

**TREE CARE CONSULTING  
'SUSTAINABLE PLANNING SOLUTIONS'**



# **PRE-DEVELOPMENT ARBORICULTURAL IMPACT ASSESSMENT**

**Prepared for:** Up Property Pty Ltd

**Site Location:** 107-123 High Street, Belmont, VIC 3216

**Date/s Inspected:** 29/08/2025

**Date of Report:** 20/12/2025



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# 1. ARBORIST DETAILS

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# 2. OVERVIEW

Jimmy Ross, a level 5 Consulting Arborist from Tree Care Consulting, has been engaged by Up Property Pty Ltd to undertake a Pre-Development Arboricultural Impact Assessment. The purpose of this report is to identify potential negative impacts to existing trees within the road reserves of High Street and Wyuna Parade, Glenara Court, Belmont and vegetation within the subject allotment 107-123 High Street, Belmont, VIC 3216.

Three trees (or groups of) within the neighbouring allotment, 4 Wyuna Parade, have also been assessed within the scope of this report.

# 3. METHODOLOGY

A ground-based Visual Tree Assessment (VTA) was performed by Jimmy Ross, a level 5 Consulting Arborist from Tree Care Consulting. The VTA was taken from ground level to determine tree health, structure, and useful life expectancy (ULE) of each tree (See Appendix C). No advanced diagnostics (e.g., aerial inspection, exploratory excavation, trunk radar) were performed unless otherwise stated.

- Diameter tape was utilised to obtain Diameter at Standard Height (DSH) at 1.4m above ground level.
- Nominal Root Zones (NRZ) and Structural Root Zones (SRZ) were calculated in accordance with AS – 4970 -2025 - *Protection of Trees on Development Sites*.
- Field data was recorded with the Fulcrum collector app and was utilised to calculate NRZ and SRZ within this report.
- All photographs were taken at the time of the inspection and shall be used within this report for referencing or identification purposes.
- Nearmaps and QGIS were utilised for aerial images.
- Forestry Pro2 was used to obtain tree heights.
- Tree widths have been estimated.
- Tree identification can be recognised through the tree location map.
- All measurements mentioned are from the centre of trees (unless specified otherwise).

## 4. LEGAL STATUS

No tree controls apply within the subject and neighbouring allotments.

Municipal trees are protected by the City of Greater Geelong's Street Tree Policy.

<https://www.geelongaustralia.com.au/trees/documents/item/8d828c6850eae4.aspx>

### 52.37 CANOPY TREES

#### Permit requirement

A permit is required to remove, destroy or lop a canopy tree in the Mixed-Use Zone, Township Zone, Residential Growth Zone, General Residential Zone, Neighbourhood Residential Zone, and Housing Choice and Transport Zone.

This does not apply:

- If the table of exemptions in clause 52.37-8 specifically states that a permit is not required.
- To the removal, destruction or lopping of a canopy tree (other than a boundary canopy tree) identified for assessment in an application to which clause 54, 55, 57 or 58 applies and the tree is not removed, destroyed or lopped until the permit is issued.
- To the removal, destruction or lopping of a canopy tree (other than a boundary canopy tree) if the site is developed with an existing dwelling.

#### 52.37-8 Table of exemptions

The requirement to obtain a permit does not apply to:

##### Dead canopy tree

A canopy tree that is dead.

##### Emergency works

A canopy tree that is to be removed, destroyed or lopped:

- in an emergency by, or on behalf of, a public authority or municipal council to create an emergency access or to enable emergency works.
- or where it presents an immediate risk of personal injury or damage to property.
- Only that part of the canopy tree that presents the immediate risk may be removed, destroyed or lopped under this exemption

##### Fire protection

A canopy tree that is to be removed, destroyed or lopped to the minimum extent necessary to carry out the following fire protection activities:

- fire fighting;
- planned burning;
- making or maintenance of a fuel break or firefighting access track (or any combination thereof) that does not exceed a combined width of 6 metres;
- the making of a strategic fuel break up to 40 metres wide by, or on behalf of, a public authority in accordance with a strategic fuel break plan approved by the Secretary to the

Department of Energy, Environment and Climate Action (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987);

- in accordance with a fire prevention notice issued under either:
  - section 87 of the Fire Rescue Victoria Act 1958;
  - section 65 of the Forests Act 1958;
  - or section 41 of the Country Fire Authority Act 1958; or
- keeping a canopy tree clear of, or minimising risk of bushfire ignition from, an electric line in accordance with a code of practice prepared under Part 8 of the Electricity Safety Act 1998;
- minimising the risk to life and property from bushfire on a roadside of a public road managed by the relevant responsible road authority, and carried out by, or on behalf of that authority, in accordance with the written agreement of the Secretary to the Department of Energy, Environment and Climate Action (as constituted under Part 2 of the Conservation, Forests and Lands Act 1987 ). In this exemption, roadside, public road and responsible road authority have the same meanings as in section 3 of the Road Management Act 2004.

Note: Additional permit exemptions for bushfire protection are provided at Clause 52.12.

### **Lopping and pruning for maintenance**

Lopping or pruning a canopy tree, for maintenance only, provided no more than 1/3 of the foliage of the tree is lopped or pruned.

This exemption does not apply to:

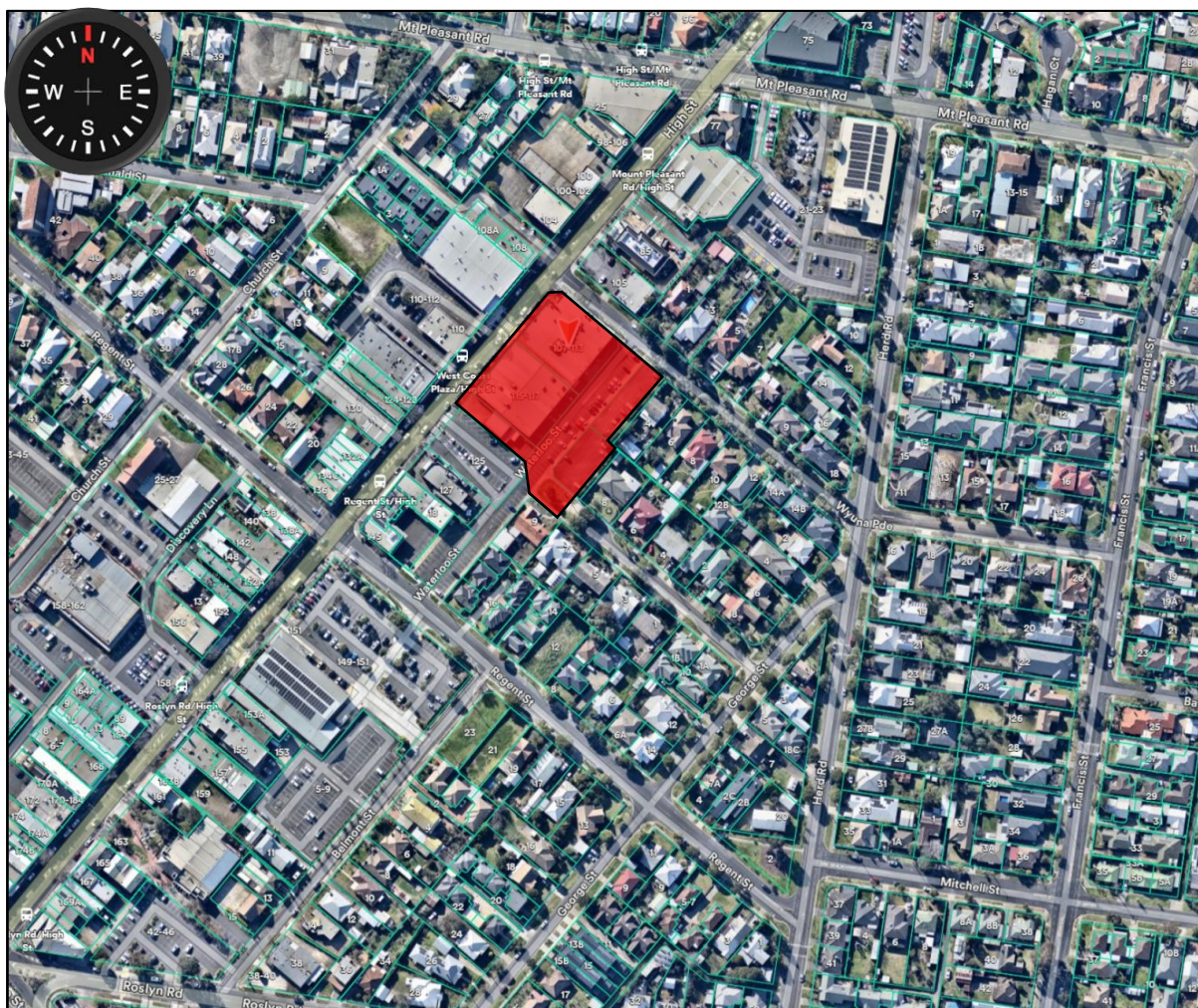
- the pruning or lopping of the trunk of a canopy tree;
- pruning or lopping that would reduce the height of the tree to less than 5 metres or the canopy diameter of the tree to less than 4 metres.

