High Country Arborist Reports
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Arboricultural Impact Assessment & Tree Protection Specifications

Wodonga Creek Activation Project

October 31, 2025 | Version 2.0

Client
Woodward Civil

Site
Wodonga Creek,
Wodonga, VIC, 3690

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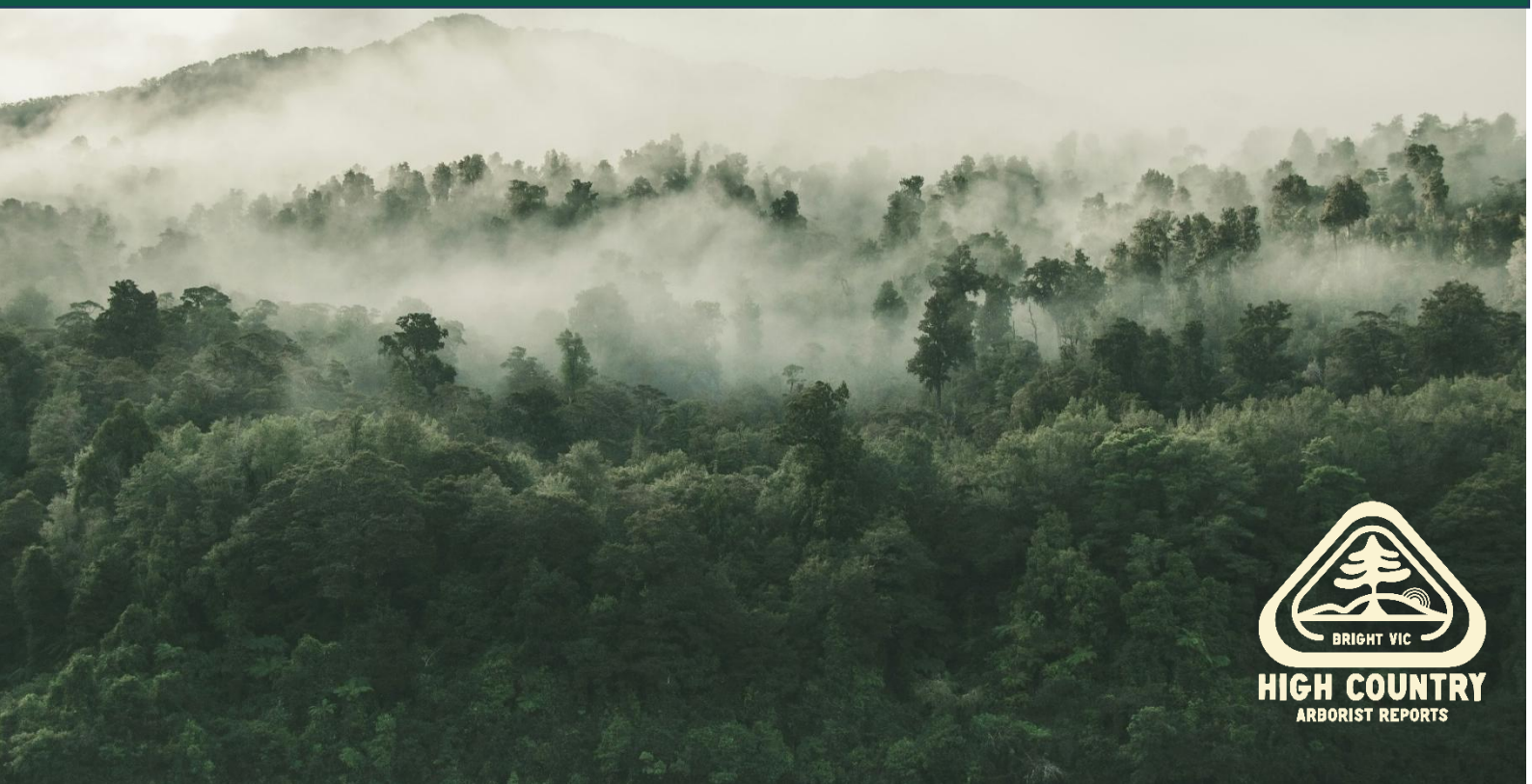


Contents

1.0 Scope and report objectives

High Country Arborist Reports were engaged by Woodward Civil to prepare an Arboricultural Impact Assessment and Tree Protection Specification for 126 trees in the vicinity of the Wodonga Creek Activation Project site

This project aims to link existing access points and paths in the vicinity of Wodonga Creek and develop a new recreation area centrally to the site.

Path and road construction works have the potential to affect retained trees both directly through mechanical injury and indirectly in ways that are not evident immediately, but which can affect the health of the tree in the long term.

Trees within and adjacent to the designated site have been assessed to identify tree-related design constraints and assess potential building impacts to trees.

This Tree Protection Specification is prepared in accordance *AS4970-2025: Protection of Trees on Development Sites* and includes all measures required to protect the trees on site during all stages of the construction process.

The report provides the following information:

- Locate and number all trees to produce a tree location plan.

- Provide arboricultural assessment data that identifies each tree to species level and provides information including expected tree impacts from proposed levee plans.

- Provide where necessary, recommendations regarding the future management of trees suitable to retain and details of tree protection distances to assess potential construction impacts.

- Professional recommendations for works (if any), and/or mitigation or changes to construction techniques to allow any significant trees to be retained in accordance with *AS4970-2025: Protection of Trees on Development Sites*.

2.0 Methodology

2.1 Data collection

Data collection was undertaken by Woodward Civil staff and Ben Keys of High Country Arborist Reports during October 2025.

Tree data including digital imagery was captured onsite and is recorded within the report.

Tree assessment data fields include the following:

- Onsite Visual Tree Assessment (VTA)
- Genus/species
- Trunk diameter measured at 1.3 above ground level (DSH = Diameter at Standard Height)
- Expected impact on trees and structures (based on NRZ details)
- Recommendations for works or impact mitigation techniques to allow trees to be retained as per *AS4970-2009: Protection of Trees on Development Sites*.

Trunk diameter data (Diameter at Standard Height) was collected using RTK GPS:

- Three points were surveyed at ground level and this data was used to determine the trunk DAB value (Diameter at Base).
- This DAB value was then multiplied by a factor of 0.8 (80%) to calculate final DSH value.
- The resulting Notional Root Zone was determined by using this DSH value and overlaid onto plans using Hatch in AutoCAD (attached at rear).

2.2 Documents relevant to this report

- *Australian Standard: Protection of Trees on Development Sites AS4970-2025*
- *Australian Standard: Pruning of Amenity Trees AS4373-2007*
- City of Wodonga council: *Native Vegetation Guidelines Clause 52.17*
- DEECA: *Assessor's handbook: Applications to remove, destroy or lop native vegetation*
- Woodward Civil and Yonder: *Wodonga Creek Activation Project Concept Plans* (13/12/24)
- Woodward Civil: *Wodonga Creek Activation Preliminary Issue Drawings* (17/10/24)
- Red-Gum Environmental Consulting: *Preliminary Biodiversity Report* (29/10/24)

3.0 Construction methodology

3.1 Elements

This project involves linking several existing gravel roads which are proposed to be sealed, with the addition of carparks in some areas.

