TREE SURVEY

PRELIMINARY TREE ASSESSMENT

136-146 & 184 Donnison Street, Gosford
Version 1

Prepared for:
Universal Property Group

21 October 2024

Document information

Title:	136-146 & 184 Donnison Street, Gosford
Report type:	Preliminary Tree Assessment (PTA)
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Document status

Document status	Date	Revision description
Version 1	21/10/24	Final version

Abbreviations

Abbreviation	Description
AQF	Australian Qualifications Framework
AS	Australian Standards
DBH	Diameter at Breast Height
Id	Identification
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

Contents

1 Background

1.1 Introduction

Tree Survey was commissioned by Universal Property Group to prepare a Preliminary Tree Assessment (PTA) for a proposed development located at 136-146 & 184 Donnison Street, Gosford.

The purpose of this report is to:

- Identify the trees within the study area.
- Assess the current health and condition of the trees.
- Evaluate the significance of the trees and assess their suitability for retention.

1.2 The subject site

The subject site comprises 1.419ha of land located within the Central Coast Local Government Area (LGA). A map of the subject site can be found in the Appendices.

1.3 Documents and plans referenced

The conclusions and recommendations of this report are based on the findings from the site inspections, and the analysis of the documents/plans listed in **Table 1**.

Table 1: Documents and plans

Document	Author	Version	Date
Survey Plan	Trehy Ingold Neate	B	29/01/16
Pruning of Amenity Trees	Standards Australia	2	14/03/07
Protection of Trees on Development Sites	Standards Australia	1	26/03/10

1.4 Council tree preservation

The Central Coast Development Control Plan (DCP) 2022 defines a tree as a perennial plant with at least one self-supporting woody or fibrous stem, that meets at least one of the following criteria:

- A height of more than 3 metres.
- A trunk diameter of more than 75mm or more measured at 1.4 metres above ground level.

Trees and vegetation that fall within these specifications are protected unless listed as an exempt species. Trees that do not meet the prescribed dimensions have generally not been included in this report.

2 Method

2.1 Visual Tree Assessment (VTA)

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

The following limitations apply to this methodology:

- Trees are inspected visually from ground level without the use of any invasive or diagnostic tools and testing.
- Trees within private properties or restricted areas were not subject to a complete visual inspection (i.e., defects and abnormalities may be present but not recorded).
- Diameter at breast height (DBH) has been accurately measured using a diameter tape (where access to the trees was available). Tree height and canopy spread were estimated unless otherwise stated.
- Tree protection zones have been calculated in accordance with AS4970 using the DBH and diameter at root buttress (DRB) measurements.
- Tree identification was based on broad taxonomical features present and visible from ground level at the time of inspection.

2.2 Significance of a Tree, Assessment Rating System (STARS).

The retention value of a tree or group of trees is determined using a combination of environmental, cultural, physical, and social values.

- **Low:** These trees are not considered important for retention, nor require special works or design modifications to be implemented for their retention.
- **Medium:** These trees are moderately important for retention. Their removal should only be considered if adversely affecting the proposed building/works.
- **High:** These trees are considered important for retention and should be considered for retention where possible. Design modification or relocation of building/s should be considered to accommodate the setbacks as prescribed by AS4970.

This tree retention assessment has been undertaken in accordance with the Institute of Australian Consulting Aboriculturalists (IACA) Significance of a Tree, Assessment Rating System (STARS). The system uses a scale of High, Medium, and Low significance in the landscape. Once the landscape significance of a tree has been defined, the retention value can be determined. Each tree must meet a minimum of three (3) assessment criteria to be classified within a category. Further details and the assessment criteria are in the **Appendices.**

3 Results

A total of **40** trees were assessed and included in this report. The results are as follows:

3.1 Retention value

A summary of the subject trees' retention value is outlined below:

Table 2: Retention value summary

Low priority for retention	A total of **25** trees have been assessed as a low priority for retention.
Medium priority for retention	A total of **15** trees have been assessed as a medium priority for retention.
High priority for retention	A total of **0** trees have been assessed as a high priority for retention.