### **Noxious and environmental weeds**

A canopy tree that is identified as a noxious weed in:

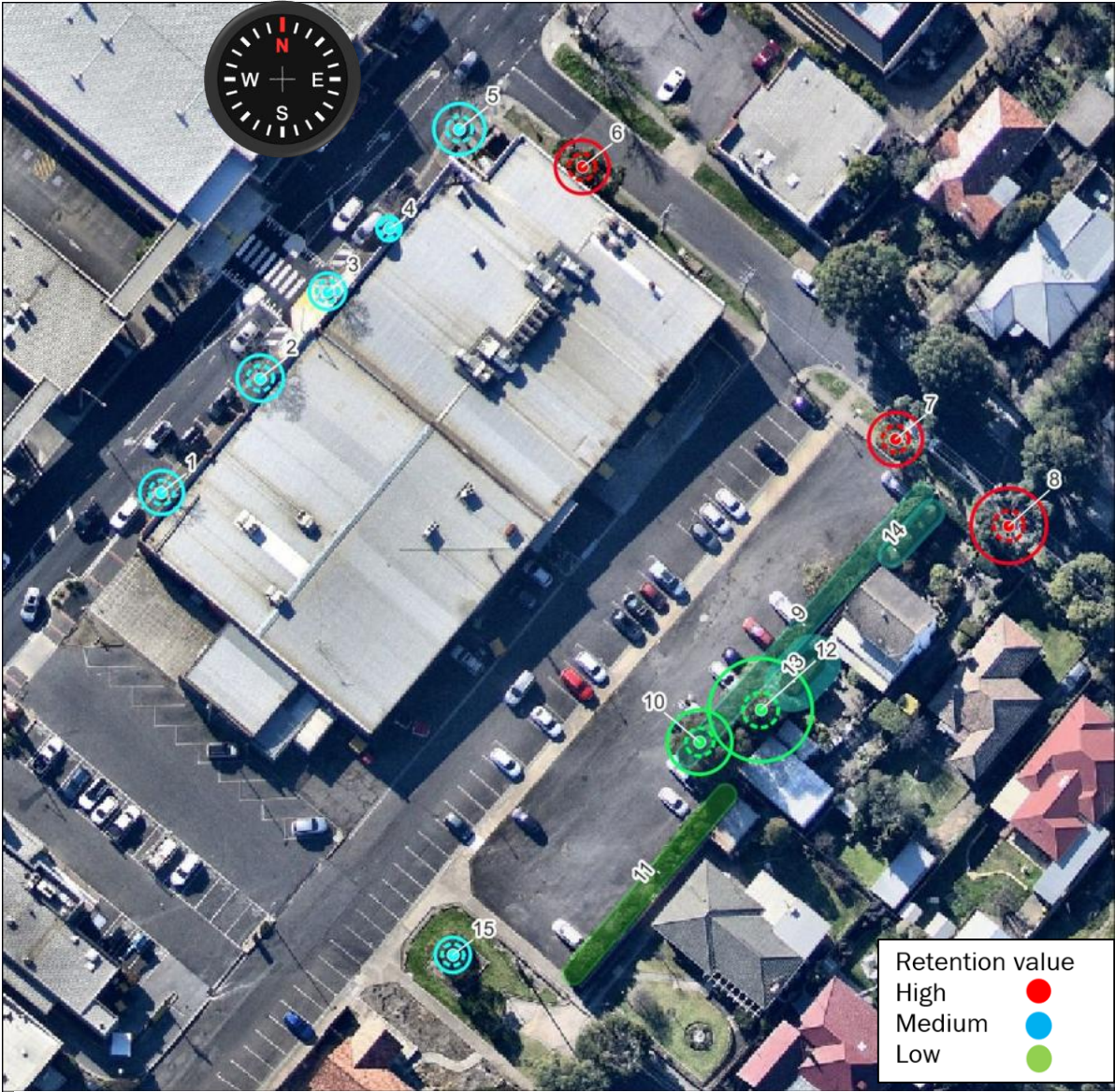
- a declaration under section 58 or section 58A of the Catchment and Land Protection Act 1994. This exemption does not apply to Australian Dodder (*Cuscuta australis*);
- or a planning scheme.

## 5. SITE LOCATION



SUBJECT ALLOTMENT. HIGH STREET, BELMONT, VIC 3216.

### 6. TREE LOCATIONS



Tree locations are indicative only. NRZ and SRZ calculated in accordance with AS – 4970 -2025 - Protection of Trees on Development Sites.

## 7. TREE DATA

Tree No.	Identification	Origin	Permit required for removal	Age	ULE	Health	Structure	Hazard	Height (m)	Width (m)	Retention Value	Recommended for retention	DSH (cm) * = multistem	NRZ (m)	SRZ (m)
1	<i>Robinia pseudoacacia</i> (Honey Locust)	Exotic,Planted	Permit Required	SM	L	G	P	L	6	4	M	Retain	30	3.6	2
2	<i>Robinia pseudoacacia</i> (Honey Locust)	Exotic,Planted	Permit Required	SM	L	G	G	L	7.5	5	M	Retain	32	3.8	2.1
3	<i>Robinia pseudoacacia</i> (Honey Locust)	Exotic,Planted	Permit Required	SM	L	G	F	L	6.5	5	M	Retain	25	3	1.8



1

**Observations**

Situated within road reserve. Splitting in trunk.

**Recommendations**

Retain tree/s.



2

**Observations**

Situated within road reserve. Codominant leaders, union appears sound.

**Recommendations**

Retain tree/s.



3

**Observations**

Situated within road reserve. Codominant leaders, union appears sound.

**Recommendations**

Retain tree/s.

Pre-Development Arboricultural Impact Assessment. 107-123 High Street, Belmont, VIC 3216

Tree No.	Identification	Origin	Permit required for removal	Age	ULE	Health	Structure	Hazard	Height (m)	Width (m)	Retention Value	Recommended for retention	DSH (cm) * = multistem	NRZ (m)	SRZ (m)
4	<i>Robinia pseudoacacia</i> (Honey Locust)	Exotic,Planted	Permit Required	SM	L	G	F	L	5	3	M	Retain	14	2	1.5
5	<i>Robinia pseudoacacia</i> (Honey Locust)	Exotic,Planted	Permit Required	SM	L	G	P	L	6.5	6	M	Retain	35	4.2	2.1
6	<i>Lophostemon confertus</i> (Brush Box)	Native,Planted	Permit Required	SM	L	G	G	L	4	8	H	Retain	37*	4.4	2.2



4

**Observations**

Situated within road reserve. Codominant leaders, union appears sound.

**Recommendations**

Retain tree/s.



5

**Observations**

Situated within road reserve. Codominant leaders with included bark union.

**Recommendations**

Retain tree/s.






6

**Observations**

Situated within road reserve. Codominant leaders, union appears sound. Past pruning / lopping for powerline utility clearance.

**Recommendations**




Retain tree/s.

Tree No.	Identification	Origin	Permit required for removal	Age	ULE	Health	Structure	Hazard	Height (m)	Width (m)	Retention Value	Recommended for retention	DSH (cm) * = multistem	NRZ (m)	SRZ (m)
7	<i>Lophostemon confertus</i> (Brush Box)	Native,Planted	Permit Required	SM	L	G	G	L	4	6	H	Retain	37	4.4	2.2
8	<i>Lophostemon confertus</i> (Brush Box)	Native,Planted	Permit Required	SM	L	G	G	L	5	7	H	Retain	52	6.2	2.5
9	Mixed species (Mixed species)	Native,Planted,Weed Species	Permit Not Required	SM	S	G	P	L	4	48	M	Remove	17*	2	1.6
															
7				8				9							
<p><b>Observations</b> Situated within road reserve. Codominant leaders, union appears sound. Past pruning / lopping for powerline utility clearance.</p> <p><b>Recommendations</b> Retain tree/s.</p>				<p><b>Observations</b> Situated within road reserve. Codominant leaders, union appears sound. Past pruning / lopping for powerline utility clearance.</p> <p><b>Recommendations</b> Retain tree/s.</p>				<p><b>Observations</b> Plantation. Situated within subject allotment. Epicormic growth throughout canopies. Severe structural damage to branch/es. Structurally unsound specimen/s.</p> <p><b>Recommendations</b> Remove small trees/shrubs/bushes.</p>							

Pre-Development Arboricultural Impact Assessment. 107-123 High Street, Belmont, VIC 3216




Tree No.	Identification	Origin	Permit required for removal	Age	ULE	Health	Structure	Hazard	Height (m)	Width (m)	Retention Value	Recommended for retention	DSH (cm) * = multistem	NRZ (m)	SRZ (m)
10	<i>Eucalyptus viminalis</i> (Manna Gum)	Indigenous,Planted	Permit Required	SM	R	G	H	H	8	8	L	Remove	44*	5.3	2.3
11	<i>Mixed species</i> (Mixed species)	Native,Planted,Weed Species	Permit Not Required	SM	S	G	P	L	3	33	L	Remove	15*	2	1.5
12	<i>Schinus areira</i> (Peppercorn Tree)	Exotic,Planted	Permit Not Required	M	M	G	P	L	9	9	L	Retain	71*	8.5	2.9

 <p style="text-align: center;">10</p> <p><b>Observations</b> Situated within subject allotment. 100% epicormic regrowth from large decaying stump.</p> <p><b>Recommendations</b> Remove tree/s.</p>	 <p style="text-align: center;">11</p> <p><b>Observations</b> Plantation. Situated within subject allotment. Multiple leaders with included bark unions.</p> <p><b>Recommendations</b> Remove shrubs/bushes.</p>	 <p style="text-align: center;">12</p> <p><b>Observations</b> Approximately 0.7m from title boundary. Tree has been lopped at approximately 6m. Situated within neighbouring allotment. Upper canopy 100% epicormic regrowth.</p> <p><b>Recommendations</b> Retain tree/s.</p>
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Tree No.	Identification	Origin	Permit required for removal	Age	ULE	Health	Structure	Hazard	Height (m)	Width (m)	Retention Value	Recommended for retention	DSH (cm) * = multistem	NRZ (m)	SRZ (m)
13	<i>Pittosporum undulatum</i> (Sweet Pittosporum)	Planted, Weed Species	Permit Not Required	M	M	G	P	L	3	5	M	Retain	39	4.7	2.2
14	<i>Mixed species</i> (Mixed species)	Planted, Weed Species	Permit Not Required	SM	M	G	P	L	4	10	M	Retain	19*	2.3	1.6
15	<i>Eucalyptus leucoxylon</i> (Yellow Gum)	Indigenous, Planted	Permit Required	SM	L	G	G	L	6	6	M	Retain	24*	2.9	1.8

 <p style="text-align: center;">13</p> <p><b>Observations</b> Approximately 0.8m from title boundary. Group of 2. Situated within neighbouring allotment. Trees has been topped. Upper canopy 100% epicormic regrowth. <b>Recommendations</b> Retain tree/s.</p>	 <p style="text-align: center;">14</p> <p><b>Observations</b> Situating within neighbouring allotment. Trees have been topped. Approximately 0.6m from title boundary. Group of 5. Upper canopy 100% epicormic regrowth. <b>Recommendations</b> Retain tree/s.</p>	 <p style="text-align: center;">15</p> <p><b>Observations</b> Situating within road reserve. Codominant leaders, union appears sound. <b>Recommendations</b> Retain tree/s.</p>
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## 8. OBSERVATIONS/DISCUSSION

The subject allotment currently has multiple retail shop frontages on High Street, Belmont. Waterloo Street is situated directly behind the retail shops and splits the subject allotment into two sections. The remaining section of the allotment is currently existing sealed carparks, which abut the residential allotments of 4 Wyuna Parade, Belmont VIC 3216 and 8 Glenara Court, Belmont VIC 3216.

