.25**
Difference in impacts		**No change**	**24.37 decrease**

The Native Vegetation Removal Report (NVRR) indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Matted Flax-lily as a result of the Project is 0.0059, and therefore the Project will require species offsets under the state Guidelines (Section 4.2 and Appendix B).

[7] An estimation of 50 per cent of individuals impacted has been used within areas of partial clearance for midstorey and groundstorey species.

Significance of Impacts

The Biodiversity IA determined that a significant impact is unlikely, based on the limited potential for the species to occur in the 40.25ha of modelled potential habitat identified to be impacted (at that stage) and the likely opportunity to microsite and avoid it should the species be present. This BD1 Report identifies an impact of 15.88ha to modelled potential habitat which is a substantial reduction of 24.37ha from the 40.25ha reported in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report are reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.2.2 Small Golden Moth Orchid (*Diuris basaltica*)

Proposed impacts

A total of 0.71ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-5 and Appendix A.2). This is a reduction of 0.29ha from 1ha assumed to be impacted in the Biodiversity IA.

Table 3-5. Summary of Small Golden Moth Orchid individuals / habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	0.66
Vegetation Risk Clearance Footprint	100	0	0.05
Vegetation Risk Clearance Footprint – partial clearance	50	0	0
Easement Corridor Construction Footprint	100	0	0
Easement Corridor Construction Footprint – partial clearance	50	0	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**0**	**0.71**
Biodiversity IA totals		**0**	**1**
Difference in impacts		**No change**	**0.29 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Small Golden Moth Orchid as a result of the Project is 0.0076, and therefore the Project will require species offsets under the state Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA determined that a significant impact is unlikely, due to the degraded nature of the 1ha of modelled potential habitat identified in the Biodiversity IA. This BD1 Report identifies an impact of 0.71ha occurs which includes a slight reduction (0.29ha) in modelled potential habitat impacts to this species. The impacted modelled potential habitat is of degraded quality and unlikely to support the species. In the highly unlikely occurrence that the species is identified within the Construction Footprint, given its small size and likely small population, micro-siting would be able to avoid impacts.

While the extent of the impacts assessed in this BD1 Report are reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.2.3 Swamp Fireweed (*Senecio psilocarpus*)

Proposed impacts

A total of 2.05ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-6. and Appendix A.2). This is a reduction of 2.06ha from 4.11ha assumed to be impacted in the Biodiversity IA.

Table 3-6. Summary of Swamp Fireweed individuals / habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	1.53
Vegetation Risk Clearance Footprint	100	0	0.48
Vegetation Risk Clearance Footprint – partial clearance	50	0	0
Easement Corridor Construction Footprint	100	0	0.04
Easement Corridor Construction Footprint – partial clearance	50	0	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**0**	**2.05**
Biodiversity IA totals		**0**	**4.11**
Difference in impacts		**No change**	**2.06 decrease**

Swamp Fireweed is not listed within the NVRR. The Project will not require species offsets under the state Guidelines.

Significance of Impacts

The Biodiversity IA determined that a significant impact is unlikely, based on impact to 4.11ha of modelled potential habitat. The considerations around this determination included the lack of high-quality habitat (i.e. high-quality herb-rich wetlands) and unlikely need to impact wetland habitat given these are unsuitable locations for towers and the species is unlikely to occur in areas requiring line clearance or fuel reduction activities. This BD1 Report identifies an impact of 2.05ha to modelled potential habitat, which includes a substantial reduction of 2.06ha from the 4.11ha identified in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report are reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3 Threatened fauna

3.1.3.1 Golden Sun Moth (*Synemon plana*)

Proposed impacts

A total of 21.48ha of field mapped Golden Sun Moth habitat comprising of 30 areas across the Construction Footprint may be impacted due to ground disturbance activities required for the Project. This is an increase of 0.48ha from the 21ha identified in the Biodiversity IA, primarily due to patch boundary refinement and a small new patch recorded during recent fieldwork. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily grassland habitat it is presumed fuel reduction activities associated with the Project (i.e., Vegetation Risk Clearance Footprint, Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF) will not impact habitat for the species, as outlined in Table 3-7. below. Impacts have remained relatively consistent with impacts presented within the Biodiversity IA.

Table 3-7. Summary of Golden Sun Moth habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species habitat	*Confirmed habitat (ha)	*Potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	9.71	11.77	**21.48**
Vegetation Risk Clearance Footprint	No	1.54	2.18	**0**
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	**0**
Easement Corridor Construction Footprint	No	0.77	0.74	**0**
Easement Corridor Construction Footprint – partial clearance	No	0	0	**0**
Canopy and NRZ impacts associated with VCCF	No	0.26	0.16	**0**
BD1 Report Totals		**12.28 (9.71 impacted)**	**27.14 (11.77 impacted)**	**21.48**
Biodiversity IA totals		**27.31 (9.71 impacted)**	**49.57 (11.29 impacted)**	**21.00**
Difference in impacts		**No change**	**0.48 increase**	**0.48 increase**

*Confirmed habitat is where the species was recorded (though opportunistic observation as no targeted surveys were undertaken). Potential habitat was initially mapped in the desktop and preliminary assessment and all these areas were assessed during general field survey to confirm habitat attributes. Hence, it is considered likely that all potential habitat has been identified and while, it is possible that habitat not readily identifiable from the desktop/preliminary assessment may occur on inaccessible properties these areas are expected to be small and contain marginal habitat.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Golden Sun Moth as a result of the Project is 0.0055, and therefore the Project will require species offsets under the state Guidelines (Section 4.2 and Appendix B).

Significance of impacts

The Biodiversity IA determined that a significant impact is possible due to Proposed impacts (reduction in size and area of occupancy) to an important population. This conclusion was based on impact to 21.00ha (9.71ha

confirmed habitat and 11.29ha potential habitat). This BD1 Report identifies an impact of a 21.48ha, which includes a slight increase of 0.48ha in potential habitat impacted.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is possible.

3.1.3.2 Growling Grass Frog (*Litoria raniformis*)

Proposed impacts

Growling Grass Frog were not directly recorded within the Project Area during fieldwork, however eDNA survey in 2025 recorded the species at Goodmans Creek in habitat previously mapped as potential habitat (now mapped as confirmed). A total of 0.66ha of potential habitat may be impacted by the Project (Table 3-8.), this is a reduction of 0.08ha compared to the Biodiversity IA.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by the Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily aquatic areas and nearby grassy habitat, it is presumed that minimum clearance requirements and fuel reduction activities associated with the Project (i.e. Vegetation Risk Clearance Footprint, Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF) will not impact habitat for the species.

Table 3-8. Summary of Growling Grass Frog habitat within the Construction Footprint and associated impacts

Impact area (Construction Footprint)	Impacts affect species habitat	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0	0.02	0.64	**0.66**
Vegetation Risk Clearance Footprint	No	0.07	0.11	0.72	**0**
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0	**0**
Easement Corridor Construction Footprint	No	0.02	0.04	0.11	**0**
Easement Corridor Construction Footprint – partial clearance	No	0	0	0	**0**
Canopy and NRZ impacts associated with VCCF	No	0	0.02	0.10	**0**
BD1 Report Totals		**0.01 (0.00 impacted)**	**0.19 (0.02 impacted)**	**1.57 (0.64 impacted)**	**0.66**
Biodiversity IA totals		**0.00 (0.00 impacted)**	**2.97 (0.02 impacted)**	**6.50 (0.72 impacted)**	**0.74**
Difference in impacts		**No change**	**No change**	**0.08 decrease**	**0.08 decrease**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys and/or eDNA surveys. Field mapped potential habitat is habitat that the species may potentially use (habitat suitability confirmed during general surveys) but has not been recorded in during targeted survey. Desktop mapped potential habitat is potential habitat mapped from desktop on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Growling Grass Frog as a result of the Project is 0.0005, and therefore the Project will not require species offsets under the state Guidelines (Appendix B).

Significance of Impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (0.74ha) are generally small and discrete in nature, located within much larger areas of potential habitat. Furthermore, the majority of potential aquatic habitat recorded is avoided and protected by the Project through EPR BD4. This BD1 Report identifies an impact of 0.66ha which includes a slight reduction of 0.08ha of desktop mapped potential habitat.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.3 Gang-gang Cockatoo (*Callocephalon fimbriatum*)

Proposed impacts

A total of 43.05ha of field mapped (32.55ha) and desktop mapped (10.50ha) potential habitat for Gang-gang Cockatoo may be impacted by the Project, as outlined in Table 3-9 below. This is an increase of 9.63ha from the 33.42ha of potential habitat identified to be impacted in the Biodiversity IA. The increase is predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF (associated with access tracks). Areas of impacted habitat are shown Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with the VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-9. Summary to Gang-Gang Cockatoo habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	**Impacts affect species habitat**	***Field mapped potential breeding habitat (ha)**	***Field mapped potential foraging habitat (ha)**	***Desktop mapped potential breeding habitat (ha)**	***Desktop mapped potential foraging habitat (ha)**	**Total impacts**
Vegetation Clearance Construction Footprint	Yes	0.15	6.99	0	1.34	**8.48**
Vegetation Risk Clearance Footprint	Yes	1.61	16.45	0	3.72	**21.79**
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	2.50	0	0	**2.50**
Easement Corridor Construction Footprint	No	0.13	0.09	0	0.27	**0**
Easement Corridor Construction Footprint – partial clearance	No	0	0.44	0	0.00	**0**
Canopy and NRZ impacts associated with VCCF	Yes	0.09	4.75	0	5.44	**10.28**
BD1 Report Totals		**1.98 (1.85 impacted)**	**32.03 (30.70 impacted)**	**0**	**10.77 (10.50 impacted)**	**43.05**
Biodiversity IA totals		**1.95 (1.76 impacted)**	**26.53 (24.91 impacted)**	**0**	**8.39 (6.75 impacted)**	**33.42**

Impact area (Construction Footprint)	Impacts affect species habitat	*Field mapped potential breeding habitat (ha)	*Field mapped potential foraging habitat (ha)	*Desktop mapped potential breeding habitat (ha)	*Desktop mapped potential foraging habitat (ha)	Total impacts
Difference in impacts		**0.09 increase**	**5.79 increase**	**No change**	**3.75 increase**	**9.63 increase**

*Field mapped potential habitat is habitat (breeding and foraging) that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

Gang-gang Cockatoo is not listed within the NVRR and therefore, the Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (33.42ha) to potential habitat were considered unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area (0.025 per cent of 134,144ha). This BD1 Report identifies an impact of 44ha which includes an increase of 9.63ha from the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. This additional 9.63ha is a conservative estimate and the actual loss is likely to be substantially less. They will occur adjacent to, and in conjunction with, areas of impact in the VCCF and for the majority of instances the loss of canopy in these areas will be replaced over time as this land will generally not be used for the Project and often the trees themselves will not be removed by the Project. Given this, while there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts means the magnitude of the impact has not significantly changed.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.4 Brown Treecreeper (south-eastern) (*Climacteris picumnus victoriae*)

Proposed impacts

A total of 86.96ha of field mapped (75.45ha) and desktop mapped (11.51ha) potential habitat for Brown Treecreeper is proposed for impacts, as outlined in Table 3-10. below. This is an increase of 17.70ha of potential habitat impacted from the 69.26ha identified in the Biodiversity IA. The increase is predominantly due to the inclusion of Canopy and NRZ impacts associated with the VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches, it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with the VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-10. Summary to Brown Treecreeper habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect species habitat	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	16.43	0.73	**17.16**

Impact area (Construction Footprint)	Impacts affect species habitat	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Risk Clearance Footprint	Yes	47.02	1.06	**48.08**
Vegetation Risk Clearance Footprint – partial clearance	Yes	3.44	0	**3.44**
Easement Corridor Construction Footprint	No	5.01	0.14	**0**
Easement Corridor Construction Footprint – partial clearance	No	0.63	0.00	**0**
Canopy and NRZ impacts associated with VCCF	Yes	8.56	9.72	**18.28**
BD1 Report Totals		**81.09 (75.45 impacted)**	**11.65 (11.51 impacted)**	**86.96**
Biodiversity IA totals		**74.57 (62.31 impacted)**	**8.78 (6.95 impacted)**	**69.26**
Difference in impacts		**13.14 increase**	**4.56 increase**	**17.70 increase**

*Field mapped potential habitat is habitat that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

Brown Treecreeper is not listed within the NVRR and therefore the Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impact to 69.26ha was considered unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area (0.023 per cent of 307,317ha). This BD1 Report identifies an impact of 86.96ha which includes an increase of 17.70ha from the 42.05ha identified in the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with the VCCF. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts results in the magnitude of the impact not significantly changing from that detailed in Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.5 Painted Honeyeater (*Grantiella picta*)

Proposed impacts

A total of 58.12ha of field mapped (46.23ha) and desktop mapped (11.89ha) potential habitat for Painted Honeyeater is proposed for impacts, as outlined in Table 3-11. below. This in an increase of 16.07ha of potential habitat impacted from the 42.05ha identified in the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-11. Summary of Painted Honeyeater habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect species habitat	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	9.72	1.08	**10.80**
Vegetation Risk Clearance Footprint	Yes	28.57	0.93	**29.50**
Vegetation Risk Clearance Footprint – partial clearance	Yes	3.13	0	**3.13**
Easement Corridor Construction Footprint	No	3.58	0.13	**0**
Easement Corridor Construction Footprint – partial clearance	No	0.63	0.00	**0**
Canopy and NRZ impacts associated with VCCF	Yes	4.81	9.88	**14.69**
BD1 Report Totals		**50.44 (46.23 impacted)**	**12.02 (11.89 impacted)**	**58.12**
Biodiversity IA totals		**45.54 (37.79 impacted)**	**6.19 (4.26 impacted)**	**42.05**
Difference in impacts		**8.44 increase**	**7.63 increase**	**16.07 increase**

*Field mapped potential habitat is habitat that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Painted Honeyeater as a result of the Project is 0.0021, and therefore the Project will not require species offsets under the state Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (42.05ha) were considered unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area (0.04 per cent of 104,587ha). This BD1 Report identifies an impact of 58.12ha which includes an increase of 16.07ha, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with the VCCF. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts results in the magnitude of the impact not significantly changing from that detailed in the Biodiversity IA. While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.6 Swift Parrot (*Lathamus discolor*)

Proposed impacts

A total of 32.88ha of field mapped (29.10ha) and desktop mapped (3.78ha) potential habitat for Swift Parrot is proposed for impacts, as outlined in Table 3-12.. This is an increase in 14.66ha from the 18.22ha of potential habitat identified to be impacted in the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with the VCCF, but also due to smaller increases associated with other components of the Construction Footprint. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore

vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-12. Summary of Swift Parrot habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect species habitat	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	5.91	0.48	**6.38**
Vegetation Risk Clearance Footprint	Yes	13.57	1.34	**14.91**
Vegetation Risk Clearance Footprint – partial clearance	Yes	2.96	0	**2.96**
Easement Corridor Construction Footprint	No	1.50	0.13	**0**
Easement Corridor Construction Footprint – partial clearance	No	0.62	0.00	**0**
Canopy and NRZ impacts associated with VCCF	Yes	6.66	1.96	**8.62**
BD1 Report Totals		**31.22 (29.10 impacted)**	**3.92 (3.78 impacted)**	**32.88**
Biodiversity IA totals		**19.17 (16.89 impacted)**	**1.57 (1.33 impacted)**	**18.22**
Difference in impacts		**12.21 increase**	**2.45 increase**	**14.66 increase**

*Field mapped potential habitat is habitat that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Swift Parrot as a result of the Project is 0.0014, and therefore the Project will not require species offsets under the state Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (18.22ha) to potential habitat were mostly limited to smaller marginal foraging habitat areas with the species considered likely to utilise larger and higher quality intact eucalypt woodland in the surrounding area. This BD1 Report identifies an impact to potential habitat of 32.88ha which is an increase of 14.66ha compared to the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with the VCCF, but also due to smaller increases associated with other components of the Construction Footprint. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, generally consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts results in the magnitude of the impact across the landscape and for the species not significantly changing from that detailed in Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.7 Hooded Robin (south-eastern) (*Melanodryas cucullata*)

Proposed impacts

A total of 48.43ha of field mapped (39.03ha) and desktop mapped (9.40ha) potential habitat for Hooded Robin is proposed for impacts, as outlined in Table 3-13. below. This is an increase in 13.60ha from the 34.83ha identified in the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance fuel reduction activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-13. Summary of Hooded Robin habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect species habitat	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	7.34	2.36	**9.70**
Vegetation Risk Clearance Footprint	Yes	26.73	0.90	**27.63**
Vegetation Risk Clearance Footprint – partial clearance	Yes	0.87	0	**0.87**
Easement Corridor Construction Footprint	No	3.05	0.15	**3.20**
Easement Corridor Construction Footprint – partial clearance	No	0.12	0.00	**0.12**
Canopy and NRZ impacts associated with VCCF	Yes	4.09	6.14	**10.23**
BD1 Report Totals		**42.21 (39.03 impacted)**	**9.55 (9.40 impacted)**	**48.43**
Biodiversity IA totals		**38.81 (31.69 impacted)**	**8.37 (3.14 impacted)**	**34.83**
Difference in impacts		**7.34 increase**	**6.26 increase**	**13.60 increase**

*Field mapped potential habitat is habitat that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

Hooded Robin is not listed within the NVRR. The Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (34.83ha) are unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area (0.036 per cent of 97,552ha). This BD1 Report identifies an impact of 48.43ha which includes an increase of 13.60ha compared to the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with the VCCF. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, generally consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts results in the magnitude of the impact across the landscape and for the species not significantly changing from that detailed in Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.8 Blue-winged Parrot (*Neophema chrysostoma*)