Multiple existing concrete mixed-use paths will also be utilised – these will be linked to new concrete mixed-use paths, which will create a loop along the northern banks of Wodonga creek, then up onto the rail trail and back along existing paths running along the southern banks of the creek.

A raised boardwalk is proposed for the eastern termination point where the new path merges with the rail trail, to help reduce impacts to vegetation and to achieve the gradual grade increase to reach the height of the rail trail.

3.2 Construction techniques

Mixed-use path:

- The proposed width of the new path will be 2.5m.
- Path will involve 125mm concrete bedded onto 100mm of FCR road base for a 225mm pavement depth. This will require maximum excavation of 125mm depth for path construction.

New sealed roads and carparks:

- Bulk of this project involves formalising and sealing existing gravel roads/carparks.
- Sealing involves a 100mm FCR overlay onto the existing gravel, with seal on top.
- Carparks will be treated in the same manner. No excavation will be required.

Eastern boardwalk/ramp:

- This will be constructed of prefabricated modules supported on pilings with concrete footings. Impact to nearby trees will be minimal (non-linear posthole impacts only).
- Some fill will be required to build up the ramped area where the path meets the ramp.

The construction activities listed above will require some minor, shallow excavation, plus the use of heavy machinery, including concrete trucks and asphalt machinery.

All vehicles will keep to existing road footprints or construction corridors.

Topsoil will be stockpiled, with all other extracted materials to be exported off site, with the topsoil then used to rehabilitate the construction areas during the rehabilitation stage.

4.0 Discussion

4.1 Existing road impacts near retained trees

One of the main aims of this project is to link existing gravel roads and access points within the Wodonga Creek precinct. As such, the project will utilise and re-seal multiple existing roads and informal carparking areas.

Many of these compacted gravel roads exist in close proximity to large remnant native trees and have done so for many years. The bulk of these trees present in reasonable health and condition, despite having large areas of their Notional Root Zones (NRZs) covered by compacted gravel with limited permeability.

The proposal to seal these existing roads and formalise carparking is unlikely to have any negative effect on nearby trees, provided excavation is kept to a minimum during construction. Existing roots will remain unaffected beneath the newly-sealed roads.

While a fully impermeable (sealed) road surface does represent some loss of NRZ area for these retained trees, the result is not dissimilar from the hard-packed gravel that already exists around the bases of these trees. We are therefore confident all encroached trees will remain viable.

4.2 Offset exemptions for trees with existing impacts

Under DEECA guidelines: "*Unless an arborist report indicates otherwise, a tree, or trees will be deemed lost if the encroachment (of compaction and excavation) into the NRZ is greater than 10 per cent or is inside the SRZ.*" (DEECA Assessor's handbook).

In the case of this project, it is the opinion of the inspecting arborist that retained trees with existing road impacts need not be considered 'Lost assets' under Clause 52.17, even where their modelled NRZ encroachments (via road sealing works/carparks) are in excess of 10%.

These trees are already heavily impacted by existing roads and they currently remain viable. The idea that adding a layer of seal onto this existing gravel should automatically classify the trees as 'Lost assets' is unrealistic and would significantly increase the vegetation offset costs for this project.

Tree Protection measures detailed further in this report will ensure that no excavation deeper than 150mm is undertaken near retained trees as part of this road surfacing component.

Protecting these tree roots is the key to ensuring all retained trees remain viable into the future.

4.1 **Offset exemptions for trees with NRZ impacts 10-20%**

As noted above, shallow excavation in the vicinity of retained trees (site-scrape) is unlikely to damage significant tree roots, if kept to a maximum depth of 150mm or less

Minor shallow excavation such as this has little-to-no effect on critical root infrastructure below the soil and if undertaken carefully, will not affect the long-term health of retained trees.

The proposed mixed-use concrete path used for this project will be restricted to a maximum excavation depth of 125mm, thereby limiting its impact on nearby trees.

The narrow width of this impermeable path (2.5m) will permit water, nutrients and oxygen to continue to filter through to the critical root systems of retained trees on either side of the trail, ensuring their longevity in the long-term.

We do not expect path compaction to create any additional issues over time, given the trail will only be used by walkers and cyclists.

Given the above, it is it is the opinion of the inspecting arborist that retained trees with path NRZ encroachments in the range of 10-20% (moderate impacts under *AS:4970-2025)* need not be considered 'Lost assets' under Clause 52.17.

As noted above, strict Tree Protection measures will be implemented for path construction, and by protecting root infrastructure, all retained trees near the path will remain viable.

5.0 Executive summary

During October 2025, we inspected selected trees lining the Wodonga Creek Activation Project site. This area is a mix of native remnant vegetation and developed sites on either side of the Lincoln Causeway. This project involves the construction of sealed roads and carparks, plus mixed-use paths and recreation areas in close proximity to remnant native trees.

5.1 **Tree Protection measures relevant to the project**

- All staff and contractors to attend site briefings to discuss TPS conditions.
- Identify and flag trees to be removed.
- Conduct fauna survey prior to tree removals.
- Trees for removal shall be felled in such a way as to avoid damaging adjacent vegetation.
- Machinery shall be limited to moving within construction corridor only.
- Tree root impacts to be minimised. Excavation shall not exceed 125mm depth
- Install Tree Protection measures as specified

5.2 **Findings**

1. A total of 126 native trees were assessed on site for this report. All trees were remnant indigenous *Eucalyptus camaldulensis* (River Red Gum), with the exception of one planted native (TT_115).

2. All trees likely to be impacted by the construction works and trees within 15m of the construction footprint were assessed for this report. Planted specimens (non-endemic species) were not assessed in most cases.

3. For the purposes of modelling tree impacts, a 0.3m buffer was applied to each edge of the mixed-use path footprint. A 1.0m buffer was similarly applied to road works areas and carpark areas.

4. Many trees in close proximity to the road and path construction areas have the potential to be impacted where their Notional Root Zone (NRZ) areas intersect with the construction buffer area. Under DEECA guidelines: "*Unless an arborist report indicates otherwise, a tree, or trees will be deemed lost if the encroachment (of compaction and excavation) into the NRZ is greater than 10 per cent or is inside the SRZ.*" (DEECA Assessor's handbook).

5. While multiple trees do incur NRZ encroachments greater than 10%, many of these trees currently experience existing impact from gravel roads, particularly those trees surrounding the recreation area at the centre of site (south of speedway track and miniature railway).

6. As noted within 'Discussion,' we propose that retained trees with existing road impacts need not be considered 'Lost assets' under Clause 52.17. New impacts to these trees are limited to sealing the road within this existing footprint – there will be no further encroachment into the tree NRZ areas. We remain confident these trees will remain viable into the future due to the lack of deep excavation that could impact structural roots.