At the time of inspection, a total of 14 trees (or groups of trees) were assessed.

Five trees (Trees 1-5), *Robinia pseudoacacia* (Honey Locust), are situated within the road reserve of High Street in planter cutouts in the concrete footpath. Tree 1 was observed to have a split in its main stem (trunk) on the south-western side of the tree.

Three trees (Trees 6-8), *Lophostemon confertus* (Brush Box) are situated within the road reserve of Wyuna Parade Street in grassed nature strips. These trees have been routinely pruned for overhead powerline clearance, resulting in low and wide spreading canopies. Tree 6's canopy was noted to have grown up and against the existing shop structure.

Tree 9 (group planting) abuts 4 Wyuna Parade. The boundary plantings consist of native and weed species. The vegetation has been poorly managed/lopped, resulting in epicormic regrowth as canopies. Tree 10 is situated at the southern end of the planted group. The specimen is the largest tree in the section and was observed to have a full canopy of epicormic regrowth from a cut stump. This tree raises safety concerns due to the size of its epicormic canopy.

Tree 11 (group planting) abuts 8 Glenara Court. The garden beds of Trees 9 and 11 (groups of) were observed to be full of fast-food litter, drug-taking needles and evidence of a small fire up along the existing wooden paling fence.

Tree 12 (single tree) and Trees 13 and 14 (groups of) are situated within the residential allotment 4 Wyuna Parade. Tree 12 is significant in size and has previously been lopped to approximately 6m in height. The canopy is entirely epicormic growth. Trees 9 and 11 (groups of) are significantly smaller specimens, which have also been routinely lopped.

Tree 15 is situated within a pocket park, directly south-west of the subject allotment, at the northern end of Glenara Court.

Plans provided by the client indicate that the existing commercial buildings and bitumen carparks at 107-123 High Street, Belmont, VIC 3216, are proposed to be demolished.

The provided plans propose the construction of two multi-level mixed-use buildings. The two commercial/residential buildings are proposed to be joined through a residential entry lobby on High Street. These structures are proposed to have the residential lobby tenancy and the entry to carparking on the ground floor and two levels of basement parking approximately 5.5m beneath the ground floor.

The existing bitumen carparking at the rear along Waterloo Street is proposed to be replaced with five multi-level residential townhouses.

Significant landscaping is proposed in and around the mixed-use buildings and townhouses to integrate the structural architecture and design.

Proposed works that are situated within the calculated NRZs of trees assessed have the potential to impact existing trees negatively. Please note that most trees have pre-existing impacts (i.e., footpath paving, structures, sealed car parking, and concrete garden edging) within their calculated NRZs and/or SRZs.

Encroachments are classified as **minor** if they are less than or equal to 10% of the area of the NRZ lost.

Encroachments are classified as **moderate** if they are greater than 10% and less than or equal to 20% of the area of the NRZ lost and are outside the SRZ.

Encroachments are classified as **major** if they are greater than 20% of the area of the NRZ or inside the SRZ.

Proposed encroachments are as follows.

### 8.1 PROPOSED ENCROACHMENTS WITHIN NRZS

Tree Number	Calculated TPZ (m)	Existing Encroachment %	Proposed New Encroachment %	Encroachment Classification	Total Encroachment Percentage %	Proposed for Retention	Permit Required for Removal
1	3.6	15.1	0.0	NIL	0.0	Yes	Yes
2	3.8	16.8	0.0	NIL	0.0	Yes	Yes
3	3.0	10.3	0.0	NIL	0.0	Yes	Yes
4	2.0	1.1	0.0	NIL	0.0	Yes	Yes
5	4.2	0.9	0.0	NIL	0.0	Yes	Yes
6	4.4	8.2	0.0	NIL	0.0	Yes	Yes
7	4.4	9.2	0.0	NIL	0.0	Yes	Yes
8	6.2	0.0	0.0	NIL	0.0	Yes	Yes
9 (Plantation)	2.0	9.0	0.0	Major	100	No	No
10	5.3	40.0	100	Major	100	No	No
11 (Plantation)	2.0	40.0	100	Major	100	No	No

Tree Number	Calculated TPZ (m)	Existing Encroachment %	Proposed New Encroachment %	Encroachment Classification	Total Encroachment Percentage %	Proposed for Retention	Permit Required for Removal
12	8.5	47.9	16.7	Moderate	16.7	Yes	No
13(2)	4.7	39.9	13.2	Moderate	8.0 and 13.2	Yes	No
14 (5)	2.3	40.1	15.8	Moderate	15.8	Yes	No
15	2.9	0.0	100	Major	100	Yes	Yes

Encroachments are classified as **minor** if they are less than or equal to 10% of the area of the NRZ lost.

Encroachments are classified as **moderate** if they are greater than 10% and less than or equal to 20% of the area of the NRZ lost and is outside the SRZ.

Encroachments are classified as **major** if they are greater than 20% of the area of the NRZ or inside the SRZ.

## **8.1 POORLY ATTACHED STEM UNIONS**

Stem attachments in trees that are separated by bark being included in their union are frequently found in urban and forest trees. Such attachments have a reputation of being structural flaws in tree crowns and they are commonly recorded as a defect by qualified arborists.

Where only two branches arise from a junction in a tree, this is formally referred to as a bifurcation. It has been established that the 'diameter ratio' between the two branches that arise from a bifurcation in a tree has a substantial effect on its mechanical strength and failure mode. Failures often occur when the two branches are nearer to the same diameter, as there is no compressive yielding, and the bifurcation fails by a sudden splitting at its apex. Poorly attached stem unions are commonly found within trees but can be remedied by a qualified arborist through formative pruning at the juvenile/semi mature stage of a tree's development.

## **8.2 EPICORMIC GROWTH IN TREES**

Epicormic growth is an upright shoot emerging on the trunk or a branch above the soil or graft (if present) from an epicormic and/or advantageous bud. Epicormic growth is often associated with a physiological stress, over pruning, drought, a lightning strike or root damage.

Compared with the deeper attachment characteristics of branches that form during the tree's growth, epicormic branches form relatively weak unions with the trunk or other branches – they have shallower attachments. In certain circumstances, epicormic growth may increase the risk of branches breaking off that tree. In particular, when epicormic branches grow quickly and become too heavy for the trunk to support them. Tree failure is more likely if:

- The union between the epicormic branch and the trunk or branch is cracked, cankered or decayed,
- The trunk below the epicormic branch is decayed or;
- The load exceeds the trees mechanical strength

Windy conditions may precipitate any of these situations.

## **9. CONCLUSION**

Municipal trees situated within the road reserves of High Street and Wyuna Parade stand out as significant to the existing streetscape and immediate area.

Tree 1 has a split in the main stem (trunk) on the southern side. The wound shows healthy reaction wood, indicating the tree is attempting to seal the open wound. This specimen raises no immediate concerns for safety.

Tree 10 was observed to have an entire epicormic canopy. The stump was noted to have decaying wood, and this specimen raises safety concerns. The large canopy is supported by the decaying base of the tree and would be expected to incur significant failures within the next 6 months.

Trees 9 (plantation), 10 and 11 (plantation) are all situated along the rear boundary of the subject allotment and are nominated for removal. This vegetation has been poorly managed with constant lopping, resulting in over-pruned small trees, shrubs and one medium-sized tree (Tree 10). This entire section is nominated for removal and should be considered lost.

Trees 1 to 6 have existing encroachment within their NRZs. The existing structures are proposed for demolition, and the new mixed-use buildings are to be constructed within the same building envelope. The Project Arborist believes tree roots cannot penetrate the footings of commercial structures of this size. It is likely these trees were planted after the construction of the existing building. The proposed calculated encroachments are like-for-like, and the actual impact should be considered zero, no impact. The Project Arborist should be on-site for the demolition of the shop frontages and side wall (adjacent to Tree 6) and removal of the foundational footings within the calculated root zones of these trees. The Project Arborist onsite is to ensure tree canopies and roots are not demolished and negatively impacted through the demolition process.

The proposed frontage awning protrudes approximately 0.5m on High Street and may require minor canopy pruning, leading to awning installation, once the actual awning alignment and height are obvious. Canopy pruning is expected to trigger permit requirements under the City of Greater Geelong's Street Tree Policy.

Tree 6's canopy has been left to grow up against the side of the existing structure on Wyuna Parade. This tree requires significant pruning away from the existing building to eliminate entire limbs being torn from the canopy during demolition, and adequate room for construction. Existing underground utility services may be situated in the vicinity of this tree and may see this specimen lost; however, until services have been located and an appropriate design is finalised, Tree 6 is nominated for practical retention.

Canopy pruning of municipal street trees is expected to trigger permit requirements under the City of Greater Geelong's Street Tree Policy. An on-site meeting with the Parks Planning Unit will be required to confirm the proposed extent of canopy pruning.

Trees 1 to 5 are nominated for retention.

Tree 7 has an existing concrete footpath, raised sealed carpark and drainage within its calculated NRZ and SRZ. Root distribution of this tree is unlikely to travel upwards, past the drainage and into the sealed car park. Historically, tree roots will populate around the existing curb and channelling and the grassed nature strip within the road reserve. Civil and construction works within the allotment are not expected to negatively impact this specimen. This tree is nominated for retention.

It must be noted, if any existing curb and channel within the calculated NRZ/TPZ or SRZ of retained trees must be completed like-for-like (if practicable) under the supervision of the Project Arborist.

Tree 8 has not proposed impacts and is nominated for retention.

Tree 12 is situated within the neighbouring allotment, 4 Wyuna Parade. This mature specimen has previously had its entire canopy removed, and now the whole canopy is epicormic growth from the 5-6m stump. The existing sealed carpark currently occupies approximately 49.7% of the calculated NRZ, and root distribution should be expected within this area. Due to this section of NRZ being utilised as a functioning car park, a Non-Destructive Root Excavation (NDR) was not possible. It's likely that back when the tree had its entire canopy removed, a significant root volume died off, as the tree had no photosynthetic material to sustain the original root plate. Tree roots should be expected; however, believed to be significantly less than the calculated radius. Should significant woody tree roots be located during excavation of the proposed basement, the impacts can easily be managed with industrial standard root pruning and/or a minor canopy reduction to aid in rebalancing the root-to-shoot ratio of this mature specimen.