Proposed impacts

A total of 143.58ha of field mapped (105.92ha) and desktop mapped (37.66ha) potential habitat for Blue-winged Parrot may be impacted by the Project , as outlined in Table 3-14. This is an increase in 34.71ha of

impacts to potential habitat from the 108.87ha identified in the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with VCCF. It is presumed that (treed) vegetation greater than 3m (considered treed habitat for the species) that will be impacted high has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-14. Summary to Blue-winged Parrot habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	**Impacts affect species habitat**	***Field mapped potential breeding habitat (ha)**	***Field mapped potential foraging habitat (ha)**	***Desktop mapped potential breeding habitat (ha)**	***Desktop mapped potential foraging habitat (ha)**	**Total impacts**
Vegetation Clearance Construction Footprint	Yes	15.37	25.80	1.69	9.75	**52.61**
Vegetation Risk Clearance Footprint	Yes	48.86	3.75	4.74	3.56	**60.91**
Vegetation Risk Clearance Footprint – partial clearance	Yes	3.43	0.09	0	0	**3.52**
Easement Corridor Construction Footprint	No	4.81	1.57	0.48	10.17	**0**
Easement Corridor Construction Footprint – partial clearance	No	0.63	0.02	0	0	**0**
Canopy and NRZ impacts associated with VCCF	Yes	8.35	0.26	10.46	7.46	**26.54**
BD1 Report Totals		**81.45 (76.01 impacted)**	**31.50 (29.91 impacted)**	**17.37 (16.89 impacted)**	**30.94 (20.77 impacted)**	**143.58**
Biodiversity IA totals		**100.22 (61.94 impacted)**	**83.54 (24.2 impacted)**	**9.54 (7.61 impacted)**	**49.89 (15.03 impacted)**	**108.87**
Difference in impacts		**14.07 increase**	**5.71 increase**	**9.28 increase**	**5.74 increase**	**34.71 increase**

*Field mapped potential habitat is habitat (breeding and foraging) that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

Blue-winged Parrot is not listed within the NVRR and therefore the Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (108.87ha) are unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area (0.035 per cent of 314,029). This BD1 Report identifies an impact of 143.58ha to potential habitat which includes an increase of 34.71ha compared to the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, generally consistent location with impacts previously assessed and

conservative method in determining NRZ and canopy impacts results in the magnitude of the impact across the landscape and for the species not significantly changing from that detailed in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.9 Diamond Firetail (*Stagonopleura guttata*)

Proposed impacts

A total of 74.18ha of field mapped (63.60ha) and desktop mapped (10.58ha) potential habitat for Diamond Firetail may be impacted by the Project, as outlined in Table 3-15 below. This is an increase in 17.58ha of impact to potential habitat from the 56.60ha identified in the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-15. Summary of Diamond Firetail habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species habitat	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	15.19	1.21	**16.39**
Vegetation Risk Clearance Footprint	Yes	37.13	0.32	**37.45**
Vegetation Risk Clearance Footprint – partial clearance	Yes	3.35	0	**3.35**
Easement Corridor Construction Footprint	No	3.62	0.07	**0**
Easement Corridor Construction Footprint – partial clearance	No	0.62	0	**0**
Canopy and NRZ impacts associated with VCCF	Yes	7.95	9.04	**16.99**
BD1 Report Totals		**67.84 (63.60 impacted)**	**10.64 (10.58 impacted)**	**74.18**
Biodiversity IA totals		**62.54 (52.92 impacted)**	**4.63 (3.68 impacted)**	**56.60**
Difference in impacts		**10.68 increase**	**6.90 increase**	**17.58 increase**

*Field mapped potential habitat is habitat that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

Diamond Firetail is not listed within the NVRR and therefore the Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (56.60ha) are unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area

(0.037 per cent of 153,916ha). This BD1 Report identifies an impact of 74.18ha which includes an increased impact to potential habitat of 17.58ha compared to the Biodiversity IA, predominantly due to the inclusion of Canopy and NRZ impacts associated with VCCF. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, generally consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts, results in the magnitude of the impact across the landscape and for the species not significantly changing from that detailed in Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.10 Southern Greater Glider (*Petauroides volans*)

Proposed impacts

Southern Greater Glider has not been recorded during survey for the Project. However, a total of 13.71ha of field mapped potential habitat for the species may be impacted, as outlined in Table 3-16. This is an increase of 1.65ha from the 12.06ha of potential habitat impacted identified in the Biodiversity IA. Impacts have increased due to the inclusion of Canopy and NRZ impacts. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-16. Summary of Southern Greater Glider habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species habitat	*Confirmed habitat	*Potential field mapped habitat (ha)	Total Impacts
Vegetation Clearance Construction Footprint	Yes	0	3.00	**3.00**
Vegetation Risk Clearance Footprint	Yes	0	8.79	**8.79**
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0.30	**0.30**
Easement Corridor Construction Footprint	No	0	0.06	**0**
Easement Corridor Construction Footprint – partial clearance	No	0	0	**0**
Canopy and NRZ impacts associated with VCCF	Yes	0	1.62	**1.62**
BD1 Report Totals		**0**	**13.78 (13.71 impacted)**	**13.71**
Biodiversity IA totals		**0**	**12.29 (12.06 impacted)**	**12.06**
Difference in impacts		**No change**	**1.65 increase**	**1.65 increase**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Potential field mapped habitat was initially mapped in the desktop and preliminary assessment and all these areas were assessed during general field survey to confirm habitat attributes. Targeted survey took place on these areas but did not record the species. Hence it is considered all potential habitat has been identified and unlikely for additional habitat to occur on inaccessible properties.

Southern Greater Glider is not listed within the NVRR and therefore the Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is possible. Impacts (12.06ha) are unlikely to cause a notable reduction in the extent of potential habitat compared to the extent of habitat in the wider study area (0.029 per cent of 42,030ha). However, the cleared Easement Corridor Construction Footprint may contribute to fragmentation of habitat and adversely affect habitat critical to the survival of the species. This BD1 Report identifies an impact of 13.71ha which includes an increase of 1.65ha due to the inclusion of Canopy and NRZ impacts associated with VCCF. These are impacts that extend beyond the Easement Corridor Construction Footprint due to ground disturbance activities such as track construction impacting the roots of trees. It is likely that while this will result in a reduction in canopy in these areas, over time this canopy will be replaced with new trees or adjacent trees that fill this space.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is possible.

3.1.3.11 Grey-headed Flying-fox (*Pteropus poliocephalus*)

Proposed impacts

Grey-headed Flying-fox camps have not been recorded within the Project Land. A total of 17.66ha of potential foraging habitat may be impacted, as outlined in Table 3-17. This is an increase of 7.49ha from the 10.17ha of potential foraging habitat identified to be impacted in the Biodiversity IA, due to the inclusion of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint as well as the Vegetation Risk Clearance Footprint and the Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-17. Summary of Grey-headed Flying-fox habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species habitat	*Potential foraging habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	1.69	**1.69**
Vegetation Risk Clearance Footprint	Yes	5.69	**5.69**
Vegetation Risk Clearance Footprint – partial clearance	Yes	2.13	**2.13**
Easement Corridor Construction Footprint	No	0.23	**0**
Easement Corridor Construction Footprint – partial clearance	No	0.16	**0**
Canopy and NRZ impacts associated with VCCF	Yes	8.16	**8.16**
BD1 Report Totals		**18.05 (17.66 impacted)**	**17.66**
Biodiversity IA totals		**11.27 (10.17 impacted)**	**10.17**
Difference in impacts		**7.49 increase**	**7.49 increase**

*Potential foraging habitat is mapped using vegetation data collected during field assessments (and modelled data for inaccessible properties) in relation to recorded species camps.

Grey-headed Flying-fox is not listed within the NVRR and therefore the Project will not require species offsets under the state Guidelines.

Significance of impacts

The Biodiversity IA determined that a significant impact is unlikely as impacts (10.17ha) to potential foraging habitat are likely to be inconsequential when compared with similar and higher-quality potential habitat across the landscape for foraging Grey-headed Flying-fox. Project impacts are not considered to be within habitat critical to the survival of the species. This BD1 Report identifies an impact of 17.66ha to potential foraging habitat, which includes an increase of 7.49ha compared to the Biodiversity IA due to the inclusion of Canopy and NRZ impacts associated with VCCF. While there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, generally consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts, results in the magnitude of the impact across the landscape and for the species not significantly changing from that detailed in Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA and a significant impact is unlikely.

3.1.3.12 Striped Legless Lizard (*Delma impar*)

Proposed impacts

Striped Legless Lizard has not been recorded during surveys for the Project. There is a total of 1.44ha across three discrete areas of potential Striped Legless Lizard habitat that may be impacted as part of the Vegetation Clearance Construction Footprint to facilitate access tracks, tower structures and distribution lines as outlined in Table 3-18. Impacts remain the same as presented within the Biodiversity IA. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by the Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily grassland habitat it is presumed fuel reduction activities associated with the Project (i.e., Vegetation Risk Clearance Footprint, Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF) will not impact habitat for the species.

Table 3-18. Summary of Striped Legless Lizard habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species habitat	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0	1.44	0	1.44
Vegetation Risk Clearance Footprint	No	0	0.17	0	0
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0	0
Easement Corridor Construction Footprint	No	0	0.10	0	0
Easement Corridor Construction Footprint – partial clearance	No	0	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0	0.01		0
BD1 Report Totals		**0**	**1.71 (1.44 impacted)**	**0**	**1.44**
Biodiversity IA totals		**0**	**7.83**	**0**	

Impact area (Construction Footprint)	Impact affects species habitat	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
			(1.44 impacted)		1.44
Difference in impacts		No change	No change	No change	No change

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Field mapped potential habitat is habitat that the species may potentially use (quality verified during field visits) but has not been recorded during targeted survey. Desktop mapped potential habitat is habitat mapped from desktop on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Striped Legless Lizard as a result of the Project is 0.0003, and therefore the Project will not require species offsets under the state Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that a significant impact is possible as impacts (1.44ha) may reduce the areas of occupancy of an important population and contribute to changes in soil structure and terrestrial cover. The extent of impacts assessed in this BD1 Report has not changed compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA, and a significant impact is possible.

3.1.3.13 Victorian Grassland Earless Dragon (*Tympanocryptis pinguicolla*)

Proposed impacts

A total of 3.48ha of mapped potential Victorian Grassland Earless Dragon habitat may be impacted as part of the Vegetation Clearance Construction Footprint due to ground disturbance activities. Impacts remain the same as presented within the Biodiversity IA. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by the Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily grassland habitat it is presumed fuel reduction activities associated with the Project (i.e., Vegetation Risk Clearance Footprint, Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF) will not impact habitat for the species, as outlined in Table 3-19 below.

Table 3-19. Summary of Victorian Grassland Earless Dragon habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0	3.48	0	3.48
Vegetation Risk Clearance Footprint	No	0	0.23	0	0
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0	0
Easement Corridor Construction Footprint	No	0	0.11	0	0
Easement Corridor Construction Footprint – partial clearance	No	0	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0	0.01		0

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
BD1 Report Totals		**0**	**3.84 (3.48 impacted)**	**0**	**3.48**
Biodiversity IA totals		**0**	**18.79 (3.48 impacted)**	**0**	**3.48**
Difference in impacts		**No change**	**No change**	**No change**	**No change**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Field mapped potential habitat is habitat that the species may potentially use (quality verified during field visits) but has not been recorded in during targeted survey. Desktop mapped potential habitat is habitat mapped from desktop on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Victorian Grassland Earless Dragon as a result of the Project is 0.005, and therefore the Project will require species offsets under the state Guidelines (Section 4.2 and Appendix B).

Significance of impacts

The Biodiversity IA determined that a significant impact is possible as impacts (3.48ha) may reduce the areas of occupancy of the species and adversely affect habitat critical to the survival of a species. The extent of impacts assessed in this BD1 Report has not changed compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA, and a significant impact is possible.

3.2 Impacts to state significant matters

3.2.1 Threatened ecological communities

3.2.1.1 Creekline Grassy Woodland (Goldfields) Community

Proposed impacts

A total of 5.74ha of Creekline Grassy Woodland (Goldfields) Community may be impacted by the Project (Table 3-20). This includes 5.40ha of confirmed extent and 0.34ha of potential extent in areas yet to be surveyed. There has been a reduction in impacts within the Easement Corridor Construction Footprint (from 2.76ha to 0.83ha) from those assumed in the Biodiversity IA. This accounts for most of the reduction (1.57ha) from the overall impact of 7.31ha reported in the Biodiversity IA.

Table 3-20. Summary of Creekline Grassy Woodland (Goldfields) Community habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
Vegetation Clearance Construction Footprint	Yes	0.32	0.01	0.33
Vegetation Risk Clearance Footprint	Yes	4.21	0	4.21
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	0
Easement Corridor Construction Footprint	Yes	0.83	0	0.83

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	0
Canopy and NRZ impacts associated with VCCF	Yes	0.04	0.33	0.37
BD1 Report Totals		**5.40**	**0.34**	**5.74**
Biodiversity IA Totals		**6.05**	**1.26**	**7.31**
Difference in impacts		**0.65 decrease**	**0.92 decrease**	**1.57 decrease**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation Layer in areas not yet surveyed.

Significance of impacts

The Biodiversity IA determined that the Project is unlikely to cause a notable reduction in the extent of this community, based on an impact to 7.31ha (6.05ha field mapped and 1.26ha modelled). This is due to the degraded condition of the vegetation and the large potential habitat area (1,192ha) in the study area. While some localised fragmentation will occur, it is within an already highly fragmented landscape, making substantial changes to species composition or long-term persistence of the TEC unlikely. This BD1 Report identifies an impact of 5.74ha which includes a reduction of 0.65ha in field mapped extent and a reduction of 0.92ha in modelled extent.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.1.2 Grey Box – Buloke Grassy Woodland Community

Proposed impacts

A total of 4.42ha of Grey Box – Buloke Grassy Woodland Community may be impacted by the Project (Table 3-21). This includes only a small portion (0.12ha) of confirmed extent of the TEC and the remainder is 4.30ha of EVC equivalents within areas not yet surveyed. The most substantial reduction in impacts from the Biodiversity IA is associated with the Easement Corridor Construction Footprint (2.42ha to 0.01ha), although there is also a reduction in the modelled extent within other areas of the Construction Footprint, except for NRZ impacts which account for the majority of the impacts (3.55ha). The overall impact has been reduced by 1.42ha from the 5.84ha impact reported in the Biodiversity IA.

Table 3-21. Summary of Grey Box – Buloke Grassy Woodland Community habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
Vegetation Clearance Construction Footprint	Yes	0	0.71	0.71
Vegetation Risk Clearance Footprint	Yes	0	0.15	0.15
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	0
Easement Corridor Construction Footprint	Yes	0	0.01	0.01
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	0
Canopy and NRZ impacts associated with VCCF	Yes	0.12	3.43	3.55

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
BD1 Report Totals		**0.12**	**4.30**	**4.42**
Biodiversity IA Totals		**0**	**5.84**	**5.84**
Difference in impacts		**0.12 increase**	**1.54 decrease**	**1.42 decrease**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation Layer in areas not yet surveyed.

Significance of impacts

The Biodiversity IA determined that the Project is unlikely to cause a notable reduction in the extent of this community, based on an impact to 5.84ha modelled extent, compared to an estimated 515ha of the community in the wider study area. A review of aerial imagery and adjacent field surveys indicate that the majority of areas of potential TEC are predominantly small patches, often within cleared paddocks and existing cleared access tracks, suggesting the community is unlikely to be present. This BD1 Report identifies an impact of 4.43ha which includes an increase of 0.12ha in field mapped extent and a reduction of 1.54ha in modelled extent.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.1.3 Rocky Chenopod Open Scrub Community

Proposed impacts

A total of 10.14ha of Rocky Chenopod Open Scrub Community is anticipated to be impacted by the Project (Table 3-22). This includes 1.81ha of confirmed extent and 8.33ha of potential extent in areas yet to be surveyed. The most considerable reduction in impacts from the Biodiversity IA is associated with the Easement Corridor Construction Footprint (10.11ha to 0.54ha). There has also been a slight reduction in the modelled extents within the Vegetation Clearance Construction Footprint (4.58ha to 4.32ha) and Vegetation Risk Clearance Footprint (1.97ha to 1.40ha). The overall impact has been reduced from the 18.00ha impact reported in the Biodiversity IA.

Table 3-22. Summary of Rocky Chenopod Open Scrub Community habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
Vegetation Clearance Construction Footprint	Yes	0.57	4.32	4.90
Vegetation Risk Clearance Footprint	Yes	0.75	1.40	2.15
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	0
Easement Corridor Construction Footprint	Yes	0.26	0.28	0.54
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	0
Canopy and NRZ impacts associated with VCCF	Yes	0.23	2.33	2.56
BD1 Report Totals		**1.81**	**8.33**	**10.14**
Biodiversity IA Totals		**3.33**	**14.67**	**18.00**
Difference in impacts		**1.52 decrease**	**6.34 decrease**	**7.86 decrease**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation Layer in areas not yet surveyed.

Significance of impacts

The Biodiversity IA determined that under a worst-case scenario the Project may cause a significant reduction in the extent of this community, based on an impact to 18ha (3.33ha field mapped and 14.67ha modelled). A review of aerial imagery and adjacent field surveys indicates that most of these areas are unlikely to support the community due to inappropriate floristics and vegetation structure. However, under a worst-case scenario, impacts may be significant given the restricted extent of the community mapped within Victoria (less than 200ha). This BD1 Report identifies an impact of 10.14ha which includes a reduction of 1.52ha in field mapped extent and a substantial reduction of 6.34ha in modelled extent.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.1.4 Western Basalt Plains (River Red-gum) Grassy Woodland Community

Proposed impacts

Western Basalt Plains (River Red-gum) Grassy Woodland Community has not been recorded within the Project Area. Approximately 4.11ha of potential TEC extent occurs within the Construction Footprint (Table 3-23). The most substantial reduction in impacts from the Biodiversity IA is associated within the Easement Corridor Construction Footprint (4.36ha to 0.19ha). There has also been a slight reduction in the modelled extent within the Vegetation Clearance Construction Footprint (1.38ha to 0.74ha) and a slight increase in modelled extent of Vegetation Risk Clearance Footprint (1.02ha to 1.21ha). The overall impact has been reduced from the 6.76ha impact reported in the Biodiversity IA.