7. There are also multiple trees on site where NRZ encroachments from the new mixed-use path are in the 10-20% range (moderate impacts under *AS4970-2025)*. We further propose that path-side trees experiencing moderate NRZ impacts in the range of 10-20% need not be considered 'Lost assets' under Clause 52.17 – offsetting not required. These trees will also remain viable due to the lack of excavation deeper than 125mm that could impact roots.

8. Other trees on site with NRZ impacts greater than 20% will be offset as per City of Wodonga council *Native Vegetation Guidelines Clause 52.17.* Trees proposed for removal will also be offset. Total trees for offset are 13 trees.

9. Despite any impacts listed above, the bulk of trees assessed for this report will be retained safely on site, even those trees designated as 'Lost assets'. Only two trees will be removed.

10. Table of Vegetation Offset outcomes (126 trees total):

OUTCOME	TREE VOLUME
Retained - no impact	60 trees
Retained - impact <10%	14 trees
Not lost - impact 10-20%	16 trees
Not lost - existing impact	23
Lost but retained	11
Lost and removed	2

6.0 Tree Protection Plan (TPP) details

1. To ensure the success of this project, it will be necessary to follow specific construction guidelines that safeguard retained trees in close proximity to the road sealing and path construction works. Staff and contractors shall be briefed on these TPP guidelines at pre-start stage.

2. All trees approved for removal shall be identified and marked to ensure that there is no confusion between trees being removed and retained. Any trees to be removed should be subject to a pre-clearing survey to detect any roosting or nesting fauna.

3. Trees to be removed shall be felled in such a way as to avoid falling into and damaging adjacent vegetation outside of the construction footprint.

4. Heavy machinery shall use the existing roads and/or path footprints for access. If it is necessary to work outside of the road footprint, machinery shall be positioned outside of TPZ areas and 'boom-in' for operations. A spotter should be used to avoid machinery impacts with retained trees.

5. No construction materials or equipment shall be stored within the NRZ areas of retained trees. All vehicles shall use road footprint or adjacent paths to avoid soil compaction.

6. Root impacts to retained trees shall be minimised so far as practicable. Path excavation near retained trees shall not exceed 120mm maximum depth. There shall be no excavation for road sealing works.

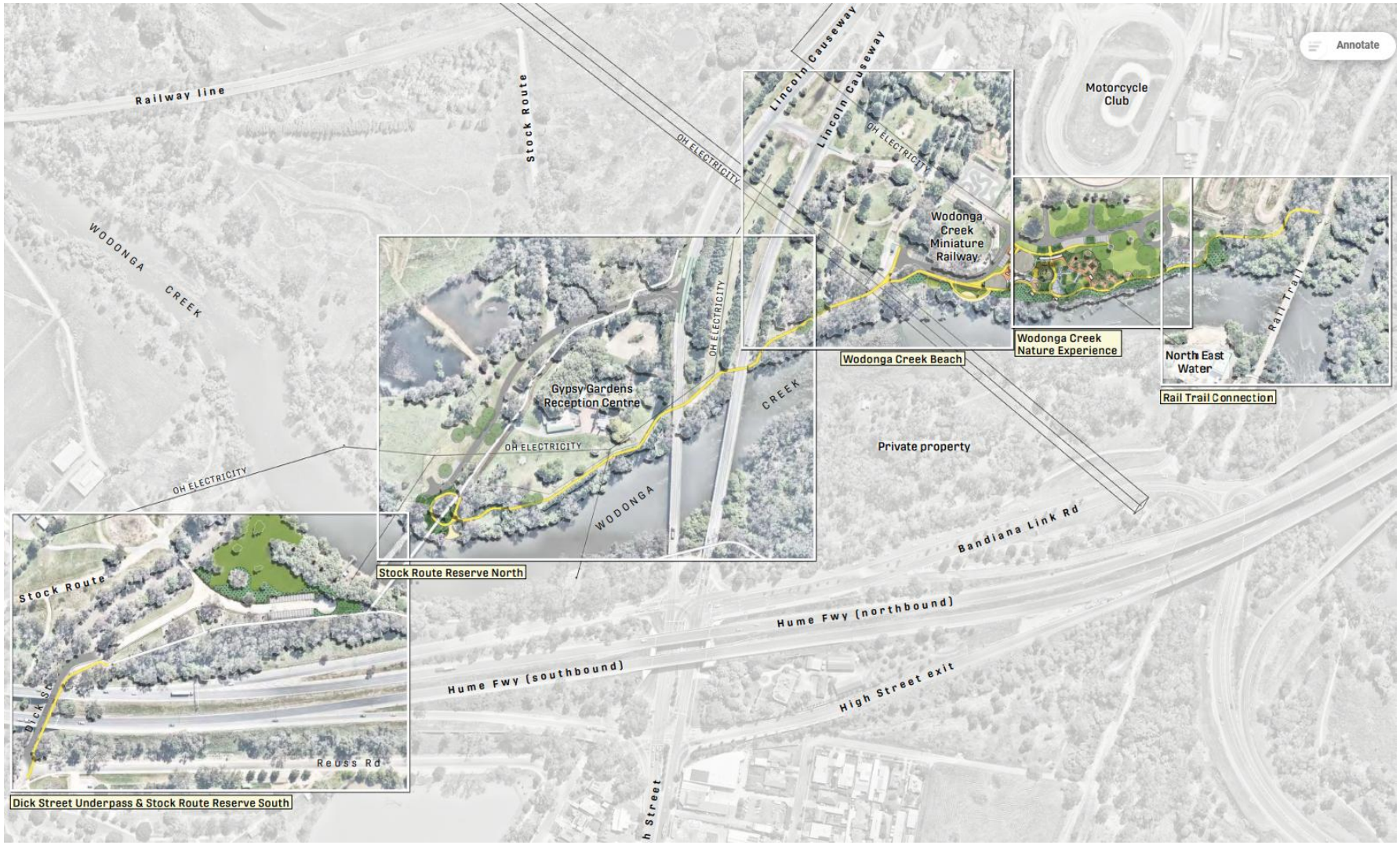
7. Tree protection fencing shall be installed as required. The TPZ isolation fence shall be installed around trees on all sides (where practical) and shall be 1.8m high with post size a minimum of 20mm, installed clear of roots. Shade cloth or similar is to be installed over the fencing. The TPZ fencing is to be secured to restrict access. Locations TBC.

8. Trees requiring pruning shall only be pruned by council-approved contractors, in accordance with *AS4373-2007.*

9. The correct implementation of the below Tree Protection Plan will prevent access, procedural or storage-related damage to the trunks, canopies, or roots of the trees present on this site

7.0 Site observations

The project involves the construction of approximately 1.1km of new concrete path (plus additional paths in vicinity of Diamond Park) for the purposes of opening up a currently unused section of Wodonga Creek for recreational opportunities.



