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Dear Rohan

Barry Way REF 1 and 2 Amendments

1. Summary of past ecology assessment

Hansen Yuncken are undertaking upgrades to the Barry Way highway for School Infrastructure NSW (SINSW) to enable access into the new Jindabyne Education Campus. WSP undertook a flora and fauna assessment for the Barry Way Upgrade in May 2024 to support the Review of Environmental Factors for:

- REF01- assessing ecological values within the footprint for the first stage of general road improvements to Barry Way.
 The REF was prepared in response to SSD-15788005 and included road widening of Barry Way, a new T-intersection, earthworks, partial pedestrian and cycle paths, tree removal and supporting infrastructure (Mecone 2025).
- REF02- assessing ecological values within the second stage of general road improvements to Barry Way. The REF was prepared in response to SSD-15788005 and includes road widening of Barry Way, construction of a new roundabout, realignment of the Sport & Recreation Centre access road and Tinworth Drive to align with the new roundabout location, earthworks, installation of stormwater pipes and discharge points, erosion and sediment control, tree removal, and signage and line marking (Mecone 2025).

The ecological assessments for REF01 and REF02 identified high value ecological constraints including the presence of a threatened ecological community (TEC) and important habitat (hollow bearing) trees within the impact footprint. The ecological assessment concluded that the project was likely to:

- Impact 2.07 ha of vegetation including 0.29 ha of 'Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion', listed as Critically Endangered under the NSW *Biodiversity Conservation Act* 2016 (BC Act).
- clear 119 trees (based on the arboricultural impact assessments and advice provided). This included 12 habitat trees (containing either hollows or nest boxes for native fauna).

These impacts were considered unlikely to be significant for threatened biodiversity under the NSW BC Act or *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) due to the small area of TEC to be removed, the lack of threatened species recorded during surveys and the disturbed nature of the vegetation at the edge of an existing road (WSP 2024a).



2. Updated design

Hansen Yuncken have proposed additional updates to the REF01 and REF02 boundaries (Figure 2.1 and Figure 2.2). As outlined in the Planning Memo (Mecone 2025), and previous advice provided by Hansen Yuncken the scope of changes to each REF include:

REF 1 Addendum

- Amendments to the approved road design, including, but not limited to, replacement of a proposed retaining wall
 with battering within Lot 1 DP 1294413.
- Amendments to the approved stormwater design to improve pipe protection and maintenance arrangements.
- Inclusion of water main and telecommunications infrastructure relocation works under the REF. The works will
 involve a combined services trench which is being relocated from the east to the west side of Barry Way.
- Removal of three additional trees.
- Expansion of the project area into Lot 1 DP 1294413, as necessitated by the proposed changes.
- Amendment to approved construction hours.
- Minor amendments to mitigation measures.

REF 2 Addendum

- Amendments to the approved road design, including, but not limited to additional works in Lot 192 DP 1019526 to accommodate a revised southern approach to the proposed roundabout.
- Amendments to the approved stormwater design to improve pipe protection and maintenance arrangements.
- Inclusion of water main and telecommunications infrastructure relocation works under the REF. The works will
 involve a combined services trench which is being relocated from the east to the west side of Barry Way.
- Inclusion of sewer diversion works under the REF. The sewer diversion works are proposed from the roundabout along the Jindabyne Sport and Recreation Centre access road.
- Removal of two additional trees.
- Expansion of the project area into Lot 192 DP 1019526 and Lot 2 DP 1294413, as necessitated by the proposed changes.
- Amendment of approved construction hours.
- Minor amendments to mitigation measures.



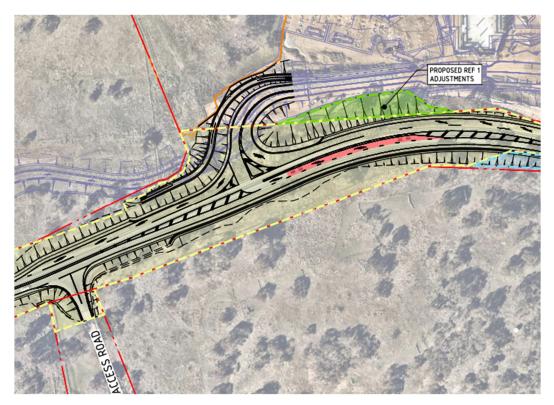


Figure 2.1 Proposed REF01 adjustments (green outline) – from civil drawing NRP-CEC-REF-GA-DWG-0001

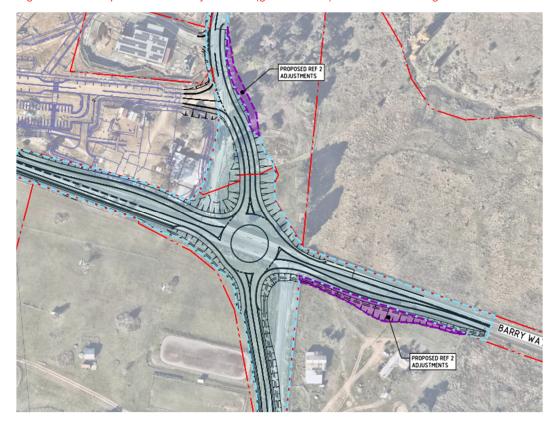


Figure 2.2 Proposed REF02 adjustments (purple outline) – from civil drawing NRP-CEC-REF-GA-DWG-0001

The updated works will require additional vegetation removal for both REF01 and REF02. The following assessment of impacts is based on approved REF documents provided by Hansen Yuncken on 12/06/2025, the Civil and Planning documents provided by Hansen Yuncken on 1/05/2025 (including NRP-CEC-REF-GA-DWG-0001, NRP-CEC-REF-RBT-



DWG-0201 and NRP-CEC-REF-RBT-DWG-0301), along with the arborist advice provided by email by EcoLogical on 20/06/2025 regarding proposed tree removal.