Table 3-23. Summary of Western Basalt Plains (River Red-gum) Grassy Woodland Community habitat within the Construction Footprint and associated impacts

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
Vegetation Clearance Construction Footprint	Yes	0	0.74	0.74
Vegetation Risk Clearance Footprint	Yes	0	1.21	1.21
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	0
Easement Corridor Construction Footprint	Yes	0	0.19	0.19
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	0
Canopy and NRZ impacts associated with VCCF	Yes	0	1.97	1.97
BD1 Report Totals		**0**	**4.11**	**4.11**
Biodiversity IA Totals		**0**	**6.76**	**6.76**
Difference in impacts		**No change**	**2.65 decrease**	**2.65 decrease**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation Layer in areas not yet surveyed.

Significance of impacts

The Biodiversity IA determined that the Project is unlikely to cause a significant reduction in the extent of this community, based on an impact to 6.76ha modelled extent compared to an estimated14,255ha of the community in the wider study area. A review of aerial imagery and adjacent field surveys indicates that most of the modelled extent is unlikely to support the community due to degraded native vegetation, treeless vegetation, non-vegetated areas or non-native vegetation. This BD1 Report identifies an impact of 4.11ha which includes a reduction of 2.65ha in modelled extent.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.1.5 Western (Basalt) Plains Grasslands Community

Proposed impacts

A total of 8.00ha of Western (Basalt) Plains Grassland Community may be impacted by the Project (Table 3-24). This includes 7.29ha of confirmed extent and 0.71ha of potential extent in areas yet to be surveyed. There has been a slight increase in the field mapped extent (6.33ha to 7.29ha) and a decrease in modelled extent (0.90ha to 0.71ha) within the Construction Footprint, with a net increase of 1.23ha.Table 3-24. Summary of Western (Basalt) Plains Grasslands Community habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Confirmed extent (ha)	*Potential extent (ha)	Total impacts (ha)
Vegetation Clearance Construction Footprint	Yes	6.29	0.66	6.96
Vegetation Risk Clearance Footprint	Yes	0.68	0.05	0.73
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0	0
Easement Corridor Construction Footprint	Yes	0.31	0	0.31
Easement Corridor Construction Footprint – partial clearance	Yes	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0.01	1.17	0
BD1 Report Totals		**7.29 (7.29 impacted)**	**1.88 (0.71 impacted)**	**8.00**
Biodiversity IA Totals		**33.85 (6.33 impacted)**	**1.66 (0.90 impacted)**	**7.23**
Difference in impacts		**0.96 increase**	**0.19 decrease**	**1.23 increase**

*Confirmed extent is the extent of field mapped occurrence of this TEC. Potential extent is the extent of modelled EVC equivalent from the Integrated Native Vegetation Layer in areas not yet surveyed.

Significance of impacts

The Biodiversity IA determined that the Project is unlikely to cause a significant reduction in the extent of this community, based on an impact to 7.23ha (6.33ha field mapped and 0.9ha modelled extent). The majority of TEC impact areas are small and fragmented, or in a number of cases, impacts are limited to the edges of larger patches, with the remaining extent of the patch likely to persist following construction. In comparison to the estimated 6,148ha of this community within the study area, the proposed impacts are unlikely to cause a significant reduction within the wider landscape. This BD1 Report identifies an impact of 8.00ha which includes

an increase of 0.96ha in field mapped extent and a reduction of 0.19ha in modelled extent, leading to an overall net increase of 1.23ha.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.1.6 Victorian Temperate Woodland Bird Community

Proposed impacts

A total of 62.25ha of Victorian Temperate Woodland Bird Community is anticipated to be impacted by the Project (Table 3-25). This includes 54.37ha of field mapped potential habitat and 7.88ha of modelled potential extent in areas yet to be surveyed. There has been a substantial reduction in impacts within the Easement Corridor Construction Footprint (10.69ha to 3.45ha) from those determined in the Biodiversity IA. There has been an increase in the field mapped potential habitat extent (47.41ha to 54.37ha) and a decrease in modelled potential habitat (12.66ha to 7.88ha), leading to a net increase of 2.19ha.

Table 3-25. Summary of Victorian Temperate Woodland Bird Community habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impacts affect TEC habitat	*Field mapped potential habitat (ha)	*Modelled potential habitat (ha)	Total impacts (ha)
Vegetation Clearance Construction Footprint	Yes	10.76	2.57	13.33
Vegetation Risk Clearance Footprint	Yes	31.01	4.86	35.88
Vegetation Risk Clearance Footprint – partial clearance	Yes	3.18	0	3.18
Easement Corridor Construction Footprint	Yes	3	0.45	3.45
Easement Corridor Construction Footprint – partial clearance	Yes	0.61	0	0.61
Canopy and NRZ impacts associated with VCCF	Yes	5.81	0	5.81
BD1 Report Totals		**54.37**	**7.88**	**62.25**
Biodiversity IA Totals		**47.41**	**12.66**	**60.06**
Difference in impacts		**6.96 increase**	**4.78 decrease**	**2.19 increase**

*Field mapped potential habitat is the extent of potentially suitable habitat (mapped using indicator EVCs of field mapped native vegetation) occurring on accessible properties of this TEC. Modelled potential habitat is the extent of modelled EVC equivalents from the Integrated Native Vegetation Layer and Tree canopy layer in areas not yet surveyed.

Significance of impacts

The Biodiversity IA determined that the Project would lead to increased fragmentation of this community, but this is unlikely to have a significant impact on the occupant bird species. This is based on an impact of 60.06ha (47.41ha field mapped and 12.66 modelled extent). This community will be directly impacted through removal and fragmentation of suitable habitat. However, the nature of the bird species in this community is highly mobile and there is a comparatively large amount of suitable habitat remaining in the wider study area. This BD1 Report identifies an impact of 62.25ha which includes an increase of 6.96ha in field mapped potential habitat extent and a reduction of 4.78ha\ in modelled potential habitat extent.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2 Threatened flora

3.2.2.1 Bacchus Marsh Wattle (*Acacia rostriformis*)

Proposed impacts

A total of 451 individuals of this species are considered unavoidable by the Project. A total of 8.38ha of modelled potential habitat is anticipated to be impacted in areas yet to be surveyed (Table 3-26 and Appendix A.2, A.3). This is a reduction from 500 individuals and 21.53ha assumed to be impacted in the Biodiversity IA.

Table 3-26. Summary of Bacchus Marsh Wattle individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	156	5.26
Vegetation Risk Clearance Footprint	100	109	2.67
Vegetation Risk Clearance Footprint – partial clearance	75	133	0
Easement Corridor Construction Footprint	100	29	0.45
Easement Corridor Construction Footprint – partial clearance	75	24	0
Canopy and NRZ impacts associated with VCCF*	0	0	N/A
BD1 Report Totals		**451**	**8.38**
Biodiversity IA totals		**500**	**21.53**
Difference in impacts		**49 decrease**	**13.15 decrease**

*Canopy and NRZ impacts are considered to not impact this species

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Bacchus Marsh Wattle as a result of the Project is 0.0395, and therefore the Project will require species offsets under the Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA identified an impact to 500 individuals and 21.53ha of modelled potential habitat. This was considered unlikely to affect the viability of the population given the local abundance of the species and its likelihood to persist within the Project Area. This BD1 Report identifies an impact of 451 individuals and 8.38ha of modelled potential habitat which is a substantial reduction (13.15ha) from the 21.53ha of modelled potential habitat identified to be impacted in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.2 Buloke (*Allocasuarina luehmannii*)

Proposed impacts

A total of 27 individuals of this species are considered unavoidable by the Project. A total of 19.38ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-27 and Appendix A.2, A.3). This is the

same number of individuals reported as being impacted in the Biodiversity IA but is a reduction from 47.25ha of modelled potential habitat assumed to be impacted in the Biodiversity IA.

Table 3-27. Summary of Buloke individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	3	10.21
Vegetation Risk Clearance Footprint	100	23	7.86
Vegetation Risk Clearance Footprint – partial clearance	100	0	0
Easement Corridor Construction Footprint	100	1	1.21
Easement Corridor Construction Footprint – partial clearance	100	0	0
Canopy and NRZ impacts associated with VCCF	100	0	19.02
BD1 Report Totals		**27**	**38.30**
Biodiversity IA totals		**27**	**47.25**
Difference in impacts		**No change**	**8.95 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Buloke as a result of the Project is 0.0008, and therefore the Project will not require species offsets under the Guidelines (Appendix B).

Significance of Impacts

The Biodiversity IA determined that impact to 27 individuals in relation to a statewide population estimation of 100,000 to 10,000,000 mature individuals is not considered to be a notable impact to the species. It also found the 47.25ha of modelled potential habitat is small in comparison to the extent of potential habitat in the study area (157,303ha) and most of the 47.25ha is unlikely to support the species given desktop review identified these to be mostly treeless areas. This BD1 Report identifies an impact of 27 individuals and 38.3ha, which includes a substantial reduction of 8.95ha in modelled potential habitat impacts to this species.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.3 Cane Spear-grass (*Austrostipa breviglumis*)

Proposed impacts

No Cane Spear-grass individuals have been recorded within the Construction Footprint. A total of 14.95ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-28 and Appendix A.2, A.3). This is a reduction from 33.51ha assumed to be impacted in the Biodiversity IA.

Table 3-28. Summary of Cane Spear-grass individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	7.34
Vegetation Risk Clearance Footprint	100	0	6.36
Vegetation Risk Clearance Footprint – partial clearance	50	0	0
Easement Corridor Construction Footprint	100	0	1.25
Easement Corridor Construction Footprint – partial clearance	50	0	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**0**	**14.95**
Biodiversity IA totals		**0**	**33.51**
Difference in impacts		**No change**	**18.56 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Cane Spear-grass as a result of the Project is 0.0037, and therefore the Project will not require species offsets under the Guidelines (Appendix B).

Significance of Impacts

The Biodiversity IA determined that the species is not likely to be significantly impacted, based on the limited potential for the species to occur in the 33.51ha of modelled potential habitat identified to be impacted at that stage and the likely opportunity to retain the species in partial clearance areas and/or through micro-siting to avoid should the species be present. This BD1 Report identifies an impact of 14.95ha to modelled potential habitat, which is a substantial reduction (18.56ha) from the 33.51ha of modelled potential habitat impact to this species identified in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.4 Glaucous Flax-lily (*Dianella longifolia* var. *grandis* sl)

Proposed impacts

No Glaucous Flax-lily individuals have been recorded within the Construction Footprint. A total of 15.88ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-29 and Appendix A.2). This is a reduction from 40.25ha assumed to be impacted in the Biodiversity IA.

Table 3-29. Summary of impacts to Glaucous Flax-lily individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted[8]	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	7.68
Vegetation Risk Clearance Footprint	100	0	7.19
Vegetation Risk Clearance Footprint – partial clearance	50	0	0
Easement Corridor Construction Footprint	100	0	1.01
Easement Corridor Construction Footprint – partial clearance	50	0	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**0**	**15.88**
Biodiversity IA totals		**0**	**40.25**
Difference in impacts		**No change**	**24.37 decrease**

Glaucous Flax-lily is not listed within the NVRR and therefore the Project will not require species offsets under the Guidelines (Appendix B).

Significance of Impacts

The Biodiversity IA determined that the species is not likely to be significantly impacted based of the limited potential for the species to occur in the 40.25ha of modelled potential habitat identified to be impacted at that stage, and the likely opportunity to retain the species in partial clearance areas and/or through micro-siting to avoid it should the species be present. This BD1 Report identifies an impact of 15.88ha to modelled potential habitat which is a substantial reduction (24.37ha) from the 40.25ha of modelled potential habitat impacts to this species identified in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.5 Brooker's Gum (*Eucalyptus brookeriana*)

Proposed impacts

A total of 254 individuals of this species are considered unavoidable by the Project. A total of 13.41ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-30. and Appendix A.2, A.3). This is an increase of 21 from the 233 individuals assessed as impacted in the Biodiversity IA but a reduction from the 22.83ha of modelled potential habitat assumed to be impacted in the Biodiversity IA. The increase in impacted individuals is mainly attributed to impacts to the NRZ of trees outside of the Construction Footprint that were not previously assessed in the Biodiversity IA. Further fieldwork and applying no-go zones have also contributed to the reduction in impacted potential habitat to 13.41ha.

[8] An estimation of 50 per cent of individuals impacted has been used within areas of partial clearance for midstorey and groundstorey species

Table 3-30. Summary of Brooker's Gum individuals and habitat within the Construction Footprint and associated impacts

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	41	2.81
Vegetation Risk Clearance Footprint	100	191	5.28
Vegetation Risk Clearance Footprint – partial clearance	100	6	0
Easement Corridor Construction Footprint	100	3	0.79
Easement Corridor Construction Footprint – partial clearance	100	0	0
Canopy and NRZ impacts associated with VCCF	100	13	4.53
BD1 Report Totals		**254**	**13.41**
Biodiversity IA totals		**233**	**22.83**
Difference in impacts		**21 increase**	**9.42 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Brooker's Gum as a result of the Project is 0.0054, and therefore the Project will require species offsets under the Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA determined that impacts on 233 individuals are not expected to affect the viability of the impacted population. The relatively small area of 22.83ha of modelled potential habitat is small in comparison to the extent of potential habitat in the study area (69,218) and review of aerial imagery shows it includes many treeless areas. This BD1 Report identifies an impact of 254 individuals and 13.41ha of modelled potential habitat, which includes an increase of 21 individuals impacted and substantial reduction of 9.42ha in modelled potential habitat impacts to this species.

While the extent of the impacts assessed in this BD1 Report is reduced for modelled potential habitat and increased for presumed number of individuals impacted compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.6 Melbourne Yellow-gum (*Eucalyptus leucoxylon* subsp. *connata*)

Proposed impacts

Approximately 500 individuals of this species are considered unavoidable by the Project. A total of 10.77ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-31. and Appendix A.2, A.3). This is an increase of approximately 100 individuals from the 400 individuals estimated to be impacted in the Biodiversity IA and a reduction of 8.65ha from 19.42ha of modelled potential habitat assumed to be impacted in the Biodiversity IA. The increase in the number of individuals impacted is primarily driven by impacts to the NRZ. Further fieldwork and applying no-go zones have contributed to the reduction in impacted potential habitat.

Table 3-31. Summary of Melbourne Yellow-gum individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted*	
Vegetation Clearance Construction Footprint	100	83	4.59
Vegetation Risk Clearance Footprint	100	263	2.39
Vegetation Risk Clearance Footprint – partial clearance	100	0	0
Easement Corridor Construction Footprint	100	24	0.42
Easement Corridor Construction Footprint – partial clearance	100	0	0
Canopy and NRZ impacts associated with VCCF	100	115	3.36
BD1 Report Totals		**~500**	**10.77**
Biodiversity IA totals		**~400**	**19.42**
Difference in impacts		**~100 increase**	**8.65 decrease**

*Numbers are estimates due to the use of extrapolated data in areas where access was constrained and hence totals are rounded to nearest one hundred.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Melbourne Yellow-gum as a result of the Project is 0.010, and therefore the Project will require species offsets under the Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA considered that the impacted individuals were a small fraction of the constituent populations, with the potential exception of the population at MacPherson Park of the VVP. It noted that there will be an increase to the number of individuals impacted once incursions to NRZ are considered. A large population of Melbourne Yellow-gums were found to primarily occur in the Darley area. In this area the Vegetation Clearance Construction Footprint was reduced and Easement Corridor was excluded from the Construction Footprint in the Biodiversity IA to reduce biodiversity impacts and hence the Melbourne Yellow Gum is one species that is more substantially affected by NRZ impacts (i.e. most other tree species were already considered removed if they occur with the Easement Corridor in the Biodiversity IA).

The increase occurs due to the estimation of NRZ impacts undertaken as part of this BD1 Report, which now accounts for 115 trees included as canopy and NRZ impacts, resulting in the total number of individuals impacted increasing from approximately 400 to 500. These increases generally occur among the high numbers of individuals at Darley, such that they represent a very small percentage of the substantial constituent populations (within the vicinity of the Project Area at Darley there are approximately; 1421 individuals within the Project Area, 792 individuals located immediately adjacent to the Project Area recorded during transect surveys and likely several thousand more in inaccessible areas on private property). However, there are also some increases at MacPherson Park (from 3 to 11 trees), and as noted in the Biodiversity IA there appears opportunity to adjust design (e.g. move towers/conductors slightly to the north) and reduce impacts in this location. This BD1 Report identifies an impact of 10.77ha of modelled potential habitat which is a substantial reduction of 8.65ha in modelled potential habitat impacts to this species compared to the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report is reduced for modelled potential habitat and increased for presumed number of individuals impacted compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.7 Yarra Gum (*Eucalyptus yarraensis*)

Proposed impacts

A total of 81 individuals of this species are considered unavoidable by the Project. A total of 28.76ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-32 and Appendix A.2). This is an increase of 18 individuals from the 63 individuals impacted in the Biodiversity IA and a reduction of 11.56 ha from the 40.32ha of modelled potential habitat assumed to be impacted in the Biodiversity IA. Further fieldwork has identified more individuals leading to an increase in the number of trees impacted, but with applying no-go zones it has also contributed to the reduction in impacted potential habitat.

Table 3-32. Summary of Yarra Gum individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	9	7.31
Vegetation Risk Clearance Footprint	100	71	7.13
Vegetation Risk Clearance Footprint – partial clearance	100	0	0
Easement Corridor Construction Footprint	100	0	1.01
Easement Corridor Construction Footprint – partial clearance	100	0	0
Canopy and NRZ impacts associated with VCCF	100	1	13.31
BD1 Report Totals		**81**	**28.76**
Biodiversity IA totals		**63**	**40.32**
Difference in impacts		**18 increase**	**11.56 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Yarra Gum as a result of the Project is 0.0052, and therefore the Project will require species offsets under the Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA determined that impacts on 63 individuals are not expected to affect the viability of the impacted population. The relatively small area of 40.32ha of modelled potential habitat is small in comparison to the extent of potential habitat in the study area (280,765) and a review of aerial imagery shows it includes many treeless areas. This BD1 Report identifies an impact on 81 individuals and 28.76ha of modelled potential habitat, which includes an increase of 18 individuals impacted that is primarily due to fieldwork identifying individuals in areas previously not surveyed, and a substantial reduction of 11.56ha in modelled potential habitat impacted.

