Western Sydney University Milperra Campus Arboricultural Impact Assessment

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Template 2.8.1

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Abbreviations

Abbreviation	Description
AQF	Australian Qualifications Framework
AS	Australian Standards
DBH	Diameter at Breast Height
ELA	Eco Logical Australia
m	Metre
mm	Millimetre
NDE	Non-Destructive Excavation
NO	Number
NSW	New South Wales
SP	Species
SRZ	Structural Root Zone
TPZ	Tree Protection Zone
VTA	Visual Tree Assessment

1. Introduction

1.1 Description of proposal

Western Sydney University (WSU) is embarking on a large scale, transformative initiative, seeking evolution of the University's current 'suburban' campus network into a hybrid campus model which includes both suburban and consolidated city centre vertical campuses, acknowledging the ability of both campuses to service certain aspects of course delivery and research. This Strategy was endorsed by the University Board of Trustees in June 2017, and signifies a new direction for the University's delivery and provision of education and research. The relocation of the Milperra Campus to Bankstown CBD supports this model, as well as supporting a long standing strategic action and direction. Existing courses and offerings at the Milperra Campus will be relocated to the Bankstown city centre campus, or in some instances to Liverpool. Furthermore, the proposal will ensure that the University is in a more accessible location to the broader student catchment, with the new city centre campus providing Metro, Train and Bus accessibility with the services and amenities of Bankstown city centre readily available for students. An agreement between WSU and the City of Canterbury Bankstown has been signed which will see the relocation of the WSU Milperra Campus.

As such, it is proposed that the site be repurposed to allow for reinvestment into WSU's new campuses and its education and research offerings, consistent with the University's objects and functions under the *Western Sydney University Act 1997*.

The WSU Milperra Campus is currently used as one of eleven WSU Campuses throughout metropolitan Sydney. The site has an area of 19.6 ha and is bounded by Bullecourt Avenue to the north, Horsley Road to the east, M5 Motorway to the south, and Ashford Avenue to the west. Two non-campus uses are located within this bounded area, including the council operated hockey field to the north-west corner of the site, and Mt St Joseph's Catholic School, occupying a third of the street frontage to Horsley Road to the east. In addition, protected remnant Cumberland Plain Woodland (classified as a critically endangered ecological community) is positioned in the north east corner of the site.

The campus is currently used for the purpose of tertiary education, student accommodation, administrative functions, and student parking. In 2016, the campus supported approximately 8,166 students, 195 academic staff and 128 professional staff.

A Master Plan has been prepared for the WSU Milperra campus in support of the University's transformative initiative, driven by improving the amenity of the local area for existing and future residents. Centred on creating a great place to live, the Master Plan provides open space for passive and active recreation, a walkable and cycle friendly neighbourhood with shops, services, and a diverse range of dwelling types to support affordability, and respond to the changing household and age profile in the district. The Master Plan is accompanied by a Planning Proposal that seeks to amend the land use, height of buildings, floor space ratio, biodiversity, minimum lot size and special provisions controls under the Bankstown Local Environmental Plan 2015.

1.2 Scope of assessment

ELA were commissioned by Mirvac c/- Western Sydney University to prepare an Arboricultural Impact Assessment (AIA) for a proposed development at the Milperra Campus, located at Milperra. The address of the subject site is in Table 1 and mapped in Figure 1. The purpose of this report is to:

- identify the trees within the site that are likely to be affected by the proposed works
- undertake a visual tree assessment of the subject trees
- assess the current overall health and condition of the subject trees
- evaluate the retention value of the subject trees
- identify trees to be removed, retained or transplanted
- determine the likely impacts on trees to be retained
- recommend tree protection measures to minimise adverse impacts.

Features of the subject site are tabulated below.

Table 1: Subject site

Criteria	Description
Street address	Horsley Rd & Bullecourt Ave Milperra NSW 2214
Study area	Located within the area bounded by Bullecourt Avenue to the north, Horsley Road to the east, the M5 Motorway to the south and Ashford Avenue to the west.
Local Government Area	City of Canterbury Bankstown Council
General land use	Education with ancillary uses

The description of the proposed activity in Table 2 is based on information available at the time of preparing this report.

Table 2: Proposed activity

Activities that can impact trees	Description of proposed activities
Clearing vegetation	Yes
Pruning vegetation	Yes
Earthworks including regrading, excavation and trenching • For building • For services	Yes
Compaction • Storage of materials • Installation of structures • Stockpiling fill or materials • Parking	Yes
Refuelling and chemical use (e.g. herbicides)	Yes
Erection of scaffolding	Yes
Vehicle movements	Yes
Changes to stormwater management	Yes
Landscaping	Yes

Figure 1: Location of study area

2. Method

2.1 Definition of a tree

A tree is defined under the Australian Standard, AS 4970-2009, Protection of Trees on Development Sites as a long lived woody perennial plant greater than (or usually greater than) 3 m in height with one or relatively few main stems or trunks.

For the purpose of this report this AIA has assessed trees in line with the local Councils definition of a tree. The City of Canterbury Bankstown Council's Tree Management Manual (2015) defines a tree as:

"a long perennial plant greater than 5 m in height with one or relatively few main stems or trunks.'

2.2 Visual tree assessment

The health and condition of the subject trees were assessed in accordance with a stage one visual tree assessment (VTA) as formulated by Mattheck and Breloer (1994) and practices consistent with modern arboriculture.

A total of **327 subject trees** were inspected on the 5th, 11th and 12th of December 2021 by AQF Level 5 Consulting Arborist, David Bidwell. David completed an additional inspection on Wednesday 29 June 2022 to reinspect trees located within the existing retention area in the north-east corner of the study area (see Appendix F). During this inspection Beveridge Williams surveyors collected location points for trees within the retained area, and undertook a tree count estimate[1] of these trees, which are represented in ELA's mapping as Tree 1752 (group of 1500 trees).

Trees of the same species, with similar dimensions growing near each other, have been documented as a group and presented under a single way point. Further information, observations and measurements specific to each of the subject trees can be found in Section 3 Results and Discussion.

The following limitations apply to this methodology:

- Tree height was measured using a laser clinometer.
- Diameter at breast height (DBH) and diameter at base (DAB) was measured using DBH tape.
- Trees were inspected from ground level, without the use of any invasive or diagnostic tools and testing.
- Trees were inspected within limits of site access.
- The locations of the subject trees were recorded by ELA in the field using hand-held GPS units. Tree locations were subsequently matched to the Beveridge Williams survey (2022) where possible. The remaining tree survey locations were matched to Near map (2022) aerial imagery using geographic information systems (GIS) techniques.
- Tree canopy was measured by stepping out the distance within the dripline
- No aerial inspections or root mapping was undertaken.
- Tree identification was based on broad taxonomical features present and visible from ground level at the time of inspection

- The subject trees have not been assessed for ecological or environmental value within this report therefore, please refer to ELA's Ecological Assessment (2022) for all ecological information.

2.3 Retention value

The retention value or importance of a tree or group of trees, is determined in accordance with the Institute of Australian Consulting Arborists (IACA) Significance of a Tree Assessment Rating System (STARS©), which is summarised in Appendix A. The method considers the Safe Useful Life Expectancy (SULE) and landscape significance of a tree. Trees are provided one of the following ratings:

- **High - priority for retention:** These trees are considered important and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by Australian Standard AS 4970–2009 Protection of trees on development sites.
- **Medium - consider for retention**: These trees are moderately important for retention. Their removal should only be considered if adversely affected by the proposed works and all other alternatives have been considered and exhausted.
- **Low - consider for removal:** These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
- **Priority for removal:** These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.

2.4 Protection zones

2.4.1 Tree protection zone (TPZ)

The TPZ is a specific radius area above and below ground and at a distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by the development. The TPZ (as defined by AS 4970-2009) requires restriction of access during the development process. Groups of trees with overlapping TPZs may be included within a single protection area. Tree sensitive measures must be implemented if works are to proceed within the TPZ. The TPZ radius is determined by multiplying its DBH by 12 however, the TPZ of palms and monocots should not be less than 1 m outside the crown projection.

2.4.2 Structural root zone (SRZ)

The SRZ is the area of the root system (as defined by AS 4970-2009) used for stability, mechanical support and anchorage of the tree. It is critical for the support and stability of trees. Severance of roots within the SRZ is not recommended as it may lead to the destabilisation and/or decline of the tree. The SRZ does not apply for palms and monocots (as outlined in AS 4970-2009).

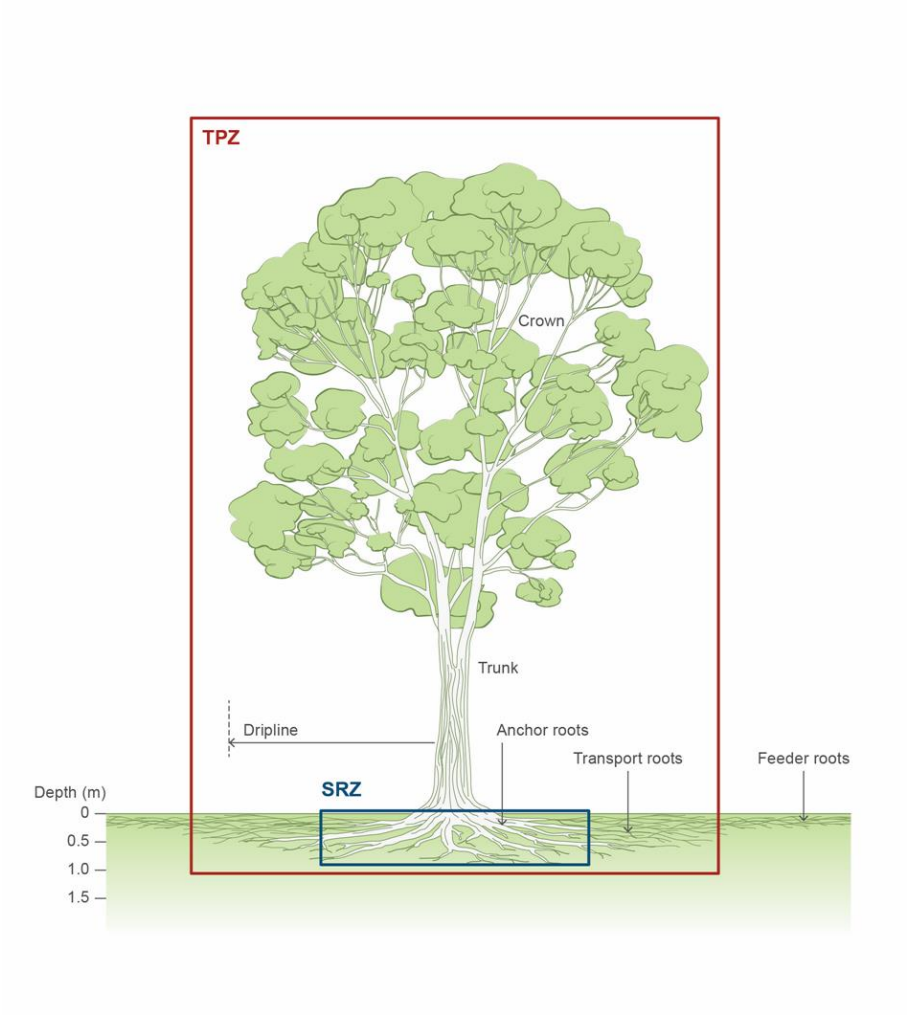

Figure 2: Representative tree structure and indicative TPZ and SRZ

2.5 Potential impacts

Trees may be impacted by physical or chemical damage to roots or above tree parts. Examples include impacts associated with site grading, soil compaction, excavation, stock piling within TPZ as well as changes in site hydrology, changes in soil level and site contamination. The extent of encroachment to the TPZ and SRZ determines the level of potential impact. AS 4970-2009 defines types of encroachment as follows and as illustrated in Appendix B:

- **Major encroachment -** If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, the project arborist must demonstrate that the tree(s) would remain viable. The location and distribution of roots may be determined through non-destructive excavation (NDE) methods such as hydro-vacuum excavation (sucker truck), Air Spade or manual extraction. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.
- **Minor encroachment** – If the proposed encroachment is less than 10% of the TPZ, and outside of the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.

For the purposes of this Arboricultural Impact Assessment, impacts were calculated using GIS techniques and defined as follows:

- High impact: The SRZ is directly affected, or the proposed encroachment is greater than 20% of the TPZ. Trees may not remain viable if they are subject to high impact. These trees cannot be retained unless the proposal is changed.
- Medium impact: If the proposed encroachment is greater than 10% of the TPZ (but less than 20% of the TPZ) and outside of the SRZ, the project arborist may require detailed root investigation to demonstrate that the tree(s) would remain viable. These trees may be retained subject to further investigation and mitigation measures.
- Low impact: If the proposed encroachment is less than 10% (total area) of the TPZ, and outside of the SRZ, detailed root investigations should not be required. These trees can be retained.
- No impact: No likely or foreseeable encroachment within the TPZ. These trees can be retained.

Impacts are calculated using GIS techniques.

2.6 Proposed action

The proposed actions to either retain or remove each tree are determined by the impact from the proposed design footprint, conversations of intent with the client and corresponding mitigation measures. The following are the definition of these actions:

- **Remove:** Trees that are to be impacted by the proposed development to the extent whereby retention is not suitable and / or incompatible if the current plans are approved. All tree removal must comply with guidelines specified in section 4 of this report and subject to regulatory approval.
- **Retain:** Trees that are suitable for retention granted they follow the specific mitigation measures discussed in section 3 and / or the tree protection measures outlined in section 4 and / or the tree protection guidelines outlined in Appendix E.
- **Potential to be retained:** The Project Arborist will need to confirm the viability of tree retention depending on proposed construction methods

3. Results and discussion

Results of the arboricultural assessment are summarised in Table 3. Detailed results are included in Appendices C and D. Tree protection guidelines are provided in Appendix E and the site plans are outlined in Appendix F. Site photos are provided in Appendix G.