Further information specific to each of the subject trees can be found in the **Appendices.**

Table 3: Tree data

Id.	Botanical name	Height (metres)	Spread (metres diameter)	Health	Structure	Age class	Tree significance	Useful life expectancy	Priority for retention	DBH 1 (millimetres diameter)	DBH 2 (millimetres diameter)	DBH 3 (millimetres diameter)	DBH Combined (millimetres diameter)	DRB (millimetres diameter)	TPZ (metres diameter)	SRZ (metres diameter)	Other notes
1	*Podocarpus elatus*	5	4	Fair	Poor	Semi-mature	Medium	Short	Low	150	150	-	210	260	2.5	1.9	Poor growth structure. Unsuitable location.
2	*Fraxinus raywood*	3	3	Fair	Poor	Semi-mature	Low	Short	Low	150	-	-	150	200	2.0	1.7	Unsuitable location.
3	*Glochidion ferdinandi*	6	3	Fair	Poor	Semi-mature	Low	Short	Low	200	-	-	200	250	2.4	1.8	Unsuitable location.
4	*Glochidion ferdinandi*	6	3	Fair	Poor	Semi-mature	Low	Short	Low	150	-	-	150	200	2.0	1.7	Unsuitable location.
5	*Glochidion ferdinandi*	6	3	Fair	Poor	Semi-mature	Low	Short	Low	150	-	-	150	200	2.0	1.7	Unsuitable location.
6	*Glochidion ferdinandi*	6	3	Fair	Poor	Semi-mature	Low	Short	Low	200	-	-	200	250	2.4	1.8	Unsuitable location.
7	*Fraxinus raywood*	4	4	Fair	Poor	Semi-mature	Low	Short	Low	150	-	-	150	200	2.0	1.7	Unsuitable location.
8	*Eucalyptus robusta*	7	7	Fair	Poor	Semi-mature	Medium	Short	Low	350	-	-	350	400	4.2	2.3	Defective root plate. Unsuitable location.
9	*Washingtonia robusta*	12	5	Fair	Fair	Mature	Medium	Medium	Medium	500	-	-	500	550	6.0	2.6	-
10	*Eucalyptus robusta*	12	14	Fair	Fair	Mature	Medium	Medium	Medium	650	-	-	650	700	7.8	2.8	Previous failure.
11	*Melia azedarach*	8	8	Fair	Poor	Mature	Medium	Medium	Medium	300	250	-	390	440	4.7	2.3	-
12	*Melia azedarach*	8	10	Fair	Poor	Mature	Medium	Medium	Medium	350	200	200	450	500	5.4	2.5	Poor growth form. Tri-dominant stems from ground.
13	*Melia azedarach*	4	4	Fair	Poor	Juvenile	Low	Short	Low	100	-	-	100	150	2.0	1.5	Suppressed canopy. Unsuitable location.
14	*Syagrus romanzoffiana*	7	3	Fair	Poor	Juvenile	Low	Short	Low	200	-	-	200	250	2.4	1.8	Undesirable species.
15	*Syagrus romanzoffiana*	10	6	Fair	Fair	Mature	Low	Short	Low	400	-	-	400	450	4.8	2.4	Undesirable species.
16	*Syagrus romanzoffiana*	7	4	Fair	Fair	Semi-mature	Low	Short	Low	300	-	-	300	350	3.6	2.1	Undesirable species.
17	*Syagrus romanzoffiana*	10	6	Fair	Fair	Mature	Low	Short	Low	300	-	-	300	350	3.6	2.1	Undesirable species.
18	*Olea africana*	6	5	Fair	Fair	Semi-mature	Low	Short	Low	250	-	-	250	300	3.0	2.0	No access. DBH estimated
19	*Araucaria cunninghamii*	16	9	Fair	Fair	Mature	Medium	Medium	Medium	600	-	-	600	650	7.2	2.8	-
20	*Syagrus romanzoffiana*	8	7	Fair	Fair	Mature	Low	Short	Low	300	-	-	300	350	3.6	2.1	Undesirable species.
21	*Schefflera actinophylla*	6	6	Fair	Poor	Semi-mature	Low	Short	Low	200	200	-	280	330	3.4	2.1	Undesirable species. Unsuitable location.
22	*Schefflera actinophylla*	8	5	Fair	Fair	Semi-mature	Low	Short	Low	150	150	150	260	310	3.1	2.0	Undesirable species. Unsuitable location.
23	*Syagrus romanzoffiana*	8	5	Fair	Poor	Mature	Low	Short	Low	300	-	-	300	350	3.6	2.1	Undesirable species. Unsuitable location.
24	*Cinnamomum camphora*	6	5	Poor	Poor	Juvenile	Low	Short	Low	150	150	100	230	280	2.8	1.9	Tree is in decline. Undesirable species.
25	*Corymbia citriodora*	10	7	Fair	Fair	Semi-mature	Medium	Medium	Medium	350	-	-	350	400	4.2	2.3	-
26	*Corymbia citriodora*	14	8	Fair	Fair	Semi-mature	Medium	Medium	Medium	450	-	-	450	500	5.4	2.5	-
27	*Glochidion ferdinandi*	6	7	Fair	Poor	Semi-mature	Low	Short	Low	250	150	-	290	340	3.5	2.1	Unsuitable location.
28	*Syagrus romanzoffiana*	8	4	Poor	Fair	Mature	Low	Short	Low	400	-	-	400	450	4.8	2.4	Undesirable species.
29	*Syagrus romanzoffiana*	9	6	Fair	Fair	Mature	Low	Medium	Medium	350	-	-	350	400	4.2	2.3	-
30	*Syagrus romanzoffiana*	8	7	Fair	Fair	Mature	Low	Short	Low	250	-	-	250	300	3.0	2.0	Undesirable species.
31	*Fraxinus raywood*	8	7	Fair	Fair	Mature	Medium	Short	Low	400	-	-	400	450	4.8	2.4	Unsuitable location.
32	*Strelitzia nicolai*	8	6	Fair	Fair	Mature	Low	Short	Low	150	150	150	260	310	3.1	2.0	Clumped stand in between trees 17-18.
33	*Syzygium luehmannii*	8	5	Fair	Poor	Semi-mature	Low	Short	Low	200	-	-	200	250	2.4	1.8	Poor structure, poorly pruned for asset clearance.
34	*Syzygium luehmannii*	8	5	Good	Poor	Semi-mature	Low	Medium	Medium	200	150	-	250	300	3.0	2.0	-
35	*Callistemon viminalis*	6	4	Good	Fair	Semi-mature	Medium	Medium	Medium	150	100	-	180	230	2.2	1.8	-
36	*Eucalyptus robusta*	8	9	Fair	Fair	Semi-mature	Medium	Medium	Medium	350	-	-	350	400	4.2	2.3	Trunk wounds.
37	*Eucalyptus robusta*	8	12	Fair	Poor	Semi-mature	Medium	Medium	Medium	300	250	-	390	440	4.7	2.3	Codominant stems
38	*Eucalyptus robusta*	10	16	Fair	Fair	Mature	Medium	Medium	Medium	550	-	-	550	600	6.6	2.7	Branch wounding over road due to impacts. Codominant. Deadwood (>10cm).
39	*Eucalyptus robusta*	8	6	Fair	Poor	Semi-mature	Medium	Medium	Medium	350	-	-	350	400	4.2	2.3	Low branch removed over road, collar at approx 1.4m from ground level.
40	*Eucalyptus botryoides*	6	4	Fair	Fair	Juvenile	Medium	Medium	Medium	200	100	-	220	270	2.6	1.9	-