While the extent of the impacts assessed in this BD1 Report is reduced for modelled potential habitat and increased for presumed number of individuals impacted compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.8 Brittle Greenhood (*Pterostylis truncata*)

Proposed impacts

A total of 648 individuals of this species are considered unavoidable by the Project. A total of 13.18ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-33 and Appendix A.2, A.3). This is a reduction of 740 individuals from the 1388 individuals impacted in the Biodiversity IA and a reduction of 7.42ha from the 20.60ha of modelled potential habitat assumed to be impacted in the Biodiversity IA. These impact reductions can be attributed to applying no-go zones within the Easement Corridor Construction Footprint.

Table 3-33. Summary of Brittle Greenhood individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	6.38
Vegetation Risk Clearance Footprint	50	488	3.30
Vegetation Risk Clearance Footprint – partial clearance	50	0	2.50
Easement Corridor Construction Footprint	50	160	0.46
Easement Corridor Construction Footprint – partial clearance	50	0	0.53
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**648**	**13.18**
Biodiversity IA totals		**1388**	**20.60**
Difference in impacts		**740 decrease**	**7.42 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Brittle Greenhood as a result of the Project is 0.0150, and therefore the Project will require species offsets under the Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA identified an impact to 1388 individuals and 20.60ha of modelled potential habitat. This was considered potentially significant (despite adopting a conservative approach) due to the potential risk to the long-term survival of the impacted population. This BD1 Report identified an impact to 648 individuals and 13.18ha of modelled potential habitat, which is a substantial reduction in both modelled potential habitat of 7.42ha and presumed number of individuals reduced by 740 compared to the impact reported in the Biodiversity IA. This is due to the creation of no-go zones within the Easement Corridor Construction Footprint.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.9 Fragrant Saltbush (*Rhagodia parabolica*)

Proposed impacts

A total of 3037 individuals of this species are considered unavoidable by the Project. A total of 14.75ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-34 and Appendix A.2). This is a reduction of 44 individuals from the 3081 individuals impacted in the Biodiversity IA and a reduction of 18.3ha from the 33.05ha of modelled potential habitat assumed to be impacted in the Biodiversity IA. These impact reductions can be attributed to applying no-go zones within the Easement Corridor Construction Footprint.

Table 3-34. Summary of Fragrant Saltbush individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	870	7.19
Vegetation Risk Clearance Footprint	100	1642	6.72
Vegetation Risk Clearance Footprint – partial clearance	75	334	0.001
Easement Corridor Construction Footprint	100	133	0.84
Easement Corridor Construction Footprint – partial clearance	75	58	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**3037**	**14.75**
Biodiversity IA totals		**3081**	**33.05**
Difference in impacts		**44 decrease**	**18.30 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Fragrant Saltbush as a result of the Project is 0.0181, and therefore the Project will require species offsets under the Guidelines (Section 4.2 and Appendix B).

Significance of Impacts

The Biodiversity IA determined that impact on 3081 individuals is not expected to affect the viability of the impacted population. Although the number of individuals impacted is notable, the relatively small area of 33.05ha of modelled potential habitat is small in comparison to the extent of potential habitat in the study area (80,204ha). This BD1 Report identifies an impact on 3037 individuals and 14.75ha of modelled potential habitat, which is a substantial reduction in both modelled potential habitat of 18.3ha and presumed number of impacted individuals of this species by 44. This is due to the creation of no-go zones within the Easement Corridor Construction Footprint.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.2.10 Floodplain Fireweed (*Senecio campylocarpus*)

Proposed impacts

No Floodplain Fireweed individuals have been recorded within the Construction Footprint. A total of 2.05ha of modelled potential habitat may be impacted in areas yet to be surveyed (Table 3-35 and Appendix A.2 and A.3). This is a reduction of 2.06ha from the 4.11ha of modelled potential habitat assumed to be impacted in the Biodiversity IA. These impact reductions can be attributed to applying no-go zones within the Easement Corridor Construction Footprint.

Table 3-35. Summary of Floodplain Fireweed individuals and habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Individuals		Modelled potential habitat impacted (ha)
	Presumed percentage of plants impacted	Presumed no. of individuals impacted	
Vegetation Clearance Construction Footprint	100	0	1.53
Vegetation Risk Clearance Footprint	100	0	0.48
Vegetation Risk Clearance Footprint – partial clearance	50	0	0
Easement Corridor Construction Footprint	100	0	0.04
Easement Corridor Construction Footprint – partial clearance	50	0	0
Canopy and NRZ impacts associated with VCCF	0	0	N/A
BD1 Report Totals		**0**	**2.05**
Biodiversity IA totals		**0**	**4.11**
Difference in impacts		**No change**	**2.06 decrease**

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Floodplain Fireweed as a result of the Project is 0.0002. The Project will not require species offsets under the Guidelines (Appendix B).

Significance of Impacts

The Biodiversity IA determined that the Project is unlikely to impact the population. This was based on no individuals being recorded within the Project Area, and limited potential for the species to occur in the 4.11ha of modelled potential habitat identified to be impacted at that stage, along with the likely opportunity to microsite and avoid it should the species be present. This BD1 Report identifies an impact of 2.05ha, which includes a slight reduction of 2.06ha in modelled potential habitat impacts to this species. This is due to applying no-go zones within the Easement Corridor Construction Footprint.

While the extent of the impacts assessed in this BD1 Report is reduced compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3 Threatened fauna

3.2.3.1 Western Burrowing Crayfish (*Engaeus merosetosus*)

Proposed impacts

Western Burrowing Crayfish have been recorded within the Project Area (suitable chimneys assumed to belong to the species under a precautionary approach). A total of 0.01ha may be impacted as part of the Vegetation Clearance Construction Footprint to facilitate access tracks, tower structures and distribution lines as outlined in Table 3-36. Impacts remain the same as presented within the Biodiversity IA. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by the Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily riparian areas along waterways and nearby damp habitat, it is presumed that minimum clearance requirements and fuel reduction activities associated with the Project (i.e. Vegetation Risk Clearance Footprint and Easement Corridor Construction Footprint) will not impact habitat for the species.

Table 3-36. Summary of Western Burrowing Crayfish habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0.01	0	0.01
Vegetation Risk Clearance Footprint	No	0.06	0.27	0
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0
Easement Corridor Construction Footprint	No	0	0.01	0
Easement Corridor Construction Footprint – partial clearance	No	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0	0	0
BD1 Report Totals		**0.07 (0.01 impacted)**	**0.28 (0.00 impacted)**	**0.01**
Biodiversity IA totals		**0.11 (0.01 impacted)**	**0.28 (0.00 impacted)**	**0.01**
Difference in impacts		**No change**	**No change**	**No change**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Desktop mapped potential habitat is potentially suitable habitat on properties unable to be accessed. It is unlikely for the species to occur elsewhere in the Project Area.

Western Burrowing Crayfish is not listed within the NVRR and therefore, the Project will not require species offsets under the Guidelines.

Significance of impacts

The Biodiversity IA determined that impact to the species was considered moderate due to the presence of chimneys being located within the Construction Footprint of a tower, but with a likely opportunity to micro-site the tower to avoid impacts to the species habitat. The extent of impacts assessed in this BD1 Report has not

changed compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.2 White-bellied Sea-Eagle (*Haliaeetus leucogaster*)

Proposed impacts

White-bellied Sea-Eagle was opportunistically recorded within the Project Land, outside of the Project Area, fishing over a large wetland east of Goodman's Creek during recent fieldwork.

A total of 17.54ha of field mapped (17.46ha) and desktop mapped (0.08ha) potential habitat for the species may be impacted by the Project, as outlined in Table 3-37. This is an increase of 1.91ha from the 15.63ha identified in the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint, as well as habitat impacted by the Vegetation Risk Clearance Footprint and Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-37. Summary of White-bellied Sea-Eagle habitat within the Construction Footprint and associated impacts

Impact area (Construction Footprint)	Impact affects species	*Field mapped potential breeding habitat (ha)	*Field mapped potential foraging habitat (ha)	*Desktop mapped potential breeding habitat (ha)	*Desktop mapped potential foraging habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	4.08	0	0	0.00	4.08
Vegetation Risk Clearance Footprint	Yes	11.30	0	0	0.02	11.32
Vegetation Risk Clearance Footprint – partial clearance	Yes	0.30	0	0	0	0.30
Easement Corridor6	No	0.91	0	0	6.71	0
Easement Corridor – partial clearance	No	0	0	0	0	0
Canopy and NRZ impacts associated with VCCF	Yes	1.76	0	0	0.06	1.82
BD1 Report Totals		**18.37 (17.46 impacted)**	**0**	**0**	**6.79 (0.08 impacted)**	**17.54**
Biodiversity IA totals		**19.71 (15.53 impacted)**	**0**	**0**	**9.07 (0.1 impacted)**	**15.63**
Difference in impacts		**1.93 increase**	**No change**	**No change**	**0.02 decrease**	**1.91 increase**

*Field mapped potential habitat is habitat (breeding and foraging) that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for White-bellied Sea-Eagle as a result of the Project is 0.0001 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate as the Project will have limited impact on suitable foraging habitat (large wetlands are largely avoided). While no breeding sites were recorded within the Project Area suitable future breeding habitat has the potential to be impacted. The species is also considered a species 'of concern' with relation to collision risk.

While the extent of the impacts assessed in this BD1 Report is increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.3 Square-tailed Kite (*Lophoictinia isura*)

Proposed impacts

Square-tailed Kite has not been recorded during surveys for the Project. A total of 95.65ha of field mapped (79.27ha) and desktop mapped (16.38ha) potential habitat for the species may be impacted, as outlined in Table 3-38. This is an increase of 21.37ha from the 74.28ha identified in the Biodiversity IA, predominantly due to the addition of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint, as well as habitat impacted by the Vegetation Risk Clearance Footprint and Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-38. Summary of Square-tailed Kite habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Field mapped potential habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	16.86	2.10	18.97
Vegetation Risk Clearance Footprint	Yes	50.29	4.82	55.10
Vegetation Risk Clearance Footprint – partial clearance	Yes	3.44	0	3.44
Easement Corridor Construction Footprint	No	5.54	0.47	0
Easement Corridor Construction Footprint – partial clearance	No	0.63	0	0
Canopy and NRZ impacts associated with VCCF	Yes	8.68	9.47	18.15
BD1 Report Totals		**85.0 (79.27 impacted)**	**16.86 (16.38 impacted)**	**95.65**
Biodiversity IA totals		**79.96 (65.44 impacted)**	**11.77 (8.84 impacted)**	**74.28**
Difference in impacts		**13.83 increase**	**7.54 increase**	**21.37 increase**

* Field mapped potential habitat is habitat (breeding and foraging) that was mapped as described in the Biodiversity IA using data collected during general surveys. Desktop mapped potential habitat is informed by the method described in the Biodiversity IA on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Square-tailed Kite as a result of the Project is 0.0009 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate as the Project is unlikely to significantly disrupt foraging activity. The species is considered of 'mild' concern in relation to collision risk. While the Project will result in the loss of suitable roosting trees, given the amount of potential habitat extent in the wider study area (140,205ha) this is not considered to be significant. This BD1 Report identifies an impact of 95.65ha which includes an increase of 21.37ha from the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. These additional 21.37ha are a conservative estimate and the actual loss is likely to be substantially less. They will occur adjacent to and in conjunction with areas of impact in the VCCF and for the majority of instances the loss of canopy in these areas will be replaced over time as this land will not generally be used for the Project. Given this, while there is an increase in the area of impact compared to the Biodiversity IA, the temporary nature, consistent location with impacts previously assessed and conservative method in determining NRZ and canopy impacts means the magnitude of the impact has not significantly changed.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.4 Barking Owl (*Ninox connivens*)

Proposed impacts

Barking Owl has not been recorded during surveys for the Project. A total of 28.94ha of field mapped potential habitat may be impacted by the Project, as outlined in Table 3-39. There is an increase of 4.98ha in proposed impacts due to the addition of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint, as well as habitat impacted by the Vegetation Risk Clearance Footprint and Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-39 Summary of Barking Owl habitat within the Construction Footprint and associated impacts

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0	5.77	5.77
Vegetation Risk Clearance Footprint	Yes	0	16.92	16.92
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0.88	0.88
Easement Corridor Construction Footprint	No	0	0.78	0
Easement Corridor Construction Footprint – partial clearance	No	0	0.11	0
Canopy and NRZ impacts associated with VCCF	Yes	0	5.37	5.37
BD1 Report Totals		**0**	**29.83 (28.94 impacted)**	**28.94**
Biodiversity IA totals		**0**	**27.20**	**23.96**

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	Total impacts
			(23.96 impacted)	
Difference in impacts		**No change**	**4.98 increase**	**4.98 increase**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Field mapped potential habitat is habitat that the species may potentially use but has not been recorded in during targeted survey. All potential habitat has been identified and it is considered unlikely that the species occurs on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Barking Owl as a result of the Project is 0.0009 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate and some habitat loss, including the loss of hollow-bearing trees will occur as a result of the Project. This BD1 Report identifies an impact of 28.94ha which includes an increase of 4.98ha from the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. These additional 21.37ha are a conservative estimate and the actual loss is likely to be substantially less. They will occur adjacent to and in conjunction with areas of impact in the VCCF and for the majority of instances the loss of canopy in these areas will be replaced over time as this land will not generally be used for the Project. Given this, while there is an increase in the area of impact compared to the Biodiversity IA the temporary nature, consistent location with impacts previously assessed, and the conservative method in determining NRZ and canopy impacts means the magnitude of the impact has not significantly changed. It is unlikely that this increase will result in significant further hollow bearing tree loss compared to that reported in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.5 Powerful Owl (*Ninox strenua*)

Proposed impacts

Powerful Owl was recorded north of the Project Area at Bolwarrah. A total of 28.94ha of confirmed habitat (15.38ha) and field mapped potential habitat (14.45ha) may be impacted by the Project, as outlined in Table 3-40. There has been an increase of 4.98ha in proposed impacts due to the addition of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint, as well as habitat impacted by the Vegetation Risk Clearance Footprint and Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-40. Summary of Powerful Owl habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	3.88	2.40	5.77
Vegetation Risk Clearance Footprint	Yes	9.68	7.24	16.92
Vegetation Risk Clearance Footprint – partial clearance	Yes	0.30	0.57	0.88
Easement Corridor Construction Footprint	No	0.33	0.45	0
Easement Corridor Construction Footprint – partial clearance	No	0	0.11	0
Canopy and NRZ impacts associated with VCCF	Yes	1.68	3.68	5.37
BD1 Report Totals		**15.38 (15.04 impacted)**	**14.45 (13.90 impacted)**	**28.94**
Biodiversity IA totals		**0**	**27.20 (23.96 impacted)**	**23.96**
Difference in impacts		**15.04 increase**	**10.06 decrease**	**4.98 increase**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Potential habitat is habitat that the species may potentially use but has not been recorded in during targeted survey. All potential habitat has been identified and it is considered unlikely that the species occurs on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Powerful Owl as a result of the Project is 0.0005 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate. Some habitat loss, including the loss of hollow-bearing trees will occur as a result of the Project. This BD1 Report identifies an impact of 28.94ha which includes an increase of 4.98ha from the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. These additional 21.37ha are a conservative estimate and the actual loss is likely to be substantially less. They will occur adjacent to and in conjunction with areas of impact in the VCCF and for the majority of instances the loss of canopy in these areas will be replaced over time as this land will not generally be used for the Project. Given this, while there is an increase in the area of impact compared to the Biodiversity IA the temporary nature, consistent location with impacts previously assessed, and the conservative method in determining NRZ and canopy impacts means the magnitude of the impact has not significantly changed. It is unlikely that this increase will result in significant further hollow bearing tree loss compared to that discussed in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.1 Platypus (*Ornithorhynchus anatinus*)

Proposed impacts

Targeted survey using eDNA was undertaken in March 2025 with Platypus being confirmed present within Birch Creek. A total of 0.01ha of confirmed habitat may be impacted in this location, along with 0.02ha of potential habitat associated with the Vegetation Clearance Construction Footprint as outlined in Table 3-41..

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily in aquatic areas and associated bank habitat, it is presumed fuel reduction activities associated with the Project (i.e., Vegetation Risk Clearance Footprint and Easement Corridor Construction Footprint) will not impact habitat for the species, as outlined in Appendix A.4.

Table 3-41. Summary of Platypus habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0.01	0.02	0.03
Vegetation Risk Clearance Footprint	No	0.05	0.81	0
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0
Easement Corridor Construction Footprint	No	0.03	0.05	0
Easement Corridor Construction Footprint – partial clearance	No	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0.05	0	0
BD1 Report Totals		**0.14 (0.01 impacted)**	**0.87 (0.02 impacted)**	**0.03**
Biodiversity IA totals		**0**	**1.19 (0.03 impacted)**	**0.03**
Difference in impacts		**0.01 increase**	**0.01 decrease**	**No change**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Desktop mapped potential habitat is habitat that the species may potentially use but has not been recorded in during targeted survey.

Platypus is not listed within the NVRR and therefore the Project will not require species offsets under the Guidelines.

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate due to some bank habitat requiring vegetation clearance. No instream works will occur as part of the Project. This BD1 Report identifies a total impact of 0.03ha which is consistent with the Biodiversity IA. While there is now confirmed habitat there has been no change in impact compared the Biodiversity IA as potential habitat was considered to be occupied to adopt a precautionary approach when assessing Project impacts. The significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.2 Brush-tailed Phascogale (*Phascogale tapoatafa*)

Proposed impacts

Brush-tailed Phascogale has been recorded during targeted survey near Lexton and Long Forest. A total of 12.12ha of confirmed habitat (9.86ha) and desktop mapped potential habitat (2.26ha) may be impacted by the Project, as outlined in Table 3-42. This is an increase of 1.65ha from the 12.12ha identified in the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with the VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat impacted by the Vegetation Clearance Construction Footprint, as well as habitat impacted by the Vegetation Risk Clearance Footprint,

Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF, will result in an impact on habitat for the species.

