TMC REPORTS

ARBORICULTURAL IMPACT ASSESSMENT

REPORT COMMISSIONED BY:
Property owner

SUBJECT SITE:
17-23 Stevens Road, Vermont Vic 3133

REPORT PREPARED BY:
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Consulting Arborist
Graduate Certificate Arboriculture (AQF 8)

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Consulting Arborist
Diploma of Arboriculture (AQF 5 – Pending)

DATE OF ASSESSMENT:
Monday, September 30, 2024

DATE OF REPORT:
Tuesday, October 08, 2024

VERSION 1

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Contents

1 Assignment

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1.2 Client

Name
Property owner
Site Address
17-23 Stevens Road,
Vermont Vic 3133

Intended Audience

- The property/tree owner(s)
- The development project manager and associated construction staff
- Council Planning Department

1.3 Brief

The purpose of this report is to provide an independent arboricultural assessment of prominent trees that are located within proximity to the proposed development.

Detail has been requested in relation to the following instructions:

- To assess the overall condition and retention value of the subject trees.
- To determine the Tree Protection Zones (TPZ) and Structural Root Zones (SRZ) of the subject trees.
- To determine whether the subject trees are expected to remain viable following the proposed development.
- To propose recommendations that are expected to ensure that the subject trees would remain viable post construction.

1.4 Summary

- Seven trees (Trees 2-6, 8-9) are of low retention value.
- Two trees (Trees 1, 7) are of moderate retention value.
- One tree (Tree 10) is of high retention value.
- Five trees (Trees 11-15) are neighbouring trees.
- Seven trees (Trees 1, 3, 6, 8, 9, 10 & 15) trigger a SLO9 permit.

2 Data collection

2.1 Site visit

- Lachlan Wilson, of TMC Reports, visited the site for an arboricultural assessment on Monday the 30th of September 2024 at 7:30am.

2.2 Method of data collection

- The subject trees were assessed from observations made as viewed from ground level.
- Access to neighbouring properties was not permitted. Assessment was therefore limited only to parts of the trees that were visible from within the subject site.
- A digital camera was used at ground level to obtain photographs within this report.
- The canopy spreads of the trees were estimated.
- The heights of the trees were measured by using a Nikon Forestry Pro 2 Laser Range Finder.
- A circumference tape measure was used to determine the trunk dimensions of Trees 1 - 10, except where stated.
- Trunk dimensions of neighbouring trees (Trees 11-15) were estimated due to restricted access.
- Encroachment percentages have been calculated via ArborCAD.

2.2.1 Documents viewed

- Proposed siting (22/08/2024)
- Whitehorse Council Planning Scheme
- Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites'
- Australian Standard AS4373 – 2007 'Pruning of Amenity Trees'

2.2.2 Proposed siting

- The proposed siting referenced in this report is a preliminary siting and may be subject to change.
- Trees have been mapped in their approximate locations.

3 Site description

- The subject site is located in a General Residential Zone – Schedule 1 (GRZ1) within the Whitehorse Council.
- The subject site is located in a Significant Landscape Overlay – Schedule 9 (SLO9) within the Whitehorse Council.
- The subject site is predominately flat.
- The subject trees are all located within the subject site and adjoining properties (13 -15 Kingsley Avenue, 7 Beltana Court).
- No additional prominent vegetation (greater than 3m in height) was observed within five metres of the site boundary lines.

4 Tree data

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Permit Required	Comments
1	*Eucalyptus camaldulensis subsp. arida*? River red gum	Mature	Native QLD NSW SA WA	12.1 m	N-S 13.0 m E-W 11.0 m	0.56 m 1.82 m 0.71 m	Good	Good	10-20 years	Moderate	Moderate	6.7 m	2.9 m	SLO9	Retaining wall approx. 1.5m from tree. Tree is on higher ground.
2	*Ligustrum lucidum* Broad-leaf privet	Semi - mature	Exotic	3.6 m	N-S 3.0 m E-W 3.0 m	0.06 m 0.06 m (0.08 m) 0.31 m N/A	Good	Fair/ good	10-20 years	Low	Low	2.0 m	1.5 m	No	Unable to access base of tree as growing underneath dwelling. Therefore, SRZ has been estimated.
3	*Eucalyptus radiata* Narrow-leaved peppermint	Mature	Native NSW VIC	5.1 m	N-S 4.0 m E-W 5.0 m	0.58 m 1.95 m 0.70 m	Poor	Poor	0-5 years	Low	Low	7.0 m	2.8 m	SLO9	Historic pruning does not meet AS4373 – 2007. Tree has been lopped and is major decline.
4	*Prunus domestica* Plum	Mature	Exotic	4.5 m	N-S 4.0 m E-W 6.0 m	0.08 m 0.08 m 0.06 m 0.06 m 0.05 m (0.15 m) 0.25 m 0.25 m 0.22 m 0.19 m 0.19 m (1.10 m) 0.14 m	Good	Fair/ good	10-20 years	Low	Low	2.0 m	1.5 m	No	Planted in wooden garden bed.
5	*Pyrus calleryana* Ornamental pear	Semi Mature	Exotic	4.4 m	N-S 3.0 m E-W 3.0 m	0.09 m 0.08 m 0.06 m (0.13 m) 0.35 m 0.13 m	Good	Fair	10-20 years	Low	Low	2.0 m	1.5 m	No	Existing shed within TPZ.

