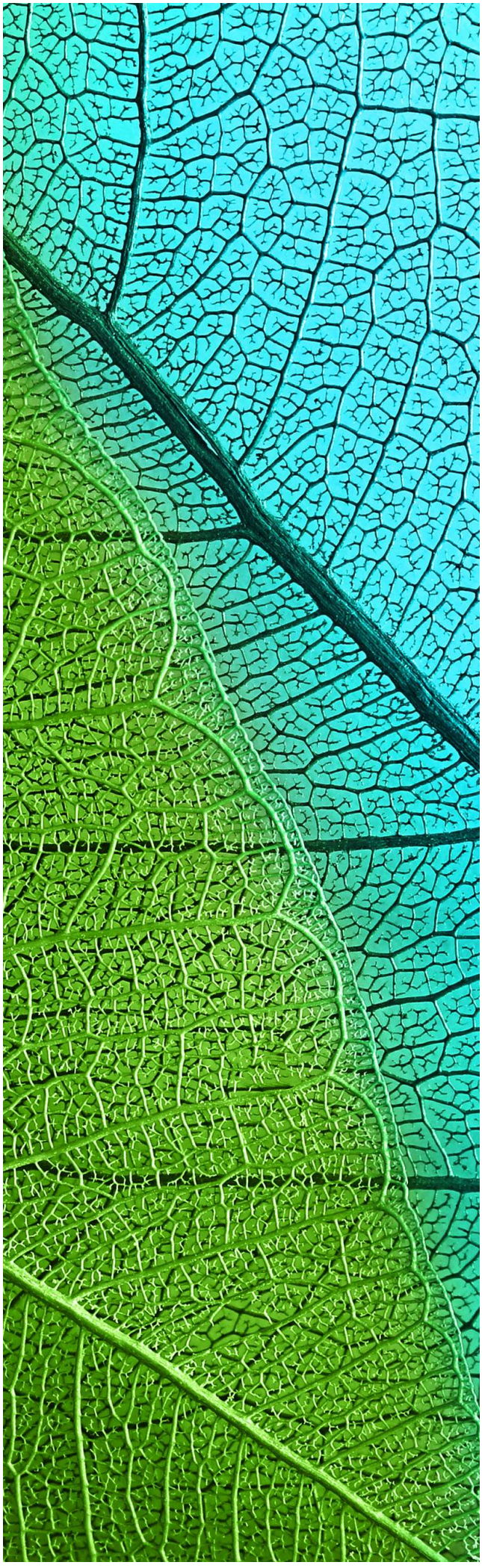

Western Renewables Link (WRL)

Peer review of Biodiversity Impact Assessment

Prepared for White & Case

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Nature Advisory acknowledges the traditional owners and sovereign custodians of the land on which we work from – the Wurundjeri people of the Woi Wurrung language group. We extend our respect to their Ancestors and all First Peoples and Elders, past and present.

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Appendices

1. Introduction

White and Case lawyers, on behalf of AusNet Transmission Group Pty Ltd, have retained Nature Advisory Pty Ltd to undertake a peer review of the *EES Technical Report A: Biodiversity Impact Assessment* for the Western Renewables Link, prepared by Jacobs and dated 5th June 2025 ('Biodiversity Impact Assessment').

The purpose of this review was to ascertain if the Biodiversity Impact Assessment ('the report') is based on appropriate and sufficient investigations, and prepared to a satisfactory standard for an Environmental Effects Statement (EES), addressing all relevant regulatory requirements. The peer review then considered whether the Biodiversity Impact Assessment adequately addressed the relevant EES Scoping Requirements for the Project.

Specifically the scope of this peer review included the following:

- the methodology adopted in the impact assessment, including consideration of the appropriateness of the assumptions and limitations applied
- the impact assessment findings
- the Environmental Performance Requirements and
- whether the impact assessment adequately addresses the relevant evaluation objective in the EES Scoping Requirements for the Project.

2. Methods

A review of the methods for the biodiversity impact assessment was undertaken based on all available and relevant documents.

This review involved the following steps:

- A review of the desktop review process, including the sources of existing information used and the evaluation of the likelihood of occurrence of listed species and communities
- A review of the field methods used for their effectiveness (with reference to existing survey guidelines, such as EPBC Act Policy Statements, and the Victorian Habitat Hectare method referred to as required)
- Identification of gaps, if any, in the adequacy of the survey methods.

These are discussed in more detail below.

2.1. Data sources

A range of data sources were used to inform the initial likelihood of occurrence determinations, ground-truthing and preliminary habitat assessments, and to assist in identifying the need for detailed field surveys. These are summarised in Table 5-1 of the biodiversity impact assessment.

The data sources utilized are appropriate and accurate in providing preliminary information on biodiversity values. Department of Energy, Environment and Climate Action (DEECA) sources, such as the Victorian Biodiversity Atlas (VBA), NatureKit (DEECA), Mapped Wetland Layer, DataVic (Online map data sources from the Victorian Government), the EPBC Act Protected Matters Search Tool (PMST) and sources associated with relevant councils and CMAs represent standard publicly available resources utilized in biodiversity assessments. Although the Birdlife Australia Birddata Atlas and Aerometrex sources are not associated with government bodies, these organisations are nonetheless considered reputable and provide reliable data in their respective areas of expertise.