Table 3-42. Summary of Brush-tailed Phascogale habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	1.86	0.54	2.39
Vegetation Risk Clearance Footprint	Yes	4.00	0.77	4.77
Vegetation Risk Clearance Footprint – partial clearance	Yes	0.57	0	0.57
Easement Corridor Construction Footprint	Yes	0.45	0	0.45
Easement Corridor Construction Footprint – partial clearance	Yes	0.11	0	0.11
Canopy and NRZ impacts associated with VCCF	Yes	2.88	0.95	3.84
BD1 Report Totals		**9.86 (9.86 impacted)**	**2.26 (2.26 impacted)**	**12.12**
Biodiversity IA totals		**9.16 (9.16 impacted)**	**1.31 (1.31 impacted)**	**10.47**
Difference in impacts		**0.70 increase**	**0.95 increase**	**1.65 increase**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Desktop mapped potential habitat is habitat that the species may potentially use but targeted survey has not been undertaken due to access constraints.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Brush-tailed Phascogale as a result of the Project is 0.0015 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Moderate as the Project will result in some habitat loss/fragmentation in confirmed habitat at Lexton as well as potential habitat near Lerderderg. This BD1 Report identifies an impact of 12.12ha which includes an increase of 1.65ha from the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. The additional 1.65ha are a conservative estimate and the actual loss is likely to be substantially less. They will occur adjacent to and in conjunction with areas of impact in the VCCF and for the majority of instances the loss of canopy in these areas will be replaced over time as this land will not generally be used for the Project. Given this, while there is an increase in the area of impact compared to the Biodiversity IA the temporary nature, consistent location with impacts previously assessed, and the conservative method in determining NRZ and canopy impacts means the magnitude of the impact has not significantly changed. It is unlikely that this increase will result in significant further hollow bearing tree loss compared to that reported in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.3 Tussock Skink (*Pseudemoia pagenstecheri*)

Proposed impacts

Tussock skink was recorded in one area during targeted survey for the Project. A total of 3.35ha of confirmed habitat (2.04ha) and desktop mapped potential habitat (1.31ha) may be impacted as part of the Vegetation Clearance Construction Footprint to facilitate access tracks, tower structures and distribution lines as outlined in Table 3-43. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by the Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily grassland habitat it is presumed fuel reduction activities associated with the Project (i.e., Vegetation Risk Clearance Footprint, Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF) will not impact habitat for the species.

Table 3-43 Summary of Tussock Skink habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	2.04	1.31	3.35
Vegetation Risk Clearance Footprint	No	0.07	0.16	0
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0
Easement Corridor Construction Footprint	No	0.02	0.10	0
Easement Corridor Construction Footprint – partial clearance	No	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0	0.01	0
BD1 Report Totals		**2.13 (2.04 impacted)**	**1.57 (1.31 impacted)**	**3.35**
Biodiversity IA totals		**10.96 (2.04 impacted)**	**7.17 (1.31 impacted)**	**3.35**
Difference in impacts		**No change**	**No change**	**No change**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Desktop mapped potential habitat is habitat mapped from desktop on inaccessible properties or properties where targeted survey was not possible.

Tussock Skink is not listed within the NVRR and therefore the Project will not require species offsets under the Guidelines.

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Moderate due to confirmed habitat being impacted at tower sites and potential changes in soil structure and terrestrial ground cover. The extent of impacts assessed in this BD1 Report has not changed compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.4 Brown Toadlet (*Pseudophryne bibronii*)

Proposed impacts

Brown Toadlet was recorded in two separate areas during targeted survey for the Project. A total of 0.66ha of confirmed habitat may be impacted by the Project as outlined in Table 3-44. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by Project, as these areas will be subject to ground disturbance. Given the species is ground-dwelling within both woody and non-woody habitat, it is presumed fuel reduction activities associated with the Project (i.e., canopy removal activities through Vegetation Risk Clearance Footprint and Easement Corridor Construction Footprint) will not impact habitat for the species and the species is still likely to utilise these areas.

Table 3-44 Summary of Brown Toadlet habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Desktop mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0.66	0	0.66
Vegetation Risk Clearance Footprint	No	0.59	0	0
Vegetation Risk Clearance Footprint – partial clearance	No	0.80	0	0
Easement Corridor Construction Footprint	No	0.05	0	0
Easement Corridor Construction Footprint – partial clearance	No	0.11	0	0
Canopy and NRZ impacts associated with VCCF	No	1.50	0	0
BD1 Report Totals		**3.71 (0.66 impacted)**	**0**	**0.66**
Biodiversity IA totals		**2.23 (0.66 impacted)**	**0**	**0.66**
Difference in impacts		**No change**	**No change**	**No change**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Potential habitat is habitat that the species may potentially use but has not been recorded in during targeted survey. All potential habitat has been identified and it is considered unlikely that the species occurs on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Brown Toadlet as a result of the Project is 0.0026 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Moderate due to ground disturbance for access tracks resulting in habitat loss in confirmed habitat. The extent of impacts assessed in this BD1 Report has not changed compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.5 Fat-tailed Dunnart (*Sminthopsis crassicaudata*)

Proposed impacts

Fat-tailed Dunnart was not recorded within the Project Area during fieldwork. A total of 21.48ha field mapped potential grassland habitat may be impacted by the Project, as outlined in Table 3-45. This is a 0.48ha increase in proposed impacts associated with the Vegetation Clearance Construction Footprint. Areas of impacted habitat are shown within Appendix A.4.

Only habitat within the Vegetation Clearance Construction Footprint is presumed to be impacted by the Project, as these areas will be subject to ground disturbance. Given the species occurs in primarily grassland habitat, it is presumed fuel reduction activities associated with the Project (i.e., Vegetation Risk Clearance Footprint, Easement Corridor Construction Footprint and Canopy and NRZ impacts associated with VCCF) will not impact habitat for the species.

Table 3-45. Summary of Fat-tailed Dunnart habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0	21.48	21.48
Vegetation Risk Clearance Footprint	No	0	3.72	0
Vegetation Risk Clearance Footprint – partial clearance	No	0	0	0
Easement Corridor Construction Footprint	No	0	1.51	0
Easement Corridor Construction Footprint – partial clearance	No	0	0	0
Canopy and NRZ impacts associated with VCCF	No	0	0.42	0
BD1 Report Totals		**0**	**39.42 (21.48 impacted)**	**21.48**
Biodiversity IA totals		**0**	**76.38 (21.00 impacted)**	**21.00**
Difference in impacts		**No change**	**0.48 increase**	**0.48 increase**

*Confirmed habitat is where the species was recorded opportunistically. Field mapped potential habitat was initially mapped in the desktop and preliminary assessment and all these areas were assessed during general field survey to confirm habitat attributes. Hence it is considered all potential habitat has been identified and unlikely for the species to occur on inaccessible properties.

Fat-tailed Dunnart is not listed within the NVRR and therefore the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate due to habitat loss in potentially suitable habitat. This BD1 Report identifies an impact of a 21.48ha, which includes a slight increase of 0.48ha in potential habitat impacted.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.2.3.6 Masked Owl (*Tyto novaehollandiae*)

Proposed impacts

Masked Owl was not recorded within the Project Area during fieldwork. A total of 28.94ha of field mapped potential habitat maybe impacted by the Project, as outlined in Table 3-46. There is an increase of 4.98ha of proposed impacts due to the addition of Canopy and NRZ impacts associated with VCCF. Areas of impacted habitat are shown within Appendix A.4.

Given the species utilises treed vegetation patches it is presumed that habitat will be impacted by the Vegetation Clearance Construction Footprint, as well as habitat impacted by the Vegetation Risk Clearance Footprint and Canopy and NRZ impacts associated with VCCF. It is presumed that all vegetation greater than 3m high (considered treed habitat for the species) that will be impacted has been identified in the Vegetation Risk Clearance Footprint, therefore vegetation clearance activities within the Easement Corridor Construction Footprint will not impact habitat for the species.

Table 3-46 Summary of Masked Owl habitat within the Construction Footprint and associated impacts.

Impact area (Construction Footprint)	Impact affects species	*Confirmed habitat (ha)	*Field mapped potential habitat (ha)	Total impacts
Vegetation Clearance Construction Footprint	Yes	0	5.77	5.77
Vegetation Risk Clearance Footprint	Yes	0	16.92	16.92
Vegetation Risk Clearance Footprint – partial clearance	Yes	0	0.88	0.88
Easement Corridor Construction Footprint	No	0	0.78	0
Easement Corridor Construction Footprint – partial clearance	No	0	0.11	0
Canopy and NRZ impacts associated with VCCF	Yes	0	5.37	5.37
BD1 Report Totals		**0**	**29.83 (28.94 impacted)**	**28.94**
Biodiversity IA totals		**0**	**27.20 (23.96 impacted)**	**23.96**
Difference in impacts		**No change**	**4.98 increase**	**4.98 increase**

*Confirmed habitat is field mapped habitat that is known to be occupied by the species as determined during targeted surveys. Potential habitat is habitat that the species may potentially use but has not been recorded in during targeted survey. All potential habitat has been identified and it is considered unlikely that the species occurs on inaccessible properties.

The NVRR indicates that the percentage of modelled habitat loss (based on the habitat importance map) for Masked Owl as a result of the Project is 0.0004 and therefore, the Project will not require species offsets under the Guidelines (Appendix B).

Significance of impacts

The Biodiversity IA determined that impact to the species was considered Low-Moderate. Some habitat loss, including the loss of hollow-bearing trees may occur as a result of the Project. This BD1 Report identifies an impact of 28.94ha which includes an increase of 4.98ha from the Biodiversity IA, predominantly due to the recent inclusion of Canopy and NRZ impacts associated with VCCF. These additional 21.37ha are a conservative estimate and the actual loss is likely to be substantially less. They will occur adjacent to and in conjunction with areas of impact in the VCCF and for the majority of instances the loss of canopy in these areas will be replaced

over time as this land will not generally be used for the Project. Given this, while there is an increase in the area of impact compared to the Biodiversity IA the temporary nature, consistent location with impacts previously assessed, and the conservative method in determining NRZ and canopy impacts means the magnitude of the impact has not significantly changed. It is unlikely that this increase will result in significant further hollow bearing tree loss compared to that discussed in the Biodiversity IA.

While the extent of the impacts assessed in this BD1 Report has increased compared to the Biodiversity IA, the significance of the impacts is consistent with the findings of the Biodiversity IA.

3.3 Impacts to native vegetation (EVCs and scattered trees)

A summary of the revised assessment of potential native vegetation loss due to the Project is provided in Table 3-47.

Table 3-47. Summary of Project impact to native vegetation (BD1 Report and Biodiversity IA comparison)

Native vegetation impacts		BD1 Report Totals	Biodiversity IA
Patches		173.26ha	229.71ha
Large canopy trees in patches		1000	844
Scattered trees	Large	172	147
	Small	94	66
Total Native Vegetation Removal Report area[9]		**186.264ha**	**238.607ha**

While the area of impacted native vegetation patches has decreased by 56.45ha compared to the Biodiversity IA, primarily due to the inclusion of no-go zones and the progression of fieldwork, there has been an increase in large patch trees and scattered trees impacted. This is in part due to it being difficult to estimate large patch trees and scattered trees in areas where surveys have not occurred due to land access constraints. Both large trees in patches and scattered trees have been indicatively mapped via a desktop approach in areas yet to be surveyed however this is an estimate only and the results of this BD1 Report indicate that the desktop mapping of large patch trees under-estimates the number present. Fieldwork is required to confirm the actual number and location of large patch trees. Additionally, often areas initially modelled as native vegetation patches were identified to only be comprised of scattered trees during fieldwork, hence as fieldwork is completed and the extent of modelled patches is reduced, the number of scattered trees may increase. Impacts to large patch trees and scattered trees also increased due to the assessment of NGZs impacts included within this BD1 Report. Large patch trees and scattered tree impact numbers may continue to trend upwards as more fieldwork is completed and trees continue to be mapped, however the modelled patch extents will likely continue to trend downwards, especially given it is likely that fieldwork will continue to reveal that areas modelled as patches only contain scattered trees.

The following tables and figures presented within this section provide various summaries of the reduced impact to native vegetation in the context of EVCs, Construction Footprint components, bioregions and Local Government Areas.

3.3.1 Ecological Vegetation Classes

Table 3-48 presents a summary of the patch impacts by EVC and VQA scores. As the overall extent of impact to patches has reduced by 56.45ha, the reduced extent of impact to the constituent EVCs is also evident.

[9] A total of 186.264ha of native vegetation is to be impacted by the Project (as presented within the Native Vegetation Removal report). Of this 186.264ha, 173.26ha consists of patches and 13.004ha consists of the extent of scattered trees.

Table 3-48. Summary of native vegetation patch impacts by EVC and area-weighted average VQA scores

EVC#	EVC name	Bioregion[1]	BCS[2]	Extent impacted (ha)[3]			Area-weighted average VQA score	
				Modelled	Field data	Total	Modelled	Field data
18	Riparian Forest	CVU; VVP	V	0.45	3.09	3.54	0.52	0.37
20	Heathy Dry Forest	Gold	LC		1.66	1.66		0.42
21	Shrubby Dry Forest	CVU	LC	0.52	2.00	2.51	0.77	0.68
22	Grassy Dry Forest	CVU; Gold	D	5.56	36.17	41.73	0.63	0.49
23	Herb-rich Foothill Forest	CVU; VVP	D,V	10.32	14.53	24.85	0.46	0.59
47	Valley Grassy Forest	CVU; Gold	V	1.35	1.89	3.24	0.57	0.39
53	Swamp Scrub	CVU; VVP	E	0.80		0.80	0.64	
55	Plains Grassy Woodland	CVU; VVP	E	5.25	0.76	6.00	0.30	0.34
55_61	Plains Grassy Woodland	VVP	E		2.64	2.64		0.31
55_63	Plains Grassy Woodland - higher rainfall	VVP	E		0.46	0.46		0.22
56	Floodplain Riparian Woodland	VVP	E		0.17	0.17		0.13
61	Box Ironbark Forest	CVU	V		1.33	1.33		0.61
64	Rocky Chenopod Woodland	CVU	V	2.28	1.72	4.00	0.43	0.44
67	Alluvial Terraces Herb-rich Woodland	CVU; Gold	E	0.76	7.73	8.50	0.47	0.46
68	Creekline Grassy Woodland	CVU; Gold; VVP	E	0.47	9.35	9.82	0.51	0.51
70	Hillcrest Herb-rich Woodland	CVU	D		0.24	0.24		0.16
71	Hills Herb-rich Woodland	VVP	V	0.002		0.002	0.42	
76	Grassy Woodland/Alluvial Terraces Herb-rich Woodland Mosaic	CVU; Gold	E	3.34		3.34	0.54	
83	Swampy Riparian Woodland	CVU; VVP	E	0.54	0.56	1.1	0.38	0.28
125	Plains Grassy Wetland	Gold; VVP	E		0.64	0.64		0.22
132	Plains Grassland	VVP	E	1.88		1.88	0.58	
132_61	132_61 Plains Grassland - Heavier-soils	VVP	E		0.16	0.16		0.26
132_63	132_63 Plains Grassland - Low-rainfall	VVP	E		7.14	7.14		0.4034
152	Alluvial Terraces Herb-rich Woodland/Plains Grassy Woodland Complex	CVU	E	0.18		0.18	0.484	
164	Creekline Herb-rich Woodland	CVU	V	0.96	0.06	1.02	0.3640	0.46
175	Grassy Woodland	CVU; Gold	E,V	6.66		6.66	0.44	
175_61	Grassy Woodland	CVU; Gold	E,V		27.07	27.07		0.49
175_62	Granitic Grassy Woodland	CVU; Gold	E,V		8.17	8.17		0.32

EVC#	EVC name	Bioregion[1]	BCS[2]	Extent impacted (ha)[3]			Area-weighted average VQA score	
				Modelled	Field data	Total	Modelled	Field data
198	Sedgy Riparian Woodland	VVP	V	0.01	0.07	0.08	0.20	0.17
320	320 Grassy Dry Forest/Heathy Dry Forest Complex	Gold	D	1.19		1.19	0.47	
653	Aquatic herbland	VVP	E		0.01	0.01		0.26
693	Plains Woodland/Plains Grassland Mosaic	CVU; VVP	E	0.31		0.31	0.66	
803	Plains Woodland	CVU; Gold; VVP	E	0.11	0.69	0.80	0.35	0.28
851	Stream Bank Shrubland	CVU; VVP	V, E	0.62	0.42	1.05	0.43	0.46
894	Scoria Cone Woodland	CVU	E	0.28		0.28	0.20	
896	Grassy Woodland/Heathy Dry Forest Complex	Gold	E	0.02		0.02	0.82	
NA	DEECA Wetland	CVU; Gold; VVP	ND	0.66		0.66	0.43	
-	**Total**	-	-	**44.52**	**128.74**	**173.26**	**0.48 (overall average score)**	**0.40 (overall average score)**
	Total Biodiversity IA	-	-	**64.90**	**164.81**	**229.71**	**0.41[4]**	**0.39[4]**

[1.] Bioregions listed as those in which the impact to the specific EVC occurs

[2.] Bioregional Conservation Status (BCS): (E) = Endangered, (V) = Vulnerable, (D) = Depleted, (LC) = Least Concern, ND=Not described.

[3.] Area impacted based on Integrated Native Vegetation assessment

4. The Biodiversity IA uses average and not area-weighted average so these values are not directly comparable.

3.3.2 Construction Footprint components

Table 3-49 provides a summary of the extent of native vegetation impacts due to the revised Construction Footprint component in comparison with the Biodiversity IA. It shows large reductions in the impacts associated with the Easement Corridor Construction Footprint due to the addition of no-go zones.

Impacts assessed through modelled vegetation have reduced across all components of the Construction Footprint (except for NRZ impacts) and impacts assessed based on field mapped vegetation have increased as fieldwork has progressed. This has resulted in some slight increases in impacts associated with the VCCF and VRCF. However, overall native vegetation impacts have reduced by 56.45ha.

The largest area in which impacts may occur is now represented by the Vegetation Risk Clearance Footprint (38 per cent), followed by the Vegetation Clearance Construction Footprint (VCCF) (36 per cent) and the Canopy and NRZ impacts associated with VCCF (18 per cent) as summarised in Figure 3-1.