Arboricultural Impact Assessment
Page 1 of 7
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The subject trees
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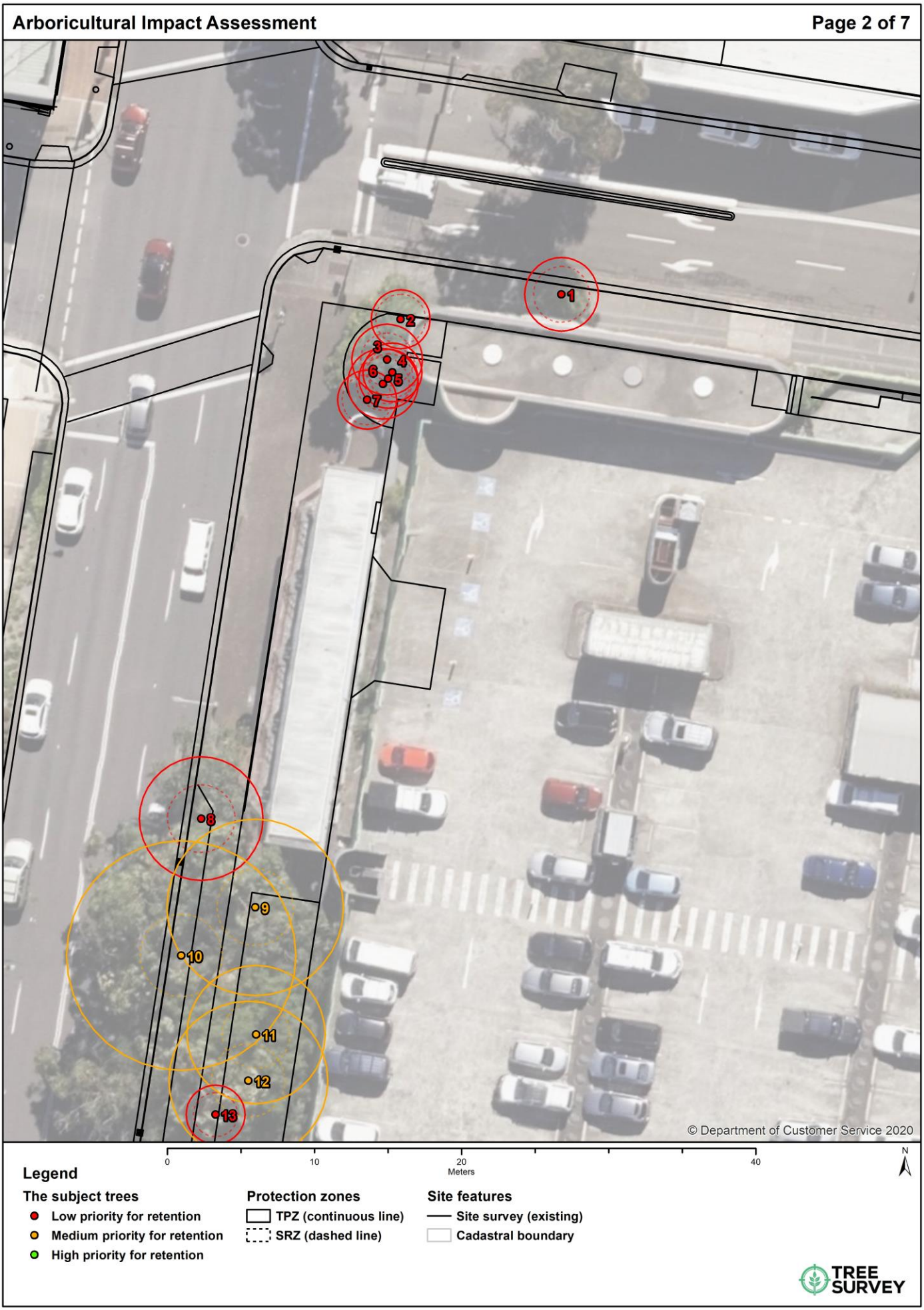
Medium priority for retention
High priority for retention
Protection zones
TPZ (continuous line)
SRZ (dashed line)
Site features
Site survey (existing)
Cadastral boundary
TREE SURVEY