3. Updated impact assessment

The extent of impacts are shown in Figure 3.1 with the impacts of the updated design illustrated in Figure 2.1 (REF01) and Figure 2.2 (REF02).

3.1 REF01 impact assessment

The total impacts from REF01 based on designs provided are detailed in Table 3.1, with trees proposed for removal in Table 3.2. The extent of impacts are shown in Figure 3.1 with the impacts of the updated design illustrated in Figure 2.1.

Table 3.1 Impacts to vegetation from project based on Flora and Fauna Assessment Report (May 2024) and updated design (May 2025)

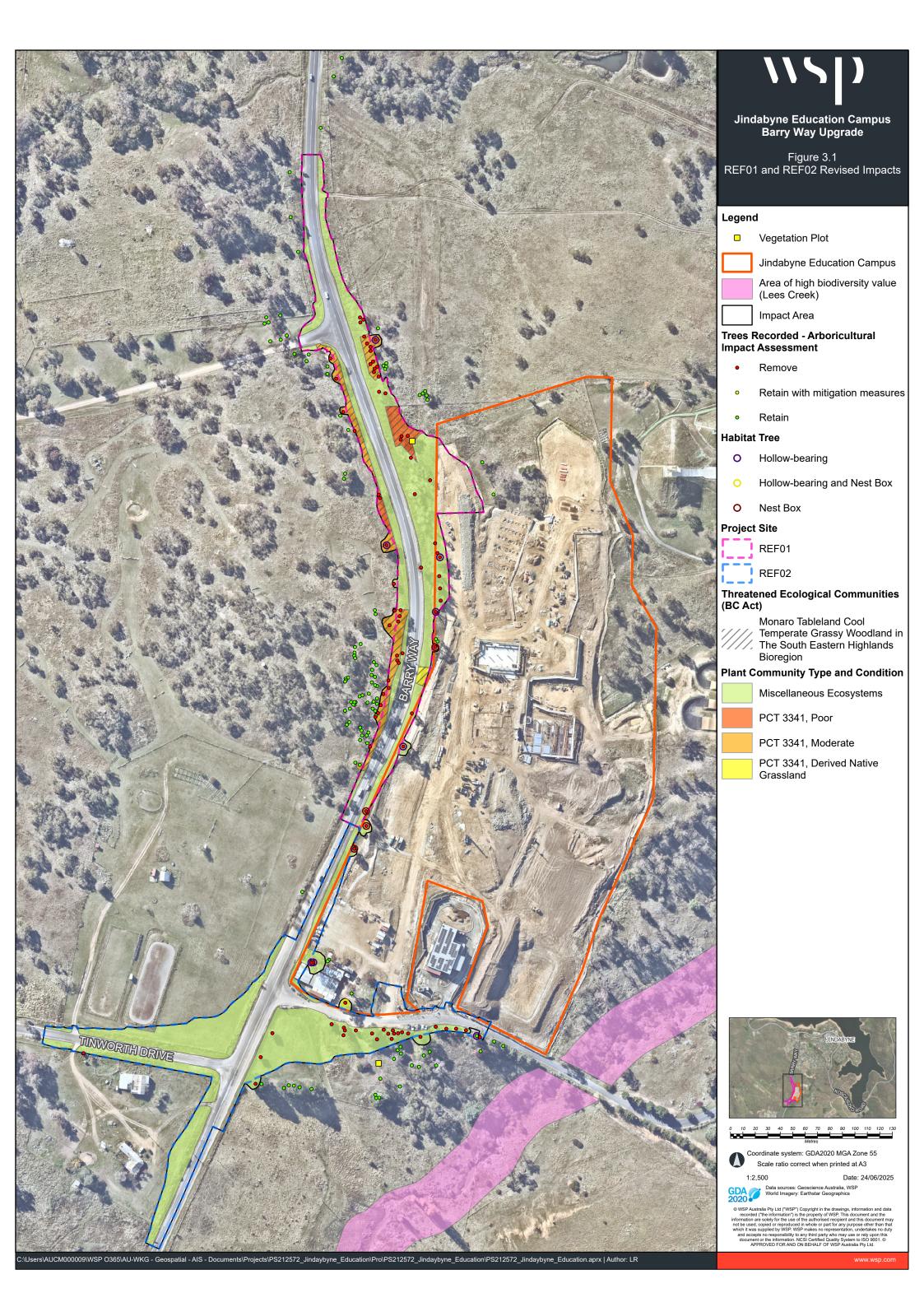
Vegetation type	TEC	Impact area (based on Flora and Fauna Assessment Report) – May 2024 (ha) ¹	Updated impact area (based on updated designs) - May 2025 (ha) ²	Change in impact?
PCT 3341 Monaro-Gourock Frost Hollow Grassy Woodland – Moderate condition	Monaro Tableland Cool	0.21	0.21	No change in impact
PCT 3341 Monaro-Gourock Frost Hollow Grassy Woodland – Poor condition	Temperate Grassy Woodland in The South	0.07	0.07	No change in impact
PCT 3341 Monaro-Gourock Frost Hollow Grassy Woodland – Derived native grassland condition	Eastern Highlands Bioregion	0.01	0.01	No change in impact
Miscellaneous ecosystems	-	0.82	0.89	Increase in impact by 0.07 ha
Total		1.11	1.18	Increase in impact by 0.07 ha (restricted to miscellaneous ecosystems)