Table 3-49. Breakdown of native vegetation patches impacted by Construction Footprint component

Construction Footprint component	Extent impacted (ha)					
	Modelled		Field data		Total	
	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA
Easement Corridor Construction Footprint	1.64	34.11	7.91	67.95	9.54	102.06

Construction Footprint component	Extent impacted (ha)					
	Modelled		Field data		Total	
	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA
Easement Corridor Construction Footprint - Partial Clearance	0	0.05	0.66	1.18	0.66	1.22
Vegetation Clearance Construction Footprint	12.15	17.61	50.63	41.96	62.78	59.57
Vegetation Risk Clearance Footprint	8.93	13.04	56.73	50.12	65.65	63.15
Vegetation Risk Clearance Footprint - Partial Clearance	0	0.10	3.74	3.61	3.74	3.70
Canopy and NRZ impacts associated with VCCF	21.81	**0**	9.07	**0**	30.88	**0**
Total	**44.53**	**64.90**	**128.74**	**164.81**	**173.26**	**229.71**

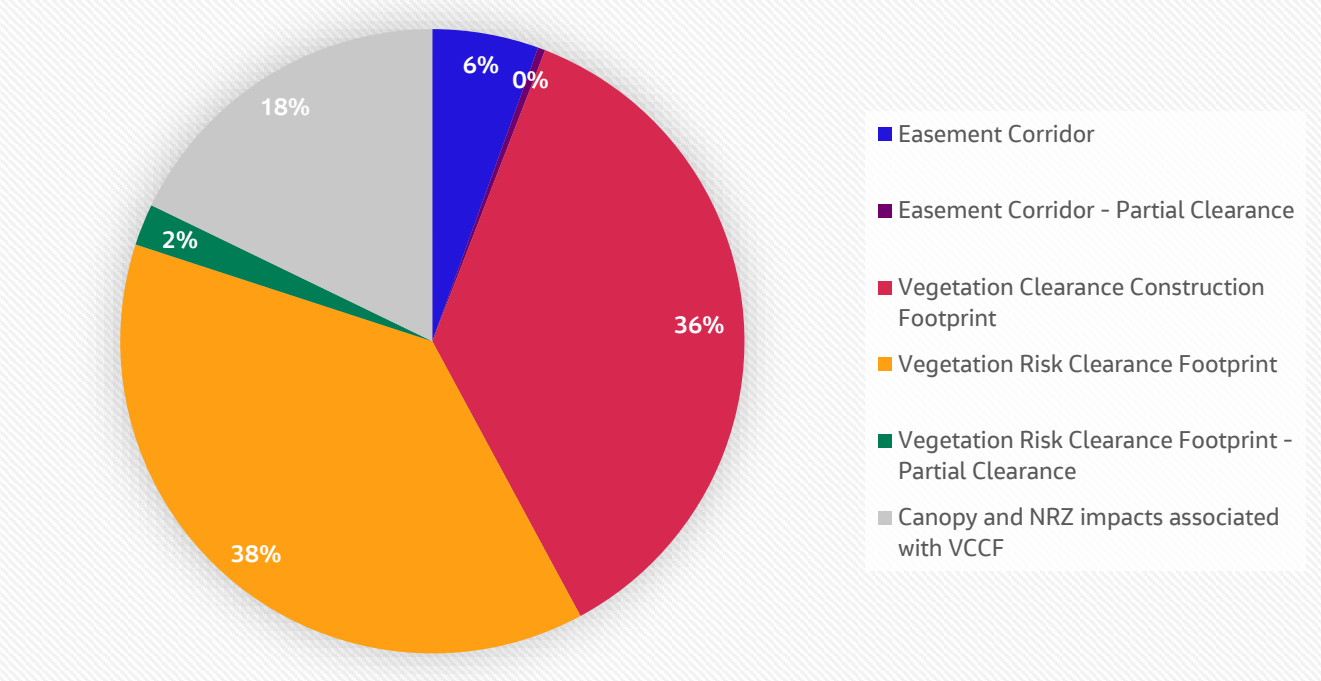


Figure 3-1. Proportional impact of native vegetation patches relevant to each Construction Footprint component

3.3.3 Bioregions

Impacts to native vegetation occur across three bioregions: Central Victorian Uplands, Goldfields and the Victorian Volcanic Plain. As shown in Table 3-50 and Figure 3-2, most Project impacts occur within the Central Victorian Uplands and Goldfields bioregion. There has been a reduction in impacts across all three bioregions in association with the inclusion of no-go zones and progression of fieldwork.

Table 3-50. Summary of native patch vegetation impacts by bioregion

Bioregion	Extent (ha) impacted		
	BD1 Report	Biodiversity IA	Difference
Central Victorian Uplands	75.93	107.03	Reduction of 31.1
Goldfields	77.48	97.89	Reduction of 20.41
Victorian Volcanic Plain	19.85	24.78	Reduction of 4.93
Total	**173.26**	**229.71**	**Reduction of 56.45**

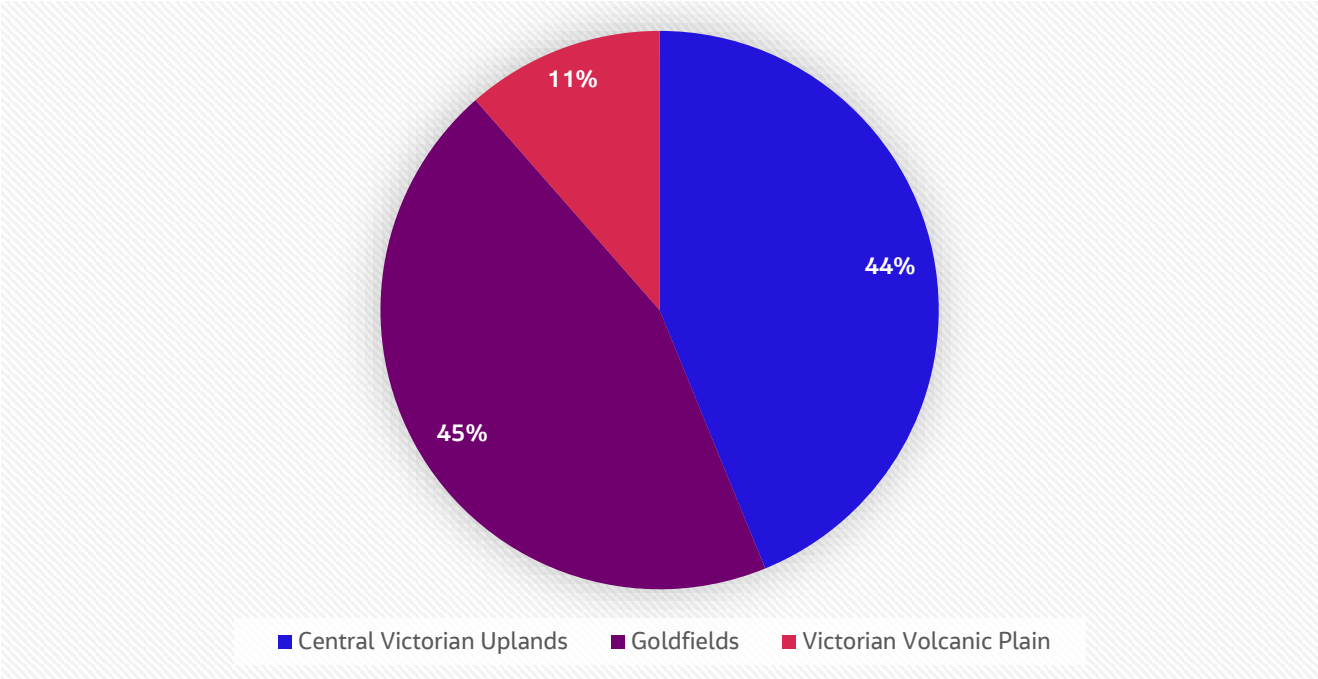


Figure 3-2. Proportional impact of native vegetation patches relevant to each bioregion

3.3.4 Bioregional Conservation Status

Bioregional Conservation Status (BCS) of an EVC is based on the amount of vegetation remaining, in relation to that thought to originally occur prior to colonisation. One of the original design objectives was to avoid large contiguous areas of native vegetation, often found in national parks and state forests, which naturally results in a lower BCS for these EVCs.

Avoiding these large areas of native vegetation leads to a disproportionally high impact to EVCs with more significant BCSs, such as endangered. Positioning the Proposed Route through large areas of vegetation would significantly increase impacts to native vegetation and threatened species habitat, reversing the BCS impact scenario. The disproportionately high extent of 'endangered' EVC impacted, is attributed to the avoidance of large contiguous areas of native vegetation.

Table 3-51 and Figure 3-3 present a summary of Project impacts to native vegetation patches, broken down by BCS. Depleted EVCs are to be the most impacted by the Project with 67.86 ha (39.2 per cent) considered lost,

followed by Endangered (63.23 ha, 36.5 per cent), Vulnerable (37.33 ha, 21.5 per cent), Least Concern (4.17 ha, 2.4 per cent) and Not Described (0.38 ha, 2.8 per cent). There has been a reduction in the extent of native vegetation impacts across all classes of Bioregional Conservation Status, except for a small increase in Least Concern.

Table 3-51. Summary of native vegetation patch impacts by Bioregional Conservation Status

Bioregional Conservation Status	Extent (ha) impacted	
	BD1 Report	Biodiversity IA
Endangered	63.23	87.67
Vulnerable	37.33	49.90
Depleted	67.86	82.21
Least Concern	4.17	3.64
Not Described[10]	0.66	6.44
Total	**173.26**	**229.71**

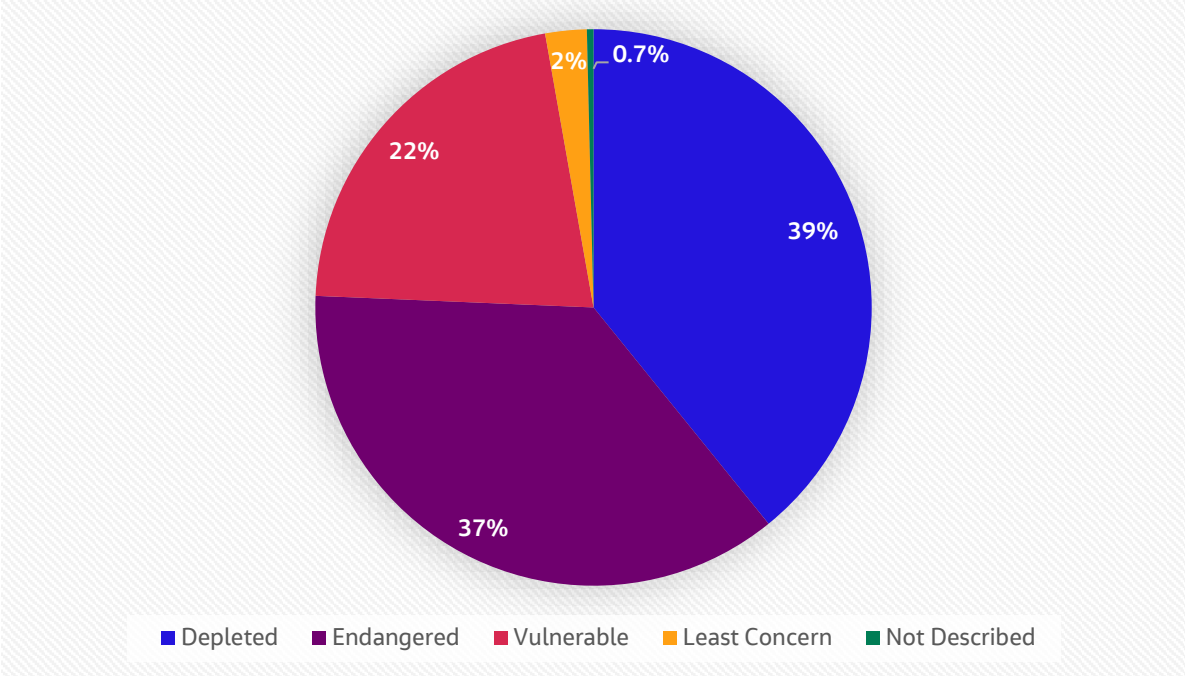


Figure 3-3. Proportional impact of native vegetation patches relevant to each Bioregional Conservation Status

3.3.5 Local Government Areas

Impacts to native vegetation occur across six Local Government Areas (LGAs), with most Project impacts occurring within the Pyrenees (47.2 per cent) and Moorabool (35.3 per cent) LGAs as summarised in Table 3-52 and Figure 3-4.

Table 3-52. Summary of native vegetation patch impacts by Local Government area

Local Government Area	Extent of native vegetation (ha) impacted	
	BD1 Report	Biodiversity IA
Pyrenees	81.86	114.95

[10] DEECA mapped wetlands

Moorabool	61.19	84.24
Northern Grampians	11.75	9.99
Melton	9.16	11.44
Hepburn	8.19	8.53
Ballarat	1.11	0.55
Total	**173.26**	**229.71**

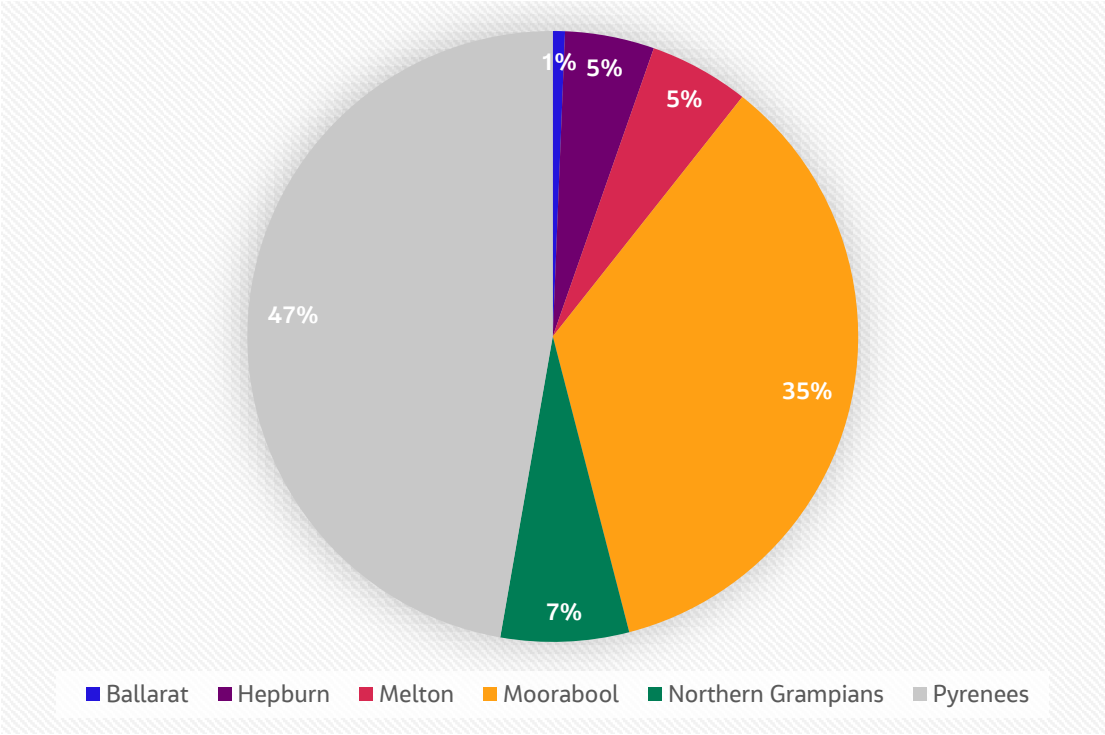


Figure 3-4. Proportional impact of native vegetation patches relevant to each LGA

3.4 Summary of Project impacts

The following tables provide a summary of the impacts based on the additional information outlined in this BD1 Report compared to the impacts presented within Section 9 of the Biodiversity IA.