Arboricultural Impact Assessment
Page 2 of 7
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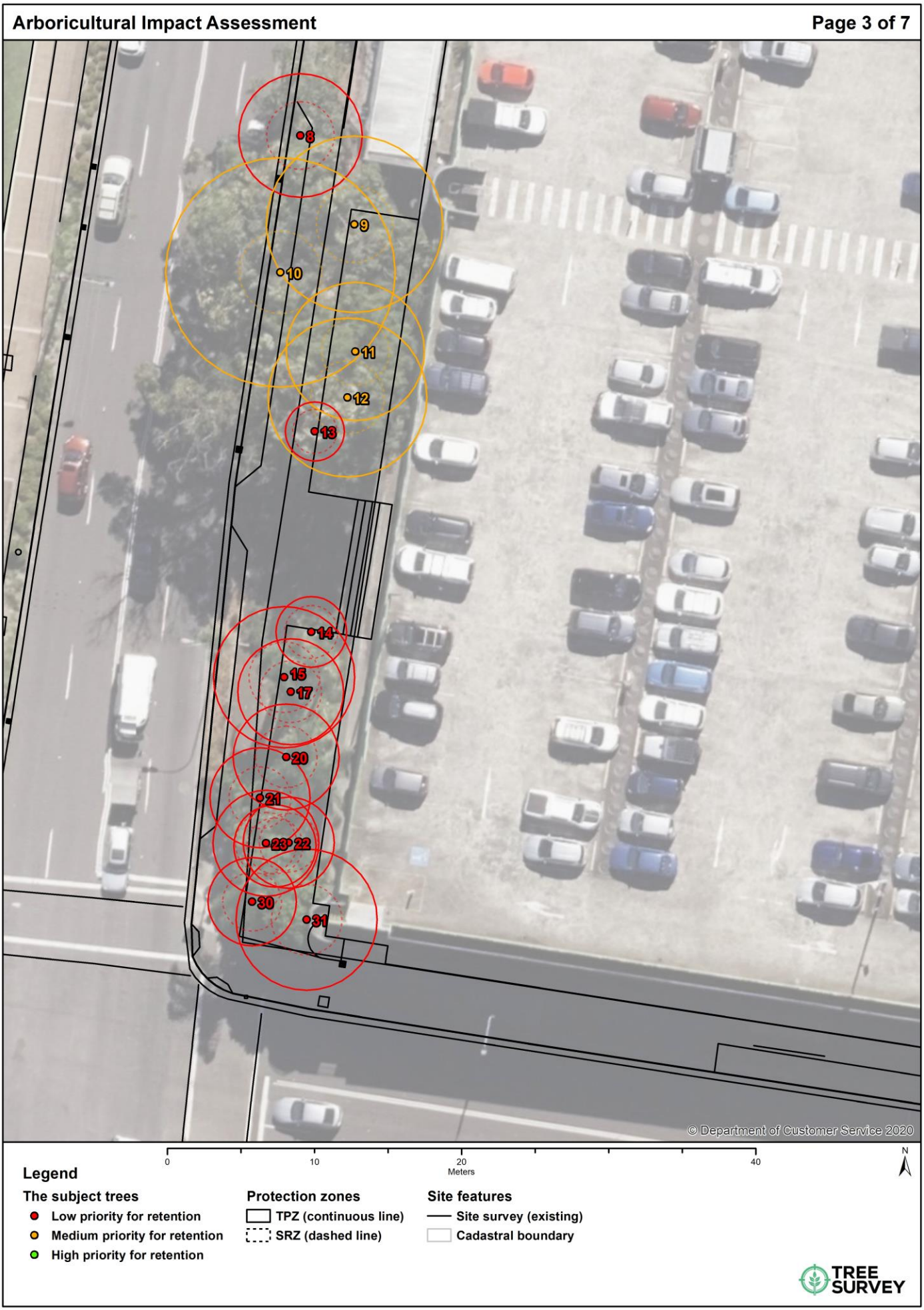
Arboricultural Impact Assessment
Page 3 of 7
8
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TREE SURVEY