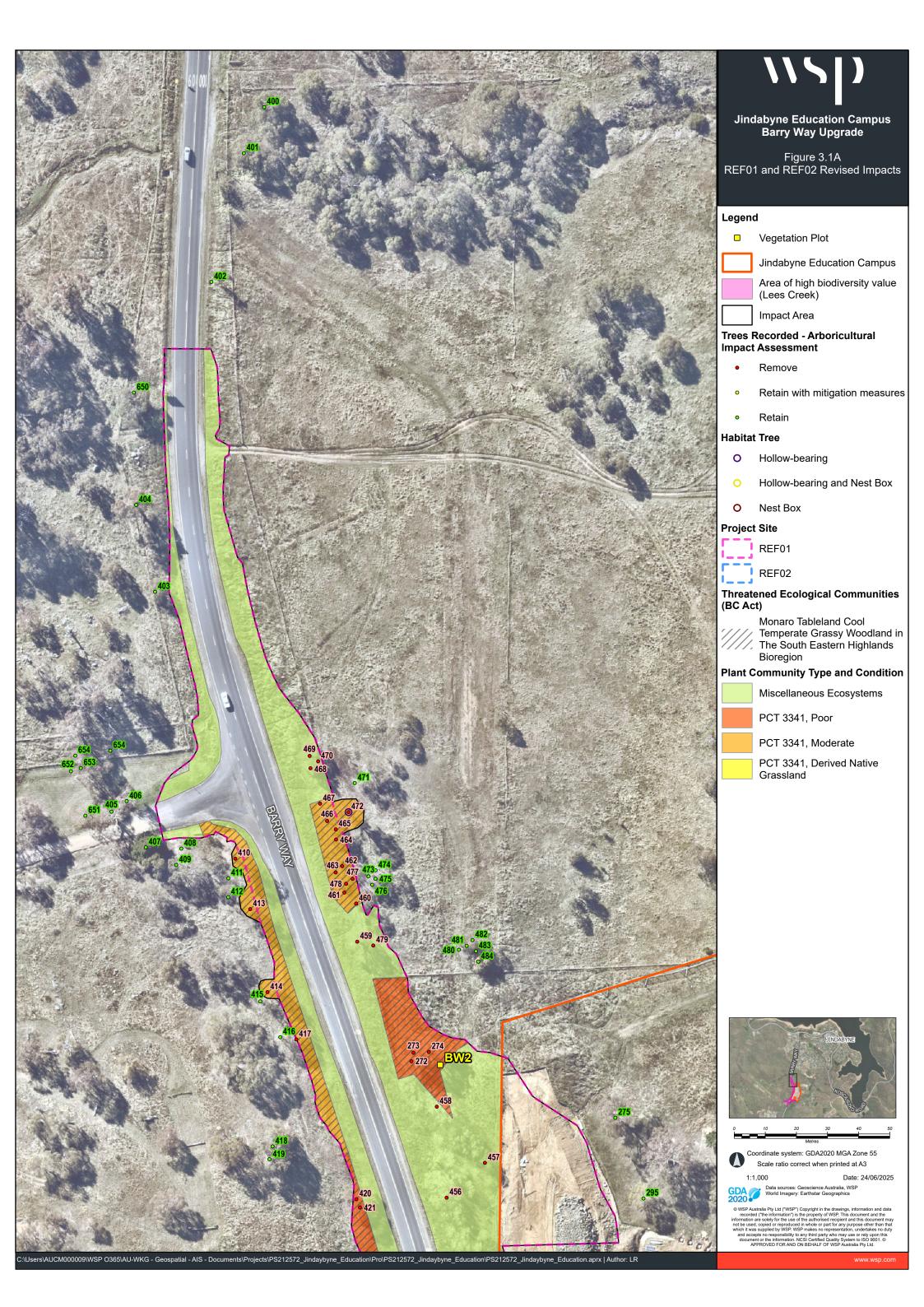
¹⁾ impact assessed in Flora and Fauna Assessment report (WSP 2024a)