Table 3-53. Summary of changes to Project impacts for TECs and threatened species

TEC/species	Summary of changes in data and extent of impacts	Change in significance of impacts
EPBC Act listed threatened communities		
Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Decrease in impacts – slight reduction in confirmed extent of impact (0.67ha) and more substantial reduction in modelled extent (8.39ha). Increase in impacts due to inclusion of NRZ impacts. No-go zones have reduced impacts and more field work has been completed to reduce reliance on modelled data.	No significant change

TEC/species	Summary of changes in data and extent of impacts	Change in significance of impacts
Natural Temperate Grassland of the Victorian Volcanic Plain	Increase in impact - this TEC was excluded from Easement Corridor impacts in the Biodiversity IA, for this assessment areas of the Easement Corridor not covered with no-go zones are now considered impacted as these are required to access adjacent areas for vegetation risk clearance. The Biodiversity IA only included very small amounts of modelled extent, and while this extent has reduced (0.32ha) it is not as substantial a reduction as the addition of impacts (0.53ha).	No significant change
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland	Net decrease in impacts – confirmed extent of habitat impacted has increased (0.81ha) due to more fieldwork undertaken and NRZ inclusion but large decrease in modelled extent of impact due to completed fieldwork not recording TEC in modelled areas and the inclusion of no-go zones have reduced impacts	No significant change
EPBC Act listed threatened fauna		
Golden Sun Moth	Increase in impact – small (0.48ha) increase in potential habitat due to a new patch recorded and as there was no modelled data used in Biodiversity IA there has been no reduction associated with this. The Easement Corridor impacts for species were excluded in Biodiversity IA as habitat is treeless so inclusion of no-go zones has had limited effect.	No significant change
Growling Grass Frog	Decrease in impacts to desktop modelled potential habitat (0.08ha) more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Gang-Gang Cockatoo	Increase in impacts (5.79ha increase of field mapped potential habitat and 3.75ha increase of desktop mapped potential habitat) – due to inclusion of Canopy & NRZ impacts which increases the potential impact to treed habitat. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Brown Treecreeper	Increase in impacts (13.14ha increase of field mapped potential habitat and 4.56ha increase of desktop mapped potential habitat) – due to inclusion of Canopy & NRZ impacts which increases the potential impact to treed habitat. An increase in impact to habitat associated with the VCCF was also due to fieldwork progression identifying more habitat, as access became available. The inclusion of no-go zones has little effect on reducing impacts, given trees generally need to be removed from the Easement Corridor.	No significant change
Painted Honeyeater	Increase in impacts (8.44ha increase of field mapped potential habitat and 7.63ha increase of desktop mapped potential habitat) – due to Canopy & NRZ impacts a being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Swift Parrot	Increase in impacts (12.21ha increase of field mapped potential habitat and 2.45ha increase of desktop mapped potential habitat) -due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact to habitat is also due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change

TEC/species	Summary of changes in data and extent of impacts	Change in significance of impacts
Hooded Robin	Increase in impacts (7.34ha increase of field mapped potential habitat and 6.26ha increase of desktop mapped potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact to habitat is also due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Blue-winged Parrot	Increase in impacts (19.78ha increase of field mapped potential habitat and 15.02ha increase of desktop mapped potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Diamond Firetail	Increase in impacts (10.68ha increase of field mapped potential habitat and 6.90ha increase of desktop mapped potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. Some other smaller increases due to additional habitat as fieldwork progressed as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Southern Greater Glider	Increase in impacts (1.65ha increase of field mapped potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Grey-headed Flying-fox	Increase in impacts to potential foraging habitat (7.49ha) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Striped Legless Lizard	No change to data or impacts assessed – modelled data not used in Biodiversity IA and Easement Corridor impacts excluded in Biodiversity IA as habitat is treeless so no-go zones did not have an effect	No change
Victorian Grassland Earless Dragon	No change to data or impacts assessed – modelled data not used in Biodiversity IA and Easement Corridor impacts excluded in Biodiversity IA as habitat is treeless so no-go zones did not have an effect	No change
EPBC Act listed flora		
Matted Flax-lily	Decrease in impacts to potential habitat (24.37haha) - No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change (conclusions in Biodiversity IA supported with more data)
Small Golden Moth Orchid	Decrease in impacts to modelled potential habitat (0.29ha) – No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Swamp Fireweed	Decrease in impacts to modelled potential habitat (2.06ha) – No-go zones have reduced impacts and more field work has been completed to reduce reliance on modelled data as land access became available.	No significant change
FFG Act listed threatened communities		
Creekline Grassy Woodland (Goldfields) Community	Decrease in impacts (0.65ha of confirmed extent and 0.92ha of potential extent) – No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change

TEC/species	Summary of changes in data and extent of impacts	Change in significance of impacts
Grey Box – Buloke Grassy Woodland	Net decrease in impacts – confirmed extent of impact has increased (0.12ha) due to more fieldwork undertaken and NRZ inclusion but larger decrease in modelled extent (1.54ha) due to completed fieldwork not recording TEC in modelled areas and no-go zones have reduced impacts.	No significant change
Rocky Chenopod Open-Scrub Community	Decrease in impacts (1.52ha of confirmed extent and 6.34ha of potential extent) – No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Western Basalt Plains Grasslands (River Red-gum) Community	Decrease in impacts (2.65ha of potential extent) – No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Western (Basalt) Plains Grasslands Community	Increase in impact (0.96ha increase of confirmed extent and 0.19ha reduction of potential extent) – this TEC was excluded from Easement Corridor impacts in the Biodiversity IA, for this assessment areas of the Easement Corridor not covered with no-go zones are now considered impacted. The Biodiversity IA only included very small amounts of modelled extent, and while this extent has reduced it is not as substantial a reduction as the addition of impacts in the Easement Corridor.	No significant change
Victorian Temperate Woodland Bird Community	Increase in impacts (6.96ha increase of field mapped potential habitat and 4.78ha reduction of potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to habitat. The inclusion of no-go zones has little effect on reducing impacts, given trees generally need to be removed from the Easement Corridor.	No significant change
FFG Act listed fauna		
Western Burrowing Crayfish	No change to data or impacts assessed – modelled data not used in Biodiversity IA and Easement Corridor impacts excluded in Biodiversity IA as habitat is treeless so no-go zones did not have an effect	No change
White-bellied Sea-Eagle	Increase in impacts (1.93ha increase of field mapped potential habitat and 0.02ha reduction of potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor. Species recorded on Project Land for the first time in February 2025.	No significant change
Square-tailed Kite	Increase in impacts (13.83ha increase of field mapped potential habitat and 7.54ha increase of potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Barking Owl	Increase in impacts (4.98ha increase of field mapped potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change

TEC/species	Summary of changes in data and extent of impacts	Change in significance of impacts
Powerful Owl	Increase in impacts (15.04ha increase of confirmed habitat and 10.06ha reduction of potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Platypus	No net change to total impacts to potential habitat– modelled data not used in Biodiversity IA however the species was confirmed present in Birch creek using eDNA in February 2025. Previously no confirmed habitat, only desktop mapped potential habitat.	No significant change
Brush-tailed Phascogale	Increase in impacts (0.70ha increase of confirmed habitat and 0.95ha increase of potential habitat) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
Tussock Skink	No change to data or impacts assessed – modelled data not used in Biodiversity IA and Easement Corridor impacts excluded in Biodiversity IA as habitat is treeless so no-go zones did not have an effect	No change
Brown Toadlet	No change to data or impacts assessed – modelled data not used in Biodiversity IA.	No change
Fat-tailed Dunnart	Increase in impact to potential habitat – Small (0.48ha) increase in VCCF impacts. Modelled data not used in Biodiversity IA and Easement Corridor impacts excluded in Biodiversity IA as habitat is treeless so no-go zones have limited effect.	No significant change
Masked Owl	Increase in impacts to potential habitat (4.98ha) – due to Canopy & NRZ impacts being assessed and thus increasing the potential impact to treed habitat. An increase in impact associated with the VCCF due to fieldwork progression as access became available. The inclusion of no-go zones has little effect on reducing impacts to habitat, given trees generally need to be removed from the Easement Corridor.	No significant change
FFG Act listed flora		
Bacchus Marsh Wattle	Decrease in impacts – Reduction in impacts to individuals (49) and potential habitat (13.15ha). No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Buloke	Decrease in impacts – Reduction in impacts to potential habitat (8.95ha). No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Cane Spear-grass	Decrease in impacts – Reduction in impacts to potential habitat (18.56ha). No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Glaucous Flax-lily	Decrease in impacts – Reduction in impacts to potential habitat (24.37ha). No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change

TEC/species	Summary of changes in data and extent of impacts	Change in significance of impacts
Brooker's Gum	No significant change – Slight increase in confirmed impacts (21) due to Canopy & NRZ impacts associated with the VCCF being assessed. Decrease in impact of modelled habitat (9.42ha) due to more fieldwork being undertaken where access became available, and no-go zones have also reduced impacts to modelled habitat.	No significant change
Melbourne Yellow-gum	No significant change – Slight increase in confirmed impacts (~100) due to Canopy & NRZ impacts associated with the VCCF being assessed. Decrease in impact of modelled habitat (8.65ha) due to more fieldwork being undertaken where access became available, and no-go zones have also reduced impacts to modelled habitat.	No significant change
Yarra Gum	No significant change – Slight increase in confirmed impacts (18) due to Canopy & NRZ impacts associated with the VCCF being assessed. Decrease in impact of modelled habitat (11.56ha) due to more fieldwork being undertaken where access became available, and no-go zones have also reduced impacts to modelled habitat.	No significant change
Brittle Greenhood	Decrease in impacts– No-go zones have resulted in substantial decrease in confirmed impacts (1388 to 648 individuals impacted) and more fieldwork completed combined to rule out modelled areas resulting in a decrease (7.42ha) of impact to potential habitat.	Decrease
Fragrant Saltbush	Decrease in impacts – Reduction in impacts to individuals (44) and potential habitat (18.30ha). No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change
Floodplain Fireweed	Decrease in impacts – Reduction in impacts to potential habitat (2.06ha). No-go zones have reduced impacts and more fieldwork has been completed to reduce reliance on modelled data as land access became available.	No significant change

Table 3-54. Summary of Project impact to flora and fauna values

Biodiversity value	Project impact						Significant Impact (MNES only)	
	Impacted individuals/ confirmed habitat (ha)		Impacted field mapped potential habitat (ha)		Impacted modelled/desktop mapped potential habitat (ha)			
	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA
Commonwealth values								
EPBC Act listed threatened communities								
Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	6.12	6.79	n/a	n/a	1.43	9.82	Likely	Likely
Natural Temperate Grassland of the Victorian Volcanic Plain	5.00	4.47	n/a	n/a	0.58	0.90	Likely	Likely
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland	0.81	0	n/a	n/a	5.24 (5 worst-case)	17.00 (5 worst-case)	Possible	Possible
EPBC Act listed threatened fauna								
Growling Grass Frog	0	0	0.02	0.02	0.64	0.72	Unlikely	Unlikely
Gang-Gang Cockatoo	0	0	32.55	26.67	10.50	6.75	Unlikely	Unlikely
Brown Treecreeper	0	0	75.45	62.31	11.51	6.95	Unlikely	Unlikely
Painted Honeyeater	0	0	46.23	37.79	11.89	4.26	Unlikely	Unlikely
Swift Parrot	0	0	29.1	16.89	3.78	1.33	Unlikely	Unlikely
Hooded Robin	0	0	39.03	31.69	9.4	3.14	Unlikely	Unlikely
Blue-winged Parrot	0	0	105.92	86.14	37.66	22.64	Unlikely	Unlikely
Diamond Firetail	0	0	63.6	52.92	10.58	3.68	Unlikely	Unlikely
Golden Sun Moth	9.71	9.71	11.77	11.2	0	0	Possible	Possible
Southern Greater Glider	0	0	13.71	12.06	0	0	Possible	Possible

Biodiversity value	Project impact						Significant Impact (MNES only)	
	Impacted individuals/ confirmed habitat (ha)		Impacted field mapped potential habitat (ha)		Impacted modelled/desktop mapped potential habitat (ha)			
	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA
Grey-headed Flying-fox	0	0	0	0	17.66	10.17	Unlikely	Unlikely
Striped Legless Lizard	0	0	1.44	1.44	0	0	Possible	Possible
Victorian Grassland Earless Dragon	0	0	3.48	3.48	0	0	Possible	Possible
EPBC Act listed flora								
Matted Flax-lily	0 individuals	0 individuals	n/a	n/a	15.88	40.25	Unlikely	Unlikely
Small Golden Moth Orchid	0 individuals	0 individuals	n/a	n/a	0.71	1	Unlikely	Unlikely
Swamp Fireweed	0 individuals	0 individuals	n/a	n/a	2.05	4.11	Unlikely	Unlikely
State values								
FFG Act listed threatened communities								
Creekline Grassy Woodland (Goldfields) Community	5.40	6.05	n/a	n/a	0.34	1.26	n/a	n/a
Grey Box – Buloke Grassy Woodland	0.12	0	n/a	n/a	4.30	5.84	n/a	n/a
Rocky Chenopod Open-Scrub Community	1.81	3.33	n/a	n/a	8.33	14.67	n/a	n/a
Western Basalt Plains Grasslands (River Red-gum) Community	0	0	n/a	n/a	4.11	6.76	n/a	n/a
Western (Basalt) Plains Grasslands Community	7.29	6.33	n/a	n/a	0.71	0.90	n/a	n/a
Victorian Temperate Woodland Bird Community	n/a	n/a	54.37	47.41	7.88	12.66	n/a	n/a
FFG Act listed fauna								
Western Burrowing Crayfish	0.01	0.01	0	0	0	0	n/a	n/a

Biodiversity value	Project impact						Significant Impact (MNES only)	
	Impacted individuals/ confirmed habitat (ha)		Impacted field mapped potential habitat (ha)		Impacted modelled/desktop mapped potential habitat (ha)			
	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA	BD1 Report	Biodiversity IA
White-bellied Sea-Eagle	0	0	17.46	15.53	0.08	0.1	n/a	n/a
Square-tailed Kite	0	0	79.27	65.44	16.38	8.84	n/a	n/a
Barking Owl	0	0	28.94	23.96	0	0	n/a	n/a
Powerful Owl	15.04	13.36	13.90	10.60	0	0	n/a	n/a
Platypus	0.01	0	0	0	0.02	0.03	n/a	n/a
Brush-tailed Phascogale	9.86	9.16	0	1.31	2.26	0	n/a	n/a
Tussock Skink	2.04	2.04	0	1.31	1.31	0	n/a	n/a
Brown Toadlet	0.66	0.66	0	0	0	0	n/a	n/a
Fat-tailed Dunnart	0	0	21.48	21.00	0	0	n/a	n/a
Masked Owl	0	0	28.94	23.96	0	0	n/a	n/a
FFG Act listed flora								
Bacchus Marsh Wattle	451 individuals	500 individuals	n/a	n/a	8.38	21.53	n/a	n/a
Buloke	27 individuals	27 individuals	n/a	n/a	38.30	47.25	n/a	n/a
Cane Spear-grass	0 individuals	0 individuals	n/a	n/a	14.95	33.51	n/a	n/a
Brooker's Gum	254 individuals	233 individuals	n/a	n/a	13.41	22.83	n/a	n/a
Melbourne Yellow-gum	500 individuals	400 individuals	n/a	n/a	10.77	19.42	n/a	n/a
Yarra Gum	81 individuals	63 individuals	n/a	n/a	28.76	40.32	n/a	n/a
Brittle Greenhood	648 individuals	1388 individuals	n/a	n/a	13.18	20.60	n/a	n/a
Fragrant Saltbush	3037 individuals	3081 individuals	n/a	n/a	14.75	33.05	n/a	n/a
Floodplain Fireweed	0 individuals	0 individuals	n/a	n/a	2.05	4.11	n/a	n/a
Glaucous Flax-lily	0 individuals	0 individuals	n/a	n/a	15.88	40.25	n/a	n/a

Table 3-55. Summary of Project impact to native vegetation (BD1 Report and Biodiversity IA comparison)

Native vegetation impacts		BD1 Report Totals	Biodiversity IA Totals
Patches		173.26ha	229.71ha
Large canopy trees in patches		1000	844
Scattered trees	Large	172	147
	Small	94	66
Total Native Vegetation Removal Report area[11]		**186.264ha**	**238.607ha**

[11] A total of 186.264ha of native vegetation is to be impacted by the Project (as presented within the Native Vegetation Removal report). Of this 186.264ha, 173.26ha consists of patches and 13.004ha consists of the extent of scattered trees.

4. Offset requirements

This section sets out the offset requirements arising from the revised extent of impacts outlined in this BD1 Report.

4.1 Commonwealth offsets

Specific EPBC Act offsets are potentially necessary for significant impacts on seven of the EPBC Act listed matters associated with the Project. Table 4-1 provides an estimation of EPBC Act offset requirements for the Project. These are based on the impacts detailed in Section 3.1 and include a worst-case estimate that considers modelled habitat for communities where survey has not been completed. The completed field surveys show that modelled habitat for TECs does not equate to the area of TEC expected to be present. For example, while 6.05ha of both field (0.81ha) and modelled (5.24ha) habitat for White Box-Yellow Box-Blakely's Red Gum Grassy Woodland occurs in the Construction Footprint, the worst-case scenario is that only a total of 5ha of the Construction Footprint contains the TEC, and hence this area has been used to determine the offset required. For the other TECs the sum of field mapped and modelled habitat (i.e. worst-case impact) has been used as survey of these TECs has progressed more thoroughly so that smaller areas of modelled habitat remain and do not skew the offset calculation so significantly.

The area-weighted average condition score of the field mapped Vegetation Quality Assessment results has been used to calculate the quality score of the TECs requiring offsets. As can be seen in Table 4-1 the quality score of impacted TECs has increased compared to the Biodiversity IA. This is due to fieldwork progressing and changes to the area of impact associated with changes to the Construction Footprint and NRZ impact areas. A reduction in extent of impact for Grey Box Grassy Woodlands has more than offset the increase in quality score so the indicative offset areas is 60.67ha lower than the Biodiversity IA. In the case of Natural Temperate Grassland of the Victorian Volcanic Plain, the indicative offset area has also increased due to a small increase in the area impacted. Combined with an increase in quality score this results in an increase of 17.12ha in the indicative offset area required. In the case of Yellow Box Grassy Woodland the modelled habitat impacted has been significantly reduced from 17.00ha to 5.00ha, although the worst-case scenario has been kept at 5.00ha of TEC impact. With the increase in the quality score this has increased the indicative offset area.

For the four species that may be significantly impacted (Golden Sun Moth, Southern Greater Glider, Victorian Grassland Earless Dragon and Striped Legless Lizard) sufficient survey has been completed so that modelled habitat has not been used to determine impacts and hence only impacts to field mapped habitat is utilised to calculate the offset requirement for these species. Of these, Southern Greater Glider impacts have increased (1.65ha) due to NRZ impacts associated with access tracks and a subsequent increase to the indicative offset area of 10.6ha, however these impacts may be avoided through design development and informed by further field surveys. Golden Sun Moth has seen a slight increase (0.48ha) in impacts to potential habitat and a subsequent increase to the indicative offset area of 2.81ha. For the other two species, the impacts to the species and the offset requirements are unchanged.

Table 4-1. EPBC Act offset requirement (indicative only and subject to change with further survey)[12]

MNES	Significant impact	Impact	Area (ha)		Quality score		Quantum of impact (ha)		Indicative offset area (ha)	
			BD1 Report	Biodiversity IA	BD1 Report[13]	Biodiversity IA[14]	BD1 Report	Biodiversity IA	BD1 Report[15]	Biodiversity IA[11]
Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Likely	Field mapped occurrence	6.12	6.79	6	5	3.67	3.4	59.11	54.65
		Modelled occurrence of EVC equivalents	1.43	9.82	6	5	0.86	4.91	13.81	79.03
		Worst-case TEC impact	7.56	16.61	6	5	4.54	8.31	73.01	133.68
Natural Temperate Grassland of the Victorian Volcanic Plain	Likely	Field mapped occurrence	5.00	4.47	4	3	2.00	1.34	55.16	36.99
		Modelled occurrence of EVC equivalents	0.58	0.9	4	3	0.23	0.27	6.40	7.45
		Worst-case TEC impact	5.58	5.37	4	3	2.23	1.61	61.56	44.44
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland	Possible	Field mapped occurrence	0.81	0.00	-	-	-	-	-	-
		Modelled occurrence of EVC equivalents	5.24	17.00	-	-	-	-	-	-
		Worst-case TEC impact	5.00	5.00	4	3	2.00	1.5	55.16	41.38
Golden Sun Moth habitat	Possible	Field mapped confirmed habitat	9.71	9.71	4	4	3.88	3.88	56.61	56.61

[12] Refer to the EES Attachment V: Offset Management Strategy document for the method of calculation for offsets.
[13] Quality score is based on the area-weighted average of the field VQA scores for the impacted patches of the TEC.
[14] Quality score for fauna and indicative area to be offset for all MNES based on the method and assumptions listed in within the Offset Management Strategy (Rev 1.0). The area to be offset is indicative until the offset sites are assessed and the proposed management actions confirmed.
[15] Worse-case scenario indicative offset area totals are directly from the EPBC Act calculator, if discrepancies arise between the addition of field mapped and modelled rows, this is due to decimal rounding in the calculator.