Trees 12s proposed encroachment (16.7%), however, inside the SRZ. This is classified as a Major encroachment, in accordance with *AS-4970 2025 - Protection of Trees on Development Sites*. Although the encroachment is classified as Major, the actual impact should be considered Moderate to Minor, as the root distribution is expected to be much less than the calculations. This tree species is known to be tolerant to root disturbance, and with adequate tree protection measures (Arborist onsite) is expected to remain structurally stable, healthy and viable for the foreseeable future. This tree is nominated for retention.

Trees 13 (group of 2) and 14 (group of 5) are situated within the neighbouring allotment, 4 Wyuna Parade. The existing garden bed and sealed carpark currently occupy approximately 12.5% of the calculated NRZ, and root distribution is not expected beyond the garden bed and concrete edging. This is classified as a Moderate encroachment, in accordance with *AS-4970 2025 – Protection of Trees on Development Sites*. Although the encroachment is classified as Moderate, the actual impact should be considered minor, as the root distribution is expected to be much less than the calculations, due to competition from the adjacent tree (Tree 9, plantation). Trees 13 and 14 are expected to remain structurally sound, healthy and viable for the foreseeable future. Long-term, these trees are expected to thrive with the removal of the lopped vegetation of Tree 9. These trees are nominated for retention.

NRZ areas lost to the development for Trees 12, 13 and 14 can easily be compensated for in a contiguous manner within the allotment the trees are situated in.

Tree 15 has a proposed encroachment of approximately 100%. This is classified as a Major encroachment, in accordance with *AS-4970 2025 – Protection of Trees on Development Sites*. Although the encroachment is classified as Major, the actual impact should be considered minor, as the proposed pavers are to be installed above the natural grade. The cracks between pavers ensure the finished surface is porous and will not negatively impact this specimen. This tree is nominated for retention.

It must be noted, utility services (gas, water, electrical, NBN) are not represented on the plans provided. It is recommended that all services be installed outside the calculated NRZ of all retained trees, unless directional boring or hydro-excavation is utilised for installation, and under the direct supervision of the Project Arborist. Any additional impacts to existing trees beyond the plans provided fall outside the scope of this report, and re-assessment may be required.

## **10. RECOMMENDATIONS**

Retain Trees 1 to 5, 7, 8, and 12 to 15.

Tree 6 is nominated for practical retention.

Remove Trees 9, 10 and 11.

Tree 10 triggers permit requirement for removal under 52.37.

All removal and pruning works should be carried out as per *AS 4373 – Pruning of Amenity Trees* by a minimum level 3 arborist for best practice management of retained vegetation.

Trees nominated for removal should be removed at ground level, and tree stumps should be ground out using modern stump removal methods along the allotments' rear boundary.

**However, stump grinding MUST NOT be utilised within the NRZ of Tree 12. This will adversely impact the tree's stability and long-term health.** The remaining small stumps from vegetation removed in the section should be sprayed with a suitable herbicide to eliminate regrowth. And/or removed by hand. These stumps can be excavated under the direct supervision of the Project Arborist.

Where removals are nominated, inclusion of Indigenous native species is encouraged for the future landscape design to contribute to the native vegetated character of the area.

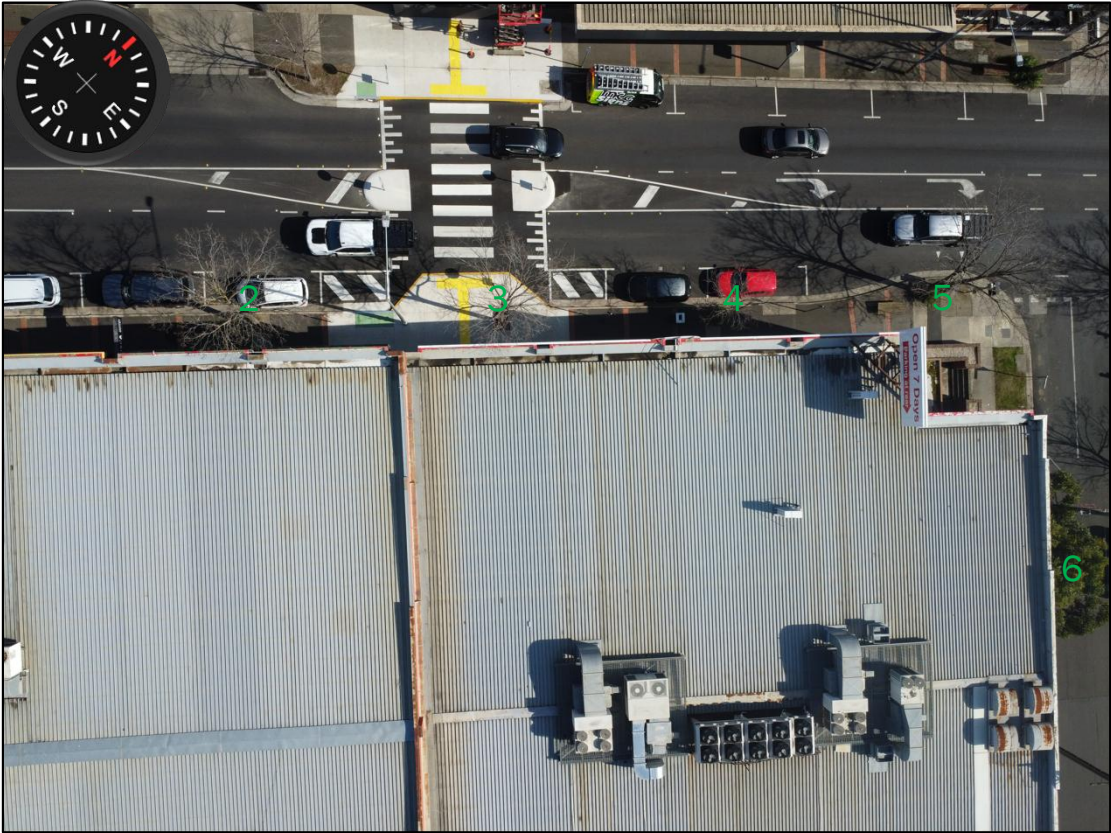
The Project Arborist should be on-site to supervise the removal of the structure façade on High Street and Wyuna Parade, and all excavation and service installation works within the calculated NRZ/TPZ of all retained trees. This is essential when the substantial roots (i.e., > 50 mm) require pruning.

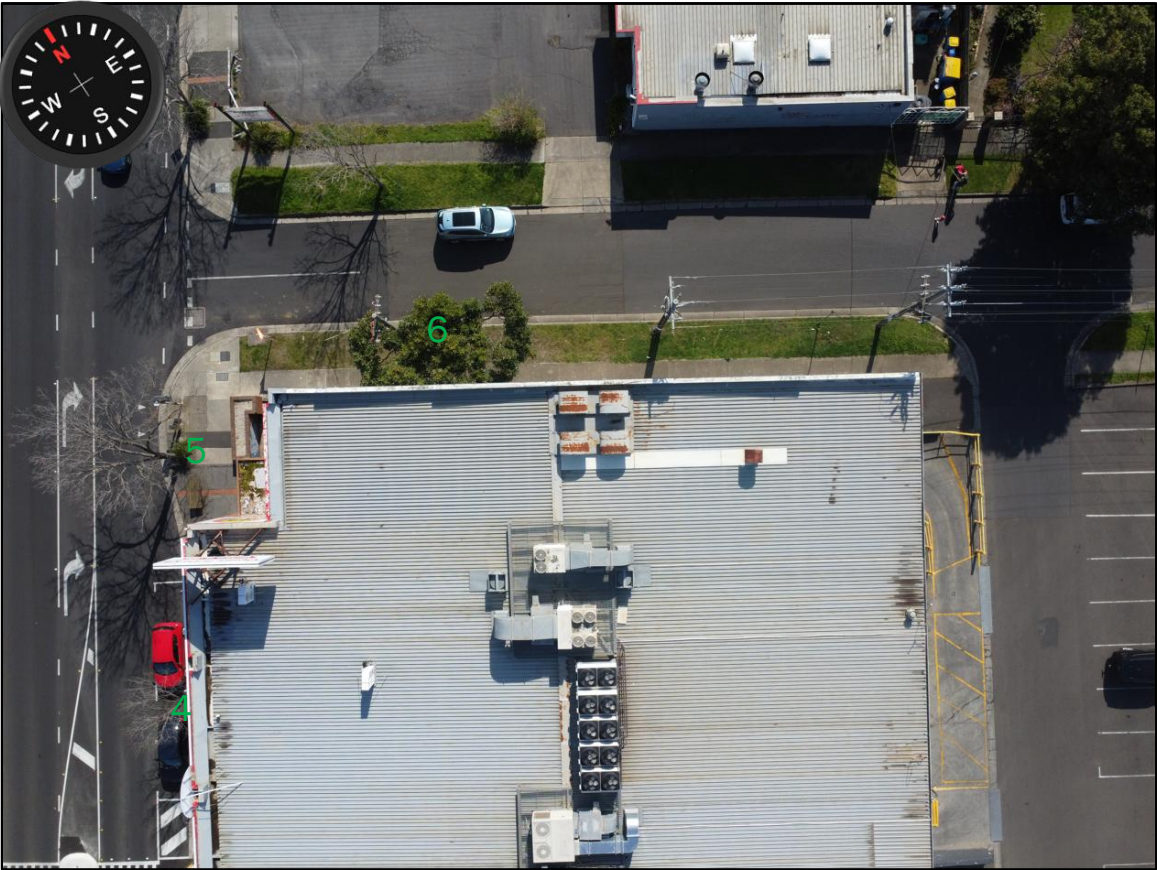
All supervised excavation works within the Tree Protection Zones of retained trees, permitted by the Responsible Authority, should be signed off with a Letter of Inspection. The completed Letter of Inspection should be provided by the client to the Responsible Authority, prior to a Statement of Compliance being issued.