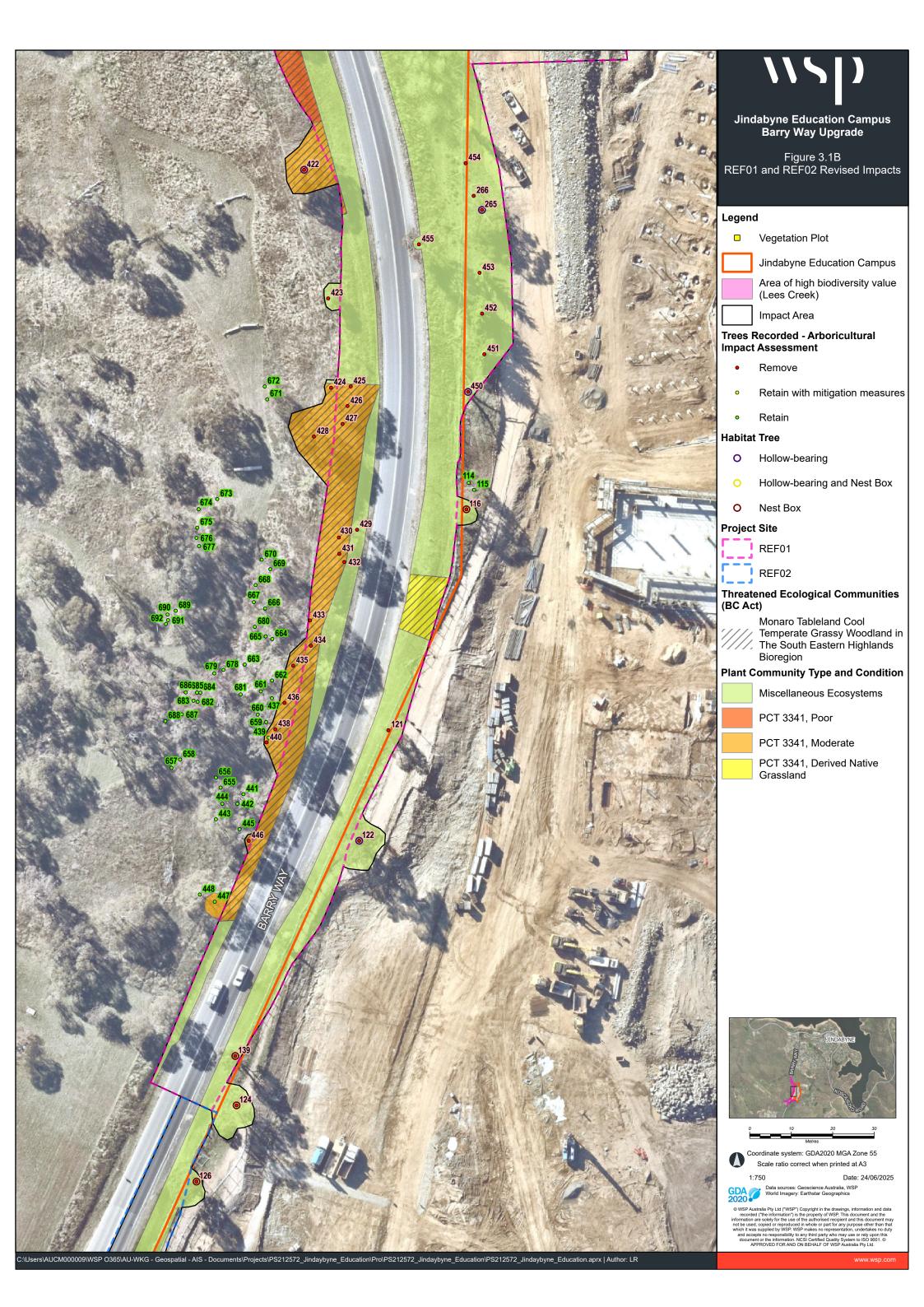
²⁾ impact based on designs provided for latest addendums (including NRP-CEC-REF-GA-DWG-0001, NRP-CEC-REF-RBT-DWG-0201 and NRP-CEC-REF-RBT-DWG-0301)