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Permit Required	Comments
6	*Callistemon citrinus*	Mature	Native NSW QLD VIC	5.3 m	N-S 6.0 m	0.11 m 0.13 m 0.16 m 0.10 m 0.10 m (0.27 m)	Fair/ good	Fair/ good	10-20 years	Low	Low	3.3 m	2.5 m	SLO9	Multi-stemmed at ground level therefore SRZ has been estimated.
						0.35 m 0.44 m 0.53 m 0.35 m 0.35 m (2.01 m)									
	Crimson Bottlebrush				E-W 5.0 m	N/A									
7	*Pittosporum undulatum*	Mature	Native NSW QLD VIC	7.5 m	N-S 12.0 m	0.26 m 0.28 m 0.35 m 0.34 m 0.31 m (0.69 m)	Good	Fair/ good	10-20 years	Moderate	Moderate	8.3 m	2.9 m	No	Shallow roots exposed. Poor pruning visible. Exempt from SLO9 due to environmental weed species.
						2.54 m									
	Sweet Pittosporum				E-W 7.0 m	0.71 m									
8	*Eucalyptus petiolaris*	Mature	Native SA	9.1 m	N-S 7.0 m	0.44 m	Fair/ good	Fair/ poor	5-10 years	Moderate	Low	5.3 m	2.7 m	SLO9	Major decay in trunk. Minor deadwood in canopy.
						1.48 m									
	Water gum				E-W 10.0 m	0.59 m									
9	*Eucalyptus petiolaris*	Mature	Native SA	5.2 m	N-S 8.0 m	0.40 m	Fair/ good	Fair/ poor	10-20 years	Low	Low	4.8 m	2.6 m	SLO9	Moderate decay in trunk.
						1.04 m									
	Water gum				E-W 12.0 m	0.56 m									
10	*Corymbia maculata*	Mature	Native NSW VIC	21.8 m	N-S 12.0 m	0.94 m	Good	Good	20+ years	High	High	11.3 m	3.9 m	SLO9	
						3.24 m									
	Spotted gum				E-W 12.0 m	1.48 m									
11	*Prunus domestica*	Mature	Exotic	3.5 m	N-S 3.0 m	0.10 m	Good	Fair/ good	10-20 years	Low	Neighbouring Tree	2.0 m	1.5 m	No	Neighbouring tree located within the southern adjoining property (13 Kingsley Avenue).
						0.35 m									
	Plum				E-W 2.0 m	0.11 m									

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Permit Required	Comments
12	*Prunus sp.*	Mature	Exotic	4.8 m	N-S 2.0 m	0.13 m	Fair	Fair	10-20 years	Low	Neighbouring Tree	2.0 m	1.5 m	No	Neighbouring tree located within the southern adjoining property (13 Kingsley Avenue).
						0.41 m									
	Pear				E-W 2.0 m	0.13 m									
13	*Eriobotrya japonica*	Mature	Exotic	4.9 m	N-S 7.0 m	0.15 m	Good	Good	10-20 years	Moderate	Neighbouring Tree	2.0 m	1.6 m	No	Neighbouring tree located within the southern adjoining property (15 Kingsley Avenue). Canopy extends into the site by 4m at a height of 2m above ground level., Existing shed within TPZ.
						0.53 m									
	Loquat				E-W 4.0 m	0.17 m									
14	*Pittosporum tenuifolium*	Mature	Exotic	6.2 m	N-S 6.0 m	0.13 m	Good	Good	10-20 years	Low	Neighbouring Tree	2.0 m	1.5 m	No	Neighbouring tree located within the western adjoining property (7 Beltana Court). Within 3m of residential dwelling.
						0.42 m									
	Kohuhu				E-W 4.0 m	0.15 m									
15	*Olea europaea*	Mature	Exotic	5.4 m	N-S 5.0 m	0.12 m 0.09 m (0.15 m)	Good	Good	10-20 years	Low	Neighbouring Tree	2.0 m	1.5 m	SLO9	Neighbouring tree located within the western adjoining property (7 Beltana Court).
						0.41 m									
	Olive				E-W 5.0 m	0.15 m									