Table 3: Summary of number of trees impacted and their retention value

	Proposed to be removed	Potential to be retained		Proposed to be retained		
Retention value	High impact	High impact	Medium impact	Low impact	No impact	**Total**
Priority for retention (High)	65	2	2	12	29	**110**
Consider for retention (Medium)	119	-	1	4	19	**143**
Consider for removal (Low)	7	-	-	-	6	**13**
Not assessed (Tree 1752)	-	-	-	-	1500	**1500**
Total	**191**	**2**	**3**	**16**	**1554**	**1766**

Remnant Cumberland Plain Woodland (classified as a critically endangered ecological community) is positioned in the northeast corner of the Campus. This area has been identified as Tree 1752 and it made up of approximately 1,500 trees that are proposed to be retained as a conservation area.

3.1 Trees proposed to be removed

A total of **191 trees** are proposed to be removed. These trees will be subject to high impact (>20% TPZ encroachment) from the proposed development. Tree IDs and retention values are as follows:

- **High retention: 65** high retention value trees (Trees 7, 13, 34, 42.1, 42.6, 44, 46.01-46.04, 55, 58, 59, 60, 62-65, 68, 70, 71, 76 (group of 2), 77, 79, 80, 81, 85, 86, 95, 101, 103, 106, 107, 111, 114, 117, 125, 126, 130, 131, 132, 138, 139, 140, 141, 142, 149, 150, 152, 153, 156, 157, 168, 169, 171, 172, 173, 176, 183, 184, 198, 203, 207 and 210).
- **Medium retention: 119** medium retention value trees (see Appendices C and D for Tree IDs)
- **Low retention: seven** low retention value tree (Tree 52, 90, 146, 1331.1, 1331.4, 1332.1 and 1414).

Any loss of trees should be offset with replacement planting in accordance with the landscape plan

3.2 Trees proposed to be retained

A total of **1570 trees** are proposed to be retained. Of these, 16 trees (Trees 5, 14, 15, 29, 32, 33, 40, 41, 43, 46.05, 82, 83, 143, 148, 209 and 1412) will be subject to low impact (<10% TPZ encroachment) and 1554 trees (including Tree 1752 group of 1500 trees) will be subject to no impact (0% TPZ encroachment) from the proposed works. The tree protection plan for these trees is outlined in section 4 and guidelines provided in Appendix E.

3.3 Trees with the potential to be retained

A total **five trees** have potential to be retained subject to further investigation. Of these, two trees (Trees 108 and 129) will be subject to high impact (>20% TPZ and SRZ encroachment) and three trees (Trees 129, 137 and 162) will be subject to medium impact (<20% TPZ but >10% TPZ encroachment) and from the proposed works and have potential to be retained subject to further investigation (i.e., root mapping) and mitigation measures, including construction methods to be in consultation with the Project Arborist prior to construction. Specific impacts, tree IDs and retention values are as follows:

High impact (>20% and SRZ encroachment)

- **High retention: two** high retention value trees (Tree 42.2 and 108)

Medium Impact (10-20% TPZ encroachment)

- **High retention: two** high retention value trees (Trees 129 & 137)
- **Medium retention: one** medium retention value tree (Tree 162)

3.4 Recommendations

Tree 168 (see Figures 18 & 19, Appendix G) requires urgent attention due to a large, decayed section in the upper trunk. Options to manage the risk of harm from the section failing are:

- A. Restrict access to the lawn below, where limb is most likely to fall.
- B. Reduce decayed limb above defect to retain wildlife habitat
- C. Combination of options A & B
- D. Remove decayed limb down to fork and reduce remainder of tree
- E. Remove tree

Tree 184 is recommended for removal due to the presence of termites and decay fungi established in the main fork. The removal should occur whilst students are on university holidays.

Any loss of trees should be offset with replacement planting in accordance with the landscape plan.

4. Tree protection plan

- All tree pruning and removal is to be carried out by an arborist with a minimum AQF Level 3 qualification in Arboriculture.
- All tree work must be in accordance with *Australian Standard AS 4373-2007, Pruning of Amenity Trees* and the NSW WorkCover Code of Practice for the Amenity Tree Industry (1998).
- Permission must be granted from the relevant consent authority prior to removing or pruning of any of the subject trees (including the pruning of trees 168 & 184). Approved tree works should be carried out before the installation of tree protection measures.
- Any additional construction activities within the TPZ of the subject trees must be assessed and approved by the project arborist and must comply with AS 4970-2009 - Protection of trees on development sites.

Tree protection measures are summarised in Table 4 and further information is in Appendix E.

Table 4: Tree protection measures

Type	More details	Comment
Signage	Appendix E1	Prominently sign posted with 300 mm x 450 mm boards stating, “NO ACCESS - TREE PROTECTION ZONE”.
Tree protection fencing	Appendix E1	Protective cyclone chain wire link fence to be erected around the TPZ to protect and isolate retained trees from the construction works. Existing boundary fencing may be used.
Crown protection	Appendix E2	Where required, crown protection may include the installation of a physical barrier, pruning selected branches to establish clearance, or the tying/bracing of branches.
Trunk and branch protection	Appendix E3	When fencing is not practical or prior to any activities within the TPZ, trunk protection is required and consist of a layer geotextile fabric or similar followed by 1.8 m lengths of softwood timbers spaced evenly around the trunk and secured with a galvanised hoop strap.
Ground protection	Appendix E4	Install and maintain 100mm thick layer of mulch around tree in TPZ. For machine or vehicle access within TPZ geotextile fabric beneath crushed rock or rumble boards may be required.
Soil moisture		Soil moisture levels should be regularly monitored by the project arborist. Temporary irrigation or watering may be required within TPZ.
Root protection and investigation	Appendix E5	If incursions/excavation within the TPZ are unavoidable, root investigation may be needed to determine the extent and location of roots within the area of construction activity using non-destructive excavation (NDE) methods.
Underground services	Appendix E6	All underground services should be routed outside of the TPZ. If underground services need to be installed within the TPZ, they should be installed using horizontal directional drilling (HDD), non-destructive excavation (NDE) methods such as hydro-vacuum, Air Spade or manually excavated trenches.

5. Hold points, inspection and certification

A Project Arborist (AQF Level 5 Consulting Arborist) needs to be engaged to supervise work (including vehicle access), within the TPZ of trees to be retained, provide advice regarding tree protection and monitor compliance. Once each stage is reached, the work will be inspected and certified by the project arborist and the next stage may commence. Alterations to this schedule may be required due to necessity, however, this shall be through consultation with the Project Arborist only.

A copy of this report must be available on-site prior to the commencement of works, and throughout the entirety of the project. Hold points have been specified in the schedule of works below to ensure trees are adequately protected during construction. It is the responsibility of the principal contractor to complete each of the tasks.

PRE-CONSTRUCTION

Prior to any construction, an onsite meeting should be conducted with attendee's subject but not limited to the Project Arborist (AQF Level 5 Consulting Arborist), site manager and construction personnel team to walkthrough the tree protection measures requirements. All trees approved for removal are to be indicated clearly with spray paint on trunks.

The Project Arborist is to inspect that the tree protection measures have been installed in accordance with the *AS4970-2009 Protection of Trees on Development Sites.*

To ensure the viable retention of the two trees (Trees 42.2 and 108) subject to high impact (>20% TPZ and SRZ encroachment) and three trees (Trees 129, 137 and 162) subject to medium impact (10-20% TPZ encroachment) from the proposed works marked as 'potential to be retained,' construction methods will need to be in consultation with the Project Arborist (AQF Level 5) prior to construction. In addition root mapping may also be required to ensure retention is viable.

Permission to remove trees located outside the site boundary is to be sought by the landowner prior to construction and permission must be granted from the relevant consent authority prior to removing any of the subject trees.

DURING CONSTRUCTION

Bi-monthly inspection of trees to be retained are to be completed by the Project Arborist (or other timing as agreed with the Project Arborist) to inspect the installed tree protection measures.

All works to be completed within the TPZ/SRZ of trees the be retained are to be completed under the supervision of the Project Arborist.

POST-CONSTRUCTION

Final inspection of trees by Project Arborist after all major construction has ceased and following the removal of tree protection measures.

6. Conclusion

A total of 1766 trees were identified within the study area.

Of these 1766 trees identified, 1570 trees are proposed to be retained. Tree 1752 is within this group and is made up of approximately 1,500 trees that form part of a remnant Cumberland Plain Woodland community (classified as a critically endangered ecological community) and is positioned in the northeast corner of the Campus. This area will be retained as a conservation area.

To ensure the viable retention of the additional seven trees (Trees 42.2, 108, 129, 137 and 162) marked as 'potential to be retained,' construction methods will need to be in consultation with the Project Arborist (AQF Level 5) prior to construction. In addition root mapping may also be required to ensure retention is viable.

Of the 1766 trees identified, 191 trees are proposed to be removed. These trees are impacted by high impact (>20% TPZ and or SRZ encroachment) from the proposed works and cannot be viably retained within the current design. Of these 191 trees, two trees 168 and 184 require removal irrespective of the development. Tree 168 (see Figures 18 & 19, Appendix G) requires urgent attention due to a large, decayed section in the upper trunk and Tree 184 is recommended for removal due to the presence of termites and decay fungi established in the main fork.

Permission to remove trees located outside the site boundary is to be sought by the landowner prior to construction and permission must be granted from the relevant consent authority prior to removing any of the subject trees

7. References

7.1 General references

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7.2 Project specific references

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Eco Logical Australia 2022. *Bushfire Protection Assessment, Subdivision WSU Milperra Campus*. Ref 19SUT-14738, version 4 dated 14 September 2022

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Appendix A Tree retention assessment method

A1 Tree Significance Assessment Criteria - STARS©

The tree is to have a minimum of three criteria in a category to be classified in that group.

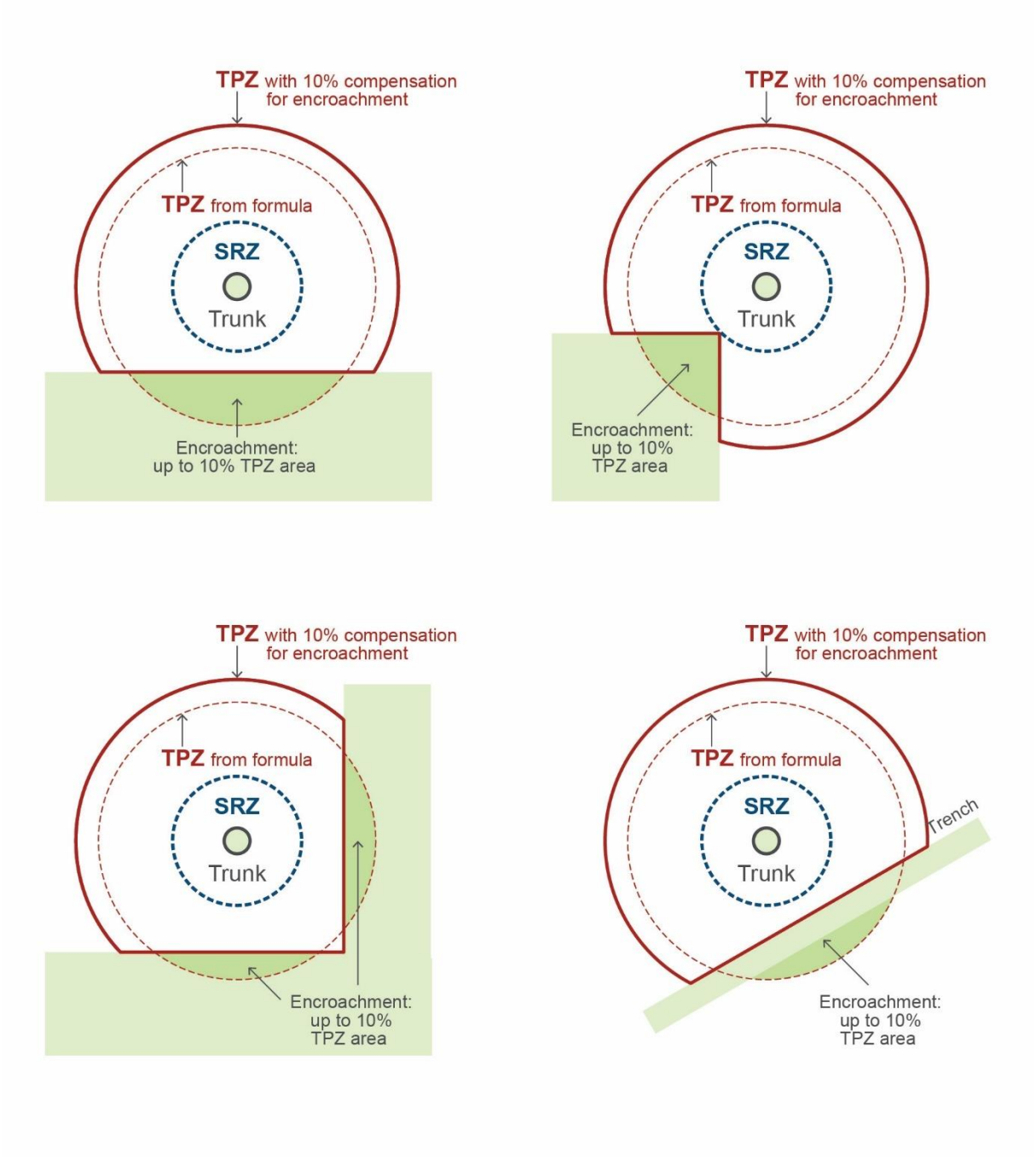
Low	Medium	High
The tree is in fair-poor condition and good or low vigour.	The tree is in fair to good condition and good or low vigour	The tree is in good condition and good vigour
The tree has form atypical of the species	The tree has form typical or atypical of the species	The tree has a form typical for the species
The tree is not visible or is partly visible from the surrounding properties or obstructed by other vegetation or buildings	The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area	The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age.
The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area	The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street	The tree is listed as a heritage item, threatened species or part of an endangered ecological community or listed on Council's significant tree register
The tree is a young specimen which may or may not have reached dimensions to be protected by local Tree Preservation Orders or similar protection mechanisms and can easily be replaced with a suitable specimen	The tree provides a fair contribution to the visual character and amenity of the local area	The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity.
The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa in situ – tree is inappropriate to the site conditions	The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa in situ	The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values.
The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms		The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa in situ – tree is appropriate to the site conditions.
The tree has a wound or defect that has the potential to become structurally unsound.		
Environmental Pest / Noxious Weed The tree is an environmental pest species due to its invasiveness or poisonous/allergenic properties. The tree is a declared noxious weed by legislation.		
Hazardous /Irreversible Decline The tree is structurally unsound and / or unstable and is considered potentially dangerous. The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.		