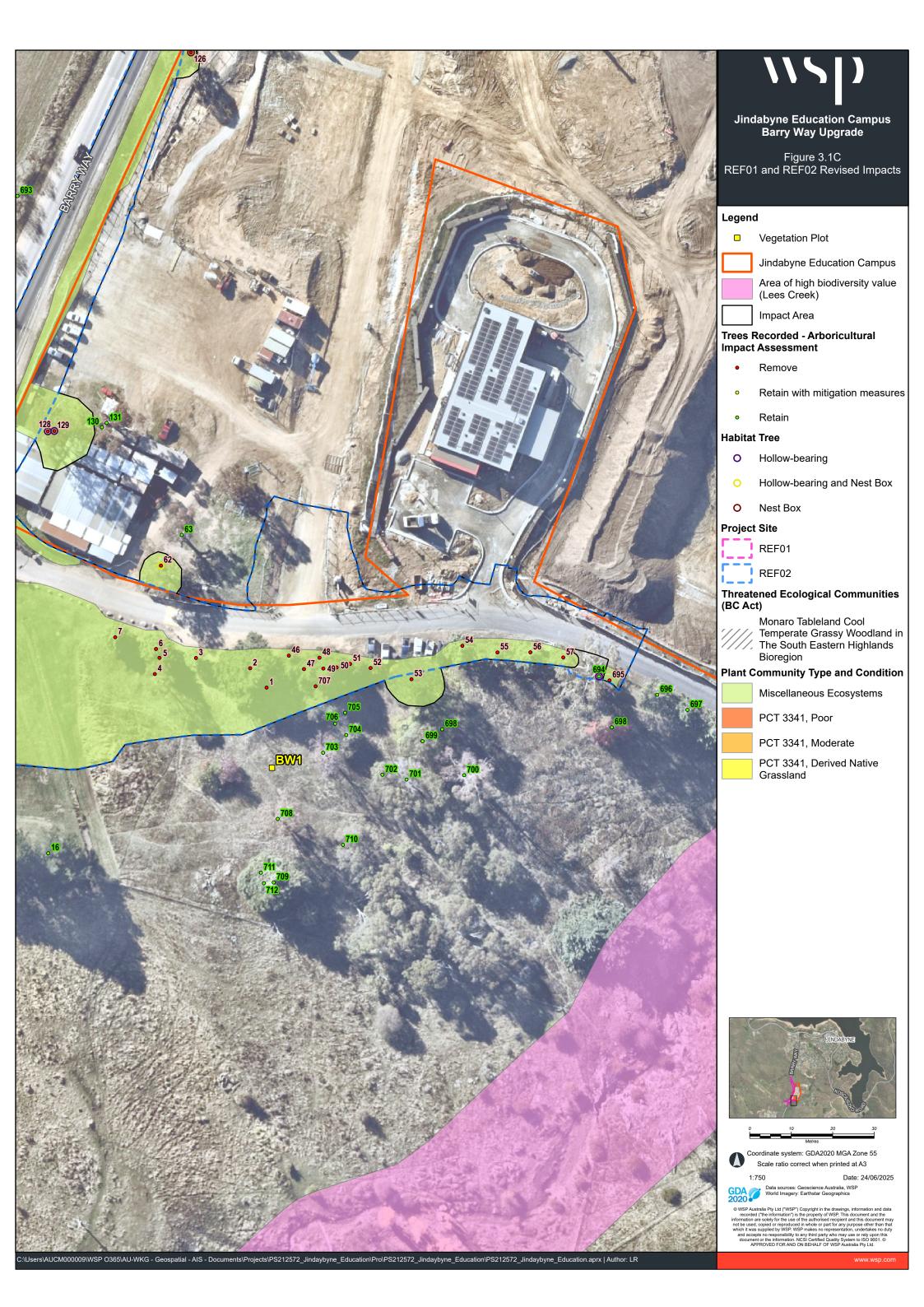


Figure 3.1 REF 01 and REF02 revised impacts









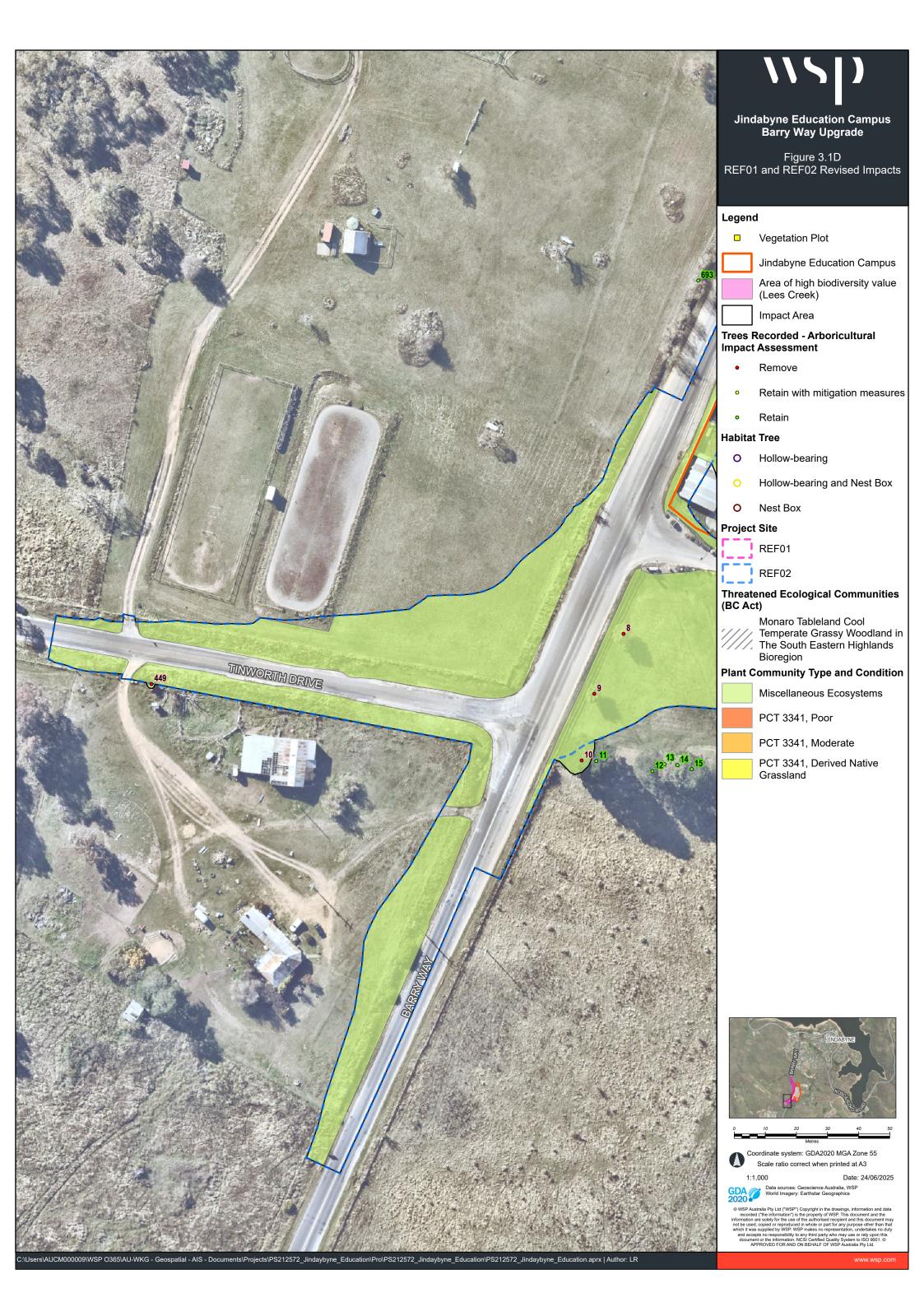




Table 3.2 Impacts to trees from project based on Flora and Fauna Assessment Report (May 2024) and updated design (May 2025)

Tree type	Impact (based on Flora and Fauna Assessment Report) – May 2024 ¹	Updated impact – June 2025 ²	Change in impact
Native habitat trees (hollow- bearing trees or trees containing nest boxes)	7	8	+1
Other native trees	50	54	+4
Exotic trees	3	24	+21
Total	55	86	+26

¹⁾ impact assessed in Flora and Fauna Assessment report (WSP 2024a)

Based on updated impacts, 0.29 ha is a native vegetation community (PCT 3341) consistent with the TEC Monaro Tableland Cool Temperate Grassy Woodland in the South Eastern Highlands Bioregion (listed as Critically Endangered under the NSW BC Act), which is the same as the impact in the original Flora and Fauna Assessment Report (WSP 2024a, WSP 2024b). This impact was not considered to be significant to the TEC under the BC Act due to the degraded state of the TEC (canopy trees with exotic understorey), the small area to be removed, and the occurrence of the removal at the edge of existing patches, meaning that the removal would not result in fragmentation of the community (full assessment of significance for the TEC under the BC Act is provided in Appendix D of the Flora and Fauna Assessment Report (WSP 2024a)).

Threatened flora species

Potential habitat was recorded for one threatened flora species (Mauve Burr-Daisy, *Calotis glandulosa*) listed as Vulnerable under the BC Act and EPBC Act (associated PCT 3341). However, targeted surveys were undertaken during the seasonal survey period for the species (February 2024), and the species was not recorded. The updated design will have no additional impacts to associated habitat (PCT 3341). Given this, REF01 was considered unlikely to have a significant impact on threatened flora species (assessment of significance for *Calotis glandulosa* is provided in Appendix D and E of the Flora and Fauna Assessment Report (WSP 2024a)).