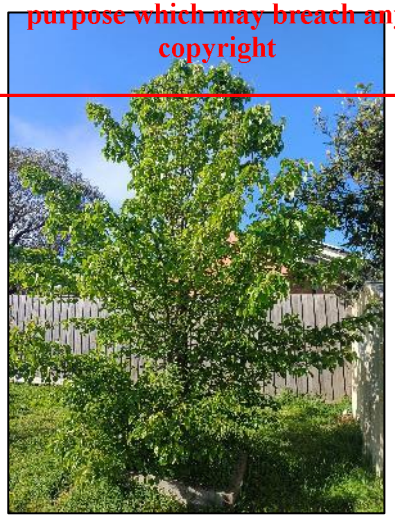
4.1 Photographic evidence

Tree 1

Tree 2

Tree 3

Tree 4



Tree 5

Tree 6

Tree 7

Tree 8

Tree 9

Tree 10

Tree 11

Tree 12

Tree 13

Tree 14

Tree 15

Subject site as viewed from west

Subject site as viewed from south

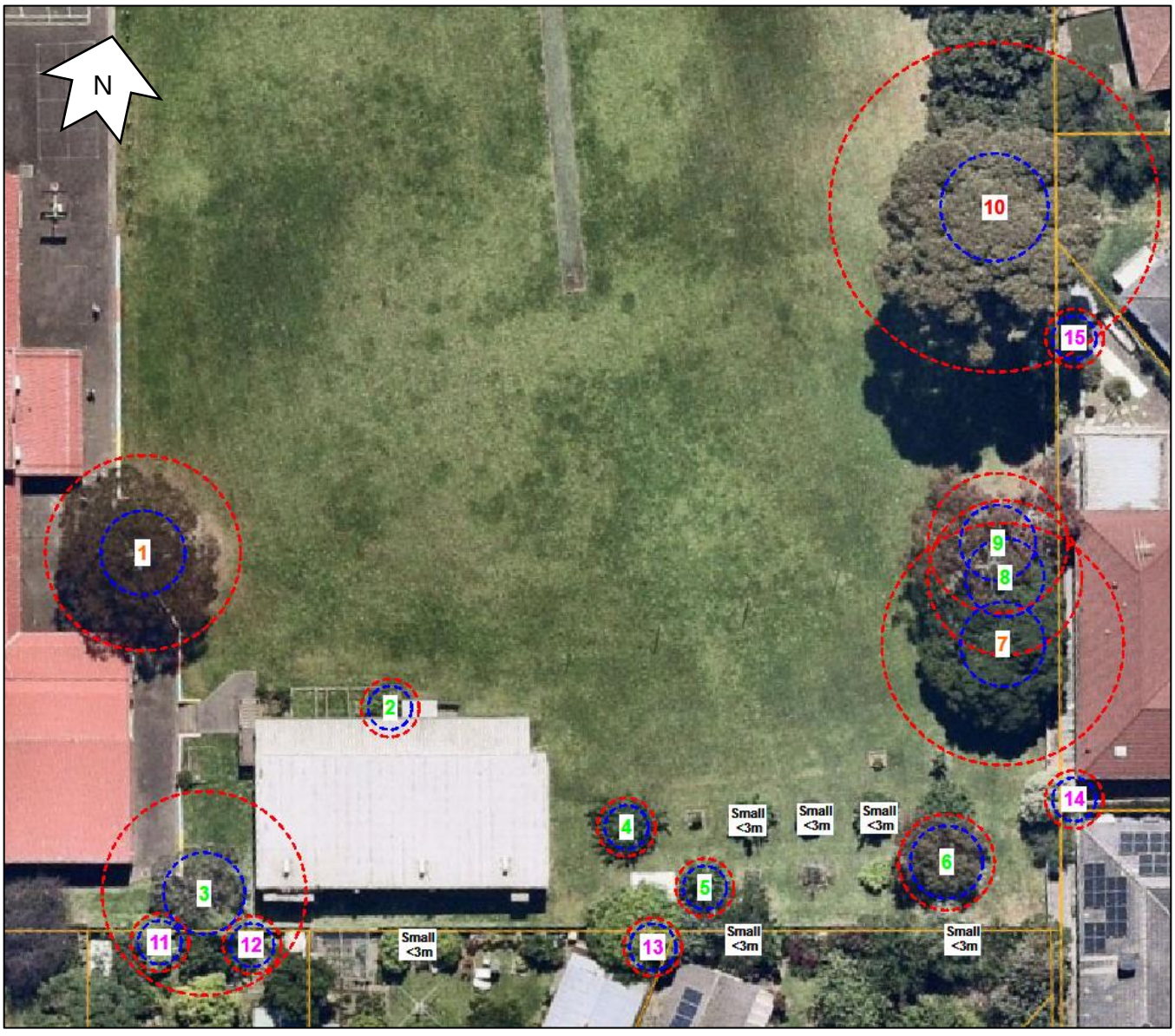
Subject site as viewed from east

Subject site as viewed from north

5 Site maps

5.1 Existing conditions

The following map indicates the approximate tree locations in relation to the existing conditions:

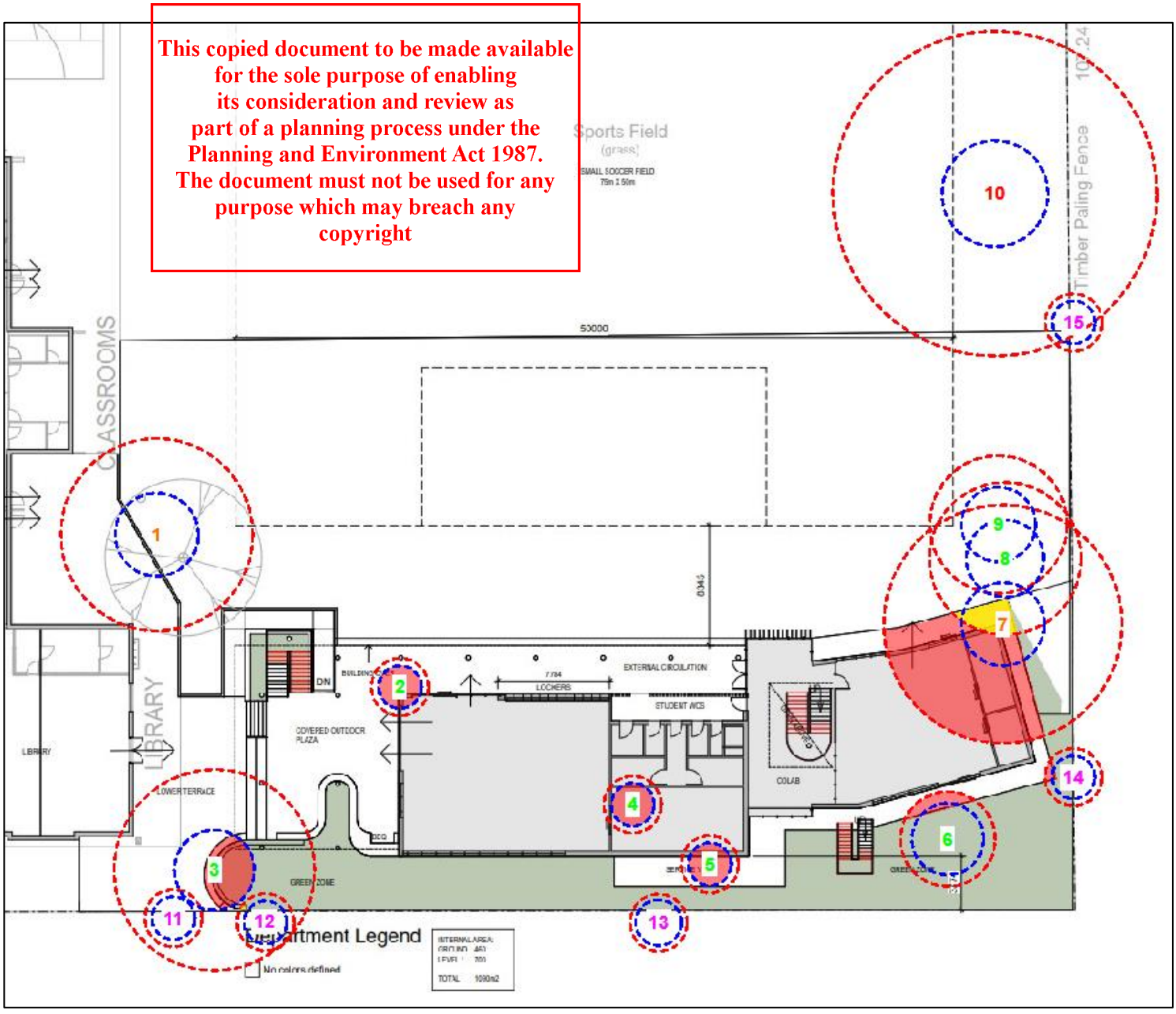


LEGEND

- LOW RETENTION VALUE
- MODERATE RETENTION VALUE
- HIGH RETENTION VALUE
- COUNCIL OWNED TREE
- NEIGHBOURING TREE
- MAJOR ENCROACHMENT
- TREE PROTECTION ZONE
- STRUCTURAL ROOT ZONE
- MINOR ENCROACHMENT

5.2 Proposed plan

The following map indicates the approximate tree locations in relation to the proposed plans:



LEGEND

- LOW RETENTION VALUE
- MODERATE RETENTION VALUE
- HIGH RETENTION VALUE
- COUNCIL OWNED TREE
- NEIGHBOURING TREE
- MAJOR ENCROACHMENT
- TREE PROTECTION ZONE
- STRUCTURAL ROOT ZONE
- MINOR ENCROACHMENT

6 Discussion

6.1 Tree protection zone

The tree protection zone (TPZ) is determined by multiplying the trunk diameter of the tree at breast height, 1.4m from ground level, by 12. A 10% encroachment on one side of this zone is acceptable without investigation into root distribution or offset of the lost area.

Section 3.2 of the Australian Standard AS4970 – 2009 Protection of Trees on Development Sites states that the TPZ of Palms, other monocots, cycads and tree ferns should not be less than 1 m outside the crown projection.