A2 Matrix assessment - STARS©

		Tree significance				
		High	Medium	Low		
		Significance in Landscape	Significance in Landscape	Significance in Landscape	Environmental Pest/Noxious Weed Species	Hazardous/ Irreversible Decline
Useful Life Expectancy	Long >40 years					
	Medium 15-40 years					
	Short <1-15 years					
	Dead					

	Priority for retention (High): Tree considered important so should be retained and protected. Design modification or re-location of structure should be considered to accommodate the setbacks as prescribed by the *Australian Standard AS4970 Protection of trees on development sites*. Tree sensitive construction measures must be implemented if works are to proceed within the Tree Protection Zone.
	Consider for retention (Medium): Tree considered less important, however, retention should remain priority. Removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.
	Consider for removal (Low): Tree not considered important for retention, nor requiring special works or design modification to be implemented for their retention.
	Priority for removal: Tree not considered important for retention, nor requiring special works or design modification to be implemented for their retention.

Appendix B Encroachment into tree protection zones - AS 4970-2009



Appendix C Maps

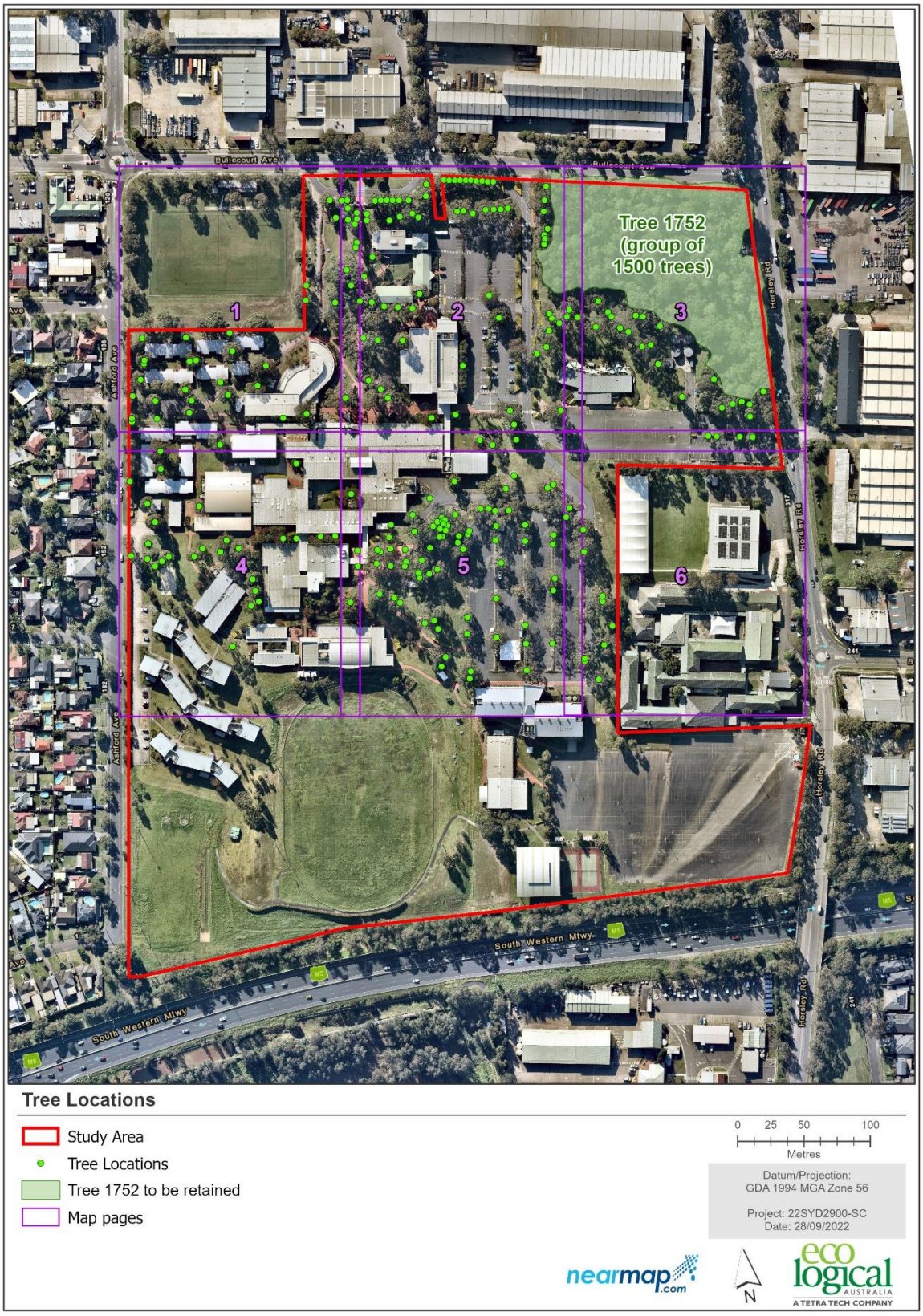


Figure 3: Tree locations

Figure 4: Retention values, page 1

Figure 5: Retention values, page 2

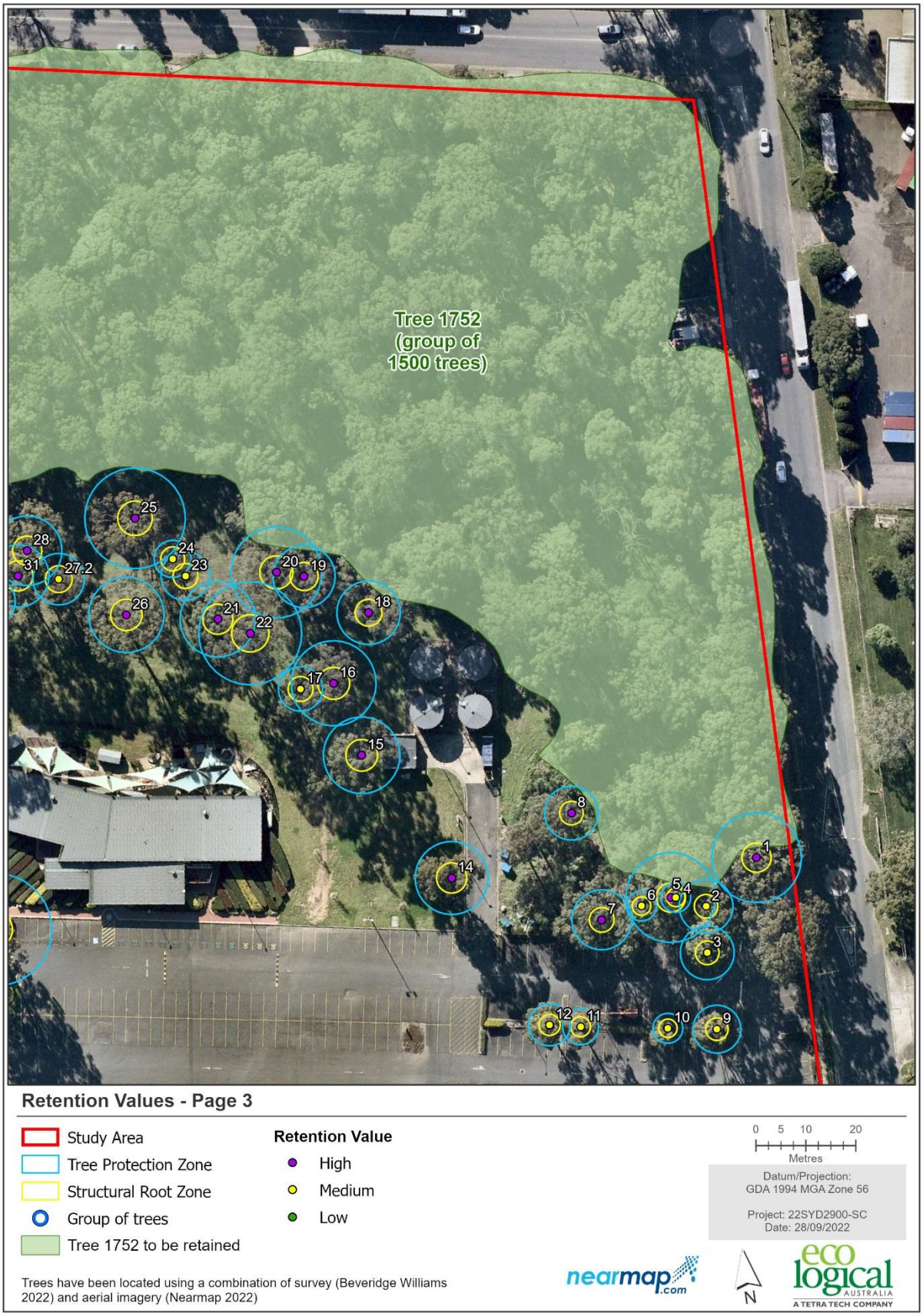


Figure 6: Retention values, page 3

Figure 7: Retention values, page 4

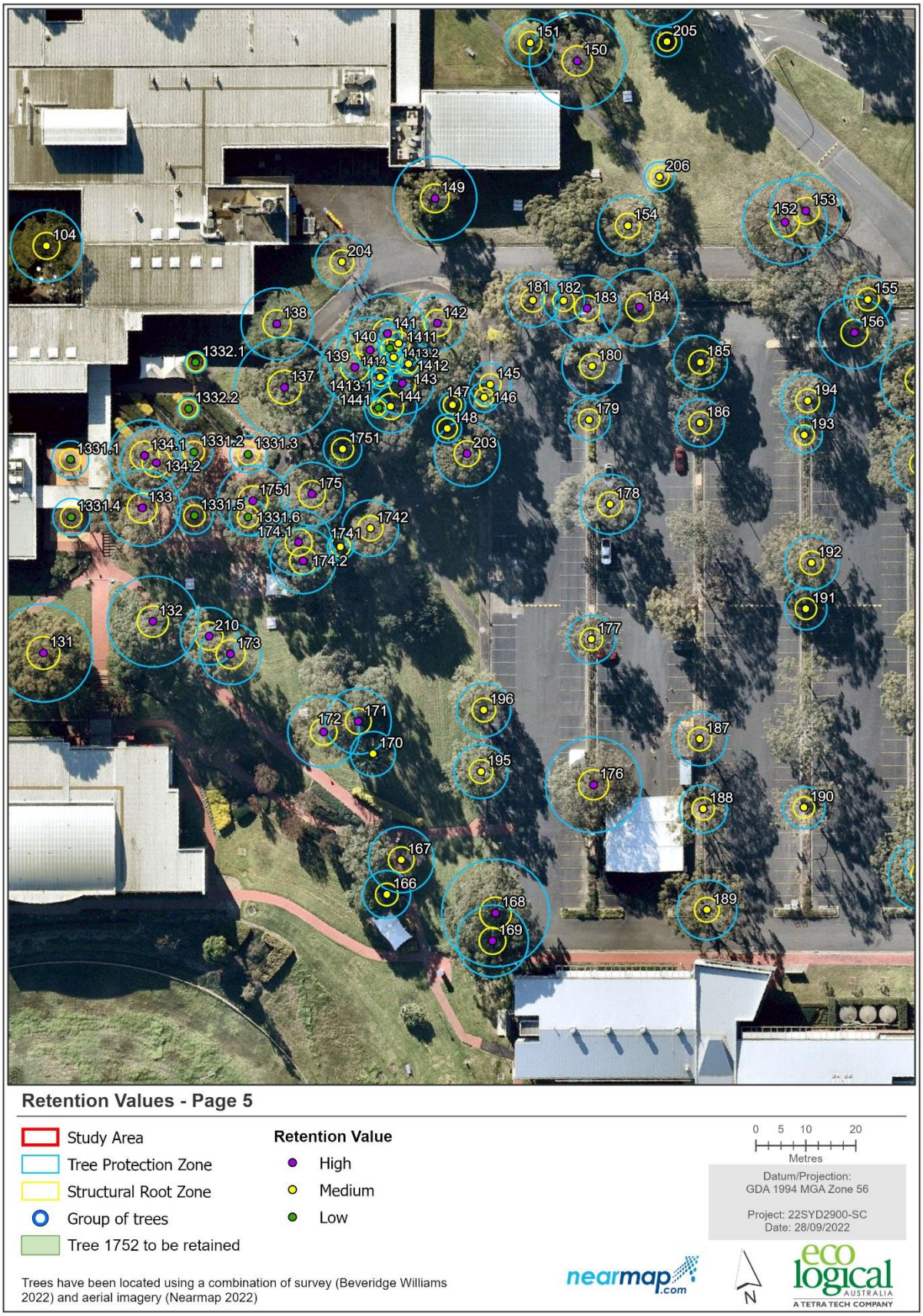


Figure 8: Retention values, page 5

Figure 9: Retention values, page 6

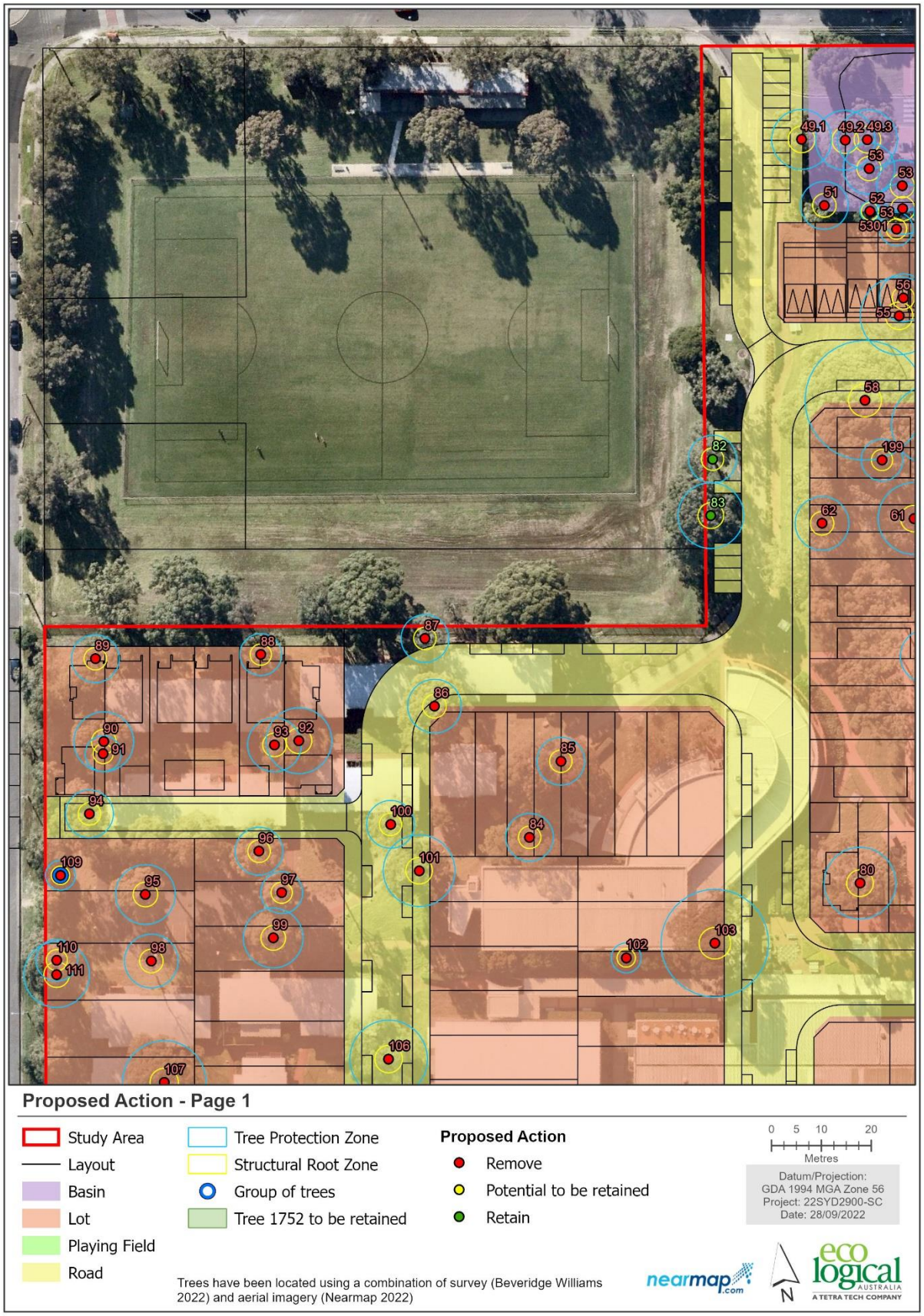


Figure 10: Proposed action, page 1

Figure 11: Proposed action, page 2

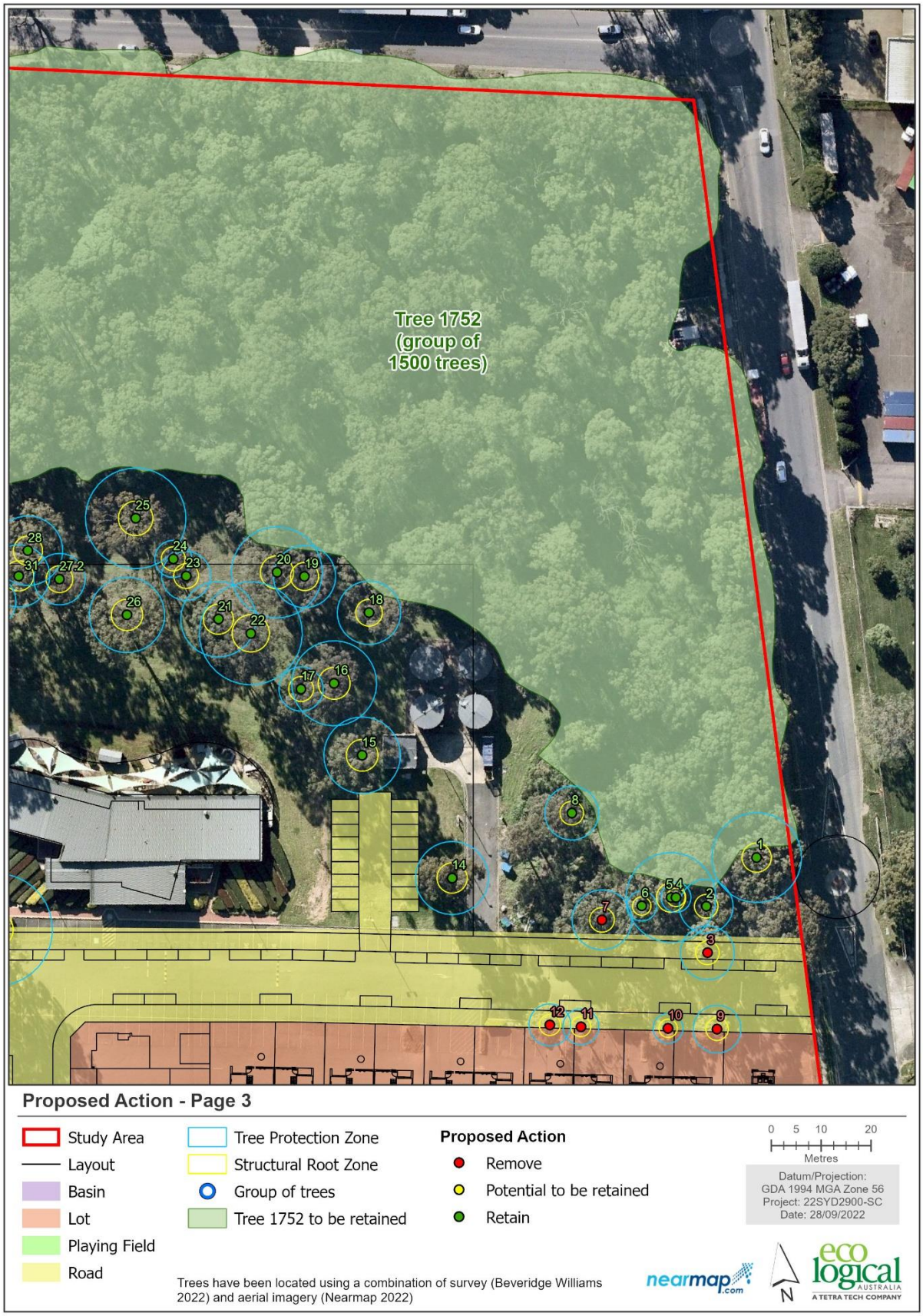


Figure 12: Proposed action, page 3

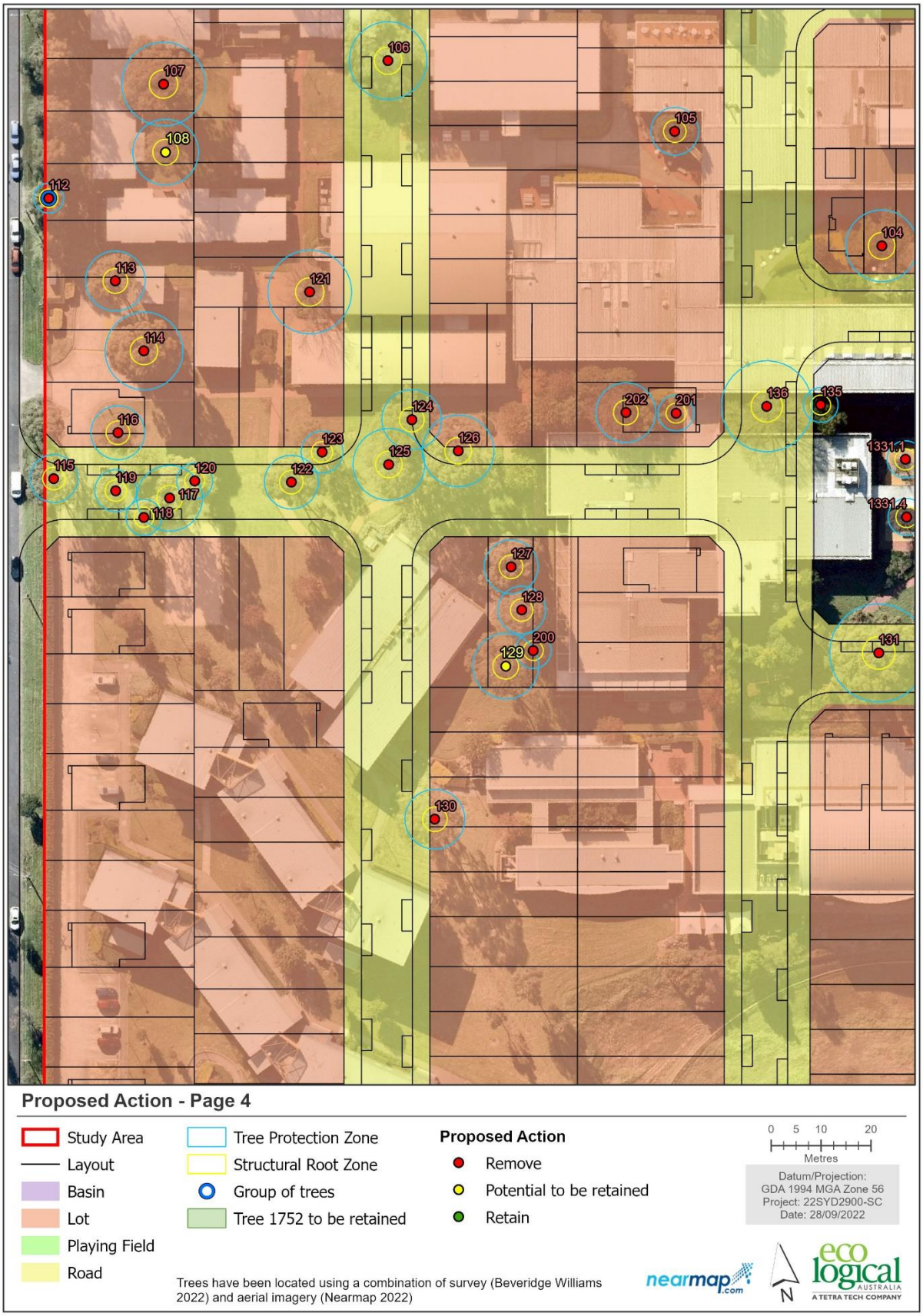


Figure 13: Proposed action, page 4

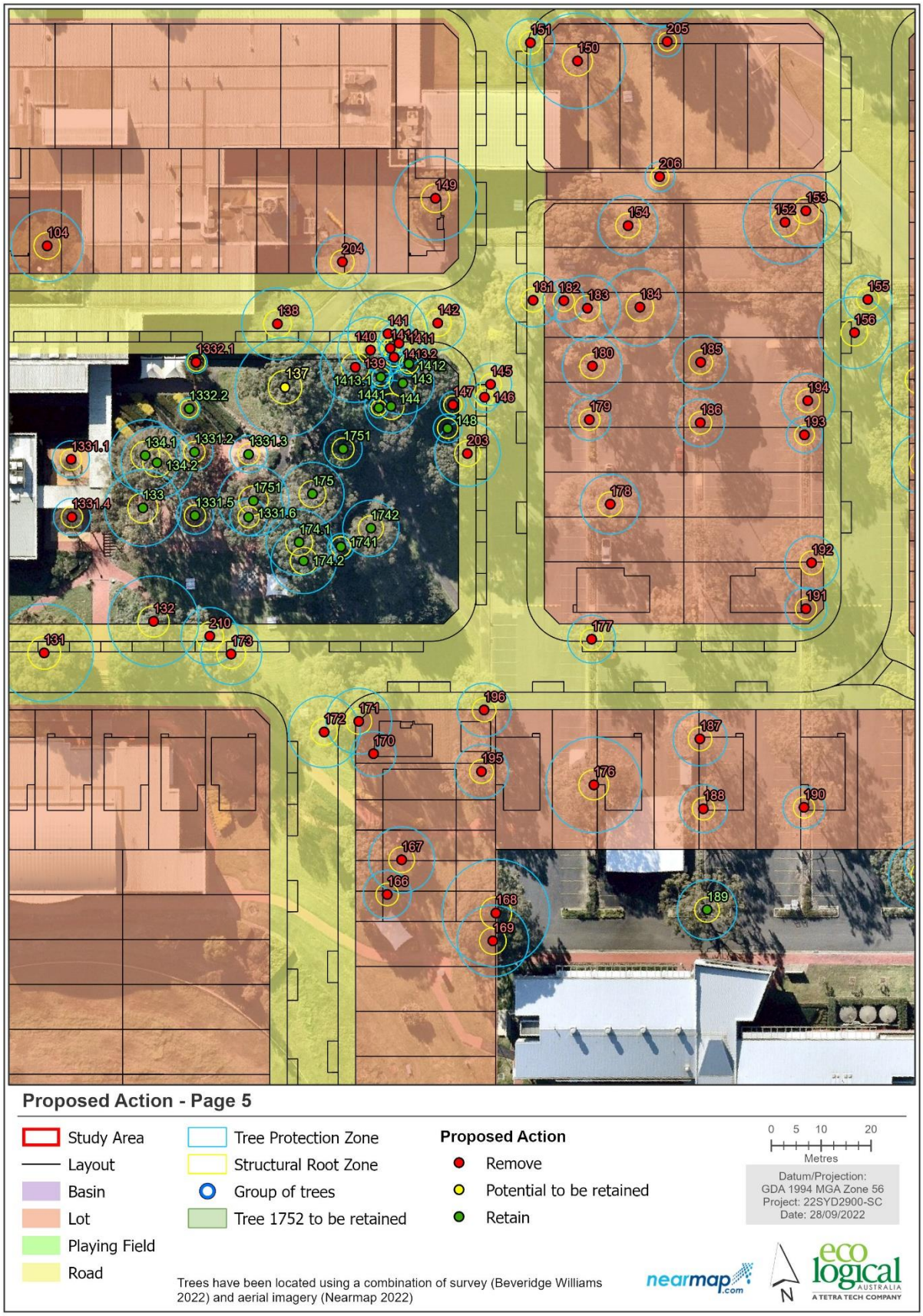


Figure 14: Proposed action, page 5

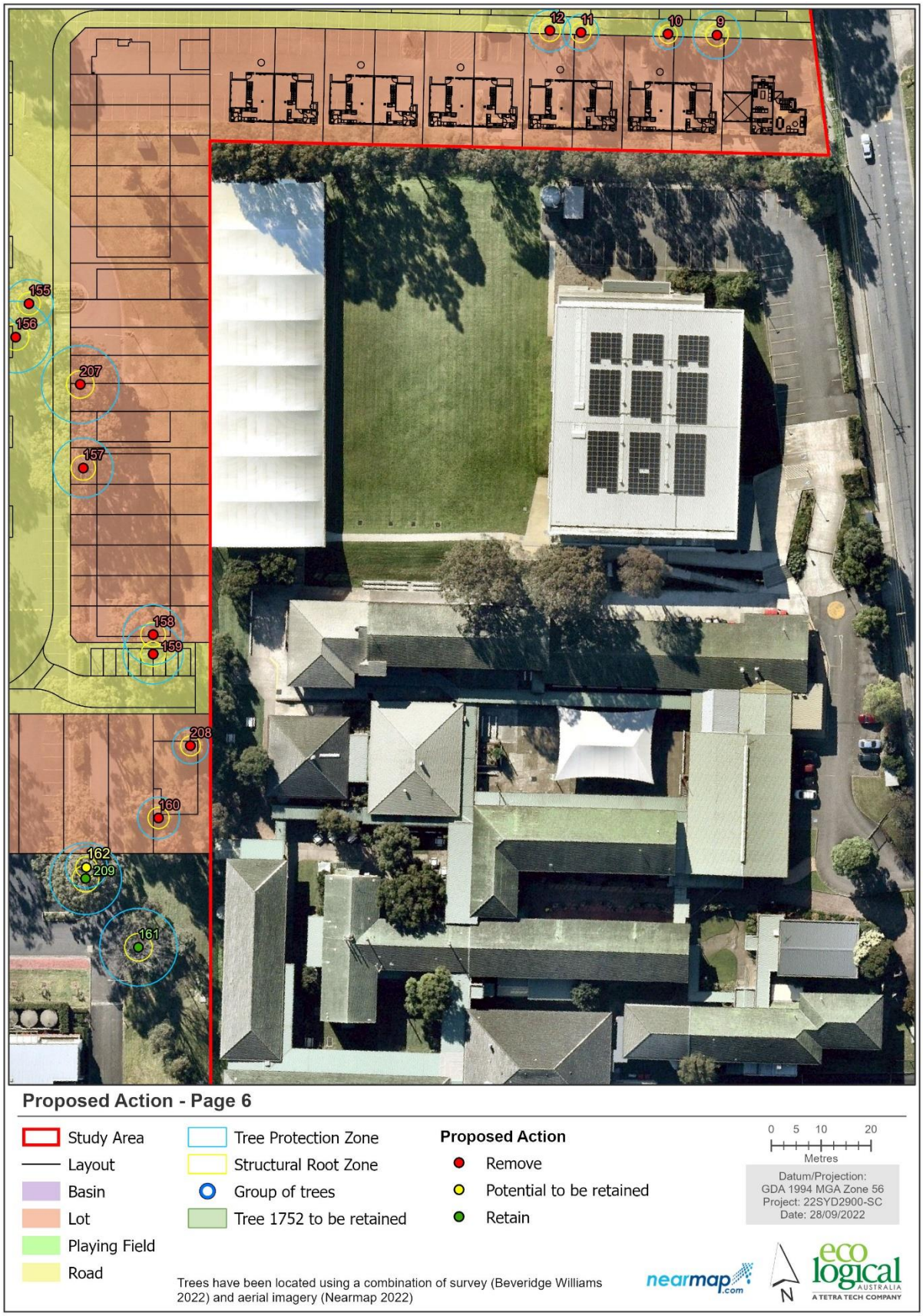


Figure 15: Proposed action, page 6

Appendix D Tabulated results of arboricultural assessment

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
1	*Eucalyptus fibrosa*	1	GPS unit	20	14	750	750	9.0	2.9	Fair	Fair	Medium		High	0	No	No Impact: 0%	Retain	Bifurcated stem, wounds
2	*Eucalyptus tereticornis*	1	GPS unit	15	5	450	450	5.4	2.4	Fair	Fair	Medium		Medium	0	No	No Impact: 0%	Retain	
3	*Eucalyptus moluccana*	1	GPS unit	20	9	450	450	5.4	2.4	Fair	Fair	Long		Medium	87	Yes	High Impact: >20%	Remove	
4	*Eucalyptus fibrosa*	1	GPS unit	12	7	250	250	3.0	1.8	Fair	Fair	Long		Medium	0	No	No Impact: 0%	Retain	
5	*Eucalyptus tereticornis*	1	GPS unit	22	11	750	750	9.0	2.9	Fair	Fair	Long		High	4	No	Low Impact: <10%	Retain	
6	*Eucalyptus fibrosa*	1	GPS unit	16	8	250	250	3.0	1.8	Fair	Fair	Long		Medium	0	No	No Impact: 0%	Retain	
7	*Eucalyptus moluccana*	1	GPS unit	18	9	500	500	6.0	2.5	Good	Good	Long		High	21	No	High Impact: >20%	Remove	
8	*Eucalyptus moluccana*	1	GPS unit	15	5	450	450	5.4	2.4	Good	Good	Medium		High	0	No	No Impact: 0%	Retain	
9	*Eucalyptus moluccana*	1	Nearmap 2022	10	8	400	400	4.8	2.3	Good	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Bifurcated stem
10	*Eucalyptus moluccana*	1	Nearmap 2022	10	5	250	250	3.0	1.8	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
11	*Eucalyptus moluccana*	1	Nearmap 2022	11	6	300	300	3.6	2.0	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
12	*Eucalyptus moluccana*	1	Nearmap 2022	11	7	350	350	4.2	2.1	Good	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
13	*Eucalyptus moluccana*	1	Survey	20	20	940	1070	11.3	3.4	Good	Good	Long (>40 years)	High	High	53	Yes	High Impact: >20%	Remove	
14	*Eucalyptus moluccana*	1	Survey	17	12	610	810	7.3	3.0	Good	Good	Long (>40 years)	High	High	1	No	Low Impact: <10%	Retain	