High-resolution aerial imagery and DEECA datasets and mapping were utilised to broadly consider potential habitat across the Project Land[1]. This use of desktop resources is considered a standard approach in providing a preliminary overview of habitat potentially utilised by listed species. When coupled with detailed field assessments of potential habitat, an accurate indication of likelihoods of occurrence for listed values can be determined.

2.2. Likelihood of occurrence

Determination of the preliminary likelihood of occurrence of listed values has been based on known habitat preferences and use by the listed matter compared with habitat available, and the frequency, timing, and location of previous records within the Project Land. This approach is sound as it utilises existing data on occurrence and is consistent with approaches widely used in the consultancy industry. The resulting short-list of species and communities for further consideration (see Section 5.1 of the Biodiversity Impact Assessment) is therefore considered valid.

The subsequent refined likelihood of occurrence based on targeted and other field investigations is the logical second step to a final short-list of listed matters potentially affected.

[1] As defined in Section 3.2 of the biodiversity impact assessment

The criteria used for assigning a likelihood of occurrence vary and there is no standard method. This is not a concern if the criteria are transparent and readily applied to the available type and volume of existing data. Review of Table 5-2 in the report sets out the likelihood criteria for species, ranking it from present (recorded during project field studies) to low and not applicable (the last for species for which the Project Land was outside their usual range or occurrences were non-indigenous, planted). For threatened ecological communities, a simple high-moderate-low designation is used. The likelihood hierarchy, the criteria used and the designations of likelihood are considered acceptable and informative.

It is appropriate that matters with a 'low' likelihood of occurrence (or 'not applicable') are not subject to a detailed impact assessment.

2.3. Vegetation Quality Assessment (VQA)

The Victorian Vegetation Quality Assessment (VQA) method (DSE 2004) was utilized by Jacobs in assessing native vegetation. This is considered appropriate, as it is the standard method for vegetation assessment within Victoria and in accordance with DEECA-approved guidelines (e.g. the Assessor's Handbook – DELWP 2018).

To assess the veracity of Jacobs VQA assessment, Nature Advisory conducted field assessments across four sample sites within the Project Area, comprising:

- Lexton H5 Bushland Reserve
- 412 Glendhu Road, Crowlands
- Lot 2 Diggers Rest Road, Merrimu (south of Merrimu Reservoir Picnic Area)
- 331 Lerderderg Gorge Road, Darley

The areas inspected represented a range of habitat types and Ecological Vegetation Classes (EVCs) of varying quality, evenly distributed across the proposed transmission line route. These assessments were conducted on the 28th July, 8th August and 4th October 2022. During these assessments, the sites were surveyed on foot and areas supporting native vegetation and fauna habitat were inspected in detail. The accuracy of Jacobs mapping was also evaluated.

The results of this assessment are presented in Appendix 1, including a comparison of detailed VQA scoring. It should be noted that several Habitat Zones previously assessed are no longer included in the most recent Project Area and therefore have not been included in this version of the Jacobs impact assessment. These include the following:

- HZGW1_13-1-21
- HZGW2_13-1-21
- HZGW3_13-1-21
- HZGW4_13-12-21
- HZ1A – 8NOV21

It is noted that due to access constraints, not all native vegetation could be assessed in person. This continuing limitation has been acknowledged throughout the Biodiversity Impact Assessment and it is understood that once the project is approved, access will be obtained and a final on-ground assessment will be made, as per the Environment Performance Requirements. In this case, the final Native Vegetation Removal Report (NVRR) will accurately assess native vegetation impacts, including addressing the issues observed below.

2.3.1. VQA results

When comparing Jacobs VQA results with those of the Nature Advisory assessment, it was found that most VQA scores for each zone only differed by 1-3 points. However, there was greater variation in scores for site condition components. Many of these differences may be attributed to seasonal variations and changes in habitat quality over time. For instance, the high rainfall experienced in 2022 is likely to have had a notable impact on the cover values of both native and exotic components of habitat zones since the Jacobs assessments. Furthermore, the VQA method also relies on an estimation of cover values, which can be prone to being influenced by assessor subjectivity. Overall, these differences in scores are not considered to constitute a significant inconsistency and are within the normal range of variance between observers and survey times.

Key issues related to patch mapping, habitat zone delineation and scoring for landscape context are discussed in Appendix 1.

It is understood that the Jacobs VQA results will be reviewed and the necessary updates will be made for the final NVRR, including adding in final results once access to all land parcels has been obtained, as per the Environmental Performance Requirements (EPRs).

2.3.2. Scattered trees

Scattered trees identified by both Jacobs and Nature Advisory were largely consistent. However, during the field assessment at 331 Lerderderg Gorge Road, Nature Advisory identified an additional two large scattered trees. It should be noted that these trees occurred within a paddock supporting numerous remnant eucalypts, which may have resulted in these trees being missed. Given that the tree mapping across the survey areas was otherwise consistent and Nature Advisory didn't note any additional scattered trees at other sites surveyed, this may constitute a relatively isolated assessor error. The requirement for a final NVRR will ensure that any such omissions are addressed.