Arboricultural Impact Assessment **Page 4 of 7**

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TREE SURVEY

Arboricultural Impact Assessment **Page 5 of 7**

Legend

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- SRZ (dashed line)

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- Cadastral boundary

TREE SURVEY


Arboricultural Impact Assessment
Page 6 of 7
18
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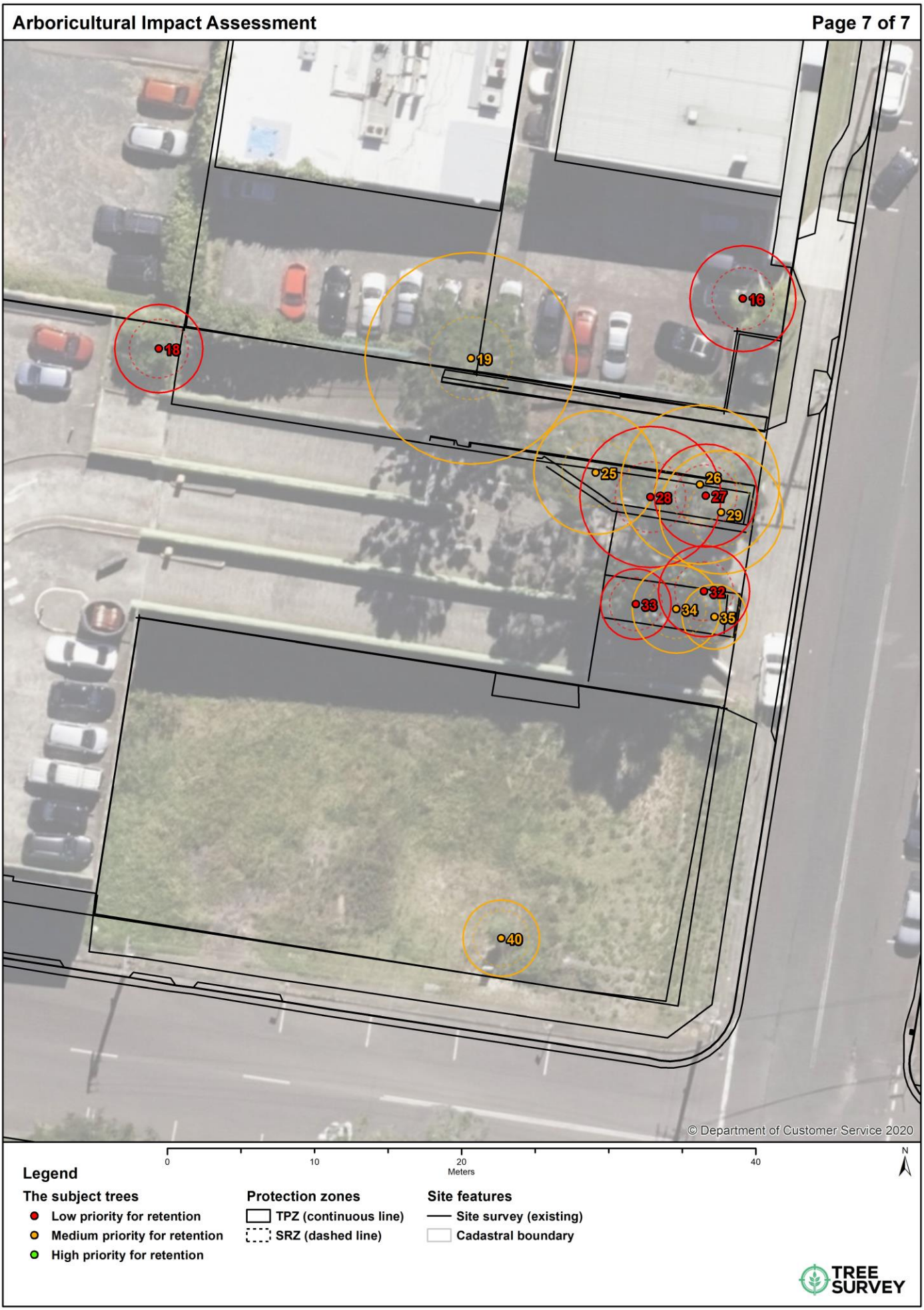
TREE SURVEY