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
15	*Eucalyptus tereticornis*	1	Survey	18	13	640	910	7.7	3.2	Good	Good	Long (>40 years)	High	High	0	No	Low Impact: <10%	Retain	
16	*Eucalyptus moluccana*	1	Survey	18	15	710	930	8.5	3.2	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
17	*Eucalyptus moluccana*	1	Survey	16	13	370	510	4.4	2.5	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	
18	*Eucalyptus fibrosa*	1	Survey	17	12	530	610	6.4	2.7	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
19	*Eucalyptus crebra*	1	Survey	18	12	520	680	6.2	2.8	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
20	*Eucalyptus crebra*	1	Survey	18	16	760	1010	9.1	3.3	Fair	Fair	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Some delamination of bark on lower trunk
21	*Eucalyptus tereticornis*	1	Survey	17	11	630	800	7.6	3.0	Good	Fair	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
22	*Eucalyptus moluccana*	1	Survey	18	14	860	1340	10.3	3.7	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
23	*Eucalyptus moluccana*	1	Survey	13	14	410	510	4.9	2.5	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	
24	*Eucalyptus tereticornis*	1	Survey	14	12	310	470	3.7	2.4	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	
25	*Eucalyptus tereticornis*	1	Survey	18	16	840	1110	10.1	3.5	Fair	Poor	Medium (15-40 years)	High	High	0	No	No Impact: 0%	Retain	Sparse canopy, large dead branches, lack of vigour, Wounds on lower trunk
26	*Eucalyptus crebra*	1	Survey	18	20	630	890	7.6	3.2	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
27.1	*Eucalyptus fibrosa*	1	Survey	16	11	430	610	5.2	2.7	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	2 trees remaining from previously recorded group of 4

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
27.2	*Eucalyptus fibrosa*	1	Survey	16	11	430	610	5.2	2.7	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	2 trees remaining from previously recorded group of 4
28	*Eucalyptus tereticornis*	1	Survey	17	18	580	750	7.0	2.9	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
29	*Eucalyptus tereticornis*	1	Survey	18	18	800	1000	9.6	3.3	Fair	Fair	Long (>40 years)	High	High	3	No	Low Impact: <10%	Retain	Wounds at base, some large dead branches
30	*Eucalyptus fibrosa*	1	Survey	17	12	480	650	5.8	2.8	Good	Good	Long (>40 years)	Medium	High	0	No	No Impact: 0%	Retain	
31	*Eucalyptus fibrosa*	1	Survey	19	9	520	800	6.2	3.0	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
32	*Eucalyptus tereticornis*	1	Survey	23	18	810	1080	9.7	3.4	Fair	Fair	Long (>40 years)	High	High	3	No	Low Impact: <10%	Retain	Large dead branches, wound at base
33	*Eucalyptus tereticornis*	1	Survey	21	14	690	960	8.3	3.3	Good	Fair	Long (>40 years)	High	High	7	No	Low Impact: <10%	Retain	Significant wound and Hollow on upper trunk
34	*Eucalyptus fibrosa*	1	Survey	23	14	700	880	8.4	3.1	Fair	Fair	Long (>40 years)	High	High	56	Yes	High Impact: >20%	Remove	bifurcation ofmain stem, minor dieback
35	*Eucalyptus tereticornis*	1	GPS unit	10	5	350	350	4.2	2.1	Fair	Fair	Long		Medium	0	No	No Impact: 0%	Retain	
36	*Eucalyptus tereticornis*	1	GPS unit	10	6	400	400	4.8	2.3	Fair	Fair	Long		Medium	0	No	No Impact: 0%	Retain	
37	*Eucalyptus tereticornis*	1	GPS unit	9	3	200	200	2.4	1.7	Fair	Fair	Long		Medium	0	No	No Impact: 0%	Retain	
38	*Eucalyptus moluccana*	1	GPS unit	16	10	500	500	6.0	2.5	Fair	Fair	Long		Medium	0	No	No Impact: 0%	Retain	
39	*Melaleuca decora*	1	GPS unit	10	5	350	350	4.2	2.1	Fair	Fair	Medium		Medium	0	No	No Impact: 0%	Retain	
40	*Eucalyptus moluccana*	1	GPS unit	12	10	500	500	6.0	2.5	Good	Good	Long		Medium	4	No	Low Impact: <10%	Retain	

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
41	*Eucalyptus fibrosa*	1	GPS unit	15	15	650	650	7.8	2.8	Good	Fair	Long		High	6	No	Low Impact: <10%	Retain	
42.1	*Corymbia citriodora*	1	Survey	16	20	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	51	Yes	High Impact: >20%	Remove	Row of 6 trees