Threatened fauna species

Impacted vegetation (including one native vegetation community (PCT 3341) and scattered trees within 'Miscellaneous ecosystems') within the REF01 boundary was previously determined to provide potential foraging or roosting habitat for several threatened woodland bird species including:

- Dusky Woodswallow (Artamus cyanopterus cyanopterus) Vulnerable under BC Act
- Gang-gang Cockatoo (Callocephalon fimbriatum) Endangered under BC Act and EPBC Act.
- Brown Treecreeper (eastern subspecies) (Climacteris picumnus victoriae) Vulnerable under BC Act and EPBC Act.
- White-bellied Sea-Eagle (Haliaeetus leucogaster) Vulnerable under BC Act
- Little Eagle (*Hieraaetus morphnoides*) Vulnerable under BC Act
- Hooded Robin (south-eastern form) (Melanodryas cucullata cucullata) Endangered under the BC Act and EPBC Act
- Scarlet Robin (Petroica boodang) Vulnerable under BC Act

²⁾ impact based on arborist advice (20/06/2025) and Arboricultural Impact Assessments (AIAs) provided, recommending all trees proposed for removal for REFs and addendums to date (Eco Logical Australia 2024b, Eco Logical Australia 2024c, Eco Logical Australia 2024e, Eco Logical Australia 2024d, Eco Logical Australia 2024b, Eco Logical Australia 2025b, Eco Logical Australia 2025a)



- Flame Robin (*Petroica phoenicea*) Vulnerable under BC Act
- Diamond Firetail (Stagonopleura guttata) Vulnerable under BC Act and EPBC Act.
- Fork-tailed Swift (*Apus pacificus*) Migratory under EPBC Act.
- White-throated Needletail (Hirundapus caudacutus) Vulnerable and Migratory under EPBC Act
- Satin Flycatcher (Myiagra cyanoleuca) Migratory under EPBC Act and
- Blue-winged Parrot (Neophema chrysostoma) Vulnerable under the BC Act and EPBC Act.