Arboricultural Impact Assessment
Page 7 of 7
16
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TREE SURVEY

4 Discussion

4.1 Tree protection zones

The Australian Standard, Protection of Trees on Development Sites (AS4970), describes two zones that need to be considered when designing for trees:

- **Tree protection zone (TPZ):** The TPZ is the combination of crown and root area that requires protection during the construction process so that the tree can remain viable. The TPZ is calculated by measuring the DBH and multiplying it by twelve (12). The resulting value is applied as a radial measurement from the centre of the trunk to delineate the TPZ.
- **Structural root zone (SRZ):** The SRZ is the area of the root system used for stability, mechanical support, and anchorage of the tree.

4.2 Encroachment within the TPZ

The Australian Standard, Protection of Trees on Development Sites (AS4970), describes three (3) levels of encroachment within the TPZ that need to be considered when designing for trees:

- **Nil encroachment (0%):** No encroachment within the TPZ.
- **Minor encroachment (<10%):** The encroachment is less than 10% of the TPZ.
- **Major encroachment (>10%):** The encroachment is greater than 10% of the TPZ.

4.3 Minor encroachment

Encroachment within the TPZ is acceptable under most circumstances, especially if the encroachment does not exceed 10% of the overall TPZ area (minor encroachment). Encroachment of greater than 10% is typically not recommended for trees located outside the project boundary (on adjoining or neighbouring properties). Any allowance for encroachment within the TPZ should be shared between properties and tree owners. Consent authorities are unlikely to support major encroachments (greater than 10%) for trees on neighbouring or adjoining properties.

4.4 Major encroachment

Encroachment of up to 20% of the overall TPZ area (major encroachment) is possible for trees within the project boundary. Encroachment of up to 20% can be achieved without significantly impacting the health or stability of the tree (Roberts, Jackson, and Smith 2006, p.295; Costello, Watson, and Smiley 2017, p.21). Encroachment of greater than 20% can begin to impact the structural root zone (SRZ) and is more likely to compromise tree stability" (Costello, Watson, and Smiley (2017, p.21). Impacts within the SRZ are not recommended as they may lead to the destabilisation and/or decline of the tree.

4.5 Encroachment on one side of the TPZ

If a proposed encroachment only impacts one side of the TPZ (linear encroachment), the standard TPZ setback distance can be halved without exceeding 20% encroachment. For example, a tree with a 6m TPZ could accommodate construction up to 3m distance from the tree without exceeding 20% encroachment or impacting the SRZ. This form of encroachment could only take place if the proposed encroachment only occurs on one side of the tree, as is common with the construction of roads, pathways, retaining walls, and underground services. Allowing up to 20% encroachment on one side of the tree will ensure the SRZ is not impacted while allowing for an increased amount of space for design and construction.

5 Avoiding and minimising impacts

5.1 Hierarchy of controls

There are three key controls for avoiding and minimising the impacts of construction on trees. This hierarchy of controls provides an opportunity to retain that would otherwise be removed or further reduce impacts on trees that will be retained. A summary of this hierarchy of controls is outlined below:

- **Avoidance:** The key factor for the successful retention of trees is providing adequate construction setbacks by maximising the distance between trees and infrastructure. This is achieved through design strategies such as the relocation or modification of structures, services, and hardscapes. Ensuring adequate distance between the tree and the construction footprint not only reduces the impact on trees but also reduces the likelihood of trees causing damage to infrastructure in the future.
- **Minimisation:** Minimising impact may be a viable option when there is little opportunity to relocate or re-align proposed works. When impacts on the trees or encroachment within the TPZ cannot be avoided, they may be minimised. Minimising impacts on trees can be achieved through tree-sensitive design techniques, where proposed works are designed in a way to reduce ground disturbance and impacts on tree roots. This tree-sensitive design strategy can include utilising alternative construction methods or alternative construction materials.
- **Mitigation:** Tree protection mitigations will be required to ensure that any proposed impacts on trees are strictly limited to those that are expected and have been assessed and approved. These tree protection measures form the Tree Protection Plan (TPP) and provide the safeguards to ensure that trees proposed to be retained are protected during construction and that any impacts on these trees are controlled and monitored.