7.1 **Whole-site plan**

7.2 **Tree Protection Plan**

Due to the large size of this site, we have not developed a scaled Tree Protection Plan.

If City of Wodonga council deem it necessary, we can create a Tree Protection Plan prior to the start of construction.

8.0 Tree Protection Specifications

8.1 **Pre-Construction**

8.1.1 Site induction

Construction manager and all contractors to meet on-site prior to site preparation to introduce the Tree Protection Specifications (TPS). The TPS induction shall be attended by all contractors.

8.1.2 Tree pruning

Any pruning requests shall be submitted to the determining authority, subsequently authorized, and only conducted by a qualified arborist (AQF-5 min) in accordance with *AS4373-2007, Pruning of Amenity Trees.* Construction manager and council staff to determine extent of branch pruning required to gain clearances for proposed work zones (once approval is gained).

8.1.3 Tree Protection

Erect tree protection fencing and ground protection and signage as indicated in the TPS and according to *AS4970-2025 Protection of Trees on Development Sites.* Once all tree protection measures are in place, construction manager shall inspect and sign off. Fencing TBC.

8.1.4 Protective fencing

Fencing shall be 1.8m high with post size a minimum of 20mm, installed clear of roots. Shade cloth or similar is to be installed over the fencing to prevent dust, particles, or other materials from entering the exclusion zone. The TPZ fencing is to be secured to restrict access.

Signs are to be erected on all sides of each TPZ fence. Signs are to read: "**Tree Protection Zone – No Access. Contact Project Manager for Tree Protection Specifications**", or similar.

Existing perimeter fencing and other structures may be suitable as part of the protective fencing.

8.2 **Construction**

Construction manager to determine if any site inspections are required over the construction phase.

8.2.1 Root pruning

During excavation works, any roots encountered less than 60mm diameter can be cut at right angles and with sharp tools. Larger roots shall be left intact.

If Tree Protection Fencing or other tree protection measures are to be moved or altered, the construction manager shall first approve the alterations.

8.3 **Post Construction and Landscape Construction Stage**

8.3.1 Landscaping

Landscaping within the TPZ is to be completed in the final stage of construction once machinery has left the site. Tree protection fencing and additional protective measures may be removed at this stage. All soft landscaping to be completed at existing ground level, without cultivation or changes to soil levels.

8.4 **TPS technical requirements**

8.4.1 Protection of Trees On Development Sites: AS 4970-2025

This TPS has been prepared in accordance with *Australian Standard 4970-2025: Protection of Trees on Development Sites.* Where proposed works are within the vicinity of trees, this standard is used to determine acceptable distances of works from trees via the calculation of Notional Root Zones (NRZ) and the Structural Root Zone (SRZ).

A Notional Root Zone (NRZ) is calculated (DSH × 12) to establish the acceptable proximity of works, equipment, and construction practices/procedures from an existing tree. Following this, the erection of isolation fencing, the tying of branches, tree protection measures or instalment of tree protection zone signage may be required. This ensures the tree is protected for the duration of the works. The proposed works shall not encroach within the NRZ unless this encroachment is less than 10% of the NRZ, is previously agreed upon and compensation of additional NRZ area (% of encroachment) is added to the NRZ.

Structural Root Zone (SRZ) refers to the structural roots within closer vicinity to the trunk which are required by the tree to remain upright. Encroachment into the SRZ of an existing tree is not permitted. Works conducted within the SRZ may destabilise the tree, requiring removal to avoid subsequent tree failure.

Note: The above is listed as a summary of the Australian Standard. The Consulting Arborist shall demonstrate why relevant trees will remain viable if encroachment of more than 10% is required, or if there is any SRZ impact.

8.4.2 Tree Protection Zone procedures

This section outlines the non-negotiable prohibitions beyond allowable encroachment into the NRZ:

- Machine excavations including trenching
- Excavation for silt fencing
- Cultivation
- Storage

- Preparation of chemicals including cement products
- Parking of vehicles and plant
- Refuelling
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Lighting of fires
- Soil level changes
- Temporary placement of utilities and/or signs
- Physical damage to the tree
- New requests due to unforeseen events and requirements for amendments to the TPMP

8.4.3 TPZ isolation fencing

The Tree Protection Zone indicates the minimum area required by the tree to remain healthy and vital. NRZ area is measured as a radius from the centre of the trunk and encompasses both below and above ground aspects. The TPZ isolation fence should be installed around trees on all sides.

Fencing shall be bunting, para-webbing, or barrier mesh for the retained trees, or similar. The TPZ fencing is to be secured to restrict access.

Signs are to be erected on all sides of each TPZ fence. Signs are to read: **Tree Protection Zone – No Access. Contact Project Manager for Tree Protection Specifications**", or similar.