2.4. Threatened flora surveys

Habitat preferences and survey guidelines for relevant targeted flora identified by Jacobs were reviewed and are considered appropriate. The use of 5m transects is considered a standard approach to targeted flora surveys, which allows sufficient survey coverage of potential habitat and effective detection of smaller lifeforms and cryptic species. Aside from transects, an informal meander method was also utilized. This was appropriately restricted to areas of greater visibility or habitat that was too degraded to warrant formalized transects. It is recognised that Jacobs has therefore also provided a broader consideration of targeted flora by surveying in lower quality habitat, which demonstrates a precautionary approach to this aspect of the assessment.

2.4.1. Nature Advisory threatened flora results

Direct observations of threatened flora species by Nature Advisory were limited to the visited sample of sites. Four threatened flora species were identified during those assessments in 2022, and their mapped extents were largely in accordance with Jacobs' mapping. These results provide confidence in the ability of Jacobs assessors to correctly detect and identify the following species:

- Austral Tobacco (*Nicotiana suaveolens*)
- Bacchus Marsh Wattle (*Acacia rostriformis*)
- Fragrant Saltbush (*Rhagodia parabolica*)
- Melbourne Yellow Gum (*Eucalyptus leucoxylon subsp. connata*)

2.5. Threatened ecological community surveys

Jacobs conducted field surveys for EPBC-listed threatened ecological communities (TECs) in accordance with applicable survey guidelines, as administered by the federal government environment department. Due to FFG-listed communities lacking defined condition thresholds, their presence was determined based on compatibility of surveyed vegetation with published community descriptions. These are the standard approaches to assessing threatened ecological communities and are therefore considered by Nature Advisory to be appropriate.

Importantly, seasonal condition checks were specified and undertaken for EPBC-listed communities. This allows for a more rigorous survey approach, as eligibility as a TEC is often heavily reliant upon understory components. By prioritising optimal flowering times and growth periods of native flora, this maximizes the likelihood of detecting all species and lifeforms that might contribute to the eligibility of a remnant patch as a TEC. Given this, the approach to assessing TECs is considered robust. It is understood gaps in coverage due to access constraints will be addressed once access can be obtained, as indicated in the EPRs.

2.5.1. Nature Advisory threatened ecological community results

Nature Advisory could only assess a limited portion of the Project Area and therefore direct observations of TECs are also limited. However, two TECs were identified during field assessments by Nature Advisory in 2022, and their mapped extents were found to be in accordance with Jacobs' mapping. These communities comprised:

- *Natural Temperate Grassland of the Victorian Volcanic Plain* – 11.80 hectares identified at Lot 2 Diggers Rest Road, Merrimu.
- *Western (Basalt) Plains Grassland Community* - 11.80 hectares identified at Lot 2 Diggers Rest Road, Merrimu.

This occurrence of WBPGC was consistent with Jacobs mapping, with the exception of additional patches identified subsequently by Jacobs in 2023 that were not apparent during the 2022 surveys.

2.6. Threatened fauna surveys

A range of species-specific survey techniques were used by Jacobs to assess the presence of threatened fauna within the project area for the Biodiversity Impact Assessment. These were consistent with both state and Commonwealth survey guidelines. In most cases, a precautionary approach was taken; if a threatened species was not detected during these surveys but suitable habitat was present, it was assumed that the species could potentially occur. This approach is appropriate for addressing uncertainties as negative survey results do not prove the absence of a fauna species.

Not all threatened species identified as having greater than a low likelihood of occurrence were surveyed. Instead, a desktop analysis was conducted, supplemented by incidental records during various biodiversity surveys throughout the assessment period, to assess their status. In the absence of species-specific survey guidelines, this approach is considered appropriate.

2.7. Assumptions, limitations and uncertainties

One of the primary limitations of this Biodiversity Impact Assessment is the incomplete survey coverage of land parcels for which permission for access could not be obtained. As of June 2025, 76% of land parcels requiring field survey have had all field surveys completed. It is understood since the finalisation of the reviewed report this total is now at 79% of land parcels. The rest still require field survey. While it is understood that site access has limited field assessment coverage, the areas surveyed comprise a very significant proportion of affected land parcels.

This limitation in survey coverage has primarily been addressed through consideration of desktop data (e.g. aerial photography, EVC modelling) and field data from assessments of adjacent land. While desktop data is broadly indicative and cannot confirm on-ground values, a precautionary approach has also been adopted, such as through assigning the large tree class to all scattered trees in an aerial photograph of an inaccessible land parcel. By applying the precautionary principle and employing desktop methods in conjunction with field data, Jacobs has minimized the risk of underestimating native vegetation impacts on inaccessible parcels. Importantly, this method has been approved by DEECA as a reasonable means of overcoming unavoidable site access issues.

It is also understood that additional access arrangements have enabled further surveys to be undertaken since the finalised Biodiversity Impact Assessment and that coverage is now at 79% of land parcels.

Additionally, Jacobs has outlined the requirement for pre-clearance surveys under the Environmental Performance Requirements (EPRs) in Table 12-1 of the impact assessment. This will ensure that even where field assessment coverage is lacking, biodiversity values will ultimately be assessed prior to any works and associated impacts occurring.