42.2	*Corymbia citriodora*	1	Survey	16	20	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	17	No	Medium Impact: <20%	Potential to retain	Row of 6 trees
42.3	*Corymbia citriodora*	1	Survey	16	20	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 6 trees
42.4	*Corymbia citriodora*	1	Survey	16	20	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 6 trees
42.5	*Corymbia citriodora*	1	Survey	16	20	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 6 trees
42.6	*Corymbia citriodora*	1	Survey	16	20	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	40	Yes	High Impact: >20%	Remove	Row of 6 trees
43	*Eucalyptus saligna*	1	Survey	17	14	690	710	8.3	2.9	Good	Fair	Long (>40 years)	High	High	5	No	Low Impact: <10%	Retain	Wound on lower trunk
44	*Eucalyptus microcorys*	1	Survey	16	20	740	960	8.9	3.3	Good	Good	Long (>40 years)	High	High	100	Yes	High Impact: >20%	Remove	
45	*Angophora costata*	1	Survey	12	15	470	540	5.6	2.6	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Sparse canopy
46.01	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	81	Yes	High Impact: >20%	Remove	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.02	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	76	Yes	High Impact: >20%	Remove	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
46.03	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	53	Yes	High Impact: >20%	Remove	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.04	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	25	Yes	High Impact: >20%	Remove	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.05	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	0	No	Low Impact: <10%	Retain	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.06	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.07	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.08	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
46.09	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
46.1	*Eucalyptus microcorys*	1	Survey	16	10	480	560	5.8	2.6	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Row of 10 trees. Some trees have bifurcated trunk, large dead branches. Of value as a group
47.1	*Eucalyptus microcorys*	1	Survey	17	15	480	610	5.8	2.7	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 6 trees.
47.2	*Eucalyptus microcorys*	1	Survey	17	15	480	610	5.8	2.7	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 6 trees.
47.3	*Eucalyptus microcorys*	1	Survey	17	15	480	610	5.8	2.7	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 6 trees.
47.4	*Eucalyptus microcorys*	1	Survey	17	15	480	610	5.8	2.7	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 6 trees.
47.5	*Eucalyptus microcorys*	1	Survey	17	15	480	610	5.8	2.7	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 6 trees.
47.6	*Eucalyptus microcorys*	1	Survey	17	15	480	610	5.8	2.7	Good	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 6 trees.
48.1	*Stenocarpus sinuatus*	1	Survey	8	4	250	320	3.0	2.1	Fair	Good	Medium (15-40 years)	Medium	Medium	53	Yes	High Impact: >20%	Remove	Two trees close together
48.2	*Stenocarpus sinuatus*	1	Survey	8	4	250	320	3.0	2.1	Fair	Good	Medium (15-40 years)	Medium	Medium	90	Yes	High Impact: >20%	Remove	Two trees close together
49.1	*Eucalyptus microcorys*	1	Survey	17	11	500	600	6.0	2.7	Fair	Good	Long (>40 years)	Medium	Medium	87	Yes	High Impact: >20%	Remove	Row of 3 trees. Tree 50 in middle of group has since been removed
49.2	*Eucalyptus microcorys*	1	Survey	17	11	500	600	6.0	2.7	Fair	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 3 trees. Tree 50 in middle of group has since been removed
49.3	*Eucalyptus microcorys*	1	Survey	17	11	500	600	6.0	2.7	Fair	Good	Long (>40 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Row of 3 trees. Tree 50 in middle of group has since been removed