5.2 Avoiding impact

Key strategies for avoiding impact are outlined below:

- Relocation of infrastructure to maximise the distance between trees and proposed works.
- Relocation of underground services to maximise the distance between trees and proposed works.

5.3 Minimising impact

Key strategies for minimising impact are outlined below:

- Design modification to maximise the distance between trees and proposed works.
- Bridging the root zone by utelising suspended slabs, elevated walkways, and boardwalks.
- Pier and beam footing design.
- Cantilevered design.

5.4 Mitigating the impact

Key strategies for mitigating the impact are outlined below:

- Implementation of a tree protection plan.
- Installation of tree protection fencing, trunk protection, and ground protection.
- Project arborist supervision and monitoring of trees during construction.

5.5 Methods to avoid and minimise impact

The table below provides a summary of major construction impacts and a range of methods for avoiding or minimising these impacts.

Table 4: Methods to avoid and minimise impact

Item	Methods to avoid or minimise impact
Excavation	• Restrict stripping of topsoil within the TPZ. • Utilise retaining walls to minimise battering and grading within the TPZ. • Do not remove stumps from within the TPZ, cut trees to ground level and leave in situ. • Limit excavation to less than 150mm within the TPZ.
Fill	• Utilise retaining walls to minimise fill within the TPZ. • Limit fill to less than 150mm within the TPZ. • Use free-draining structural soils to increase ground levels within the TPZ. • Use free-draining aggregates to increase ground levels within the TPZ.
Hardstand	• Utilise free-draining permeable hardstand material such as porous paving, and porous asphalt. • Substitute concrete for free-draining aggregates such as crushed granite and crushed sandstone. • Substitute concrete for free-draining no-fines concrete. • Design areas hardstand to be constructed at or above the existing grade with no excavation. • Limit excavation to less than 150mm within the TPZ.
Services	• Re-route underground services to avoid root zones. • Consolidate utility trenches. • Utilise horizontal directional drilling, manual or non-destructive excavation, to install services. • Thread conduits under, below, above, or around existing roots. • Trench directly towards the centre of the tree to minimise segmented root loss.
Driveways	• Utilise suspended slabs or sections with pier footings. • Integrate grates or drainage into the design to allow water to access the TPZ. • Limit excavation for sub-grades to less than 150mm within the TPZ. • Utilise free-draining permeable materials such as porous paving, porous asphalt, and no-fines concrete. • Construct at or above existing ground level where possible.
Pathways	• Utilise suspended pathways or walkways such as boardwalks or pier and beam bridges within the TPZ. • Utilise articulated pavement with a 100mm thick gravel subbase over tree roots. • Split or narrow shared pathways to avoid trees. • Use paving materials requiring a minimum amount of excavation such as reinforced concrete. • Utilise free-draining permeable materials such as porous paving, porous asphalt, and no-fines concrete.
Building	• Utilise suspended slabs or building sections with pier footings. • Utilise cantilevered building sections. • Integrated drainage into the design to allow water to access the TPZ. • Construct at or above existing ground level where possible.
Decks	• Utilise suspended slabs or decks with pier footings. • Utilise cantilevered building sections. • Design to minimise the number of footings required. • Integrate grates or drainage into the design to allow water to access the TPZ.

6 Recommendations

6.1 Strategic design

- **Low priority for retention:** A total of **25** trees have been assessed as a low priority for retention. These trees are not considered important for retention, nor require special works or design modifications to be implemented for their retention.
- **Medium priority for retention:** A total of **15** trees have been assessed as a medium priority for retention. These trees are considered less critical; however, their retention should remain a priority, with the removal considered only if adversely affecting the proposed building/works.
- **High priority for retention:** A total of **0** trees have been assessed as a high priority for retention. Trees with a high priority for retention are considered important and should be considered for retention where possible. Design modification or relocation of building/s should be considered to accommodate the setbacks as prescribed by AS4970.