Therefore, while incomplete survey coverage is a notable limitation of the Biodiversity Impact Assessment, Jacobs' approach to this issue is nonetheless rigorous and considered appropriate under these challenging circumstances.

2.8. Impact footprint

The methodology for determining impacts of the construction footprint is presented in Section 5.14 of the report. Nature Advisory considers the approach to determining impacts to be largely sound. Residual issues are highlighted below.

2.8.1. Partial clearance of native vegetation

It is stated under the Partial Clearance subheading that canopy trees can be selectively removed where vegetation cover is low enough. This is ambiguous, as a quantitative threshold for what is considered an adequately low cover is not identified. Therefore, a more scientifically robust explanation of partial clearance of native vegetation is required and should outline more specifically what equates to low cover and if this applies to all lifeforms present. It is understood that AusNet has identified areas of partial clearance, however, it is unclear if this determination has been informed by the expert advice of suitably-qualified ecologists.

2.8.2. Tree canopy and Tree Protection Zone (TPZ) impacts

It is stated that outside the Easement Corridor, the extent of canopy impacted or trees that have impacts to their tree protection zones (TPZs) have not been included. This is considered to be an acceptable level of uncertainty by Jacobs, as unquantified removal is stated as being offset by the highly conservative estimation of impacts associated with the Easement Corridor Construction Footprint. While this might be accurate, without further quantification of these impacts it appears to be based on some level of speculation and lacks transparency on how it was quantified. The EPR's for the project, must require that these impacts be calculated and included in the final NVRR and associated offset requirements.

3. Impact assessment

3.1. Native vegetation

A GIS assessment of impacts to native vegetation could not be conducted by Nature Advisory, given that final impacts are still to be confirmed. However, with the exception of the issues identified in Section 2.1 and Appendix 1 of this peer review, the methodology for calculating impacts is considered sound. Therefore, if these matters are addressed, it is expected that the native vegetation impact assessment will appropriately account for native vegetation removal.

3.2. Threatened flora

3.2.1. EPBC-listed flora

No EPBC-listed flora species have been identified within the removal areas, and only one EPBC-listed flora species has been identified in the broader Project Land, comprising a single Swamp Fireweed. Although 24% of land parcels still require further surveys, Jacobs has indicated that many of these parcels supported fragmented, lower-quality habitat. Given the quality of habitat, it is expected that threatened flora populations within these land parcels will be limited if present and can be avoided through appropriate micro-siting of infrastructure. Therefore, the level of survey coverage is not considered to undermine the assessment of impacts to threatened flora and a significant impact to EPBC-listed flora values is not anticipated based on field surveys to date, the condition of unsurveyed areas and opportunities for micro-siting.

In this context, it is important that the EPRs for the project include a final seasonally appropriate assessment of the proposed removal areas where they could not be adequately surveyed in advance, and that micro-siting to avoid impacts on any detected threatened flora occurrence be required. The EPRs have addressed this requirement.

3.2.2. FFG-listed flora

The significance of impacts to FFG-listed flora are largely sound. However, impacts to Melbourne Yellow-gum require further consideration.

Melbourne Yellow-gum

Prior to the findings of this assessment, the known population of Melbourne Yellow-gum was estimated at 600 individuals. This is clearly an underrepresentation of the total population, given the 1700 individuals identified in the Project Area alone. Additionally, further surveys were conducted in the vicinity of Lerderderg State Park, to better inform the significance of impacts. This indicated that approximately 1000 individuals were present on adjacent land. It was also assumed that inaccessible parcels potentially supported several thousand more individuals, given habitat continuity and consistency. However, given these parcels were not accessed, it is ultimately not considered precautionary to assume the presence of an additional several thousand without clear confirmation.

The assessment also states that populations south of Lerderderg State Park are expected to undergo natural thinning, given that this is a common ecological process for areas of eucalypt regrowth. However, the appearance of regrowth may also be due to the poor, skeletal soils of the site stunting growth. This conclusion would be counter to the prediction that natural thinning will occur and reduce the population regardless of the proposed works. Furthermore, even if natural thinning is to occur, it is uncertain as to whether this thinning would be comparable to the level of removal proposed.

Nonetheless, when considering the 600 individuals of the previous population estimates and the population data associated with Jacobs' confirmed assessments, the population of the species may be

as high as 3,300 (not including likely additional individuals nearby). Furthermore, removal is expected to exceed this once further detail is provided on the footprint design and TPZ impacts are factored into the impact assessment. The proposed removal of the current estimated 400 individuals equates to a significant percentage (>10%) of the revised known population.

This is a significant proportion of the known population and should accordingly be considered an impact of concern to the species requiring minimisation, where practicable and offsetting through extensive replanting of suitable land near the project. In pursuing this compensatory approach, there exists opportunity to engage with Parks Victoria to conduct seed collection and replanting of this species in the vicinity of Lerderderg State Park.

A specific EPR in relation to this species is required and should be implemented to ensure the least possible number of Melbourne Yellow Gums is removed through micro-siting and avoidance measures, where practicable, and that a minimum offset outcome is achieved of no net loss from the local population over the medium term (i.e. the period required for the securing and sustainable establishment of planted trees). It is noted that the FFG Act does not establish offset requirements for impacts on listed species, so the native vegetation policy guideline is recommended in this case (i.e. 'no net loss' of individuals from the population).