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
51	*Stenocarpus sinuatus*	1	Survey	8	7	400	450	4.8	2.4	Good	Good	Medium (15-40 years)	Medium	Medium	60	Yes	High Impact: >20%	Remove	Multi trunked
52	*Stenocarpus sinuatus*	1	Survey	6	4	160	220	2.0	1.8	Fair	Fair	Medium (15-40 years)	Low	Low	51	Yes	High Impact: >20%	Remove	Lack of vigour, minor dieback
53	*Eucalyptus sideroxylon*	1	Survey	16	10	430	480	5.2	2.4	Poor	Good	Short (5-15 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Group of five trees either side of path. 2 trees are dying back, moderate dieback
53	*Eucalyptus sideroxylon*	1	Survey	16	10	430	480	5.2	2.4	Poor	Good	Short (5-15 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Group of five trees either side of path. 2 trees are dying back, moderate dieback
53	*Eucalyptus sideroxylon*	1	Survey	16	10	430	480	5.2	2.4	Poor	Good	Short (5-15 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Group of five trees either side of path. 2 trees are dying back, moderate dieback
53	*Eucalyptus sideroxylon*	1	Survey	16	10	430	480	5.2	2.4	Poor	Good	Short (5-15 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Group of five trees either side of path. 2 trees are dying back, moderate dieback
53	*Eucalyptus sideroxylon*	1	Survey	16	10	430	480	5.2	2.4	Poor	Good	Short (5-15 years)	Medium	Medium	100	Yes	High Impact: >20%	Remove	Group of five trees either side of path. 2 trees are dying back, moderate dieback
55	*Eucalyptus fibrosa*	1	Nearmap 2022	22	13	650	650	7.8	2.8	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
56	*Eucalyptus fibrosa*	1	Nearmap 2022	14	8	400	400	4.8	2.3	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Smaller tree in photo
57	*Eucalyptus saligna*	1	Nearmap 2022	11	9	400	400	4.8	2.3	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
58	*Eucalyptus crebra*	1	GPS unit	27	24	1000	1000	12.0	3.3	Good	Fair	Long		High	100	Yes	High Impact: >20%	Remove	
59	*Eucalyptus crebra*	1	GPS unit	28	15	650	650	7.8	2.8	Good	Fair	Long		High	100	Yes	High Impact: >20%	Remove	
60	*Eucalyptus crebra*	1	GPS unit	18	14	600	600	7.2	2.7	Fair	Fair	Medium		High	100	Yes	High Impact: >20%	Remove	
61	*Angophora floribunda*	1	GPS unit	14	12	600	600	7.2	2.7	Poor	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
62	*Angophora floribunda*	1	GPS unit	12	12	450	450	5.4	2.4	Poor	Fair	Medium		High	100	Yes	High Impact: >20%	Remove	Middle tree has basal decay
63	*Eucalyptus saligna*	1	GPS unit	28	16	600	600	7.2	2.7	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
64	*Corymbia citriodora*	1	GPS unit	25	12	450	450	5.4	2.4	Fair	Fair	Medium		High	99.980721	Yes	High Impact: >20%	Remove	
65	*Corymbia maculata*	1	Nearmap 2022	30	12	600	600	7.2	2.7	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
66	*Angophora floribunda*	1	GPS unit	15	10	350	350	4.2	2.1	Poor	Fair	Short		Medium	100	Yes	High Impact: >20%	Remove	Smaller tree has cavity
67	*Angophora floribunda*	1	GPS unit	12	10	500	500	6.0	2.5	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
68	*Eucalyptus crebra*	1	Nearmap 2022	17	14	450	450	5.4	2.4	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	Prev listed as E. Sideroxylon
69	*Corymbia citriodora*	1	Nearmap 2022	12	8	500	500	6.0	2.5	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
70	*Corymbia citriodora*	1	Nearmap 2022	14	15	550	550	6.6	2.6	Good	Good	Medium		High	100	Yes	High Impact: >20%	Remove	
71	*Eucalyptus microcorys*	1	Nearmap 2022	14	18	550	550	6.6	2.6	Fair	Fair	Medium		High	100	Yes	High Impact: >20%	Remove	
73	*Lophostemon confertus*	1	Nearmap 2022	9	8	250	250	3.0	1.8	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	

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74	*Eucalyptus scoparia*	1	Nearmap 2022	10	7	400	400	4.8	2.3	Fair	Fair	Short		Medium	100	Yes	High Impact: >20%	Remove	Prev listed as 3. 1 extra smal
75	*Corymbia citriodora*	1	GPS unit	16	10	350	350	4.2	2.1	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
76	*Eucalyptus saligna*	2	Nearmap 2022	25	18	700	700	8.4	2.8	Fair	Fair	Long		High	100	Yes	High Impact: >20%	Remove	2 trees. Previousl listed as 1
77	*Eucalyptus scoparia*	1	Nearmap 2022	10	10	300	300	3.6	2.0	Fair	Fair	Medium		High	100	Yes	High Impact: >20%	Remove	Memorial tree
78	*Corymbia maculata*	1	GPS unit	20	8	400	400	4.8	2.3	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
79	*Eucalyptus sideroxylon*	1	GPS unit	16	18	650	650	7.8	2.8	Fair	Fair	Long		High	100	Yes	High Impact: >20%	Remove	
80	*Corymbia citriodora*	1	Nearmap 2022	18	15	600	600	7.2	2.7	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	Line down path
81	*Corymbia citriodora*	1	Nearmap 2022	16	10	400	400	4.8	2.3	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	1 found. 2 previously recorded
82	*Angophora floribunda*	1	Nearmap 2022	12	8	400	400	4.8	2.3	Poor	Fair	Short		Medium	6	No	Low Impact: <10%	Retain	Mechanical damage at base
83	*Eucalyptus crebra*	1	Nearmap 2022	16	14	550	550	6.6	2.6	Fair	Fair	Long		High	7	No	Low Impact: <10%	Retain	
84	*Triadica sebifera*	1	GPS unit	10	10	400	400	4.8	2.3	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
85	*Eucalyptus tereticornis*	1	GPS unit	18	10	400	400	4.8	2.3	Fair	Fair	Long		High	100	Yes	High Impact: >20%	Remove	
86	*Corymbia maculata*	1	Nearmap 2022	20	10	450	450	5.4	2.4	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
87	*Angophora floribunda*	1	Nearmap 2022	12	8	400	400	4.8	2.3	Fair	Fair	Long		Medium	24	Yes	High Impact: >20%	Remove	
88	*Eucalyptus moluccana*	1	Nearmap 2022	16	10	350	350	4.2	2.1	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	

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89	*Eucalyptus tereticornis*	1	Nearmap 2022	20	10	400	400	4.8	2.3	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Larger tree trunk wound
90	*Corymbia maculata*	1	Nearmap 2022	17	12	500	500	6.0	2.5	Fair	Fair	Medium		Low	100	Yes	High Impact: >20%	Remove	
91	*Eucalyptus fibrosa*	1	Nearmap 2022	18	9	300	300	3.6	2.0	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	Bifurcated trunk
92	*Eucalyptus tereticornis*	1	Nearmap 2022	20	11	550	550	6.6	2.6	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
93	*Corymbia maculata*	1	Nearmap 2022	22	10	450	450	5.4	2.4	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
94	*Corymbia maculata*	1	Nearmap 2022	22	8	400	400	4.8	2.3	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
95	*Corymbia maculata*	1	Nearmap 2022	25	10	500	500	6.0	2.5	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
96	*Corymbia maculata*	1	Nearmap 2022	20	10	400	400	4.8	2.3	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
97	*Corymbia maculata*	1	Nearmap 2022	20	10	350	350	4.2	2.1	Good	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
98	*Eucalyptus crebra*	1	Nearmap 2022	23	12	450	450	5.4	2.4	Fair	Poor	Medium		Medium	100	Yes	High Impact: >20%	Remove	Lower trunk wound
99	*Corymbia maculata*	1	Nearmap 2022	20	12	500	500	6.0	2.5	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
100	*Eucalyptus moluccana*	1	Nearmap 2022	13	10	400	400	4.8	2.3	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
101	*Eucalyptus saligna*	1	Nearmap 2022	18	12	600	600	7.2	2.7	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
102	*Syzygium paniculatum*	1	GPS unit	7	5	250	250	3.0	1.8	Fair	Fair	Med		Medium	100	Yes	High Impact: >20%	Remove	
103	*Eucalyptus saligna*	1	Nearmap 2022	22	24	900	900	10.8	3.2	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	

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104	*Melia azedarach*	1	GPS unit	11	14	600	600	7.2	2.7	Good	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Bifurcated trunk
105	*Waterhousea floribunda*	1	Nearmap 2022	12	11	400	400	4.8	2.3	Good	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Bifurcated stem, tear out
106	*Angophora floribunda*	1	Nearmap 2022	12	17	650	650	7.8	2.8	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
107	*Eucalyptus tereticornis*	1	Nearmap 2022	20	18	700	700	8.4	2.8	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
108	*Eucalyptus saligna*	1	Nearmap 2022	22	10	550	550	6.6	2.6	Good	Fair	Medium		High	100	Yes	High Impact: >20%	Potential to retain	
109	*Eucalyptus saligna*	4	Nearmap 2022	12	4	250	250	3.0	1.8	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	4 trees in line
110	*Eucalyptus crebra*	1	Nearmap 2022	18	5	350	350	4.2	2.1	Fair	Fair	Long		Medium	84	Yes	High Impact: >20%	Remove	
111	*Eucalyptus tereticornis*	1	Nearmap 2022	22	10	550	550	6.6	2.6	Good	Good	Long		High	72	Yes	High Impact: >20%	Remove	
112	*Eucalyptus saligna*	11	GPS unit	12	5	250	250	3.0	1.8	Fair	Fair	Long		Medium	69	Yes	High Impact: >20%	Remove	Line of 11 trees, 10 in pairs
113	*Eucalyptus saligna*	1	Nearmap 2022	20	10	500	500	6.0	2.5	Good	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Bifurcated stem
114	*Corymbia maculata*	1	Nearmap 2022	21	11	650	650	7.8	2.8	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
115	*Eucalyptus crebra*	1	Nearmap 2022	18	8	400	400	4.8	2.3	Fair	Fair	Medium		Medium	74	Yes	High Impact: >20%	Remove	
116	*Eucalyptus saligna*	1	GPS unit	20	10	450	450	5.4	2.4	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
117	*Corymbia maculata*	1	GPS unit	20	12	550	550	6.6	2.6	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
118	*Eucalyptus crebra*	1	GPS unit	14	8	300	300	3.6	2.0	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	

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119	*Eucalyptus saligna*	1	GPS unit	15	8	350	350	4.2	2.1	Fair	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
120	*Jacaranda mimosifolia*	1	GPS unit	7	7	300	300	3.6	2.0	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Poor health
121	*Acer negundo*	1	Nearmap 2022	11	12	700	700	8.4	2.8	Poor	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Poor health
122	*Eucalyptus microcorys*	1	Nearmap 2022	18	10	450	450	5.4	2.4	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
123	*Jacaranda mimosifolia*	1	Nearmap 2022	8	9	350	350	4.2	2.1	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
124	*Eucalyptus tereticornis*	1	Nearmap 2022	18	14	500	500	6.0	2.5	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
125	*Eucalyptus sideroxylon*	1	Nearmap 2022	17	16	600	600	7.2	2.7	Fair	Good	Long		High	100	Yes	High Impact: >20%	Remove	
126	*Corymbia maculata*	1	Nearmap 2022	20	20	600	600	7.2	2.7	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
127	*Eucalyptus microcorys*	1	Nearmap 2022	20	12	450	450	5.4	2.4	Good	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
128	*Eucalyptus moluccana*	1	Nearmap 2022	20	12	400	400	4.8	2.3	Good	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
129	*Corymbia maculata*	1	Nearmap 2022	20	14	550	550	6.6	2.6	Good	Good	Long		High	100	Yes	High Impact: >20%	Potential to retain	
130	*Corymbia citriodora*	1	Nearmap 2022	18	14	500	500	6.0	2.5	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
131	*Corymbia maculata*	1	Survey	16	18	820	980	9.8	3.3	Good	Good	Long (>40 years)	High	High	85	Yes	High Impact: >20%	Remove	
132	*Eucalyptus saligna*	1	Survey	17	19	760	880	9.1	3.1	Good	Good	Long (>40 years)	High	High	46	Yes	High Impact: >20%	Remove	
133	*Corymbia maculata*	1	Survey	16	16	640	800	7.7	3.0	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	