6.2 Structural root zone

The structural root zone (SRZ) is the setback required to avoid damage to stabilising structural roots. The loss of roots within the SRZ must be avoided. The SRZ is determined by applying the following formula: (D X 50) 0.42 X 0.64 where D = trunk diameter in metres.

6.3 Designing around trees

It may be possible to encroach into or make variations to the TPZ of the trees that must be retained. Encroachment includes excavation, compacted fill and machine trenching.

The following is referenced from section 3.3 of the Australian Standards AS4970 – 2009 Protection of Trees on Development Sites:

6.3.1 Minor encroachment

If the proposed encroachment is less than 10% of the area of the TPZ and is outside 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.

6.3.2 Major encroachment

If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ the project arborist must demonstrate that the trees would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods.

7 Conclusion

7.1 Tree retention value

7.1.1 Neighbouring trees

The following trees do not belong to the property owner:

- Tree 11
- Tree 12
- Tree 13
- Tree 14
- Tree 15

7.1.2 Low retention value

The following trees are considered to be of low retention value as they are relatively small specimens that are insignificant to the landscape:

- Tree 2
- Tree 3
- Tree 4
- Tree 5
- Tree 6
- Tree 9

The following tree is of moderate amenity value but low retention value as it is of poor structure & decay in trunk:

- Tree 8

7.1.3 Moderate retention value

The following trees are considered to be of moderate retention value as they are moderate sized specimens that are growing in a prominent location:

- Tree 1
- Tree 7

7.1.4 High retention value

The following tree is considered to be of high retention value as it is a large specimen that is growing in a prominent location with excellent individual character:

- Tree 10

7.2 Permit requirements

7.2.1 Significant Landscape Overlay – Schedule 9 (SLO9)

Vegetation removal

A permit is required to remove, destroy or lop a tree.
This does not apply to:

- A tree that has both:
  - a height less than 5 metres; and
  - a single trunk circumference of less than 1.0 metre at a height of 1.0 metre above ground level.
- A tree that is less than 3 metres from the wall of an existing Dwelling or an existing Dependent Person's Unit when measured at ground level from the outside of the trunk. For the avoidance of doubt, this exemption does not apply to a tree that is less than 3 metres from an existing outbuilding.
- A tree that is located less than 3 metres from an existing inground swimming pool when measured at ground level from the outside of the trunk.
- A tree that is an Environmental Weed species listed below:
  - Box Elder (*Acer negundo*)
  - Cape Wattle (*Paraserianthes lophantha*)
  - Cherry Plum (*Prunus cerasifera*)
  - Cootamundra Wattle (*Acacia baileyana*)
  - Cotoneaster (*Cotoneaster* spp.)
  - Desert Ash (*Fraxinus angustifolia*)
  - Hawthorn (*Crategus monoyna*)
  - Mirror Bush (*Coprosma repens*)
  - Privet (*Ligustrum* spp.)
  - Radiata or Monterey Pine (*Pinus radiata*)
  - Sallow Wattle (*Acacia longifolia*)
  - Sweet Pittosporum (*Pittosporum undulatum*)
  - Willow (*Salix* spp.)
- The pruning of a tree for regeneration or ornamental shaping.
- A tree which is dead or dying or has become dangerous to the satisfaction of the responsible authority.

Buildings and works

A permit is required to construct or carry out works for a front fence that is within 4 metres of any vegetation that requires a permit to remove, destroy or lop under the provisions of this schedule. This does not apply to a front fence that is undertaken to the same details, specifications and materials as the front fence being replaced, to the satisfaction of the responsible authority.

A permit is not required to construct a building or construct or carry out works provided the buildings or works are set back at least 4 metres from any tree protected under the provisions of this schedule when measured at ground level from the outside of the trunk.

7.2.2 Trees subject to permit requirements

A permit is required to remove, destroy, lop or carry out works (excepting the like-for-like replacement of a front fence) within 4m of the following trees under SLO9:

- Tree 1
- Tree 3
- Tree 6
- Tree 8
- Tree 9
- Tree 10
- Tree 15

7.3 Impact assessment

The following table represents the encroachments of the proposed development:

Tree No.	Encroachment	TPZ encroachment	SRZ encroachment	Encroachment category	Proposed retention
1	N/A	0%	0%	N/A	Retain
2	Outdoor Plaza	Entire tree	Entire tree	Major	Remove
3	Green zone wall	Entire tree	Entire tree	Major	Remove
4	Classroom	Entire tree	Entire tree	Major	Remove
5	Service yard	Entire tree	Entire tree	Major	Remove
6	Service yard	13.5%	4.9%	Major	Remove
7	Classroom	Entire tree	Entire tree	Major	Remove
8	Classroom	7.7%	0%	Minor	Retain
9	N/A	0%	0%	N/A	Retain
10	N/A	0%	0%	N/A	Retain
11	N/A	0%	0%	N/A	Retain
12	Garden zone wall	1.4%	0%	Minor	Retain
13	N/A	0%	0%	N/A	Retain
14	Service yard	7.3%	3.0%	Major	Retain
15	N/A	0%	0%	N/A	Retain

Note: encroachment calculations are approximate and do not consider over excavation

7.3.1 No encroachment

Development is not proposed to encroach into the TPZ or SRZ of the following trees:

- Tree 1
- Tree 9
- Tree 13
- Tree 15

The proposed development is not expected to compromise the long-term viability of the above-mentioned trees.