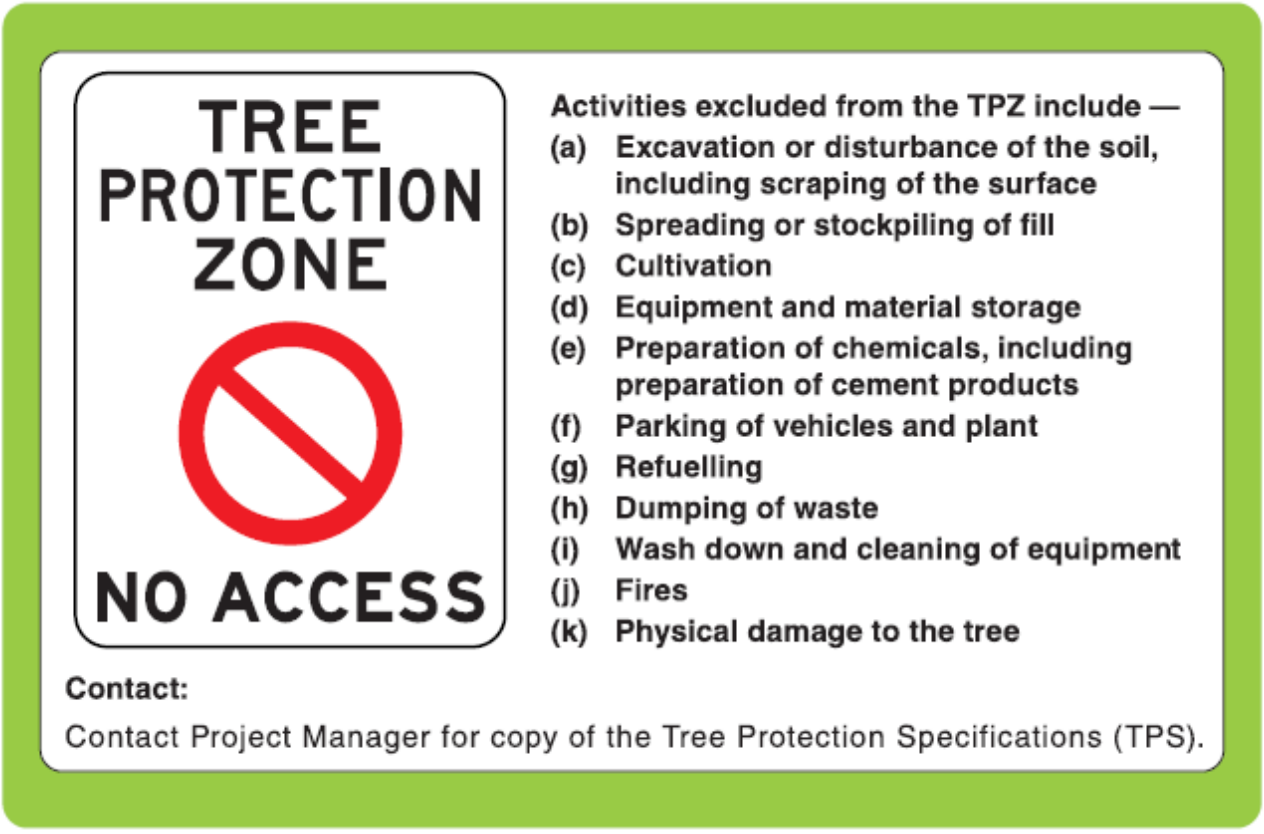
8.5 **TPZ signage examples**

Tree Protection Zone fencing example. TPZ fencing should be installed around trees on all sides. As large an allocation as possible should be made for any fencing within a nature strip area.

TPZ = DBH x 12 where

DBH = trunk diameter measured at 1.4m aboveground

Tree Protection Zone signage example. Signs are to be erected on all sides of each TPZ fence. Sign should me minimum A3 size.



9.0 Report exclusions

This assessment/report does not include the following:

- Below ground inspection (includes: location, condition and/or integrity of roots; condition of inaccessible parts of trunk; property or asset conflicts and/or damage due to roots).
- Soil profile test (including degrees of compaction if any).
- Detailed aerial tree inspection observations/findings (Visual Tree Inspection was conducted from the ground).
- Abiotic disorder certainty (resulting from groundwater analysis, gas leak investigations, etc).
- Certainty of presence or identity of biotic agents (pests, pathogens). Where present, biotic agents must be sampled and sent for lab analysis – a process not included in this commission.
- Certainty of decay present (if any) within the tree (tree was inspected from the outside only, meaning the condition and integrity of the structural wood within the tree cannot be ascertained).

10.0 References

Lonsdale, D., 2017. *Principles of Tree Hazard Assessment.* 7th ed. Stokehouse: UK Arb. Association.

Mattheck, C., 1996. *The Body Language Of Trees.* 7th ed. London: Stationery Office Books.

Nicolle, D., 2016. *Eucalypts For Planting In Australia.* Adelaide: Lane Print and Post.

Roberts, J., Jackson, N. & Smith, M., 2018. *Tree Roots In The Built Environment.* 3rd ed. Stokehouse: UK Arb. Association.

Standards Australia, 2007. *AS-4373-2007: Pruning of Amenity Trees,* Sydney: Standards Australia.

Standards Australia, 2025. *AS-4970-2025: Protection of Trees on Development Sites,* Sydney: Standards Australia.

11.0 Tree descriptors explained

Origin	**Native indigenous:** Species that are endemic to local region. **Native:** Species that occur naturally in other states of Australia, outside of subject location. **Exotic: s**pecies that occur naturally outside of Australia, i.e. species has been introduced.
Useful Life Expectancy (ULE)	**50+ years:** Structurally sound trees in locations that can accommodate future growth. **20-50 years:** Minimally-defective trees suitable for retention in the medium term. **10-20 years:** Defective/declining trees only suitable for retention in the short term. **0-10 years:** Trees likely to require imminent removal (declining and/or hazardous trees).
Health ratings	**Good:** Tree is generally free of pest and diseases; foliage cover is healthy/robust. **Average:** Tree is presenting symptoms of stress that may include tip dieback, crown thinning, defoliation or leaf discoloration. Condition may be reversible. **Poor:** Tree is presenting with significant crown dieback or thin foliage. Pathogens, insect borers, fungus or root disease may be present. Future tree removal likely. **Dead:** Tree is completely dead or at an irreparable state of health – non-functional crown (no green leaves), stem cambium dead, no evidence of fresh shoots and/or heavily declined. No chance of recovery.
Structure ratings	**Good:** Tree has no obvious, notable structural defects, or indicators of fungal decay. **Average:** Tree has structural weaknesses but is unlikely to fail at any major structural component and does not present symptoms of imminent failure. **Poor:** Tree has structural weakness that may be due to poor growth development, fungal decay, mechanical damage, or a combination of these. Signs of potential structural failure such as major limb defects may be present.
Age classifications	**Juvenile:** Young trees, generally less than 10 years old. **Semi-mature:** Trees which have reached approximately half of their expected size/lifespan. **Maturing:** Trees which have reached their expected size and are approximately two thirds of the way through their expected average lifespan. **Over-mature:** Trees which have over-matured within the surrounding landscape and now present in a poor state of health and/or structural decline. **Dead:** Trees with a non-functional crown or that are irreversibly dying. **Stump re-growth:** Trees which have been cut to a stump and allowed to regrow.
Retention value	**High:** Trees which positively contribute to the site or local environment due to their botanical, historical or local significance in combination with good characteristics of health and structure. High retention value trees should be considered for retention where possible. **Medium:** Trees offering some beneficial attributes that may enhance the site or local environment, but that are limited to some degree. Medium retention value trees should be considered for retention where possible, but not necessarily to the detriment of the design. **Low:** Trees that offer little in terms of site amenity for reasons of poor health and/or structural condition or species unsuitability (invasive or environmental weed species). Juvenile and semi-mature trees which could be readily replaced may also be placed in this category. Trees of low retention value should not be a constraint on future development.