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134.1	*Corymbia citriodora*	1	Survey	16	17	600	720	7.2	2.9	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	2 trees close together
134.2	*Corymbia citriodora*	1	Survey	16	17	600	720	7.2	2.9	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	2 trees close together
135	*Jacaranda mimosifolia*	1	Survey	8	8	290	300	3.5	2.0	Good	Good	Medium (15-40 years)	Medium	Medium	22	Yes	High Impact: >20%	Remove	
136	*Acer negundo*	1	Survey	16	14	760	890	9.1	3.2	Fair	Fair	Medium (15-40 years)	High	Medium	100	Yes	High Impact: >20%	Remove	wound in trunk
137	*Eucalyptus saligna*	1	Survey	24	19	830	1040	10.0	3.4	Good	Fair	Long (>40 years)	High	High	10	No	Medium Impact: <20%	Potential to retain	Wounds on upper trunk and large branch forks
138	*Cedrus deodara*	1	Survey	19	14	600	670	7.2	2.8	Fair	Good	Long (>40 years)	High	High	96	Yes	High Impact: >20%	Remove	Slightly sparse canopy
139	*Eucalyptus saligna*	1	Survey	24	14	590	700	7.1	2.8	Good	Good	Long (>40 years)	High	High	26	Yes	High Impact: >20%	Remove	
140	*Eucalyptus microcorys*	1	Survey	22	18	550	600	6.6	2.7	Good	Good	Long (>40 years)	High	High	57	Yes	High Impact: >20%	Remove	
141	*Eucalyptus saligna*	1	Survey	24	21	670	770	8.0	3.0	Good	Good	Long (>40 years)	High	High	80	Yes	High Impact: >20%	Remove	
142	*Corymbia maculata*	1	Survey	16	17	460	600	5.5	2.7	Good	Good	Long (>40 years)	High	High	100	Yes	High Impact: >20%	Remove	
143	*Corymbia maculata*	1	Survey	17	11	520	620	6.2	2.7	Good	Good	Long (>40 years)	High	High	1	No	Low Impact: <10%	Retain	Leaning
144	*Eucalyptus moluccana*	1	Survey	17	10	440	560	5.3	2.6	Fair	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	Sparse canopy
145	*Angophora floribunda*	1	GPS unit	10	5	350	350	4.2	2.1	Fair	Poor	Short		Medium	100	Yes	High Impact: >20%	Remove	Monitor decay in base
146	*Corymbia maculata*	1	GPS unit	12	5	250	250	3.0	1.8	Fair	Poor	Short		Low	100	Yes	High Impact: >20%	Remove	Borers

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147	*Callistemon salignus*	1	Survey	8	6	220	240	2.6	1.8	Good	Good	Medium (15-40 years)	Medium	Medium	20	Yes	High Impact: >20%	Remove	
148	*Angophora floribunda*	1	Survey	12	10	240	310	2.9	2.0	Fair	Good	Medium (15-40 years)	Medium	Medium	5	No	Low Impact: <10%	Retain	
149	*Eucalyptus haemastoma*	1	Nearmap 2022	15	15	700	700	8.4	2.8	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
150	*Eucalyptus sideroxylon*	1	Nearmap 2022	14	15	800	800	9.6	3.0	Fair	Fair	Medium		High	100	Yes	High Impact: >20%	Remove	
151	*Lophostemon confertus*	1	Nearmap 2022	10	7	400	400	4.8	2.3	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
152	*Eucalyptus sideroxylon*	1	Nearmap 2022	14	16	700	700	8.4	2.8	Good	Fair	Long		High	100	Yes	High Impact: >20%	Remove	
153	*Eucalyptus sideroxylon*	1	Nearmap 2022	12	15	600	600	7.2	2.7	Fair	Fair	Long		High	100	Yes	High Impact: >20%	Remove	
154	*Eucalyptus microcorys*	1	GPS unit	12	15	500	500	6.0	2.5	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
155	*Corymbia citriodora*	1	GPS unit	15	15	400	400	4.8	2.3	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
156	*Eucalyptus sideroxylon*	1	GPS unit	18	16	600	600	7.2	2.7	Fair	Poor	Medium		High	100	Yes	High Impact: >20%	Remove	Decay in trunk
157	*Corymbia citriodora*	1	Nearmap 2022	15	15	500	500	6.0	2.5	Good	Good	Medium		High	100	Yes	High Impact: >20%	Remove	
158	*Corymbia maculata*	1	Nearmap 2022	18	15	500	500	6.0	2.5	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
159	*Eucalyptus moluccana*	1	Nearmap 2022	20	10	500	500	6.0	2.5	Fair	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
160	*Eucalyptus moluccana*	1	Nearmap 2022	18	8	350	350	4.2	2.1	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
161	*Eucalyptus sp.*	1	Nearmap 2022	25	15	650	650	7.8	2.8	Fair	Good	Long		High	0	No	No Impact: 0%	Retain	

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162	*Corymbia citriodora*	1	Nearmap 2022	12	8	350	350	4.2	2.1	Fair	Fair	Long		Medium	12	No	Medium Impact: <20%	Potential to retain	
166	*Lophostemon confertus*	1	GPS unit	10	6	400	400	4.8	2.3	Fair	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	Drought stressed
167	*Eucalyptus robusta*	1	GPS unit	12	15	550	550	6.6	2.6	Good	Fair	Long		Medium	100	Yes	High Impact: >20%	Remove	
168	*Eucalyptus tereticornis*	1	Nearmap 2022	25	20	900	900	10.8	3.2	Fair	Fair	Long		High	52	Yes	High Impact: >20%	Remove	Decay high in trunk. Urg attn
169	*Eucalyptus tereticornis*	1	Nearmap 2022	22	20	600	600	7.2	2.7	Fair	Fair	Medium		High	58	Yes	High Impact: >20%	Remove	Decay in base
170	*Phoenix canariensis*	1	GPS unit	8	7	650	650	4.5	0.0	Good	Good	Long		Medium	100	No	High Impact: >20%	Remove	
171	*Eucalyptus tereticornis*	1	GPS unit	23	10	550	550	6.6	2.6	Fair	Poor	Long		High	100	Yes	High Impact: >20%	Remove	Split in scaffold limb
172	*Corymbia maculata*	1	GPS unit	20	10	600	600	7.2	2.7	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
173	*Angophora floribunda*	1	Survey	15	13	510	730	6.1	2.9	Good	Good	Long (>40 years)	High	High	100	Yes	High Impact: >20%	Remove	Brushcutter damage at base
174.1	*Eucalyptus saligna*	1	Survey	17	15	550	620	6.6	2.7	Good	Fair	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	2 trees planted close together. Both trees have moderate wounding on trunks
174.2	*Eucalyptus saligna*	1	Survey	17	15	550	620	6.6	2.7	Good	Fair	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	2 trees planted close together. Both trees have moderate wounding on trunks
175	*Corymbia citriodora*	1	Survey	16	17	530	610	6.4	2.7	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	
176	*Eucalyptus sideroxylon*	1	Nearmap 2022	17	18	800	800	9.6	3.0	Good	Good	Medium		High	100	Yes	High Impact: >20%	Remove	

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177	*Corymbia citriodora*	1	Nearmap 2022	14	14	400	400	4.8	2.3	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
178	*Eucalyptus sp.*	1	GPS unit	13	14	500	500	6.0	2.5	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	Basal wound
179	*Eucalyptus sideroxylon*	1	Nearmap 2022	14	8	350	350	4.2	2.1	Fair	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
180	*Eucalyptus sp.*	1	Nearmap 2022	13	14	500	500	6.0	2.5	Fair	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
181	*Corymbia maculata*	1	GPS unit	15	10	450	450	5.4	2.4	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
182	*Corymbia eximia*	1	GPS unit	10	8	350	350	4.2	2.1	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
183	*Eucalyptus sp.*	1	GPS unit	17	15	550	550	6.6	2.6	Good	Good	Long		High	100	Yes	High Impact: >20%	Remove	
184	*Eucalyptus tereticornis*	1	GPS unit	18	18	650	650	7.8	2.8	Fair	Fair	Short		High	100	Yes	High Impact: >20%	Remove	Phellinus, termites in fork
185	*Eucalyptus microcorys*	1	Nearmap 2022	10	12	450	450	5.4	2.4	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
186	*Eucalyptus sideroxylon*	1	Nearmap 2022	14	10	400	400	4.8	2.3	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
187	*Eucalyptus sideroxylon*	1	Nearmap 2022	15	14	450	450	5.4	2.4	Fair	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
188	*Corymbia citriodora*	1	Nearmap 2022	15	12	400	400	4.8	2.3	Poor	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
189	*Corymbia citriodora*	1	Nearmap 2022	18	18	500	500	6.0	2.5	Fair	Fair	Medium		Medium	0	No	No Impact: 0%	Retain	
190	*Corymbia citriodora*	1	GPS unit	14	10	350	350	4.2	2.1	Poor	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
191	*Eucalyptus microcorys*	1	Nearmap 2022	7	10	350	350	4.2	2.1	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
192	*Corymbia citriodora*	1	Nearmap 2022	16	15	450	450	5.4	2.4	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
193	*Corymbia citriodora*	1	Nearmap 2022	12	10	300	300	3.6	2.0	Poor	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
194	*Eucalyptus sideroxylon*	1	Nearmap 2022	15	12	450	450	5.4	2.4	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
195	*Angophora floribunda*	1	Nearmap 2022	14	14	450	450	5.4	2.4	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
196	*Angophora floribunda*	1	Nearmap 2022	15	14	450	450	5.4	2.4	Good	Good	Long		Medium	99	Yes	High Impact: >20%	Remove	
197	*Eucalyptus microcorys*	1	Survey	17	12	490	610	5.9	2.7	Good	Good	Long (>40 years)	Medium	Medium	69	Yes	High Impact: >20%	Remove	
198	*Eucalyptus microcorys*	1	Survey	20	22	870	1050	10.4	3.4	Good	Good	Long (>40 years)	High	High	80	Yes	High Impact: >20%	Remove	
199	*Eucalyptus sideroxylon*	1	GPS unit	16	5	350	350	4.2	2.1	Poor	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
200	*Eucalyptus crebra*	1	Nearmap 2022	18	8	300	300	3.6	2.0	Good	Good	Long		Medium	100	Yes	High Impact: >20%	Remove	
201	*Jacaranda mimosifolia*	1	GPS unit	11	8	300	300	3.6	2.0	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
202	*Fraxinus raywood*	1	GPS unit	15	17	500	500	6.0	2.5	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
203	*Angophora costata*	1	GPS unit	15	15	550	550	6.6	2.6	Good	Good	Long		High	66	Yes	High Impact: >20%	Remove	
204	*Eucalyptus nicholii*	1	Nearmap 2022	11	10	450	450	5.4	2.4	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
205	*Cedrus deodara*	1	Nearmap 2022	8	6	250	250	3.0	1.8	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	
206	*Cedrus deodara*	1	Nearmap 2022	8	7	250	250	3.0	1.8	Good	Good	Medium		Medium	100	Yes	High Impact: >20%	Remove	

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
207	*Corymbia maculata*	1	Nearmap 2022	14	16	650	650	7.8	2.8	Good	Good	Medium		High	100	Yes	High Impact: >20%	Remove	
208	*Corymbia maculata*	1	Nearmap 2022	15	5	300	300	3.6	2.0	Fair	Fair	Medium		Medium	100	Yes	High Impact: >20%	Remove	
209	*Corymbia maculata*	1	Nearmap 2022	20	20	600	600	7.2	2.7	Good	Good	Long		High	10	No	Low Impact: <10%	Retain	Previously IDd as 183
210	*Corymbia maculata*	1	Survey	16	13	480	660	5.8	2.8	Good	Good	Long (>40 years)	Medium	High	76	Yes	High Impact: >20%	Remove	
1331.1	*Zelkova serrata*	1	Survey	5	7	310	350	3.7	2.1	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Remove	Group of five small to medium trees planted near Tree 133
1331.2	*Zelkova serrata*	1	Survey	5	7	310	350	3.7	2.1	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Retain	Group of five small to medium trees planted near Tree 133
1331.3	*Zelkova serrata*	1	Survey	5	7	310	350	3.7	2.1	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Retain	Group of five small to medium trees planted near Tree 133
1331.4	*Zelkova serrata*	1	Survey	5	7	310	350	3.7	2.1	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Remove	Group of five small to medium trees planted near Tree 133
1331.5	*Zelkova serrata*	1	Survey	5	7	310	350	3.7	2.1	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Retain	Group of five small to medium trees planted near Tree 133
1331.6	*Zelkova serrata*	1	Survey	5	7	310	350	3.7	2.1	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Retain	Group of five small to medium trees planted near Tree 133
1332.1	*Lagerstroemia indica*	1	Survey	5	3	180	240	2.2	1.8	Good	Good	Medium (15-40 years)	Low	Low	5	Yes	High Impact: >20%	Remove	Two trees located either side of red brick path

Tree ID	Botanical name	Trees in group	Location	Height (m)	Spread (m)	DBH (mm)	DAB (mm)	TPZ (m)	SRZ (m)	Health	Structure	ULE	Landscape significance	Retention value	TPZ% encroachment	SRZ encroached	Impact	Action	Notes
1332.2	*Lagerstroemia indica*	1	Survey	5	3	180	240	2.2	1.8	Good	Good	Medium (15-40 years)	Low	Low	0	No	No Impact: 0%	Retain	Two trees located either side of red brick path
1411	*Corymbia maculata*	1	Survey	16	10	350	420	4.2	2.3	Good	Good	Long (>40 years)	Medium	Medium	80	Yes	High Impact: >20%	Remove	
1412	*Harpullia pendula*	1	Survey	6	9	200	280	2.4	1.9	Good	Good	Long (>40 years)	Medium	Medium	3	No	Low Impact: <10%	Retain	
1413.1	*Eucalyptus tereticornis*	1	Survey	12	4	200	250	2.4	1.8	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	Two trees of similar size close together
1413.2	*Eucalyptus tereticornis*	1	Survey	12	4	200	250	2.4	1.8	Good	Good	Long (>40 years)	Medium	Medium	30	Yes	High Impact: >20%	Remove	Two trees of similar size close together
1414	*Castanospermum australe*	1	Survey	9	4	180	220	2.2	1.8	Good	Good	Long (>40 years)	Low	Low	81	Yes	High Impact: >20%	Remove	Multi trunked
1441	*Diploglotis australis*	1	Survey	6	3	130	150	2.0	1.5	Good	Good	Long (>40 years)	Low	Low	0	No	No Impact: 0%	Retain	
1741	*Flindersia australis*	1	Survey	8	8	220	300	2.6	2.0	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	
1742	*Corymbia maculata*	1	Survey	15	14	470	520	5.6	2.5	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	
1751	*Corymbia maculata*	1	Survey	16	16	590	770	7.1	3.0	Good	Good	Long (>40 years)	High	High	0	No	No Impact: 0%	Retain	Appears to have been left off previous survey
1751	*Flindersia australis*	1	Survey	12	8	320	380	3.8	2.2	Good	Good	Long (>40 years)	Medium	Medium	0	No	No Impact: 0%	Retain	
5301	*Eucalyptus sideroxylon*	1	Survey	14	6	280	320	3.4	2.1	Poor	Fair	Short (5-15 years)	Medium	Medium	74	Yes	High Impact: >20%	Remove	Significant dieback
1752	Mixed group	1500	-	-	-	-	-	-	-	-	-	-	-	Not assessed			No Impact: 0%	Retain	-

Appendix E Tree protection guidelines

The following tree protection guidelines must be implemented during the construction period if no tree-specific recommendations are detailed.