Less invasive construction measures or development redesign are therefore not required to ensure that these trees would remain viable post construction.

7.3.2 Minor encroachment

The proposed development is considered to be a minor encroachment according to section 3.3.2 of the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites' of the following trees:

- Tree 8
- Tree 12

The proposed development is not expected to compromise the health and/or structural integrity of the above-mentioned trees.

Less invasive construction measures or development redesign are therefore not required to ensure that these trees remain viable post construction.

7.3.3 Major encroachment

The proposed development is considered to be a major encroachment according to section 3.3.3 of the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites' of the following trees:

- Tree 2
- Tree 3
- Tree 4
- Tree 5
- Tree 6
- Tree 7
- Tree 14

Tree 2

- The tree is located within the footprint of the proposed outdoor plaza.
- The proposed development requires the removal of this tree.
- This tree is of low retention value.
- This tree is not subject to any permit restrictions.
- In the event of removal, less invasive construction measures or development redesign are not required.

Tree 3

- The tree is located within the footprint of the proposed green zone wall.
- The proposed development requires the removal of this tree.
- This tree is of low retention value.
- This tree is subject to SLO9 permit restrictions.
- In the event of removal, less invasive construction measures or development redesign are not required.

Tree 4

- The tree is located within the footprint of the proposed classroom.
- The proposed development requires the removal of this tree.
- This tree is of low retention value.
- This tree is not subject to any permit restrictions.
- In the event of removal, less invasive construction measures or development redesign are not required.

Tree 5

- The tree is located within the footprint of the proposed service yard.
- The proposed development requires the removal of this tree.
- This tree is of low retention value.
- This tree is not subject to any permit restrictions.
- In the event of removal, less invasive construction measures or development redesign are not required.

Tree 6

- The footprint of the proposed service yard is considered to be a major encroachment (6.3.2) of 13.5% of the TPZ and 4.9% of the SRZ.
- The construction of the proposed service yard has the potential to compromise the tree's long-term viability.
- This tree is of low retention value and is proposed to be removed.
- This tree is subject to SLO9 permit restrictions.
- In the event of removal, less invasive construction measures or development redesign are not required.

Tree 7

- The tree is located within the footprint of the proposed classroom.
- The proposed development requires the removal of this tree.
- This tree is of moderate retention value.
- This tree is not subject to any permit restrictions.
- In the event of removal, less invasive construction measures or development redesign are not required.

Tree 14

- The proposed footprint of the service yard is considered to be a major encroachment (6.3.2) of 7.3% of the TPZ and 3.0% of the SRZ.
- This is a neighbouring tree that is proposed to be retained.
- This tree is not subject to any permit restrictions.
- Although this is considered to be a major encroachment, the tree is expected to remain viable due to the following factors:
  - The tree is of a hardy species that generally tolerates root disturbance well.
  - This is a small tree that is expected to have a small and vigorous root system.
  - The tree is of good health and vigour.
- Less invasive construction measures are not required to ensure that this tree would remain viable post construction.

8 Recommendations

8.1 Tree retention

The following tree of moderate retention value is proposed to be retained:

- Tree 1

The following trees of low retention value are proposed to be retained:

- Tree 8
- Tree 9

The following tree of high retention value is proposed to be retained:

- Tree 10

The following neighbouring trees are proposed to be retained:

- Tree 11
- Tree 12
- Tree 13
- Tree 14
- Tree 15

The following is recommended in order to ensure that trees that are proposed to be retained would remain viable post construction:

- Comply with less invasive construction measures (8.3)
- Comply with tree protection measures (8.4)

8.1.1 Permit requirements for trees that are proposed to be retained

A permit is required to remove, destroy, lop or carry out works (excepting the like-for-like replacement of a front fence) within 4m of the following trees under SLO9 of the following trees that are proposed to be retained:

- Tree 1
- Tree 8
- Tree 9
- Tree 10
- Tree 15

8.2 Tree removal

The following trees of moderate retention value are proposed to be removed:

- Tree 7

The following trees of low retention value are proposed to be removed:

- Tree 2
- Tree 3
- Tree 4
- Tree 5
- Tree 6

In the event of tree removal, the following is recommended:

- Tree removal should be undertaken prior to construction commencing or during demolition.
- Written consent from the responsible authority must be obtained prior to tree removal (if required).