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WODONGA CREEK ACTIVATION PROJECT

Assessed trees_all tree data

TREE ID	TREE SPECIES	ORIGIN	DSH (m)	NRZ (m radius)	NRZ TOTAL AREA (M2)	IMPACTED NRZ (M2)	IMPACT %	OUTCOME	NEW IMPACT TYPE	COMMENT
TT_1	River Red Gum	Remnant native	0.31	5.93	110.4	0.0	0.00%	Retained	Nil	
TT_2	River Red Gum	Remnant native	0.81	15.00	707.0	113.0	15.98%	Not lost moderate impact	2.5m concrete path	Minor existing impact from gravel carpark
TT_3	River Red Gum	Remnant native	0.20	3.76	44.4	12.4	27.92%	Lost but retained	2.5m concrete path	
TT_4	River Red Gum	Remnant native	0.14	2.77	24.2	2.9	12.01%	Not lost moderate impact	2.5m concrete path	
TT_5	River Red Gum	Remnant native	0.28	5.45	93.3	0.0	0.00%	Retained	Nil	Trees next to existing rail trail
TT_6	River Red Gum	Remnant native	0.32	6.23	122.0	0.0	0.00%	Retained	Nil	Trees next to existing rail trail
TT_7	River Red Gum	Remnant native	0.14	2.75	23.7	0.0	0.00%	Retained	Nil	
TT_8	River Red Gum	Remnant native	0.43	8.24	213.3	0.0	0.00%	Retained	Nil	
TT_9	River Red Gum	Remnant native	0.26	5.03	79.4	0.0	0.00%	Retained	Nil	
TT_10	River Red Gum	Remnant native	0.37	7.03	155.3	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_11	River Red Gum	Remnant native	0.34	6.45	130.8	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_12	River Red Gum	Remnant native	0.52	10.08	319.0	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_13	River Red Gum	Remnant native	0.22	4.27	57.2	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_14	River Red Gum	Remnant native	0.10	1.91	11.4	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_15	River Red Gum	Remnant native	0.42	8.14	208.3	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_16	River Red Gum	Remnant native	0.15	2.86	25.7	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_17	River Red Gum	Remnant native	0.43	8.33	218.2	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_18	River Red Gum	Remnant native	0.35	6.78	144.5	0.0	0.00%	Retained	Boardwalk postholes	Tree adjacent to raised boardwalk. Minor impact
TT_19	River Red Gum	Remnant native	0.22	4.26	57.1	0.0	0.00%	Retained	Nil	Minor impacts from fill operations
TT_20	River Red Gum	Remnant native	0.18	3.49	38.4	0.0	0.00%	Retained	Nil	Minor impacts from fill operations
TT_21	River Red Gum	Remnant native	0.21	4.08	52.3	1.7	3.20%	<10% retained	2.5m concrete path	Minor impacts from fill operations
TT_21a	River Red Gum	Remnant native	0.17	3.31	34.4	0.0	0.00%	Retained	Nil	Minor impacts from fill operations
TT_22	River Red Gum	Remnant native	0.16	3.03	28.9	0.0	0.00%	Lost and removed	Path/fill	To be removed
TT_23	River Red Gum	Remnant native	0.14	2.71	23.1	0.0	0.00%	Retained	Nil	Minor impacts from fill operations
TT_24	River Red Gum	Remnant native	0.27	5.14	83.1	0.0	0.00%	Retained	Nil	
TT_25	River Red Gum	Remnant native	0.18	3.54	39.3	0.0	0.00%	Retained	Nil	
TT_26	River Red Gum	Remnant native	0.14	2.76	24.0	0.7	2.91%	<10% retained	2.5m concrete path	
TT_27	River Red Gum	Remnant native	0.28	5.44	93.0	28.3	30.42%	Lost but retained	2.5m concrete path	
TT_28	River Red Gum	Remnant native	0.18	3.48	38.2	0.0	0.00%	Retained	2.5m concrete path	

WODONGA CREEK ACTIVATION PROJECT

Assessed trees_all tree data

TREE ID	TREE SPECIES	ORIGIN	DSH (m)	NRZ (m radius)	NRZ TOTAL AREA (M2)	IMPACTED NRZ (M2)	IMPACT %	OUTCOME	NEW IMPACT TYPE	COMMENT
TT_29	River Red Gum	Remnant native	0.24	4.58	65.8	6.3	9.57%	<10% retained	2.5m concrete path	
TT_30	River Red Gum	Remnant native	0.37	7.07	157.0	8.5	5.40%	<10% retained	2.5m concrete path	
TT_31	River Red Gum	Remnant native	0.32	6.12	117.5	33.8	28.77%	Lost but retained	2.5m concrete path	
TT_33	River Red Gum	Remnant native	0.20	3.92	48.3	0.0	0.00%	Retained	Nil	Trees within existing carpark
TT_34	River Red Gum	Remnant native	0.49	9.37	275.8	0.0	0.00%	Retained	Nil	Trees within existing carpark
TT_35	River Red Gum	Remnant native	0.27	5.17	84.1	0.0	0.00%	Retained	Nil	Trees within existing carpark
TT_36	River Red Gum	Remnant native	0.42	8.13	207.4	0.0	0.00%	Retained	Nil	Trees within existing carpark
TT_37	River Red Gum	Remnant native	0.52	9.95	311.2	0.0	0.00%	Retained	Nil	Trees within existing carpark
TT_38	River Red Gum	Remnant native	0.42	8.00	200.9	0.0	0.00%	Retained	Nil	Trees within existing carpark
TT_39	River Red Gum	Remnant native	0.21	4.12	53.3	8.5	15.95%	Not lost moderate impact	2.5m concrete path	
TT_40	River Red Gum	Remnant native	0.29	5.58	97.7	0.0	0.00%	Retained	Nil	
TT_41	River Red Gum	Remnant native	0.55	10.52	348.0	0.0	0.00%	Retained	Nil	
TT_42	River Red Gum	Remnant native	0.45	8.57	230.5	0.0	0.00%	Retained	Nil	
TT_43	River Red Gum	Remnant native	0.43	8.28	215.6	0.0	0.00%	Retained	Nil	
TT_44	River Red Gum	Remnant native	0.19	3.59	40.5	0.0	0.00%	Retained	Nil	
TT_45	River Red Gum	Remnant native	0.51	9.70	295.6	102.0	34.50%	Not lost existing impact	Path & carparks	Existing impact from gravel carpark
TT_46	River Red Gum	Remnant native	0.63	12.09	459.0	49.4	10.76%	Not lost moderate impact	Path & carparks	Existing impact from gravel carpark
TT_47	River Red Gum	Remnant native	0.58	11.06	384.7	72.2	18.77%	Not lost moderate impact	Path & carparks	Existing impact from gravel carpark
TT_48	River Red Gum	Remnant native	0.59	11.30	401.3	150.1	37.41%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_49	River Red Gum	Remnant native	0.52	10.00	314.2	130.0	41.38%	Lost and removed	Poor structure	Removal
TT_50	River Red Gum	Remnant native	0.40	7.67	184.7	65.0	35.20%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_51	River Red Gum	Remnant native	0.26	5.03	79.6	28.4	35.67%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_52	River Red Gum	Remnant native	0.65	12.40	483.1	178.7	36.99%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_53	River Red Gum	Remnant native	0.62	11.99	451.9	186.3	41.23%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_54	River Red Gum	Remnant native	0.59	11.32	402.5	176.8	43.92%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_55	River Red Gum	Remnant native	0.70	13.37	561.7	263.3	46.87%	Not lost existing impact	Path and road	Existing impact from gravel carpark
TT_56	River Red Gum	Remnant native	0.27	5.25	86.5	0.0	0.00%	Retained	Nil	Existing impact from gravel carpark
TT_57	River Red Gum	Remnant native	1.17	15.00	707.0	72.1	10.20%	Not lost moderate impact	2.5m concrete path	Existing impact from gravel carpark
TT_58	River Red Gum	Remnant native	0.47	8.97	252.9	47.4	18.74%	Not lost moderate impact	2.5m concrete path	Tree located below path level on river bank