3.3. Threatened ecological communities

3.3.1. EPBC-listed communities

Significant impacts were identified by Jacobs on two EPBC-listed TECs including:

- Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
- Natural Temperate Grassland of the Victorian Volcanic Plain

Based on the nature of the impacts and following our independent significant impact assessments the significance of impacts identified by Jacobs to the above TECs are considered sound. It is also noted that a suitable precautionary approach has been taken by Jacobs in identifying the potential for significant impacts to *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, which has the potential to occur in unsurveyed areas but which has not been identified to date.

3.3.2. FFG-listed communities

Impacts to four FFG-listed communities were identified by Jacobs, including:

- Creekline Grassy Woodland (Goldfields) Community
- Rocky Chenopod Open Scrub Community
- Western (Basalt) Plains Grasslands Community
- Victorian Temperate Woodland Bird Community (habitat)

Determining the significance of impacts for FFG-listed values can be challenging, due to a lack of clearly defined significant impact guidelines. Jacobs has therefore primarily assessed the significance of impacts based on a consideration of the extent of removal relative to the known and potential distribution of these communities. Other factors that are typically considered part of EPBC significant impact assessments, such as fragmentation, have also been considered where relevant. This is a sound approach that accurately reflects the significance of impacts. A suitable precautionary approach has been taken by Jacobs in identifying the potential for significant impacts to *Grey Box – Buloke Grassy Woodland Community Grassland* and *Western Basalt Plains (River Red-gum) Grassy Woodland Community,* which have the potential to occur in unsurveyed areas but have not been identified to date.

3.4. Threatened fauna

A total of 15 EPBC Act-listed and an additional 26 FFG Act-listed fauna species were considered as having greater than a low likelihood of occurrence in the affected area. A EPBC Act significance impact assessment was undertaken for each of the 15 EPBC Act-listed species. The outcomes of the significant impact assessment were considered accurate. The results of the impact assessment on FFG Act-listed species are also considered to be accurate. Both assessments were based on a review of existing desktop information and assessment of habitat suitability across most of the assessment area visited and using observations of habitat from nearby as well as aerial photograph interpretation where site access was not possible. The impact assessment is therefore based on an appropriate, precautionary method and on relevant impact pathways generated by a project of this nature.

4. Environmental Performance Requirements

Environmental Performance Requirements (EPRs) are presented in Section 12 of the report. These are intended to ensure that the outcomes of mitigation activities are achieved, and therefore no additional impacts arise from construction, operational and decommissioning activities. The EPRs proposed in relation to native vegetation, flora and fauna impacts are considered largely appropriate, as discussed below.

4.1. BD1 - Complete ecological surveys and finalise design

This EPR requires unsurveyed land to be assessed, prior to finalisation of a development layout. This EPR also requires modifications to the development layout, to minimise impacts to native vegetation on the basis of additional survey results. It therefore represents the primary means of addressing site access issues, which constitute an unavoidable limitation of this assessment. Furthermore, it demonstrates adherence to the avoid and minimise principle of the Guidelines by limiting biodiversity impacts where practicable. Therefore, this EPR is considered appropriate in addressing the EES scoping requirement of 'avoiding, minimising and mitigating impacts to biodiversity'.

4.2. BD2 – Vegetation management plan

This EPR prioritises protection of native vegetation through pre-clearance surveys for threatened species, construction environment mitigation measures and reinstatement of native habitat where feasible. It is considered largely comprehensive in its consideration of native vegetation, though the following issues require further consideration.

It is unclear how canopy trees will be removed in a manner that is sensitive to the retention of understory values within the Vegetation Risk Clearance Footprint. Given the ground disturbance associated with canopy tree removal, damage to understory vegetation is considered very likely. It is understood that Jacobs has applied a precautionary approach in considering these impacts, by assuming a 50 per cent loss of patch vegetation within sections of the Vegetation Risk Clearance Footprint subject to partial clearance, as per Section 5.14.2.3 of the impact assessment. Though likely precautionary, this indicates that impacts to understory values are unlikely to be minimal. Therefore, the feasibility of this objective requires further consideration. Nonetheless, BD2 (g) presents a corrective approach, through reinstatement of native vegetation that in the medium-term should address the residual impacts on understorey vegetation in the vegetation Risk Clearance Footprint.

This EPR would also benefit from consideration of habitat reinstatement measures specific to threatened flora species, where relevant, such those facing confirmed impacts (e.g. Melbourne Yellow-gum, Brittle Greenhood).

4.3. BD3 – Fauna management plan

This EPR comprehensively covers the available mitigation measures for addressing potential impacts on fauna and their habitats.

4.4. BD6 – Aquatic and riparian habitat

BD6 specifies measures for reinstating riparian habitat and minimising erosion. This EPR is comprehensive in its approach to protecting aquatic and riparian habitat, with no notable issues identified.

4.5. BD7 – Operational vegetation and habitat management plan

This EPR specifies protective measures aimed at ensuring that impacts to vegetation and habitat are minimised during the operational phase of this project. The overarching objectives, such as weed and

pest animal control, biosecurity and understory protection are standard considerations for projects of this nature and largely appropriate.