8.2.1 Permit requirements for trees that are proposed to be removed

The following trees that are proposed to be removed require a permit under SLO9:

- Tree 3
- Tree 6

8.3 Less invasive construction measures

- Less invasive construction measures or development redesign is not required to ensure that trees which are proposed to be retained (8.1) would remain viable post construction.

8.3.1 Underground services

In the event that any drains or services are included in a greater than 10% encroachment into the TPZ or encroach into the SRZ of trees that are proposed to be retained, the following should be undertaken:

- Install underground services via low pressure hydro-excavation under arborist supervision, unless a root investigation determines that the trees would remain viable.

Note: encroachment calculations must consider additional encroachments e.g. site cuts, retaining walls, building footprint.

8.4 Tree protection measures

8.4.1 Pruning

- Pruning of trees that are proposed to be retained (8.1) is not required for clearance purposes and should therefore not be undertaken.

8.4.2 Tree protection fencing

- Tree protection fencing (TPF) should be installed for Trees 1, 8 & 9.
- TPF should be installed as close to the TPZ boundary as practically possible provided that it does not encroach onto the road, footpath, crossover or proposed works.
- The existing site perimeter fencing may be used as TPF for neighbouring trees (Trees 11- 15).
- TPF should be installed prior to machinery being brought onsite for the demolition of the existing dwelling.
- TPF should be a minimum 1.8m high and comprised of wire mesh (or similar) supported by concrete feet (or similar).
- TPF should remain intact for the duration of the project.
- TPF should only be removed or shifted with the approval of the Project Arborist and the Responsible Authority.

8.4.3 Tree protection signage

- The signage on the TPF should be placed on TPZ fencing at regular intervals so that it is visible from any angle outside the TPZ.
- Signage should state 'Tree Protection Zone, No Access' or similar.
- Signage should be greater than 600mm X 400mm in size.
- The contact details of the project arborist and site manager should be written clearly on the sign.

8.4.4 Ground protection

- Ground protection is not expected to be required.

8.4.5 Scaffolding

- When scaffolding must be erected within Tree Protection Zones, cover the ground with a 10cm layer of mulch, and then cover this with boards and plywood to prevent soil compaction.

8.4.6 Site storage

- A designated storage area where building materials, chemicals etc. can be stored should be located outside the TPZ of retained trees.

8.4.7 Prohibitions within the TPZ

The following activities are prohibited within the TPZ:

- Machine excavation including trenching (unless approved by the Responsible Authority)
- Cultivation
- Storage
- Preparation of chemicals, including cement products
- Parking of vehicles
- Refuelling
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Lighting of fires
- Physical damage to the tree
- Pruning or damaging of roots greater than 30mm in diameter

9 Limitation of liability

TMC Reports and their employees are tree specialists who use their qualifications, education, knowledge, training, diagnostic tools and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of this assessment and report.

Trees are living organisms that fail in ways the arboriculture industry does not fully understand. Conditions are often hidden within trees and below ground. Unless otherwise stated, observations have been made from ground level and limited to accessible components without dissection, excavation or probing. There is no guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of this report, such as property boundaries and ownership, disputes between neighbours, sight lines, landlord-tenant matters, and related incidents. Such issues cannot be taken into account unless complete and accurate information is given prior to or at the time of site inspection.

Information contained in this report covers those items that were examined and reflect the condition of those items at the time of inspection. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the trees or property in question may not arise in the future. Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk. The only way to eliminate all risks involved with a tree is to eliminate the tree.

All written reports must be read in their entirety, at no time shall part of the written assessment be referred to unless taken in full context of the whole written report.

10 Definition of terms

The following descriptors are used as indicators only. Other factors may be used in assessing an individual tree's health, structure, ULE, retention value and amenity value.

10.1 Tree health

Category	Description
Good:	The tree is demonstrating good or exceptional growth for the species. The tree is exhibiting a full canopy of foliage and may have only minor pest or disease problems. Foliage colour size and density is typical of a healthy specimen of that species.
Fair:	The tree is in reasonable condition and growing well for the species. The tree may exhibit an adequate canopy of foliage. There may be some dead wood in the crown, some grazing by insect or animals may be evident, and/or foliage colour, size or density may be atypical for a healthy specimen of that species.
Poor:	The tree is not growing to its full capacity. Extension growth of the laterals may be minimal. The canopy may be thinning or sparse. Large amounts of dead wood may be evident throughout the crown, as well as significant pest and disease problems. Other symptoms of stress indicating tree decline may be present.
Very poor:	The tree appears to be in a state of decline, and the canopy may be very thin and sparse. A significant volume of dead wood may be present in the canopy, or pest and disease problems may be causing a severe decline in tree health.
Dead:	The tree is no longer alive.