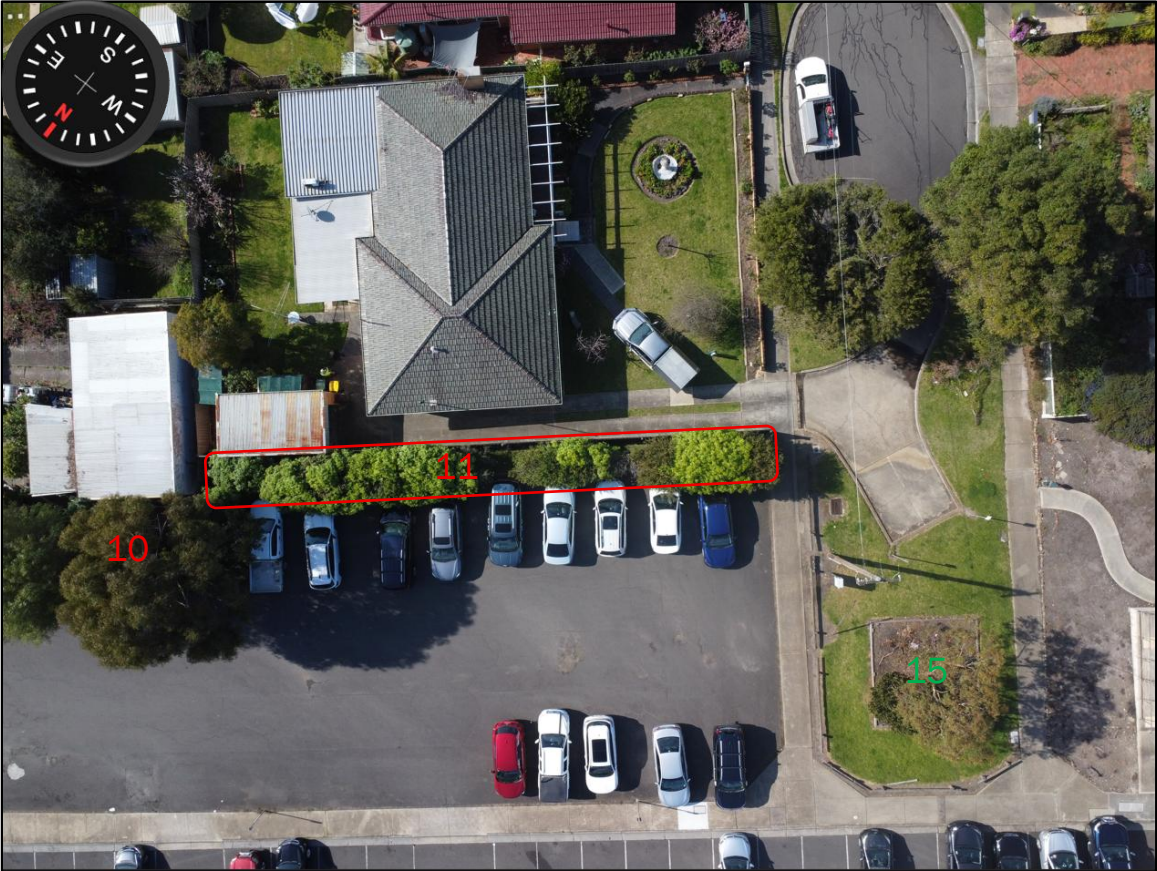
Tree Protection Specifications and a Tree Protection Plan follow this report, to provide a schedule of works and include ground protection, directional boring, Tree Protection Zone (TPZ) fencing locations and direct supervision of the Project Arborist of any excavation works required within the NRZ/TPZ of retained trees.

**This report does not give permission for the removal of vegetation; these permissions must be sought from the Responsible Authority (Local Council).**

# APPENDIX A. PHOTOS

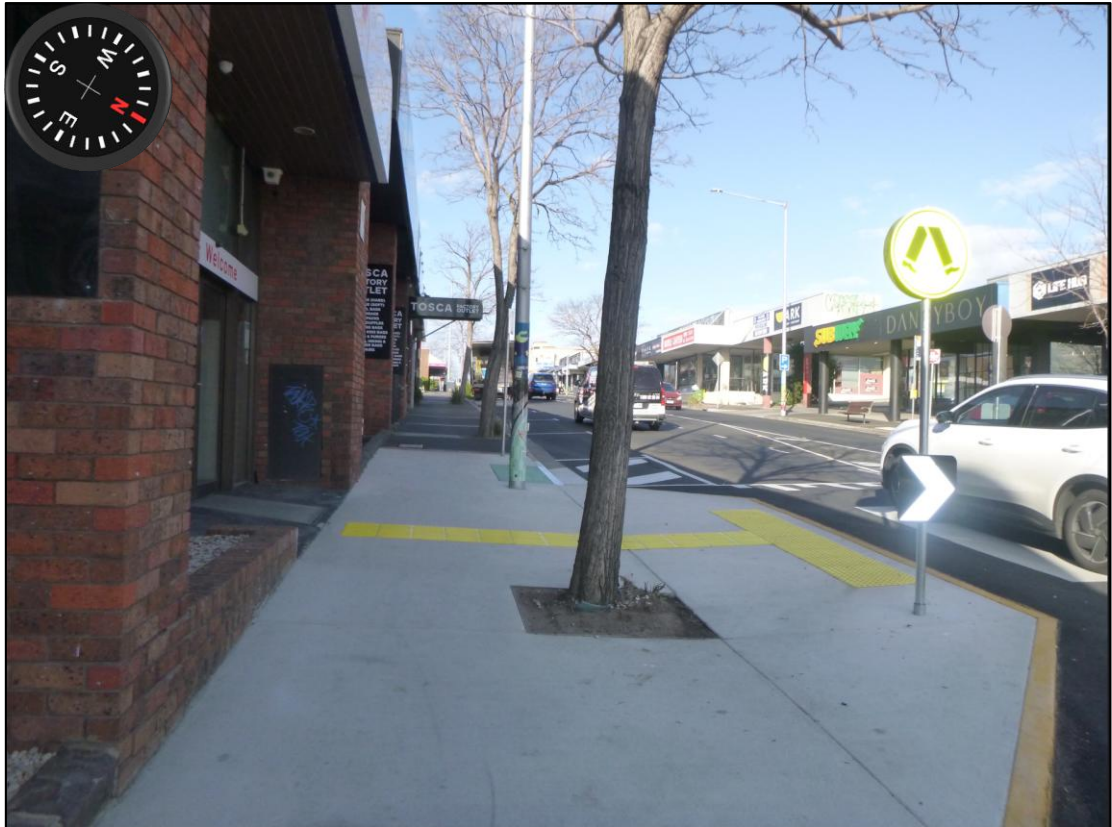




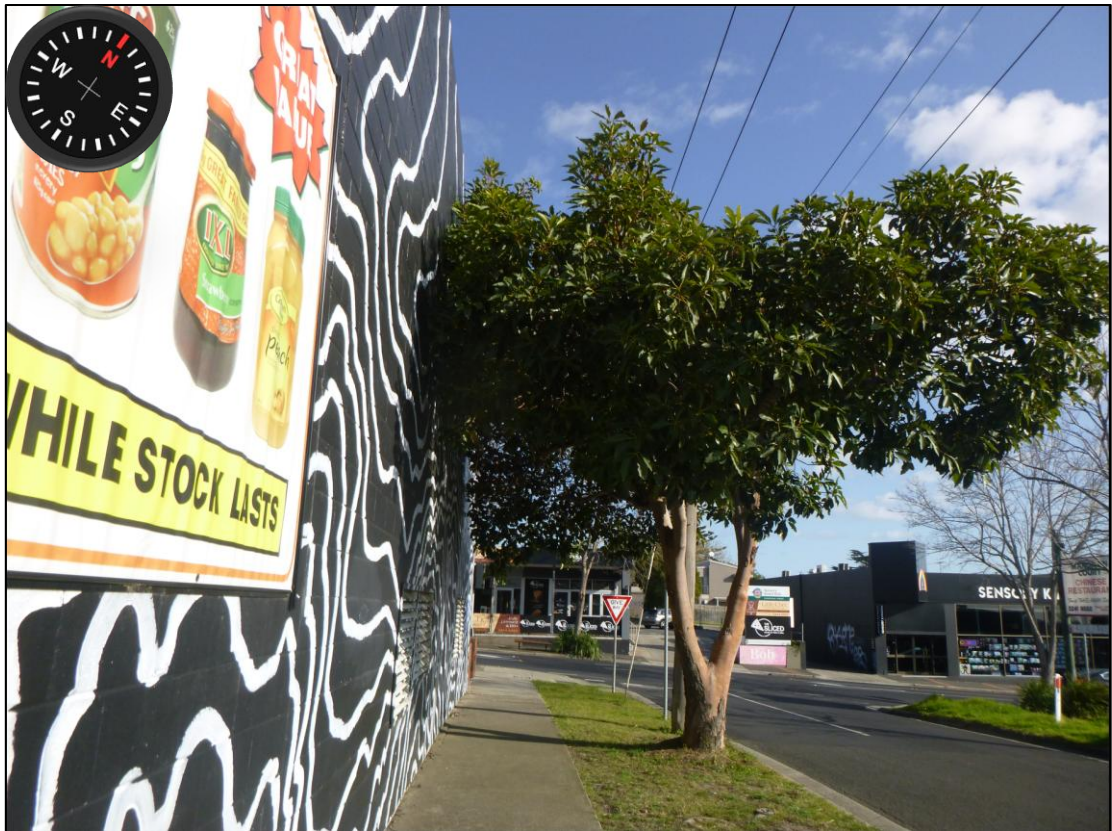




TREE 1. SPLIT IN MAIN STEM.



HIGH STREET. TREES 1, 2 AND 3.



WYUNA PARADE. TREE 6. CANOPY ON EXISTING STRUCTURE.