MNES	Significant impact	Impact	Area (ha)		Quality score		Quantum of impact (ha)		Indicative offset area (ha)	
			BD1 Report	Biodiversity IA	BD1 Report[13]	Biodiversity IA[14]	BD1 Report	Biodiversity IA	BD1 Report[15]	Biodiversity IA[11]
		Field mapped potential habitat	11.77	11.29	4	4	4.71	4.52	68.62	65.81
		Worst-case habitat impact	21.48	21.00	4	4	8.59	8.4	125.22	122.42
Southern Greater Glider habitat	Possible	Field mapped potential habitat	13.71	12.06	4	4	5.48	4.82	88.28	77.68
Victorian Grassland Earless Dragon habitat	Possible	Field mapped potential habitat	3.48	3.48	3	3	1.04	1.04	28.80	28.80
Striped Legless Lizard habitat	Possible	Field mapped potential habitat	1.44	1.44	3	3	0.43	0.39	6.30	6.30

NOTE: *The table is indicative only and outlines indicative offset requirements based on a worst-case scenario for TECs which includes the consideration of modelled data. This is subject to change with further surveys undertaken to reduce impacts identified due to the use of modelled data. The worst-case scenario for White Box-Yellow Box-Blakely's Red Gum Grassy Woodland does not include all modelled areas due to the highly conservative model for this TEC.*

4.2 State offsets

The state native vegetation offset requirements arising from the impacts set out in this BD1 Report are detailed in Table 4-2. The offset must be in place prior to the removal of any native vegetation.

The native vegetation removal report for this assessment is included in Appendix B and summarised below in Table 4-2. In general, state offsets have decreased compared to the Biodiversity IA, predominantly due to an overall decrease in native vegetation impacted by the Project.

Table 4-2. Native vegetation offset requirements under the Guidelines

Summary of native vegetation removal			
		BD1 Report	**Biodiversity IA**
Extent of proposed vegetation removal		186.264ha	238.607ha
Extent of past removal		0 ha	0 ha
Number of Large Trees to be removed		1172	991
Location Category		Location 3	Location 3
Offset requirements			
General offset	General offset amount	1.864 general offset units	2.832 general offset units
	Vicinity	Corangamite, North Central, Port Phillip and Westernport, Wimmera Catchment Management Authority (CMA) or Ballarat City, Hepburn Shire, Melton City, Moorabool Shire, Northern Grampians Shire, Pyrenees Shire Councils	Corangamite, North Central, Port Phillip and Westernport, Wimmera Catchment Management Authority (CMA) or Ballarat City, Hepburn Shire, Melton City, Moorabool Shire, Northern Grampians Shire, Pyrenees Shire Councils
	Minimum strategic biodiversity value score	0.272	0.277
	Large trees	57 large trees	44 large trees
Species offset	Species offset amount	22.321 species units of habitat for Spotted Hyacinth-orchid, *Dipodium pardalinum* 16.045 species units of habitat for Grassland Earless Dragon, *Tympanocryptis pinguicolla* 87.696 species units of habitat for Golden Sun Moth, *Synemon plana* 26.192 species units of habitat for Brooker's Gum, *Eucalyptus brookeriana* 78.555 species units of habitat for Yarra Gum, *Eucalyptus yarraensis* 8.606 species units of habitat for Small Golden Moths, *Diuris basaltica* 33.755 species units of habitat for Goldfields Grevillea, *Grevillea dryophylla* 18.142 species units of habitat for Ben Major Grevillea, *Grevillea floripendula* 23.374 species units of habitat for Smooth Grevillea, *Grevillea rosmarinifolia* subsp. *glabella*	24.821 species units of habitat for Spotted Hyacinth-orchid, *Dipodium pardalinum* 23.146 species units of habitat for Victorian Grassland Earless Dragon, *Tympanocryptis pinguicolla* 102.005 species units of habitat for Golden Sun Moth, *Synemon plana* 20.275 species units of habitat for Wiry Bossiaea, *Bossiaea cordigera* 29.596 species units of habitat for Brooker's Gum, *Eucalyptus brookeriana* 86.892 species units of habitat for Yarra Gum, *Eucalyptus yarraensis* 6.790 species units of habitat for Small Golden Moths, *Diuris basaltica* 33.951 species units of habitat for Goldfields Grevillea, *Grevillea dryophylla* 16.956 species units of habitat for Ben Major Grevillea, *Grevillea floripendula* 12.247 species units of habitat for Brittle Greenhood, *Pterostylis truncata*

Summary of native vegetation removal			
		3.216 species units of habitat for Brisbane Range Grevillea, *Grevillea steiglitziana* 26.180 species units of habitat for Austral Tobacco, *Nicotiana suaveolens* 12.027 species units of habitat for Brittle Greenhood, *Pterostylis truncata* 25.801 species units of habitat for Fragrant Saltbush, *Rhagodia parabolica* 20.205 species units of habitat for Heath Spear-grass, *Austrostipa exilis* 21.858 species units of habitat for Melbourne Yellow-gum, *Eucalyptus leucoxylon* subsp. *connata* 4.536 species units of habitat for Golden Bush-pea, *Pultenaea gunnii* subsp. *tuberculata* 20.357 species units of habitat for Wombat Bush-pea, *Pultenaea reflexifolia* 55.547 species units of habitat for Matted Flax-lily, *Dianella amoena* 19.406 species units of habitat for Bacchus Marsh Wattle, *Acacia rostriformis* 12.679 species units of habitat for Shiny Leionema, *Leionema lamprophyllum* subsp. *obovatum* 3.623 species units of habitat for Gum-barked Bundy, *Eucalyptus goniocalyx* subsp. *laxa* 2.070 species units of habitat for Werribee Blue-box, *Eucalyptus baueriana* subsp. *thalassina*	26.292 species units of habitat for Fragrant Saltbush, *Rhagodia parabolica* 20.415 species units of habitat for Heath Spear-grass, *Austrostipa exilis* 23.397 species units of habitat for Melbourne Yellow-gum, *Eucalyptus leucoxylon* subsp. *connata* 4.483 species units of habitat for Golden Bush-pea, *Pultenaea gunnii* subsp. *tuberculata* 24.135 species units of habitat for Wombat Bush-pea, *Pultenaea reflexifolia* 0.672 species units of habitat for Red-sheath Tussock-grass, *Poa amplexicaulis* 57.628 species units of habitat for Matted Flax-lily, *Dianella amoena* 21.541 species units of habitat for Bacchus Marsh Wattle, *Acacia rostriformis* 15.054 species units of habitat for Shiny Leionema, *Leionema lamprophyllum* subsp. *obovatum* 2.789 species units of habitat for Gum-barked Bundy, *Eucalyptus goniocalyx* subsp. *laxa* 3.494 species units of habitat for Werribee Blue-box, *Eucalyptus baueriana* subsp. *thalassina*
	Large trees	1115 trees	947 trees
The total number of large trees that the offset must protect		1172 large trees (inclusive of above totals) to be protected in either the general, species or combination across all habitat units protected	991 large trees (inclusive of above totals) to be protected in either the general, species or combination across all habitat units protected

4.3 Identifying required Project offsets

The following provides a summary of offsets to be secured based on offset calculations summarised in Section 4.1 (Commonwealth) and Section 4.2 (state).

4.3.1 Commonwealth offsets

Several potential offset sites have been identified, and AusNet will seek agreement with landholders to facilitate registration of the offsets to secure them for the Project. A summary of the offsets available for the project and offsets required is provided Table 4-3. The table below is structured to align with Table 5-1 included in exhibited EES document ***Attachment V: Offset Management Strategy***.

Table 4-3 Summary of offsets availability for the relevant Commonwealth (MNES)

Offset stage	Offset availability	Offset requirement (ha)
AusNet are continuing to undertake further surveys on the proposed route, to, reduce reliance on modelled data and reduce the amount of vegetation that is required to be removed and therefore to reduce the overall offset requirements for the Project. Option agreements are being used to secure offsets prior to project approval. Offset estimates are based on conservative inputs used to inform the EPBC calculator. These inputs will be further refined with specific offset sites and direct consultation with DCCEEW to meet the EPBC Policy requirements.	**Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia** Three sites identified that can supply approximately 101ha to meet direct offset requirements.	**73.01**
	Natural Temperate Grassland of the Victorian Volcanic Plain One site identified that can supply approximately 63ha to meet direct offset requirement. Site includes 53ha of NTGVVP and an additional 10ha of native grassland that would require restoration to NTGVVP condition.	**61.56**
	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland Two sites identified that can supply approximately >60ha to meet direct offset requirements. EPR BD8 requires surveys of this threatened community to be done to confirm presence and also requires AusNet to avoid and minimise impacts through design refinements to reduce impacts and confirm actual offset requirements.	**55.16**
	Golden Sun Moth habitat Three sites identified that can supply approximately 130ha of the direct offset requirements.	**125.22**
	Southern Greater Glider habitat Three sites identified that can supply approximately 89ha of the direct offset requirement. AusNet are undertaking further design refinements to confirm additional reductions in accordance with EPR BD1.	**88.28**
	Striped Legless Lizard habitat One site identified that can supply approximately 6.5ha of the direct offset requirement.	**6.30**
	Victorian Grassland Earless Dragon habitat Two sites identified that can supply approximately 28.80ha.	**28.80**

4.3.2 State offsets

A summary of these offsets is included in Table 4-4 to define current offset availability for the Project. Table 4-4 in this report has been structured to align with Table 5-4 of the exhibited ***Attachment V: Offset Management Strategy***.

All state offsets can be met through a combination of offsets currently available on the Native Vegetation Credit Register (NVCR) and nine unregistered offset sites identified by the Project. As shown in Table 4-4, species offsets will be initially sourced through the nine unregisters sites and if a shortfall arises this will addressed using sites currently on the NVCR.

Table 4-4. Summary of offset availability for all state offsets

Offset stage	Habitat Units provided
Nine new unregistered offset sites have been identified to supply state offsets. Option agreements are being used to secure offsets prior to project approval based on the conservative assessment. Available offset sites are generally in Catchment Management Areas: ▪ Glenelg Hopkins ▪ Corangamite ▪ Melbourne Water ▪ Local Government Areas ▪ Pyrenees Shire ▪ Golden Plains Shire ▪ Greater Geelong ▪ Moorabool Shire ▪ Moyne Shire.	Species Habitat Units at the nine sites[16] include: ▪ Austral Tobacco – 26.18 SHU ▪ Bacchus Marsh Wattle – 19.406 SHU ▪ Ben Major Grevillea – 15.591 SHU ▪ Brisbane Ranges Grevillea – 3.216 SHU ▪ Brittle Greenhood - 12.027 SHU ▪ Brooker's Gum – 26.192 SHU ▪ Fragrant Saltbush – 25.801 SHU ▪ Golden Bush-pea – 4.536 SHU ▪ Golden Sun-moth – 61.552 SHU ▪ Gum-barked Bundy –3.623 SHU ▪ Heath Spear-grass – 20.205 SHU ▪ Matted Flax-lily – 44.51 SHU ▪ Melbourne Yellow-gum – 28.858 SHU ▪ Shiny Leionema – 12.679 SHU ▪ Small Golden-moths – 8.606 SHU ▪ Smooth Grevillea – 23.374 SHU ▪ Spotted Hyacinth-orchid – 22.321 SHU ▪ Victorian Grassland Earless Dragon – 16.045 SHU ▪ Werribee Blue box – 2.07 SHU ▪ Wombat Bush-pea – 14.533 SHU ▪ Yarra Gum – 57.812 SHU
Registered on the Native Vegetation Credit Register (NVCR). Offset credits currently available to be purchased from offset sites registered on the NVCR as of 3rd July 2025 (SHUs) and 4th September 2025 (GHUs). All offset sites that supply General Habitat Units are located in Catchment Management Areas: ▪ North central ▪ Wimmera ▪ Corangamite ▪ Melbourne Water ▪ Local Government Areas ▪ Pyrenees Shire	General Habitat Units: ▪ 1.864 GHU to be secured in either Corangamite, North Central, Melbourne, Wimmera Catchment Management Authority or Ballarat City, Hepburn Shire, Melton City, Moorabool Shire, Northern Grampians Shire, Pyrenees Shire Councils. Species Habitat Units (showing the balance required for species where the nine sites do not provide sufficient SHU): ▪ Ben Major Grevillea – 2.551 SHU. There are two sites that can supply 3.591 SHU. ▪ Golden Sun-moth – 26.144 SHU. There are eleven sites that can supply 93.973 SHU. ▪ Goldfields Grevillea – 33.755 SHU. There are ten sites on the NVCR that can supply 64.484 SHU.

[16] Available SHU identified across all nine sites is maximum available or capped at Project SHU requirements where they match species requirements

Offset stage	Habitat Units provided
▪ Hepburn Shire ▪ Ballarat City ▪ Moorabool Shire ▪ Melton City ▪ Northern Grampians.	▪ Matted Flax-Lily – 11.037 SHU. There are twelve sites that can supply 56.89 SHU. ▪ Wombat Bush-pea – 5.824 SHU. There are five sites that can supply 36.469 SHU. ▪ Yarra Gum – 20.743 SHU. There are thirteen sites that can supply 82.776 SHU. Large Trees ▪ All 1172 Large Tree offsets will be secured using a mix of GHU and SHU. The balance of all Large Tree credits not provided from offset site currently in progress will be purchased off market.

5. Conclusion

This BD1 Report presents the findings of additional information that has been prepared to address EPR BD1, noting that work is ongoing as land access becomes available. This includes incorporating additional survey data to reduce the reliance on modelled data, introducing no-go zones to refine impacts within the Easement Corridor Construction Footprint, and assessing impacts to NRZ and associated canopy. An assessment of impacts taking into account this additional information has been presented in this BD1 Report and compared to the impacts identified in the Biodiversity IA.

The additional work undertaken demonstrates a reduction of 52.243 ha in the extent of native vegetation proposed for removal (from 238.607ha to 186.264ha) and this general trend applies to the removal of TECs and most species. However, the reductions have not been evenly spread and some species and TECs have an increase to the impact extent. This has not resulted in a notable change in the significance of the impact to these values.

In summary:

- TECs generally saw a decrease in impacts as no-go zones and fieldwork have primarily reduced the extent of impacts to modelled habitat compared to the Biodiversity IA.

- Grassland fauna (e.g., Golden Sun Moth, Striped Legless Lizard, Victorian Grassland Earless Dragon, Tussock Skink) have had little change in impacts as field data was used (as opposed to modelled data) for these species in the Biodiversity IA, and in the Biodiversity IA, Project activities within the Easement Corridor Construction Footprint (ECCF) were assumed to not impact habitat for these species. So the fieldwork did not result in significant changes to extent of mapped habitat as the existing data was accurate (compared with other taxa assessed with less accurate modelled data) and the addition of no-go zones to the ECCF did not result in a reduction of impacts. Their habitat is not affected by NRZ impacts, so there was no increase in impacts to their habitat associated with the NRZ assessment.

- Fauna that use treed environments generally saw an increase in potential impact extent because the assessment now includes NRZ impacts. In addition to this, the inclusion of the no-go zones within the Easement Corridor Construction Footprint could not generally be applied to their habitat given trees will be removed from the Easement Corridor due to transmission line clearance safety requirements. However, the increase in impact did not result in a notable change in the significance of the impact to these species. The change was a result of a conservative recalculation of the area impacted by mapping the canopy of potential NRZ impacts.

- Flora that are not trees generally had reduced impacts, as no-go zones and fieldwork ruled out modelled habitat resulting in decreased impacts.

- Threatened tree species have seen a small increase in the extent of impacts due to NRZ impacts being assessed but impacts to modelled habitat have been reduced due to the progression of fieldwork and inclusion of no-go zones.

- There has been an increase in large patch trees and scattered trees impacted. This is in part due to it being difficult to estimate large patch trees and scattered trees in areas where surveys have not occurred due to land access constraints. Both large trees in patches and scattered trees have been indicatively mapped via a desktop approach in areas yet to be surveyed. However, this is an estimate only and the results of this BD1 Report indicate that the desktop mapping of large patch trees under-estimates the number present. Fieldwork is required to confirm the actual number and location of large patch trees. Additionally, often areas initially modelled as native vegetation patches were identified to only be comprised of scattered trees during fieldwork, hence as fieldwork is completed and the extent of modelled patches is reduced, the number of scattered trees may increase. Impacts to large patch trees and scattered trees have also increased due to the assessment of NGZs impacts included within this BD1 Report. Large patch trees and scattered tree impact numbers may continue to trend upwards as more fieldwork is completed and trees continue to be mapped, however the modelled patch extents will likely continue to trend downwards,

especially given it is likely that fieldwork will continue to reveal that areas modelled as patches only contain scattered trees.

Work to address EPR BD1 is ongoing and the extent of impacts will continue to be refined particularly as additional land access becomes available. However, this BD1 Report demonstrates that further survey work, development of design and mitigation measures (such micro-siting) can enable AusNet to avoid and minimise impacts to native vegetation, TECs and threatened species.

6. References

DEECA (2025) *Assessor's handbook: applications to remove, destroy or lop native vegetation, version 1.2*, Department of Energy, Environment and Climate Action, Government of Victoria.

DELWP (2017) *Guidelines for the removal, destruction or lopping of native vegetation*, Department of Environment, Land, Water and Planning, Government of Victoria.

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DTP (2022) *Vicmap Vegetation Tree Extent*. Depatment of Transport and Planning,. <https://metashare.maps.vic.gov.au/geonetwork/srv/api/records/f6800447-ef34-5f66-acaa-77a5f2936546/formatters/xsl-view?view=default&portalLink=>