E1 Tree protection fencing

The TPZ is a restricted area delineated by protective fencing or the use of an existing structure (such as a wall or fence).

Trees that are to be retained must have protective fencing erected around the TPZ (or as specified in the body of the report) to protect and isolate it from the construction works. Fencing must comply with the Australian Standard, AS 4687-2007, Temporary fencing and hoardings.

Tree protection fencing must be installed prior to site establishment and remain intact until completion of works. Once erected, protective fencing must not be removed or altered without the approval of the project arborist.

If the protective fencing requires temporary removal, trunk, branch and ground protection must be installed and must comply with AS 4970-2009, Protection of Trees on Development Sites.

Tree protection fencing shall be:

- Enclosed to the full extent of the TPZ (or as specified in the Recommendations and Tree Protection Plan).
- Cyclone chain wire link fence or similar, with lockable access gates.
- Certified and Inspected by the Project Arborist.
- Installed prior to any machinery or material are brought to site and before the commencement of works.
- Prominently sign posted with 300 mm x 450 mm boards stating, “NO ACCESS - TREE PROTECTION ZONE”.

E2 Crown protection

Tree crowns/canopy may be injured or damaged by machinery such as; excavators, drilling rigs, trucks, cranes, plant and vehicles. Where crown protection is required, it will usually be located at least one meter outside the perimeter of the crown. Crown protection may include the installation of a physical barrier, pruning selected branches to establish clearance, or the tying/bracing of branches.

E3 Trunk protection

Where provision of tree protection fencing is impractical or must be temporarily removed, trunk protection shall be installed for the nominated trees to avoid accidental mechanical damage.

The removal of bark or branches allows the potential ingress of micro-organisms which may cause decay. Furthermore, the removal of bark restricts the trees’ ability to distribute water, mineral ions (solutes), and glucose.

Trunk protection shall consist of a layer of either carpet underfelt, geotextile fabric or similar wrapped around the trunk, followed by 1.8 m lengths of softwood timbers aligned vertically and spaced evenly around the trunk (with an approx. 50 mm gap between the timbers).

The timbers must be secured using galvanised hoop strap (aluminium strapping). The timbers shall be wrapped around the trunk but not fixed to the tree, as this will cause injury/damage to the tree.

E4 Ground protection

Tree roots are essential for the uptake/absorption of water, oxygen and mineral ions (solutes). It is essential to prevent the disturbance of the soil beneath the dripline and within the TPZ of trees that are to be retained. Soil compaction within the TPZ will adversely affect the ability of roots to function correctly.

If temporary access for machinery is required within the TPZ ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction within the TPZ. Maintain a thick layer of mulch around all retained trees to a depth of 100 mm using coarse pine bark or wood chip material that complies with AS 4454. Where the existing landscape within the TPZ is to remain unaltered (e.g. garden beds or turf) mulch may not be required.

For heavy vehicle access within TPZ, ground protection may include a permeable membrane such as geotextile fabric beneath a layer of crushed rock or rumble boards.

If the grade is to be raised within the TPZ, the material should be coarser or more porous than the underlying material.

E5 Root protection and investigation

If incursions/excavation within the TPZ are unavoidable, root investigation may be needed to determine the extent and location of roots within the area of construction activity. The location and distribution of roots are found through non-destructive excavation (NDE) methods such as hydro-vacuum excavation (sucker truck), air spade and manual excavation. Root investigation does not guarantee the retention of the tree.

If the project arborist identifies conflicting roots that requiring pruning, they must be pruned with a sharp implement such as; secateurs, pruners, handsaws or a chainsaw back to undamaged tissue. The final cut must be a clean cut.

E6 Underground services

All underground services should be routed outside of the TPZ. If underground services need to be installed within the TPZ, they should be installed using horizontal directional drilling (HDD), non-destructive excavation (NDE) methods such as hydro-vacuum, Air Spade or manually excavated trenches. The horizontal drilling/boring must be at minimum depth of 600 mm below grade. Trenching for services is to be regarded as “excavation”. The project arborist should assess the likely impacts of boring and bore pits on retained trees.

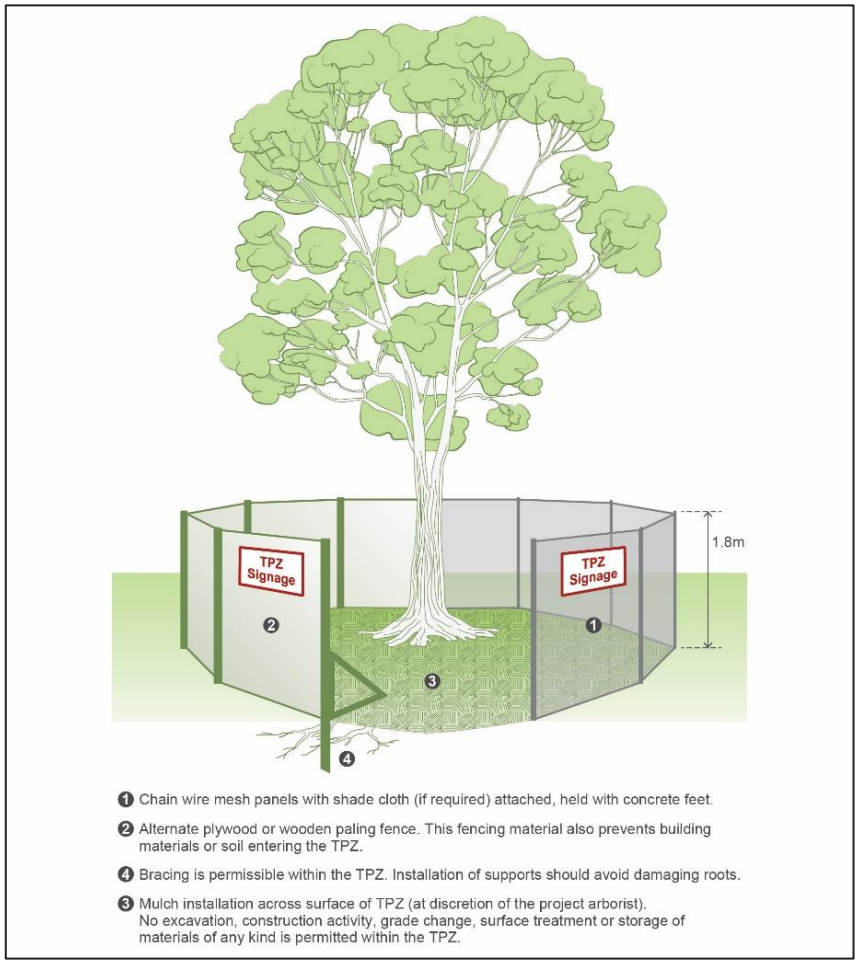


Figure 16: Tree protection fencing

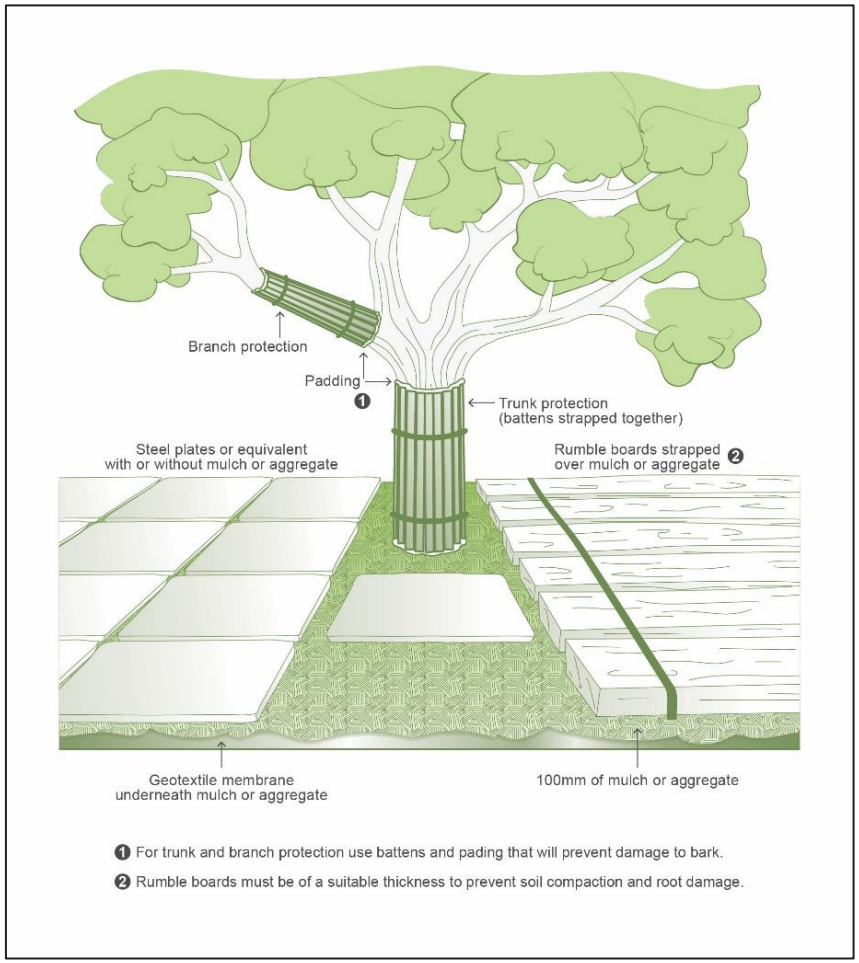
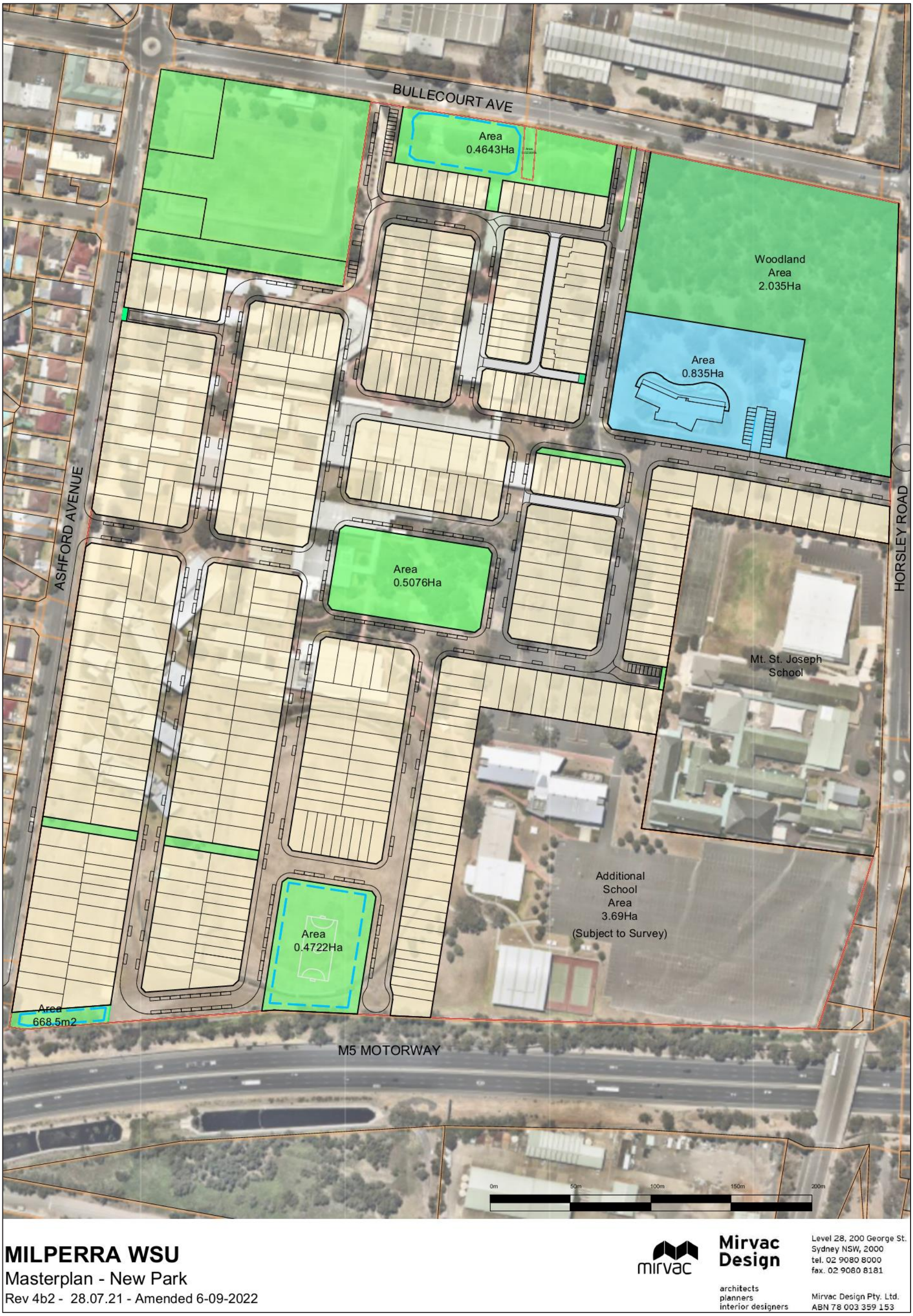


Figure 17: Trunk, branch and ground protection

Appendix F Masterplan (Mirvac 2022)



Appendix G Trees 168

Figure 18: Tree 168

Figure 19: Tree 168

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