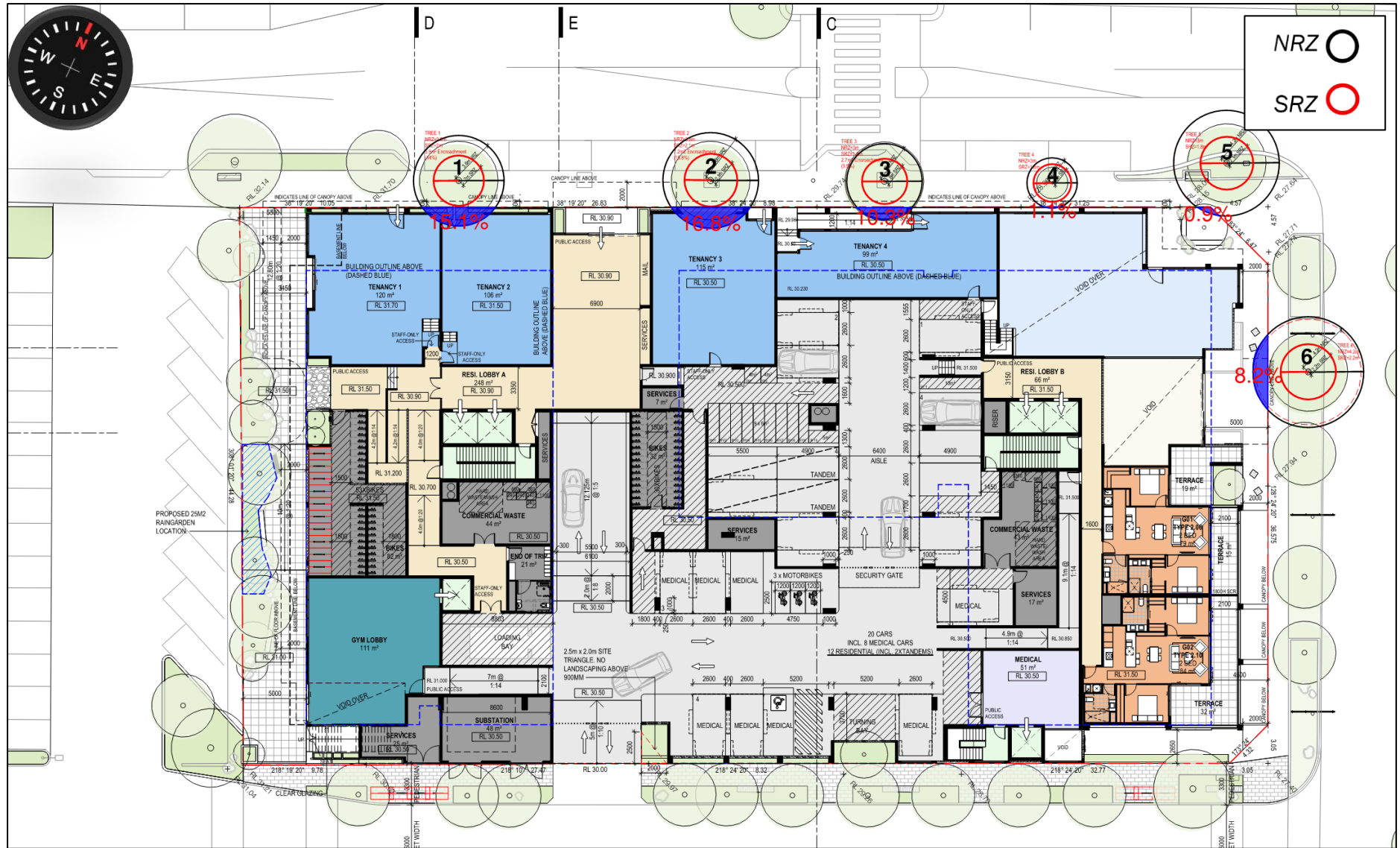
WYUNA PARADE. RAISED CARPARK ADJACENT TO TREE 7.

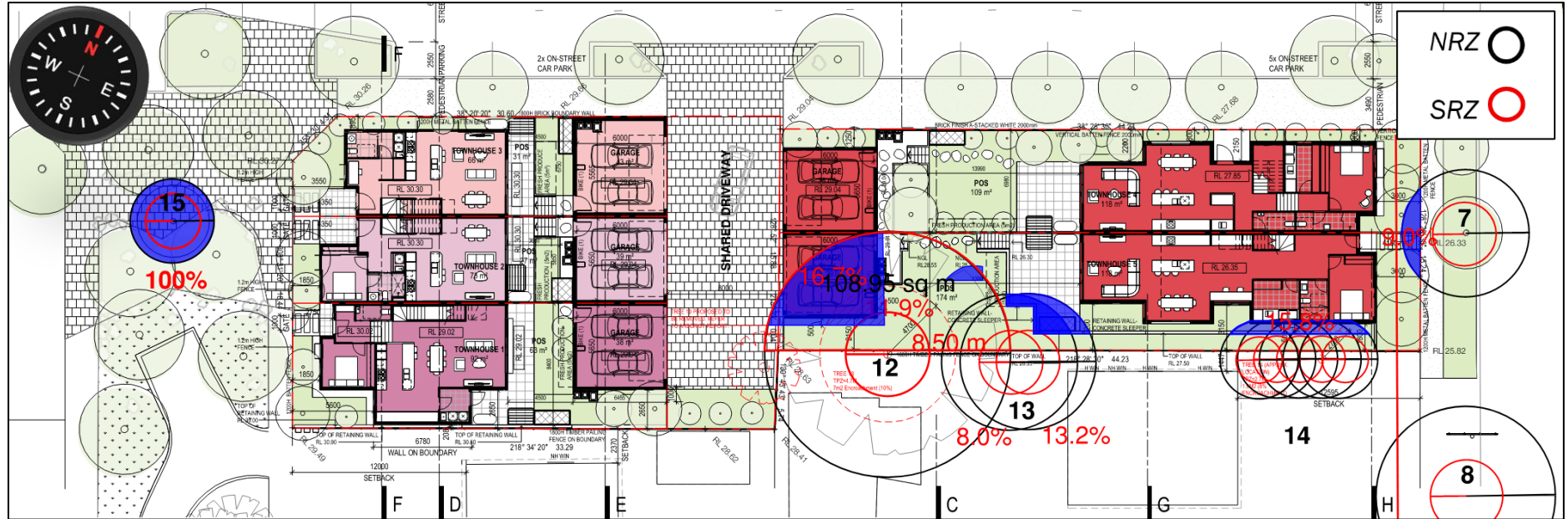


WYUNA PARADE. RAISED CARPARK AND DRAIN ADJACENT TO TREE 7. CONCRETE EDGING OF THE GARDEN ENCOMPASSES TREES 9, 10 AND 11.



Pre-Development Arboricultural Impact Assessment. 107-123 High Street, Belmont, VIC 3216





## APPENDIX C. TREE DESCRIPTORS

### AGE

**YOUNG.** Juvenile or recently planted approximately 1-7 years.

**SEMI MATURE.** Tree actively growing.

**MATURE TREE.** Has reached expected size in situation.

**OVER MATURE.** Tree is over mature and has started to decline. (Senescent)

### HEALTH

**GOOD.** Foliage of tree is entire, with good colour, very little sign of pathogens and of good density. Growth indicators are good i.e. Extension growth of twigs and wound wood development. Minimal or no canopy die back (deadwood).

**FAIR.** Tree is showing one or more of the following symptoms.

< 25% dead wood, minor canopy die back, foliage generally with good colour though some imperfections may be present. Minor pathogen damage present, with growth indicators such as leaf size, canopy density and twig extension growth typical for the species in this location.

**POOR.** Tree is showing one or more of the following symptoms of tree decline; > 25% deadwood, canopy die back is observable, discoloured, or distorted leaves. Pathogens present, stress symptoms are observable as reduced leaf size, extension growth and canopy density.

**DEAD OR DYING.** Tree is in severe decline; > 55% deadwood, very little foliage, epicormic shoots, minimal extension growth.

### STRUCTURE

**GOOD.** Trunk and scaffold branches show good taper and attachment with minor or no structural defects. Tree is a good example of the species with a well-developed form showing no obvious root problems or pests and diseases.

**FAIR.** Tree shows some minor structural defects or minor damage to trunk e.g. bark missing, there could be cavities present. Minimal damage to structural roots. Tree could be seen as typical for this species.

**POOR.** There are major structural defects, damage to trunk or bark missing. Co-dominant stems could be present or poor structure with likely points of failure. Girdling or damaged roots obvious. Tree is structurally problematic.

**HAZARDOUS TREE** is an immediate hazard with potential to fail, this should be rectified as soon as possible.

### HAZARD

**LOW.** Tree appears to be structurally sound, healthy with no signs of pests or disease, good vigour and is clear of any hazards.

**MEDIUM.** Tree displays signs of structural problems, evidence of pests or disease, signs of low vigour, deadwood, decay, may be growing into an area that could create a hazard.

**HIGH.** Tree is an immediate hazard with the potential to fail, this should be rectified as soon as possible.

## **RETENTION VALUE**

**LOW.** Trees that offer little in terms of contributing to the future landscape. Should be considered for removal.

**MEDIUM.** Trees with some beneficial attributes that may benefit the site. Could be considered for retention if possible.

**HIGH.** Trees with the potential to positively contribute to the site. Should be considered for retention if possible.

## **USEFUL LIFE EXPECTANCY – ULE**

**LONG ULE.** 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.

**MEDIUM ULE.** Trees that appear to be retainable with an acceptable level of risk for 15 to 40 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 and nuisance reasons.

Storm damage or defective trees that can be made suitable for retention in the medium term by remedial work.

**SHORT ULE.** Trees that appear to be retainable with an acceptable level of risk for 5 to 15 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 and 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.

**REMOVE.** Trees with a high level of risk that would need removal within the next 5 years.

Dead trees.

Dying or suppressed and 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 are considered unsafe to retain.

Trees that will become dangerous after removal of other trees for the above reasons.

## **APPENDIX D. DETERMINING ROOT ZONES**

### **Notional Root Zones (NRZ)**

*AS 4970-2025 Protection of trees on development site*, uses a multiplication method to determine the NRZ. Based on the NRZ radius being 12 times the stem diameter measured 1.4 metres above ground (unless stated otherwise).

NRZ radius = DSH x 12. NRZ radius is measured from the centre of the tree.

### **Structural Root Zone (SRZ)**

*AS 4970-2025 Protection of trees on development site* is applied to determine S.R.Z.

The SRZ is the area required for tree stability. A larger area is required to maintain a viable tree.

SRZ radius = (D x 50) 0.42 x 0.64. SRZ radius is measured from the centre of the tree.

### **Tree Protection Zone (TPZ)**

Establishing and maintaining a TPZ is the most important part of protecting trees during the onsite stages of works (e.g. site establishment, demolition, construction). The TPZ is the zone determined by The Project arborist using the process set out below. It shall be shown on the TPP to be associated or managed so that the tree remains viable.

The NRZ is the starting point for determining the TPZ along with the considerations in Clause 3.3.2. Alternatively, the TPZ may be specified by the consent authority.

### **Determining a Tree Protection Zone (TPZ)**

#### **General.**

The NRZ is the starting point for determining the TPZ. The TPZ should be determined using the considerations and encroachments discussed below.