The habitat trees recorded also provide potential breeding habitat for native birds and hollow-roosting bats, however none of the threatened species was considered likely to utilise the impacted trees for breeding, due to the occurrence of these trees within a disturbed area (at the edge of roadside and construction site), lack of habitat connectivity and minimal available hollows of suitable size and location. However, the removal of trees within the impact area is likely to result in a decrease of locally available foraging and roosting habitat for the listed threatened species. Given the mobility of the species, the small area of habitat to be removed and similar habitat in the vicinity, it is unlikely the project would result in a significant loss of habitat or increase in fragmentation that would place the local populations of these threatened woodland bird species at risk of extinction (full assessments of significance for threatened fauna species listed under the BC Act and EPBC Act are provided in Appendix D and E of the Flora and Fauna Assessment Report (WSP 2024a)).

3.1.1 Additional impacts

It is noted that one additional tree (450) was previously removed, though was not identified for assessment. This tree was a dead stag containing tree hollows which were likely to provide potential breeding habitat for native bird or bat species.

Based on the addendum designs provided, a total of 1.18 ha of vegetation ('Miscellaneous ecosystems) will be removed, consisting of exotic grassland with scattered trees. EcoLogical have also advised the requirement for removal of an additional three trees (451, 452 and 453) (Eco Logical Australia 2025b). These trees were identified as the exotic species *Cupressus macrocarpa*, 'Monterey Cypress'. The additional trees to be removed (451, 452 and 453) are likely to provide marginal habitat for native fauna species. However, this habitat is unlikely to present suitable foraging or breeding habitat for threatened fauna species, though they may use the habitat for roosting on occasion.

Considering the degraded state of the vegetation to be removed, small impact to foraging habitats, and lack of impact to breeding habitats, the updated design for REF01 is considered unlikely to have any significant impact on TECs, threatened flora or threatened fauna under the BC Act or EPBC Act with the implementation of all mitigation measures outlined in the Flora and Fauna Assessment Report (WSP 2024a).

3.2 REF02 updated impact assessment

The total impacts for REF02 based on designs provided are detailed in Table 3.3, with trees proposed for removal in Table 3.4. The extent of impacts are shown in Figure 3.1 with the impacts of the updated design illustrated in Figure 2.2.

Table 3.3 Impacts to vegetation from project based on Flora and Fauna Assessment Report (May 2024) and updated design (May 2025)

Vegetation type		Impact area (based on Flora and Fauna Assessment Report) – May 2024 (ha) ¹	area (based on updated designs) -	Change in impact?
Miscellaneous ecosystems	-	0.96	1.09	Increase in impact by 0.13 ha



Vegetation type	Impact area (based on Flora and Fauna Assessment Report) – May 2024 (ha) ¹	area (based on updated designs) -	Change in impact?
Total	0.96	1.09	Increase in impact by 0.13 ha (restricted to miscellaneous ecosystems)

¹⁾ impact assessed in Flora and Fauna Assessment report (WSP 2024a)

Table 3.4 Impacts to trees from project based on Flora and Fauna Assessment Report (May 2024) and updated design (May 2025)

Tree type	Impact (based on Flora and Fauna Assessment Report) – May 2024 (ha) ¹	Updated impact – June 2025 ²	Change in impact?
Native habitat trees (hollow- bearing trees or trees containing nest boxes)	4	5	+1
Other native trees	3	3	0
Exotic trees	19	28	+9
Total	27	36	+10

¹⁾ impact assessed in Flora and Fauna Assessment report (WSP 2024a)

3.2.1 Impacts consistent with previous assessment

Threatened ecological communities

Based on updated impacts 1.17 ha of vegetation (Miscellaneous ecosystems) would be removed. This vegetation consists of exotic grassland with scattered trees. None of the impacted vegetation is a native vegetation community consistent with TEC.

Threatened flora species

No threatened flora species were previously recorded or considered to have potential habitat within the REF02 impact area which contains only 'Miscellaneous ecosystems' consisting of exotic groundcover and scattered trees. No additional impact to native vegetation communities representing potential habitat for threatened flora will occur as a result of updated impacts.

Threatened fauna species

Impacted vegetation (including scattered trees within 'Miscellaneous ecosystems') within the REF02 boundary was previously determined to provide potential foraging or roosting habitat for several threatened woodland bird species including:

²⁾ impact based on designs provided for latest addendums (including NRP-CEC-REF-GA-DWG-0001, NRP-CEC-REF-RBT-DWG-0201 and NRP-CEC-REF-RBT-DWG-0301)

²⁾ impact based on arborist advice (20/06/2025) and Arboricultural Impact Assessments (AIAs) provided, recommending all trees proposed for removal for REFs and addendums to date (Eco Logical Australia 2024b, Eco Logical Australia 2024c, Eco Logical Australia 2024e, Eco Logical Australia 2024d, Eco Logical Australia 2024a, WSP 2024b, Eco Logical Australia 2025b, Eco Logical Australia 2025a)



- Dusky Woodswallow (Artamus cyanopterus cyanopterus) Vulnerable under BC Act
- Gang-gang Cockatoo (Callocephalon fimbriatum) Endangered under BC Act and EPBC Act.
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- White-bellied Sea-Eagle (Haliaeetus leucogaster) Vulnerable under BC Act
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- Hooded Robin (south-eastern form) (Melanodryas cucullata cucullata) –Endangered under the BC Act and EPBC Act
- Scarlet Robin (*Petroica boodang*) Vulnerable under BC Act
- Flame Robin (*Petroica phoenicea*) Vulnerable under BC Act
- Diamond Firetail (Stagonopleura guttata) Vulnerable under BC Act and EPBC Act.
- Fork-tailed Swift (*Apus pacificus*) Migratory under EPBC Act.
- White-throated Needletail (*Hirundapus caudacutus*) Vulnerable and Migratory under EPBC Act
- Satin Flycatcher (Myiagra cyanoleuca) Migratory under EPBC Act and
- Blue-winged Parrot (Neophema chrysostoma) Vulnerable under the BC Act and EPBC Act.