However, as with BD2, it is unclear how the removal of canopy trees will be conducted sensitively in these areas. The aim of limiting removal to canopy trees and ensuring minimal disturbance to understory values is also not consistent with the prediction in Section 9.2.2.7, which states that approximately 50% of Brittle Greenhood could be impacted in the process of removing taller vegetation. Therefore, the feasibility of this objective requires further consideration and clear corrective actions (e.g. reinstatement of impacted Brittle Greenhood habitat).

4.6. BD8 - Finalise design for TEC

Similarly to BD1, this EPR specifies the requirement for further surveys in previously inaccessible portions of the Project Area, with a focus on detecting and avoiding threatened ecological communities. It therefore also addresses key limitations relating to access issues and is considered a sound approach in addressing the EES scoping requirements.

5. Offset Management Strategy

In addition to the impact assessment, Nature Advisory also reviewed the Offset Management Strategy (OMS) prepared by Jacobs. The results of this review are presented below.

5.1. Offset requirements

5.1.1. Commonwealth requirements

Jacobs has utilised the Commonwealth offset calculator to determine offset requirements for EPBC Act-listed matters, which is the standard approach for calculating offsets of this type.

Given that offset sites for Commonwealth impacts haven't been subject to detailed assessments and impacts haven't been finalised, EPBC offset obligations cannot be definitively calculated. This is due to the fact that an accurate calculation of EPBC offset obligations requires data relating to both the proposed impacts and the condition and potential gain of offset sites. In the absence of this data, Jacobs has therefore considered theoretical values.

The results of the Jacobs EPBC offset calculations should ultimately be considered a hypothetical guide to offset requirements for impacts to EPBC Act-listed matters. However, it should be noted that Jacobs has based the calculation of these requirements on highly-conservative inputs, aimed at detailing a worst-case scenario for both the extent of impacts and required offsets. This is considered to be an appropriate way to scope out likely offset requirements.

A key limitation of the EPBC Act offset calculation method is the lack of definitive criteria for developing inputs to the calculator. For this reason, any calculation can only be considered indicative and ultimately the values the Commonwealth provides will have to be used. It is noted that these are often developed by them without site based knowledge.

It is understood that Jacobs will ultimately undertake the final offset calculations with the input of the Commonwealth Department of the Environment once all surveys are completed. Therefore, the Commonwealth offsets are expected to be accurately accounted for in the final OMS which will have the input of the relevant regulator.

Finally, it is noted that in the best of all possible worlds, every single offset obligation might be located, finally assessed as suitable and the quantum and landholder arrangements locked in. Requiring it at the project assessment stage before approval, although considered desirable by the regulator, is not always practical, particularly for large complex projects. In the real world, experience indicates that the assurance that offsets are met comes from conditioning project approval, with the proponent acutely aware they must prioritise it or their project cannot commence.

5.1.2. State requirements

State offsets for native vegetation have been calculated in accordance with the Guidelines and quantified as General Habitat Units (GHUs) and Species Habitat Units (SHUs). This represents the standard approach for quantifying offset obligations under Clause 52.17 of the state planning scheme.

5.2. Proposed strategy

5.2.1. Commonwealth offset strategy

Potential offset sites have been appropriately assessed to broadly confirm suitability.

The EPBC offset strategy has been appropriately developed in accordance with the government-published *EPBC Act Environmental Offsets Policy*. A review of Tables 5-2 and 5-3 in the OMS also demonstrates sound consideration of the eight policy principles that must be adhered to in developing an OMS. Though

a definitive response could not be provided for the principle *'Impacting on existing EPBC Act offsets',* it is understood that this will be determined following completion of all relevant surveys and the finalisation of a development footprint. This is also not deemed to represent a flaw in the strategy, given the calculation of potential impacts has been conservative.

5.2.2. State offset strategy

It is understood that potential offset sites have been appropriately assessed by a DEECA accredited offset site assessor to confirm suitability. Based on the results of these assessments, all worst-case GHU and SHU requirements can be successfully met through a combination of offset sites to be registered and third-party credits available through the Native Vegetation Credit Register (NVCR).

Importantly, under Clause 52.17 it is a requirement that all offsets must be secured prior to the removal of native vegetation. Therefore, registration of all required sites must be completed prior to impacts occurring.

5.3. Alternative offsets

Alternative offsets (e.g. research and educational work relating to listed matters) have been considered as a corrective measure for any additional offset requirements arising from new survey results and development footprint refinement. This is a sound approach to risk management, as it provides scope to account for unforeseen impacts that cannot be readily accounted for via direct offsets. Jacobs also correctly identifies that this can only account for 10% of EPBC offsets and is subject to approval by DEECA for state matters.

As per Sections 3.2.2 and 4.5 of this peer review, consideration should be given to the reestablishment of listed flora (e.g. Melbourne Yellow-gum) and threatened species habitat as alternative offset measures for FFG Act-listed matters.

5.4. Offset implementation

Government-administered guidelines, including DCCEEW's *Environmental Management Plan Guidelines* (2024) and DEECA's *Management Standards for Native Vegetation Offset Sites* (2023), will be utilised in the development of Offset Management Plans (OMPs). These guides represent standard publicly available resources utilized in the preparation of OMPs, and adherence to these will ensure that management actions are appropriate and in accordance with government standards. When utilised in conjunction with site-specific considerations, this approach is expected to allow for effective offset implementation.