6.2 Further arboricultural assessment

An Arboricultural Impact Assessment (AIA) and Tree Protection Plan (TPP) should be prepared once the design has been finalised. The AIA and TPP report must meet the specifications outlined below:

- The report must be prepared by a minimum AQF level 5 arborist in accordance with AS4970.
- The report must assess impacts on existing trees and identify any trees that may need to be removed and trees that can be successfully retained.
- The report should include two (2) sets of drawings. One displaying the trees, TPZ, the impact footprint, and the extent of encroachment. The second set should provide details of tree removal, tree retention, and tree protection. Drawings should be colour-coded for ease of use.
- The report should include details on tree protection, site-specific tree protection mitigations, and details on any inspections, monitoring, or certification that may be required before construction, during construction, or after construction has been completed.

7 References

Costello, L., Watson, G. and Smiley, E., 2017. Root Management. International Society of Arboriculture.

Mattheck, C., Breloer, H. (1994). The body language of trees. London: The Stationery Office.

Roberts, J., Jackson, N. and Smith, D. (2006). Tree roots in the built environment.

Standards Australia (2009), Protection of Trees on Development Sites AS4970.

Standards Australia (2007), Pruning of Amenity Trees AS4373

Appendix I - STARS© assessment matrix

The retention value of a tree or group of trees is determined using a combination of environmental, cultural, physical, and social values.

- **Low:** These trees are not considered important for retention, nor require special works or design modifications to be implemented for their retention.
- **Medium:** These trees are moderately important for retention. Their removal should only be considered if adversely affecting the proposed building/works, and all other alternatives have been considered and exhausted.
- **High:** These trees are considered important for retention and should be retained and protected. Design modification or relocation of building/s should be considered to accommodate the setbacks as prescribed by Australian Standard, AS4970-2009 Protection of trees on development sites.

This tree retention assessment has been undertaken in accordance with the Institute of Australian Consulting Aboriculturalists (IACA) Significance of a Tree, Assessment Rating System (STARS). The system uses a scale of High, Medium, and Low significance in the landscape. Once the landscape significance of a tree has been defined, the retention value can be determined. Each tree must meet a minimum of three (3) assessment criteria to be classified within a category.

Tree Significance - Assessment Criteria

Low Significance	Medium Significance	High Significance
The tree is in fair-poor condition and good or low vigour. The tree has form atypical of the species The tree is not visible or is partly visible from the surrounding properties or obstructed by other vegetation or buildings The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area 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'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 is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms The tree has a wound or defect that has the potential to become structurally unsound.	The tree is in fair to good condition The tree has form typical or atypical of the species The tree is a planted locally indigenous or a common species with its taxa commonly planted in 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 provides a fair contribution to the visual character and amenity of the local area 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 is in good condition and good vigour The tree has a form typical for the species 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 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 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 supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group, or has commemorative values. 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.
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.		

Useful Life Expectancy - Assessment Criteria			
Remove	**Short**	**Medium**	**Long**
Trees with a high level of risk that would need removing within the next 5 years. Dead trees. Trees that should be removed within the next 5 years. Dying or suppressed or declining trees through disease or inhospitable conditions. Dangerous trees through instability or recent loss of adjacent trees. Dangerous trees through structural defects, including cavities, decay, included bark, wounds, or poor form. Damaged trees that considered unsafe to retain. Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting. Trees that will become dangerous after removal of other trees for the reasons.	Trees that appear to be retainable with an acceptable level of risk for 5-15 years. Trees that may only live between 5 and 15 more years. Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals. Trees that may live for more than 15 years but would be removed during the course of normal management for safety or nuisance reasons. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.	Trees that appear to be retainable with an acceptable level of risk for 15-40 years. Trees that may only live between 15 and 40 more years. Trees that may live for more than 40 years but would be removed to allow the safe development of more suitable individuals. Trees that may live for more than 40 years but would be removed during the course of normal management for safety or nuisance reasons. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.	Trees that appear to be retainable with an acceptable level of risk for more than 40 years. Structurally sound trees located in positions that can accommodate future growth. Storm damaged or defective trees that could be made suitable for retention in the long term by remedial tree surgery. Trees of special significance for historical, commemorative, or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.

Tree Significance

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

Reference

Legend for Matrix Assessment

	Priority for retention (High): These trees are considered important for retention and should be retained and protected. Design modification or relocation of building/s 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): These trees may be retained and protected. These are considered less critical; however, their retention should remain priority with the removal considered only if adversely affecting the proposed building/works, and all other alternatives have been considered and exhausted.
	Consider for removal (Low): These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
	Priority for removal (Low): These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.

IACA, 2010, IACA Significance of a Tree, Assessment Rating System (STARS)
Institute of Australian Consulting Arboriculturists
Australia, www.iaca.org.au