10.2 Structure

Category	Description
Good:	The tree has a well-defined and balanced crown. Branch unions appear to be strong, with no defects evident in the trunks or the branches. Major limbs are well defined. The tree would be considered a good example for the species. Probability of significant failure is highly unlikely.
Fair:	The tree has some minor problems in the structure of the crown. The crown may be slightly out of balance at some branch unions or branches may be exhibiting minor structural faults. If the tree has a single trunk, this may be on a slight lean, or be exhibiting minor defects. Probability of significant failure is low.
Poor:	The tree may have a poorly structured crown, the crown may be unbalanced, or exhibit large gaps. Major limbs may not be well defined; branches may be rubbing or crossing over. Branch unions may be poor or faulty at the point of attachment. The tree may have suffered major root damage. Probability of significant failure is moderate.
Very poor:	The tree has a poorly structured crown. The crown is unbalanced or exhibits large gaps. Major limbs are not well defined. Branch unions may be poor or faulty at the point of attachment. A section of the tree has failed or is in imminent danger of failure. Active failure may be present, or failure is probably in the immediate future.
Failed:	A significant section of the tree or the whole tree has failed.

10.3 Useful life expectancy (ULE)

Category	Description
Unsafe:	The tree is considered dangerous in the location and should be addressed as a priority..
0 years:	The tree no longer provides any amenity value.
Less than 5 years:	The tree under normal circumstances and without extra stress should be safe and have value of maximum of 5 years. The tree will need to be replaced in the short term. Replacement plants should be established as soon as possible if there is efficient space, or consideration should be given to the removal of the tree to facilitate replanting.
5 to 10 years:	The tree under normal circumstances and without extra stress should be safe and have value of maximum of 10 years. Trees in this category may require regular inspections and maintenance particularly if they are large specimens. Replacement plants should be established in the short term if there is sufficient space, or consideration should be given to the removal of the tree to facilitate replanting.
10 to 20 years:	The tree under normal circumstances and without extra stress should be safe and of value of up to 20 years. During this period, regular inspections and maintenance will be required.
20 + years:	The tree under normal circumstances and without extra stress should be safe and of value of more than 20 years. During this period, regular inspections and maintenance will be required.

10.4 Tree retention value

Category	Description
High:	The tree may be significant in the landscape, offer shade and other amenities such as screening. The tree may assist with erosion control, offer a windbreak or perform a vital function in the location (e.g. habitat, shade, flowers or fruit). The tree is free from structural defects and is vigorous. Consider the retention of the tree and designing the development to accommodate the tree.
Moderate:	The tree may offer some screening in the landscape or serve a particular function in the location and have minor structural defects. The tree may be entering the mature stage of its life cycle. The tree may be retained if it does not hamper the design intent.
Low:	The tree offers very little in the way of screening or amenity and may have significant structural defects. The tree may also be mature and entering the senescent stage of its life cycle. The tree may be removed if necessary.
Neighbouring tree:	The tree is located within an adjoining private property/land. The tree is to be protected unless written consent from the tree owner(s) and/or responsible authority is obtained. Consider the retention of the tree unless written consent is obtained from the tree owner and/or responsible authority.
Council owned tree:	The tree is located within Council owned land. The tree is to be protected unless written consent from the responsible authority is obtained. Consider the retention of the tree unless written consent is obtained from the tree owner and/or responsible authority.

10.5 Age

Category	Description
Young:	Juvenile or recently planted approximately 1-7 years.
Semi Mature:	An established tree but one which has not reached its potential ultimate height and has significant growth potential. Tree is actively growing.
Mature:	Tree has reached expected size in its growing conditions.
Senescent:	Tree is over mature and has started to decline.
Dead:	The tree is no longer alive.

10.6 Amenity value

Category	Description
Very Low:	Tree makes little or no amenity value to the site or surrounding areas. In some cases, the tree might be detrimental to the area's amenity value (e.g. unsightly, risk of weed spread).
Low:	Tree makes some contribution of amenity value to the site but makes no contribution to the amenity value of surrounding areas. The removal of the tree may result in little loss of amenity. Juvenile trees, including street trees are generally included in this category. However, they may have the potential to supply increased amenity in the future.
Moderate:	The tree makes a moderate contribution to the amenity of the site and/or may contribute to the amenity of the surrounding area.
High:	The tree makes a significant contribution to the amenity value of the site, or the tree makes a moderate contribution to the amenity value of the larger landscape.

10.7 Terms within the tree data table

Category	Description
DBH:	Diameter at breast height (1.4m from ground level). Combined DBH has been calculated according to the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites'.
DAB:	(Diameter above buttress) Diameter of the trunk measured immediately above the root buttress.
CA1 / CA1.5:	Circumference of trunk at either 1m or 1.5m from ground level. Combined circumference is the sum of individual stem circumferences.
TPZ:	(Tree protection zone) An area 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 development. Typically expressed as a radius in metres that defines a circle with the trunk/stem at its centre.
SRZ:	(Structural root zone) An area around the base of a tree required for the tree's stability in the ground. Woody root growth and soil cohesion in this area are necessary to hold the tree upright. Typically expressed as a radius in metres that defines a circle with the trunk/stem at its centre.