#### **Considerations and Determining the TPZ**

When did to determining a TPZ the following factors should be considered where relevant;

- A. Location and distribution of the roots
- B. Potential loss of route mass resulting from encroachment number of roots and diameter of roots.
- C. Tree species and tolerance to disturbance.

- D. If the works will result in a temporary EG service trench or permanent EG basement car park loss of available soil volume.
- E. Age health current size and projected size of the tree.
- F. Presence of other trees with overlapping nrz or grafted roots.
- G. Proposes staging and timing of excavation or root cutting.
- H. Proposed tree maintenance and Tree Care activities.
- I. Lean and stability of the tree
- J. Soil characteristics and volume topography and drainage
- K. Presents of existing or past structures obstacles affecting root growth or recent encroachments
- L. Proposed construction mazes that reduce the impact on trees
- M. Weather a root investigation is required the location and distribution of the roots should be determined through minimally distractive investigation methods pneumatic hydraulic hand digging or ground tree penetrating radar. Photographs should be taken and we are needed to address geospatial issues a route map should be prepared.

**Note 1.** Construction measures such as peer and beam, suspended slab, counter-laver building sections and screw piles can reduce the impact of encroachment.

**Note 2.** Root damage should be minimized during the process the roots should only be exposed for as long as required to meet the purpose of the investigation.

## **CROWN MANAGEMENT**

Tree crowns can be injured by machinery such as excavators, drilling rigs, cranes, trucks, hoarding instillation and scaffolding. Where the crown is at risk of being damaged, its protection shall be addressed in the TPP and TPS.

Crown protection can enclose the following measures

- A. Locating the trade protection fence outside the Crown in the effect of area.
- B. Pruning of individual or specific branches.
- C. Tying back of branches.
- D. Use of flagging to make the branch move visible.
- E. Branch protection (wrapping of branches).

If pruning is required, this shall be specified and accordance with AS-\$. Pruning maybe undertaken before the TPZ fencing as installed.

**Note.** It is possible that pruning will require approval from the relevant authority.

## **Tree Protection Specifications (TPS) and Tree Protection Plan (TPP)**

Regardless of the stage at which the relevant authority requires the TPS and TPP, these documents shall be prepared by The Project Arborist and consider measures necessary to the project and the Trace so we're all stages of the development. the most current version of the TPS and TPP shall be included and the construction documentation.

**The TPS shall**

- N. specify using a logical and sequential process the measures by which the trees will be protected and managed throughout the development works.
- O. State any prohibitions that may be required due to the lack of detail or documentation EG no trenching is allowed within the TPZ where a service plan does not exist and
- P. document critical stages

**A TPP, including a scale or dimensions shall show**

- Q. TPZs for trees being retained considering the matters referred to and section 3 and
- R. 2. the location of specified tree protection devices
- S. note one groups of trees with overlapping TPS maybe included within a single protection zone

**A copy of the TPP shall form part of the development plans.**

Where the consent process modifies that proposed development or includes new work and packing the Trace that TPS and TPP shall be assess and modified where necessary, to make those changes. these modifications may be made by The Project and or the relevant authority. a document version control should be used to manage any revision.

The location of TPZ and the specified tree protection devices should also be shown on other documents such as demolition bulk if works construction and landscape planes.

Note 2 the location of trees to be removed or transplanted should also be shown and the tpp if it is not shown in other drawings.

### **Minor NRZ Encroachments**

The proposed encroachment is considered minor if it is less than or equal to 10% of the area of the NRZ, has not had a recent encroachment and is outside the SRZ (see Clause 3.4). Generally, it is unlikely that there will be a significant impact to tree health, longevity of structure. Tree protection should be implemented during site works. To avoid a net loss of soil area and volume, an area equivalent to the encroachment shall be incorporated into the TPZ, unless the Project Arborist otherwise demonstrates that the tree will be viable.

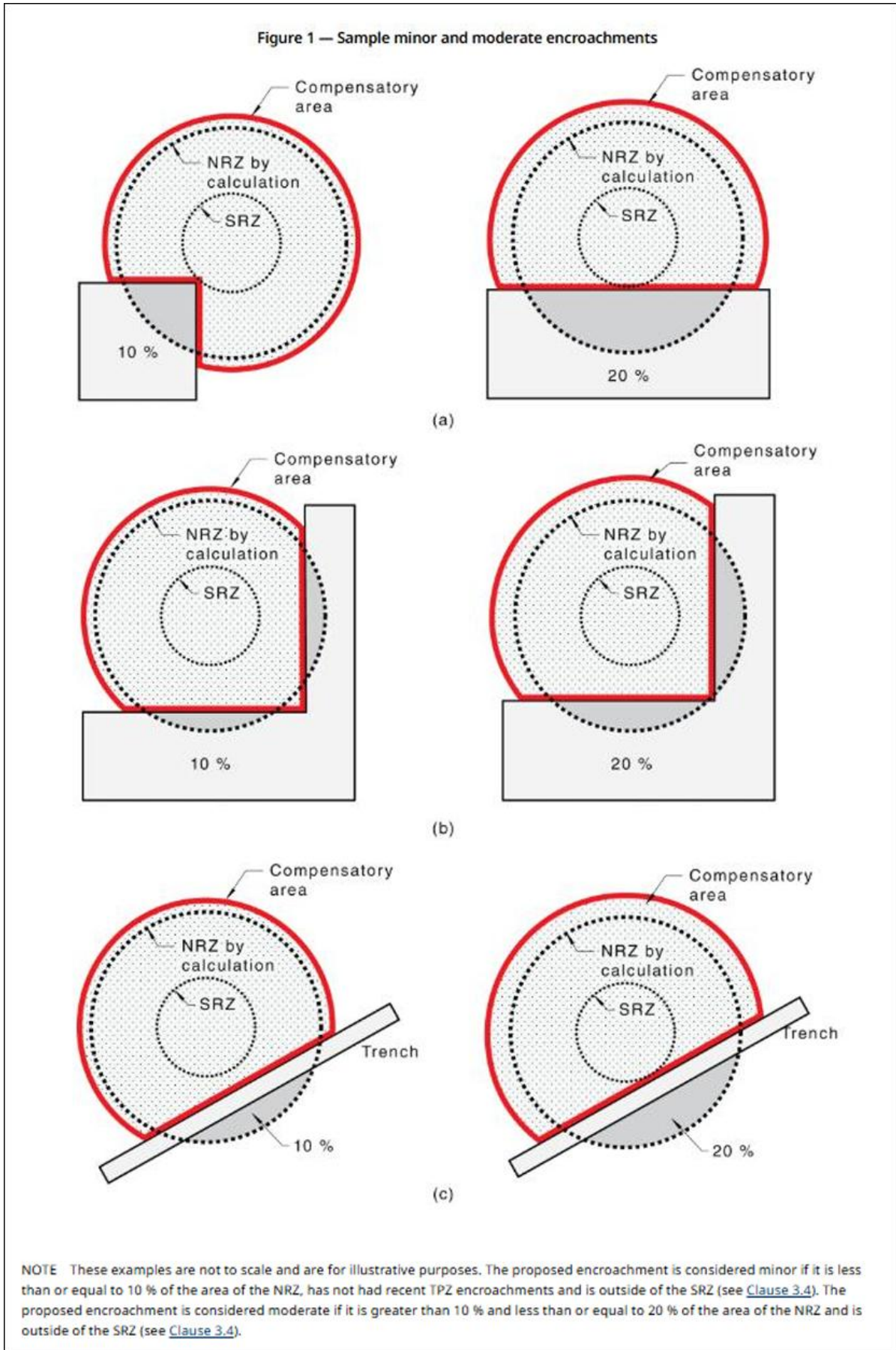
### **Moderate NRZ Encroachments**

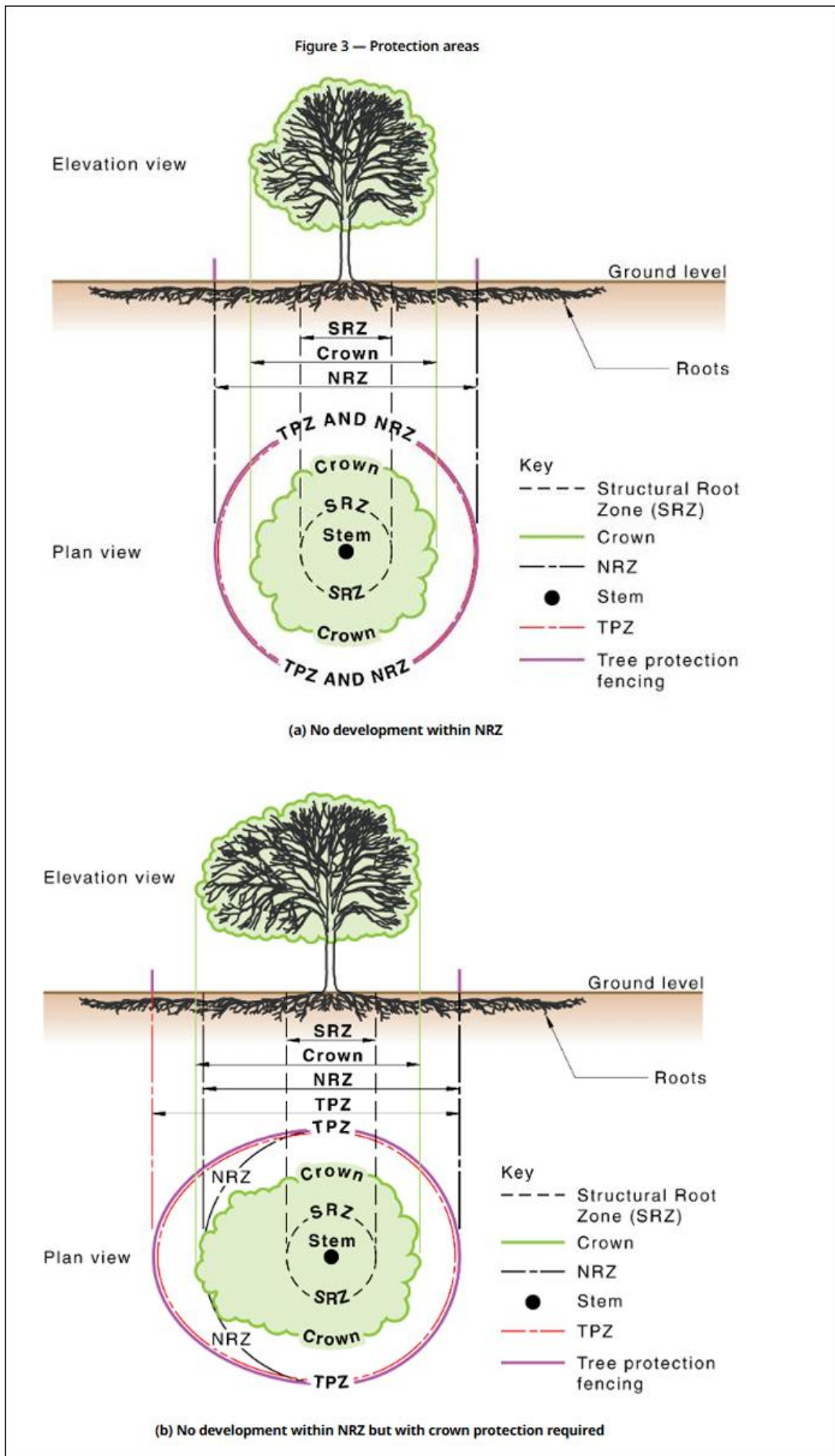
The proposed encroachment is considered moderate if it is greater than 10% and less than or equal to 20% of the area of the NRZ and is outside the SRZ (see Clause 3.4). A Project Arborist shall be engaged to review the proposed impact and undertake any other necessary investigation to address the factors listed in Clause 3.3.2 to demonstrate how the tree will remain viable. This may be through the implementation of suitable design measures and construction controls to mitigate impacts during the development process as part of a TPS and TPP. To avoid a net loss of soil area and volume, an area equivalent to the encroachment shall be incorporated into the TPZ, unless the Project Arborist otherwise demonstrates that the tree will be viable.