6. Conclusions

The desktop methods and biodiversity assessments conducted by Jacobs are considered to be sound, given that they are appropriately based on government guidelines and standard available desktop sources.

This review initially identified some issues with the field assessments conducted by Jacobs relating to habitat zone delineation and landscape context scores. However, it is understood that these issues will be addressed in the final native vegetation removal report.

The EPBC Act significant impact assessment is comprehensive, with all likely species that occur in the area being considered in detail and subject to the required significance tests.

The impact assessment conducted by Jacobs addresses the EES scoping requirements and appropriately identifies the significance of impacts for most listed values.

It is acknowledged that impacts to the FFG Act-listed Melbourne Yellow-gum are significant. Nonetheless, additional work to document the wider population of which the affected individuals are part has provided new and valuable information on the size of the species' population and therefore the context of the proposed impact. The scope for offsetting this species is high and there is a high level of certainty that in the medium term the impacts can be offset ultimately with no net loss to the species' population.

Ground-based survey of the remaining land parcels will be required to confirm the overall impacts and offset requirements of the project. In the absence of a capacity to access those land parcels, pre-construction surveys have been mandated in the project EPRs to finalise the native vegetation and threatened species impacts and offset requirements. The methods adopted to generate an estimate of impacts and offset requirements on land parcels not accessed are considered suitable for informing decisions on impacts in the absence of any alternative and, appropriately, were developed in consultation with a applied with the approval of DEECA.

The project Environmental Performance Requirements (EPRs) are comprehensive and largely appropriate for mitigating risks to biodiversity values. Measures such as signage and contractor awareness are considered relevant to all native biodiversity values (native vegetation, flora), rather than exclusively relating to the protection of threatened fauna species. Additionally, further consideration of the feasibility of minimising understory impacts as well as the implementation of clear corrective actions is advised.

Provided the above issues are addressed, the assessment has appropriately addressed the relevant EES scoping requirements, including the evaluation objective and requirements.

The OMS is considered to be sound and conservative as an interim approach to addressing offset requirements. Based on adherence to Commonwealth and State offset guidelines, it is expected that offset requirements will be appropriately accounted for once impacts are finalised and detailed offset site assessments are completed and the relevant regulators have provided detailed inputs, where required.

Appendix 1: Detailed Vegetation Quality Assessment results

Issue	Relevant Habitat Zones	Conclusion
The extent of some treed patches did not accurately follow the dripline of their associated canopy components.	HZ1A – 8NOV21 HZ1B – 8NOV21	This is likely due to accuracy issues inherent to many devices used for mapping in the field, which are typically accurate to 4-5 metres on average. However, it is noted in Section 15.4.2 of the impact assessment that Jacobs intends to refine patch mapping with the use of high-resolution aerial imagery and in accordance with the Guidelines. Therefore, this issue is expected to be resolved and is unlikely to undermine the accuracy of the final native vegetation removal report.
The extent of habitat zone mapping did not align between Jacobs and Nature Advisory field assessment.	HZ4a-9nov21	A portion of the habitat zone mapped by Jacobs did not reach the minimum 25% perennial cover threshold at the time of the Nature Advisory assessment and therefore this was excised from the final patch extent. However, this area appeared to have been associated with derived grassland, and associated native groundcovers may have been outcompeted by the abundant exotic pastures occurring adjacent to the patch by the time of the Nature Advisory site visit. This is not considered to be an error in the Jacobs assessment, as patches often change in their quality and extent over time.
Some habitat zones had been improperly split, despite being of the same EVC, physically contiguous and demonstrating a difference of <15-points in their site condition scores, as per Jacobs VQA scoring tables.	JK-PG1-18aug21 JK-PG2-18aug21 HZ4A – 9NOV21 HZ2a-8NOV21	As per Section 5.19 of the Jacobs impact assessment, it is understood that this has arisen from access limitations, requiring habitat zones to be initially split at property boundaries. This improper splitting of patches will ultimately be corrected for the final NVRR.
Patch size was underrepresented for some habitat zones when scoring the landscape context component.	LX06 LX07	The patch size score for these patches has been based only on the mapped remnant vegetation. However, when considering adjacent Grassy Dry Forest vegetation in the Lexton Bushland Reserve, the patch size exceeds 20-hectares. It is understood that this will be corrected for the final NVRR.

Patch size was overrepresented for some habitat zones when scoring the landscape context component.	HZ5A-9NOV21 DK61	HZ5A-9NOV21 extent was also identified by Jacobs as exceeding 20-hectares. This larger patch size appeared to be based on the modelled EVC extent connected along Lerderderg River. If considering vegetation along Lerderderg River as contributing to patch extent, this is not in accordance with the VQA method as these vegetation corridors connected to and linking large areas of native vegetation should be at least 50 m wide to be considered as part of the same patch, whereas these corridors were <50m in width when excluding open water associated with the river. The DK61 score indicated that the size of this patch was 5-10 hectares. This patch size does not match Jacobs mapping or DEECA modelling of the EVC extent on Naturekit. It should also be noted that the mapped extent was deemed to be accurate following Nature Advisory assessments. It is understood that this will be corrected for the final NVRR.
The distance to core component of the landscape context was underrepresented for some habitat zones.	LX06 LX07	Jacobs recorded a lower Distance to Core for LX06 and LX07, suggesting a distance of less than one kilometer. When considering native vegetation associated with the adjacent Lexton Bushland Reserve, the distance to core is contiguous as >50-hectares of connected bushland is present. It is understood that this will be corrected for the final NVRR.