WODONGA CREEK ACTIVATION PROJECT

Assessed trees_all tree data

TREE ID	TREE SPECIES	ORIGIN	DSH (m)	NRZ (m radius)	NRZ TOTAL AREA (M2)	IMPACTED NRZ (M2)	IMPACT %	OUTCOME	NEW IMPACT TYPE	COMMENT
TT_59	River Red Gum	Remnant native	0.40	7.60	181.4	37.2	20.51%	Not lost existing impact	2.5m concrete path	Tree located below path level on river bank
TT_60	River Red Gum	Remnant native	0.63	12.05	456.5	63.1	13.82%	Not lost moderate impact	2.5m concrete path	Tree located below path level on river bank
TT_61	River Red Gum	Remnant native	0.41	7.87	194.6	14.1	7.25%	<10% retained	2.5m concrete path	Tree located below path level on river bank
TT_62	River Red Gum	Remnant native	0.58	11.07	385.0	13.6	3.53%	Lost but retained	Pipeline	Tree impacted by trenching/pipeline
TT_63	River Red Gum	Remnant native	0.35	6.74	142.6	0.0	0.00%	Retained	Nil	
TT_64	River Red Gum	Remnant native	0.48	9.28	270.3	0.0	0.00%	Retained	Nil	
TT_65	River Red Gum	Remnant native	0.43	8.24	213.2	0.0	0.00%	Retained	Nil	
TT_66	River Red Gum	Remnant native	0.23	4.40	60.7	0.0	0.00%	Retained	Nil	
TT_67	River Red Gum	Remnant native	0.45	8.56	230.1	13.9	6.04%	<10% retained	Gravel path/beach	
TT_68	River Red Gum	Remnant native	0.18	3.51	38.7	0.0	0.00%	Retained	Nil	
TT_69	River Red Gum	Remnant native	0.23	4.44	62.0	0.0	0.00%	Retained	Nil	
TT_70	River Red Gum	Remnant native	0.35	6.74	142.9	0.0	0.00%	Retained	Nil	
TT_71	River Red Gum	Remnant native	0.19	3.73	43.7	0.0	0.00%	Retained	Nil	
TT_72	River Red Gum	Remnant native	0.32	6.13	118.2	15.5	13.12%	Not lost moderate impact	2.5m concrete path	
TT_73	River Red Gum	Remnant native	0.22	4.24	56.4	0.0	0.00%	Retained	Nil	
TT_74	River Red Gum	Remnant native	0.19	3.74	44.0	0.0	0.00%	Retained	Nil	
TT_75	River Red Gum	Remnant native	0.38	7.21	163.4	13.6	8.32%	<10% retained	2.5m concrete path	
TT_76	River Red Gum	Remnant native	0.68	12.98	529.8	167.8	31.67%	Lost but retained	2.5m concrete path	
TT_77	River Red Gum	Remnant native	0.19	3.56	39.8	0.0	0.00%	Retained	Nil	
TT_78	River Red Gum	Remnant native	0.28	5.39	91.4	3.0	3.28%	<10% retained	2.5m concrete path	
TT_79	River Red Gum	Remnant native	0.47	9.00	254.7	47.0	18.46%	Not lost moderate impact	2.5m concrete path	
TT_80	River Red Gum	Remnant native	0.47	9.00	254.7	52.8	20.73%	Lost but retained	2.5m concrete path	
TT_81	River Red Gum	Remnant native	0.44	8.36	219.4	30.8	14.04%	Not lost moderate impact	2.5m concrete path	
TT_82	River Red Gum	Remnant native	0.21	4.09	52.6	0.0	0.00%	Retained	Nil	
TT_83	River Red Gum	Remnant native	0.23	4.49	63.5	0.0	0.00%	Retained	Nil	
TT_84	River Red Gum	Remnant native	0.52	10.01	314.8	16.6	5.27%	<10% retained	2.5m concrete path	
TT_85	River Red Gum	Remnant native	0.23	4.46	62.5	0.0	0.00%	Retained	Nil	
TT_86	River Red Gum	Remnant native	0.16	3.13	30.8	0.0	0.00%	Retained	Nil	
TT_87	River Red Gum	Remnant native	0.52	10.00	314.0	40.3	12.83%	Not lost moderate impact	2.5m concrete path	

WODONGA CREEK ACTIVATION PROJECT

Assessed trees_all tree data

TREE ID	TREE SPECIES	ORIGIN	DSH (m)	NRZ (m radius)	NRZ TOTAL AREA (M2)	IMPACTED NRZ (M2)	IMPACT %	OUTCOME	NEW IMPACT TYPE	COMMENT
TT_88	River Red Gum	Remnant native	0.22	4.30	58.0	0.0	0.00%	Retained	Nil	
TT_89	River Red Gum	Remnant native	0.33	6.35	126.5	0.0	0.00%	Retained	Nil	
TT_90	River Red Gum	Remnant native	0.55	10.58	351.9	97.3	27.65%	Lost but retained	2.5m concrete path	
TT_91	River Red Gum	Remnant native	0.58	11.12	388.4	117.1	30.15%	Lost but retained	2.5m concrete path	
TT_92	River Red Gum	Remnant native	0.56	10.71	360.3	105.6	29.31%	Lost but retained	2.5m concrete path	
TT_93	River Red Gum	Remnant native	0.75	14.33	644.9	180.3	27.96%	Not lost existing impact	Road and carparks	Existing road impact
TT_94	River Red Gum	Remnant native	0.34	6.52	133.6	31.6	23.66%	Not lost existing impact	Road	Existing sealed road impact
TT_95	River Red Gum	Remnant native	0.63	12.12	461.9	18.6	4.03%	<10% retained	Road	Existing sealed road impact
TT_96	River Red Gum	Remnant native	1.24	15.00	707.0	135.6	19.18%	Not lost moderate impact	Road	Existing sealed road impact
TT_97	River Red Gum	Remnant native	0.70	13.51	573.7	254.8	44.41%	Not lost existing impact	Road	Existing sealed road impact
TT_98	River Red Gum	Remnant native	0.40	7.77	189.8	56.5	29.77%	Lost but retained	Retaining wall/ rock batter	**Based on existing alignment - may be altered**
TT_99	River Red Gum	Remnant native	0.48	9.16	263.6	38.7	14.68%	Lost but retained	Retaining wall/ rock batter	**Based on existing alignment - may be altered**
TT_100	River Red Gum	Remnant native	0.44	8.41	222.0	0.0	0.00%	Retained	Nil	
TT_101	River Red Gum	Remnant native	0.33	6.26	123.2	0.0	0.00%	Retained	Nil	
TT_102	River Red Gum	Remnant native	0.39	7.57	179.9	0.0	0.00%	Retained	Nil	
TT_103	River Red Gum	Remnant native	0.38	7.28	166.6	0.0	0.00%	Retained	Nil	
TT_104	River Red Gum	Remnant native	1.29	15.00	707.0	142.5	20.16%	Not lost existing impact	Road	Existing road impact
TT_105	River Red Gum	Remnant native	1.14	15.00	707.0	0.0	0.00%	Retained	Nil	
TT_106	River Red Gum	Remnant native	0.81	15.00	707.0	418.0	59.13%	Not lost existing impact	Road	Existing road impact
TT_107	River Red Gum	Remnant native	0.42	8.07	204.5	110.3	53.93%	Not lost existing impact	Road	Bridge impact - n/a
TT_108	River Red Gum	Remnant native	1.16	15.00	707.0	0.0	0.00%	Retained	Nil	
TT_109	River Red Gum	Remnant native	0.44	8.52	228.0	80.5	35.30%	Not lost existing impact	Road and carparks	Existing road impact
TT_110	River Red Gum	Remnant native	0.37	7.02	154.9	45.0	29.05%	Not lost existing impact	Road and carparks	Existing road impact
TT_112	River Red Gum	Remnant native	0.36	6.98	153.1	7.9	5.16%	<10% retained	Road and carparks	Existing road impact
TT_113	River Red Gum	Remnant native	0.31	5.96	111.6	29.5	26.43%	Not lost existing impact	Road and carparks	Existing road impact
TT_114	River Red Gum	Remnant native	0.47	9.09	259.5	62.9	24.24%	Not lost existing impact	Road and carparks	Existing road impact
TT_115	Planted native	Planted	0.46	8.74	240.2	9.5	3.95%	<10% retained	n/a	Planted Tree
TT_116	River Red Gum	Remnant native	0.48	9.18	265.0	0.0	0.00%	Retained	Road and carparks	
TT_117	River Red Gum	Remnant native	0.33	6.29	124.3	3.8	3.06%	<10% retained	Road and carparks	Existing road impact