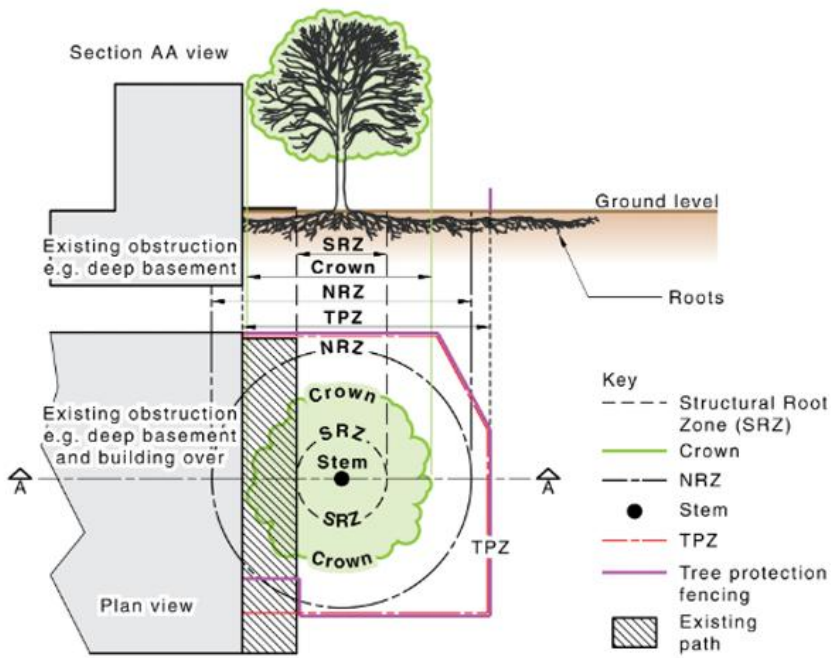
### **Major NRZ Encroachments**

The proposed encroachment is considered major if it is greater than 20% of the area of the NRZ or inside the SRZ (see Clause 3.4). The Project Arborist shall be engaged to explore alternative designs with the design team and/or demonstrate that the tree will remain viable. Relevant factors listed in Clause 3.3.2 should be considered.

For the assessment of major encroachments, a more detailed investigation is necessary. This can include research such as root investigation, soil analysis, historical records of the tree or site, relevant literature and examples of similar encroachments. A TPS and TPP should be prepared to support retention the tree. To avoid a net loss of soil area and volume, an area equivalent to the encroachment shall be incorporated into the TPZ, unless the Project Arborist otherwise demonstrates that the tree will be viable.

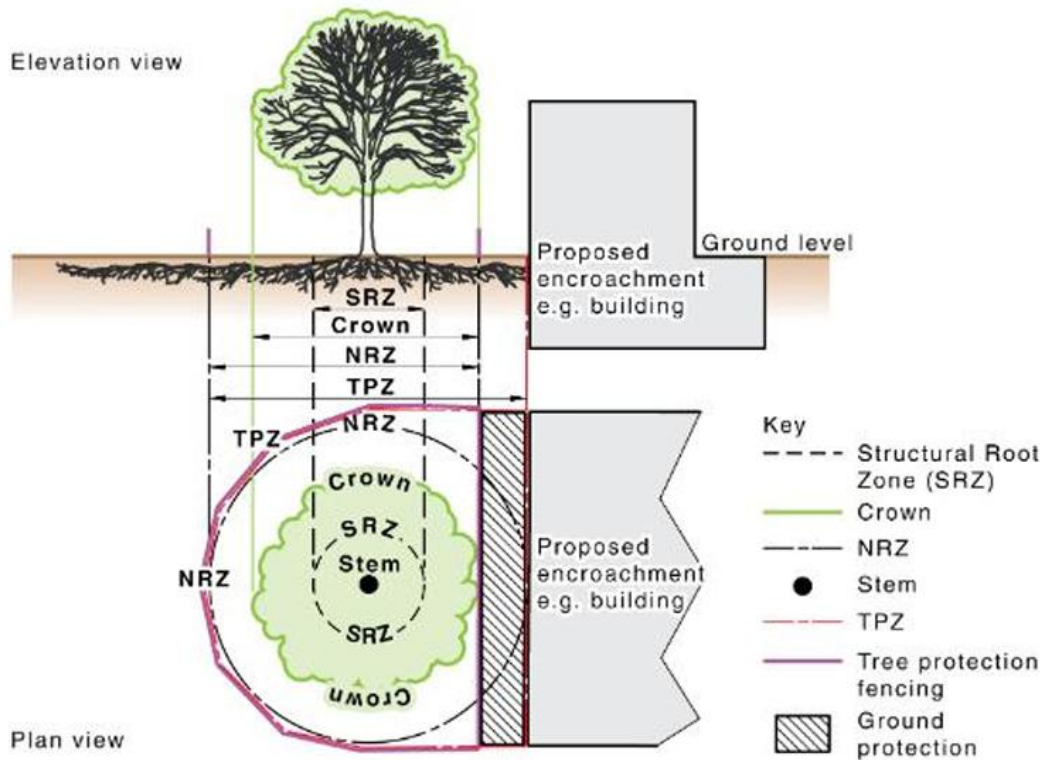






NOTE The project arborist has determined a suitable location for the tree protection fence. They have included a portion of the path as ground protection.

(c) TPZ compensatory area shown for existing structures



(d) TPZ compensatory area shown for proposed development

## **TREE PROTECTION SPECIFICATIONS (TPS) AND TREE PROTECTION PLAN (TPP)**

Regardless of the stage at which the relevant authority requires the TPS and TPP, these documents shall be prepared by The Project Arborist and consider measures necessary to the project and the Trace so we're all stages of the development. the most current version of the TPS and TPP shall be included and the construction documentation.

The TPS shall.

- A. Specify using a logical and sequential process the measures by which the trees will be protected and managed throughout the development works.
- B. State any prohibitions that may be required due to the lack of detail or documentation (e.g. no trenching is allowed within the TPZ where a service plan does not exist); and
- C. Document critical stages.

A TPP, including a scale or dimensions shall show.

1. TPZs for trees being retained, considering the matters and
2. The location of specified tree protection devices.

**Note 1.** Groups of trees with overlapping TPZs may be included within a single protection zone.

**A copy of the TPP shall form part of the development plans.**

Where the consent process modifies that proposed development or includes new work and packing the Trace that TPS and TPP shall be assess and modified, where necessary to make those changes. These modifications may be made by The Project and/or the relevant authority. a document version control should be used to manage any revision.

The location of TPZ and the specified tree protection devices should also be shown on other documents such as demolition, bulk earth works, construction and landscape plans.

**Note 2.** the location of trees to be removed or transplanted should also be shown and the TPP if it is not shown in other drawings.

## **REFERENCES**

AS 4373 Pruning of Amenity Trees, 2007. AS 4373 Pruning of Amenity Trees, Sydney: s.n.

AS 4970 Protection of Trees on Development Sites, 2025. AS 4970 Protection of Trees on Development Sites, Sydney: s.n.

Mattheck, C., 1994. The Body Language of Trees - Encyclopaedia of Visual Tree Assessment. s.l.:s.n.

52.37 Canopy Trees and City of Greater Geelong's Street Tree Policy.

<https://www.geelongaustralia.com.au/trees/documents/item/8d828c6850eaeb4.aspx>

## **TERMS AND LIMITATIONS OF THE REPORT**

Any legal information in the report has been provided to Tree Care Consulting by an external source, and it is assumed to be correct. All references to property title and/or control of ownership of land are assumed to be correct, as Tree Care Consulting has been advised.

Great care has been taken in sourcing information for this report so that it is correct. Tree Care Consulting cannot be responsible for information provided that is not directly under its control.

The Tree Care Consulting shall not be required to give testimony or attend court for any matter in relation to this report unless further contractual arrangements have been made.

This report is not to be altered in any way. It has been produced as a whole document and is intended for use as a whole document. Any changes or modifications are not to be undertaken. If this occurs, the report shall be rendered invalid.

The content of this report is produced in the full and honest opinion of Tree Care Consulting. In no way is it biased or weighted.

No diagrams, pictures or other reference material in this report are said to be to scale or value unless stipulated. All measurements and values are made to the best of Tree Care Consulting's ability at the time of the report being compiled. Care should be taken, and clarification sought before using as final measurements for whatever reason.

This report is developed around the information provided by the client in the assignment section of the report. Only issues and locations covered in the assignment section are discussed in this report.

All details, information and advice contained in this report have been researched and referenced. Where no reference is included, it is the author's learned opinion, experience, and observations.

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