The impacted habitat trees recorded also provide potential breeding habitat for native birds and hollow-roosting bats, however none of the threatened species was considered likely to utilise the impacted trees for breeding, due to the occurrence of these trees within a disturbed area (at the edge of roadside and construction site), lack of habitat connectivity and minimal available hollows of suitable size and location. However, the removal of trees within the impact area is likely to result in a decrease of locally available foraging and roosting habitat for the listed threatened species. Given the mobility of the species, the small area of habitat to be removed and similar habitat in the vicinity, it is unlikely the project would result in a significant loss of habitat or increase in fragmentation that would place the local populations of these threatened woodland bird species at risk of extinction (full assessments of significance for threatened fauna species listed under the BC Act and EPBC Act are provided in Appendix D and E of the Flora and Fauna Assessment Report (WSP 2024a)).

3.2.2 Additional impacts

It is noted that one tree previously identified for removal (tree 694) which is a native, hollow-bearing tree, was recommended for retention (as advised by Hansen Yuncken in email correspondence (pers. comms 26/06/2025)), following the initial Flora and Fauna Assessment (WSP 2024a).

Based on the addendum designs provided, EcoLogical have recommended the removal of an additional two trees (52 and 53) as part of the Arboricultural Impact Assessment (Eco Logical Australia 2025a). These trees were identified as the exotic species *Cupressus macrocarpa*, 'Monterey Cypress' and *Pinus radiata*, 'Radiata Pine'. The additional trees to be removed (52 and 53) are likely to provide marginal habitat for native fauna species. However, this habitat is unlikely to present suitable foraging or breeding habitat for threatened fauna species, though they may use the habitat for roosting on occasion.

Considering the degraded state of the vegetation to be removed, small impact to foraging habitats, and lack of impact to breeding habitats, the updated design for REF02 is considered unlikely to have a significant impact on TECs, threatened flora or threatened fauna under the BC Act or EPBC Act with the implementation of all mitigation measures outlined in the Flora and Fauna Assessment Report (WSP 2024a).



4. Conclusion

The additional impacts of the updated designs are limited to just 0.2 ha of Miscellaneous ecosystems (0.07 ha for REF01 and 0.13 ha for REF02). The additional vegetation to be impacted consists of exotic grassland and five additional exotic trees (three trees for REF01 and two trees for REF02) which represent only marginal habitat for native fauna species. Considering the degraded state (and minimal biodiversity values) of the additional vegetation to be removed, the modified footprints are consistent with the significance of impacts assessed in the Flora and Fauna Assessment Report and are unlikely to be significant for threatened biodiversity under the NSW BC Act or Commonwealth EPBC Act, provided that all mitigation measures for the project are implemented, as outlined in Table 4.2 of the original Flora and Fauna Assessment Report (WSP 2024a). No additional mitigation measures are required as a result of the outlined amendments to REF01 or REF02.

Yours sincerely

10. L

Alicia Palmer

Ecologist

5. References

Eco Logical Australia (2024a). Arboricultural Impact Assessment Addendum Letter - Updated Service Plans. Ref: 23WOL5051.

 $Eco\ Logical\ Australia\ (2024b).\ Jindabyne\ Education\ Campus\ PP02\ -\ Shared\ Pathway\ Arboricultural\ Impact\ Assessment.\ Prepared\ for\ Schools\ Infrastructure\ NSW\ c/o\ Hansen\ Yuncken.$

Eco Logical Australia (2024c). Jindabyne Education Campus. PPO1 – Barry Way Roadworks Arboricultural Impact Assessment. Prepared for Schools Infrastructure NSW c/o Hansen Yuncken

Eco Logical Australia (2024d). Quantification of PP01 trees proposed for removal in REF works. Ref: 23WOL5051

Eco Logical Australia (2024e). Quantification of PPO1 trees proposed for removal in REF2 works. Ref: 23WOL5051

Eco Logical Australia (2025a). Arboricultural Impact Assessment Addendum - REF 2. Ref: 23WOL5051.

Eco Logical Australia (2025b). Arboricultural Impact Assessment Addendum Letter – REF 1. Ref: 23WOL5051

Mecone (2025). Planning Memorandum: Review of Environmental Factors for Interim Traffic Measures at the Jindabyne Education Campus.

WSP (2024a). Jindabyne Education Campus Barry Way Upgrade Flora and Fauna Assessment Report. Prepared for Hansen Yuncken.

WSP (2024b). REF 01&02 Addendum - Jindabyne EC Barry Way roadworks. Prepared for Hansen Yuncken, December 2024.