A comparison of detailed VQA scoring is provided in the table below.

Detailed VQA scoring

Habitat Zone	LX06		LX07		HZGW4_13-1-21		HZGW3_13-12-21	HZGW2_13-1-21	HZGW1_13-1-21		JK-PG1-18aug21	
	Jacobs	Nature Advisory	Jacobs	Nature Advisory	Jacobs	Nature Advisory	Jacobs	Jacobs	Jacobs	Nature Advisory	Jacobs	Nature Advisory
Bioregion	Gold		Gold		CVU		CVU	CVU	CVU		CVU	VVP
EVC	22		22		175		175	175	175		132_61	
Size (hectares)	1.857	1.857	3.446	3.446	1.749	3.390	1.420	0.221	0.988	0.988	10.113	10.673
Site condition												
Large Trees /10	6	6	3	3	3	2	0	0	0	0	Na	Na

Canopy Cover /5	5	5	5	5	5	2	0	5	3	3	Na	Na
Understory /25	15	15	20	15	5	15	5	5	5	15	5	5
Lack of Weeds /15	4	9	11	13	7	7	0	0	0	7	4	4
Recruitment /10	10	5	10	10	3	5	5	0	0	3	3	3
Organic Litter /5	5	3	5	3	5	3	4	5	5	4	3	3
Logs /5	5	5	5	2	2	0	0	0	0	0	Na	Na
Standardiser	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.36	1.36
Site condition total	**50**	**46**	**59**	**51**	**30**	**34**	**14**	**15**	**13**	**32**	**20**	**20**
Landscape context												
Patch Size /10	2	8	2	8	1	2	1	1	1	1	4	6
Neighbourhood /10	4	3	4	3	2	2	2	2	2	0	2	2
Distance to Core /5	3	4	3	4	3	3	3	3	3	3	3	3
Total /100	**59**	**63**	**68**	**66**	**36**	**41**	**20**	**21**	**21**	**36**	**29**	**31**

Habitat Zone	JK-PG2-18aug21	HZPG1_13-1-21	HZ5A-9NOV21		HZ1A – 8NOV21		HZ1B – 8NOV21		HZ3A – 8NOV21	
	Jacobs	Jacobs	Jacobs	Nature Advisory	Jacobs	Nature Advisory	Jacobs	Nature Advisory	Jacobs	Nature Advisory
Bioregion	CVU	CVU	CVU		CVU		CVU		CVU	
EVC	132	132	851		47		47		21	
Size (hectares)	0.447	6.340	0.751	0.751	0.018	0.051	0.039	0.121	12.425	>20
Site condition										
Large Old Trees /10	N/A	N/A	2	3	10	10	10	10	2	2

Canopy Cover /5	N/A	N/A	3	3	5	5	5	5	4	4
Understory /25	5	10	15	5	5	5	5	5	20	15
Lack of Weeds /15	0	7	0	0	2	0	2	0	11	13
Recruitment /10	6	6	6	6	0	0	0	0	6	10
Organic Litter /5	2	5	4	5	2	3	2	3	5	3
Logs /5	N/A	N/A	5	4	5	5	5	5	5	5
Standardiser	1.36	1.36	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Site condition	**18**	**38**	**35**	**26**	**29**	**28**	**29**	**28**	**53**	**52**
Landscape context										
Patch Size /10	1	3	8	1	1	1	1	1	8	8
Neighbourhood /10	2	1	1	0	1	0	1	0	3	3
Distance to Core /5	3	3	4	4	3	3	3	3	4	4
Total /100	**24**	**45**	**48**	**31**	**34**	**32**	**34**	**32**	**68**	**67**

Habitat Zone	HZ4A – 9NOV21		HZ2a-8nov21	DK60		DK61	
	Jacobs	Nature Advisory	Jacobs	Jacobs	Nature Advisory	Jacobs	Nature Advisory
Bioregion	CVU		CVU	Gold		Gold	
EVC	47		45	68		67	
Size (hectares)	2.066	4.014	2.462	0.965		3.167	
	Site condition						
Large Old Trees /10	0	2	3	6	6	0	3
Canopy Cover /5	0	0	3	3	3	0	0
Understory /25	15	15	15	15	15	5	5

Lack of Weeds /15	9	9	4	7	2	4	0
Recruitment /10	0	6	3	3	5	0	0
Organic Litter /5	4	5	5	5	5	2	4
Logs /5	0	0	3	2	2	0	0
Standardiser	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Site condition total	**28**	**37**	**36**	**41**	**38**	**11**	**12**
	Landscape context						
Patch Size /10	8	8	8	1	1	4	2
Neighbourhood /10	3	3	3	0	0	0	0
Distance to Core /5	4	4	4	1	1	1	1
Total /100	**43**	**52**	**51**	**43**	**40**	**16**	**15**