WODONGA CREEK ACTIVATION PROJECT

Assessed trees_all tree data

TREE ID	TREE SPECIES	ORIGIN	DSH (m)	NRZ (m radius)	NRZ TOTAL AREA (M2)	IMPACTED NRZ (M2)	IMPACT %	OUTCOME	NEW IMPACT TYPE	COMMENT
TT_118	River Red Gum	Remnant native	0.39	7.41	172.7	0.0	0.00%	Retained	Road and carparks	
TT_119	River Red Gum	Remnant native	0.21	4.11	53.1	0.0	0.00%	Retained	Road and carparks	
TT_120	River Red Gum	Remnant native	0.78	14.98	704.9	107.0	15.18%	Not lost moderate impact	Road and carparks	Existing road impact
TT_121	River Red Gum	Remnant native	1.18	15.00	707.0	72.0	10.18%	Not lost moderate impact	Road and carparks	Existing road impact
TT_200	River Red Gum	Remnant native	0.35	6.71	141.4	10.6	7.50%	<10% retained	Road	Existing hardstand impact
TT_201	River Red Gum	Remnant native	0.23	4.42	61.4	10.1	16.44%	Not lost moderate impact	Road	Existing hardstand impact
TT_202	River Red Gum	Remnant native	0.52	10.04	316.6	172.0	54.33%	Not lost existing impact	Road	Existing hardstand impact
TT_203	River Red Gum	Remnant native	0.36	6.87	148.3	61.8	41.68%	Not lost existing impact	Playground/ landscaping	Existing hardstand impact
TT_204	River Red Gum	Remnant native	0.42	7.97	199.5	46.9	23.51%	Not lost existing impact	Playground/ landscaping	Existing hardstand impact
TT_205	River Red Gum	Remnant native	0.59	11.41	409.0	105.9	25.90%	Not lost existing impact	Playground/ landscaping	Existing hardstand impact


Tree 2
- minor existing impact
30° NE
4


Planted natives
230° SW
5 planted natives


Trees 58, 59 onwards
235° SW
6 Riverside tres - elevated path


Tree 45
- shows existing impact
274° W
7 carparks t45


Trees 201-205
- existing impacts
88° E
8 existing impact from road


256° W
removal T49


Gravel path/ river access to
'beach' proposed here
136° SE
11 gravel path


Trees 54,55
- existing impact from road
216° SW
12
habitat trees, existing impact road


Tree 72 onwards
213° SW
13

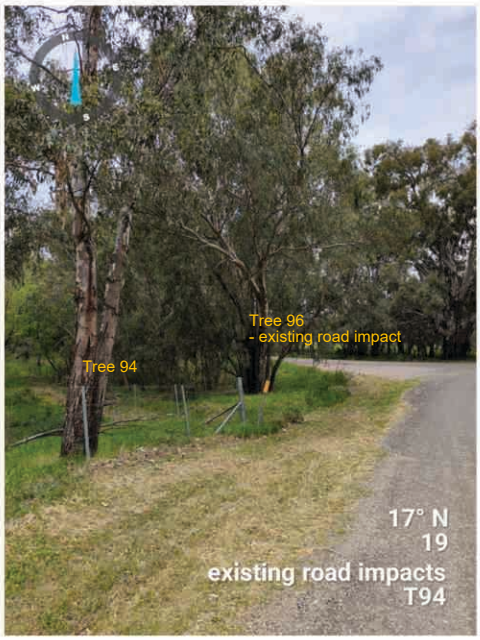

182° S
14 removal


Tree 93
33° NE
15
seal road next to t93


Trees 120, 121 onwards
- existing road impact
200° S
16
turnaround point


Exotic trees - n/a
54° NE
17 poplars


Tree 95
-existing road impact
358° N
18
match existing path


Tree 96
- existing road impact
Tree 94
17° N
19
existing road impacts
T94


353° N
20
T96 existing road impacts


94° E
21
road edge works


Tree 98
351° N
22
follow road edge


200° S
23
follow road edge


53° NE
24
match existing path


Tree 104
- existing road impact
16° N
25
seal existing road


36° NE
25
seal existing road


248° W
26
seal existing road and carpark


271° W
26
seal existing road and carpark

1 2 3 4 5 6 7 8 9 10 11 12

A B C D E F G

Rev.	Description	Approved	Date
A	CONCEPT	JF	17/01/24

Scale:

0 20 40 60 80 100m

SCALE 1:2000 (A1)

APPROVED COMPANY ISO 9001

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North : N

Drawing Status :
PRELIMINARY ISSUE
(NOT FOR CONSTRUCTION)

WODONGA CREEK ACTIVIATION GATEWAY ISLAND, STOCK RTE WODONGA KEY PLAN

Designed :	J.D.F	Date :	17/01/24
Authorised :	S.H.W	Checked :	
Drawing No. :	W023022 -FLP3 KP	Revision	A