



PAPERBARK TECHNOLOGIES

Arboricultural Consultants



**Preliminary Tree Survey and  
Arboricultural Impact  
Assessment –  
7-11 King William Street,  
Bayswater**

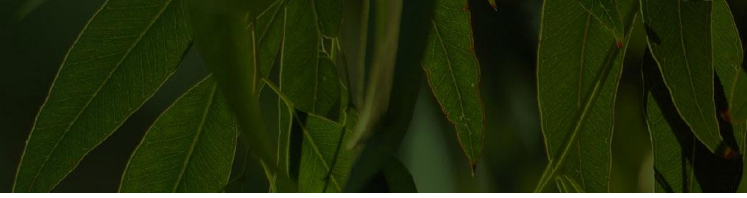
FEBRUARY 2026



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Preliminary Tree Survey and Arboricultural Impact Assessment –  
7-11 King William Street, Bayswater

**Date inspected:** 9<sup>th</sup> of February 2026

**Location:** 7-11 King William Street, Bayswater

**Prepared For:** PARC Developments

**PARC**

**Prepared By:** Zana Sheary & Gray Stead Paperbark Technologies Pty Ltd

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## 1. Introduction

- 1.1. Sean Vincent from PARC Developments has commissioned this consultant to inspect and submit a report with respect to a *Jacaranda mimosifolia* (Jacaranda) in the rear of 7-11 King William Street, Bayswater to investigate the impact of the proposed development on the tree.
- 1.2. The tree was inspected on the 9<sup>th</sup> of February 2026 from ground level, with no aerial inspections or below ground investigation made at the time.
- 1.3. This report only refers to this tree and the other trees and shrubs on the site have not been assessed.

## 2. Background

- 2.1. The *Jacaranda mimosifolia* (Jacaranda) within the site is shown on the following pages with the Structural Root Zone radius (SRZ) and Notional Root Zone radius (NRZ) displayed in green.
- 2.2. No work has commenced, and the subject area is predominantly sandy and dry ground.
- 2.3. Notional Root zone (TPZ) and structural root zone (SRZ) were calculated in accordance with the Australian Standard AS 4970–2025 *Protection of trees on development sites*.

### 3. Tree maps

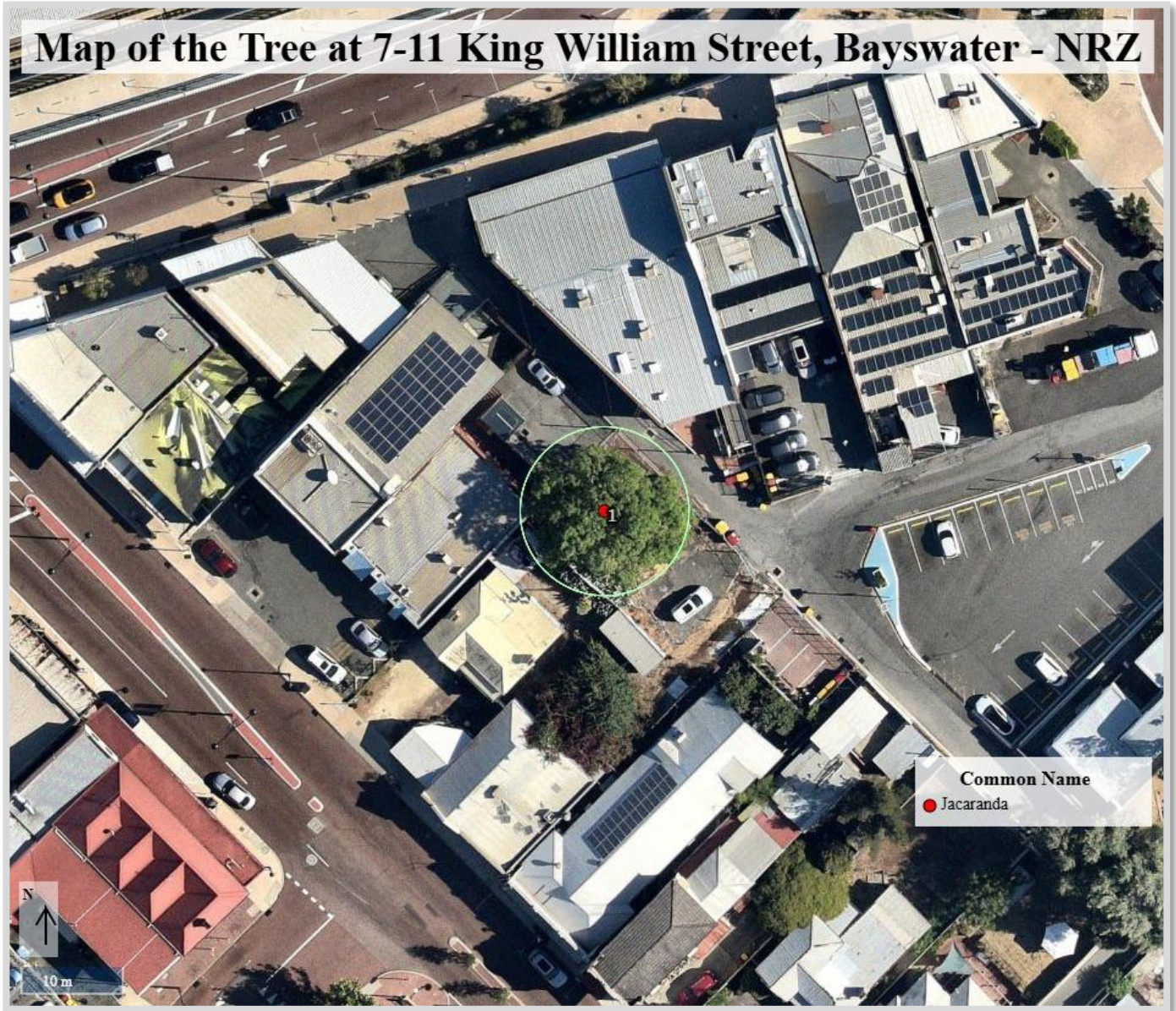


Figure 1: Displays the tree and its location with the Notional Root Zone (NRZ) radius overlay.

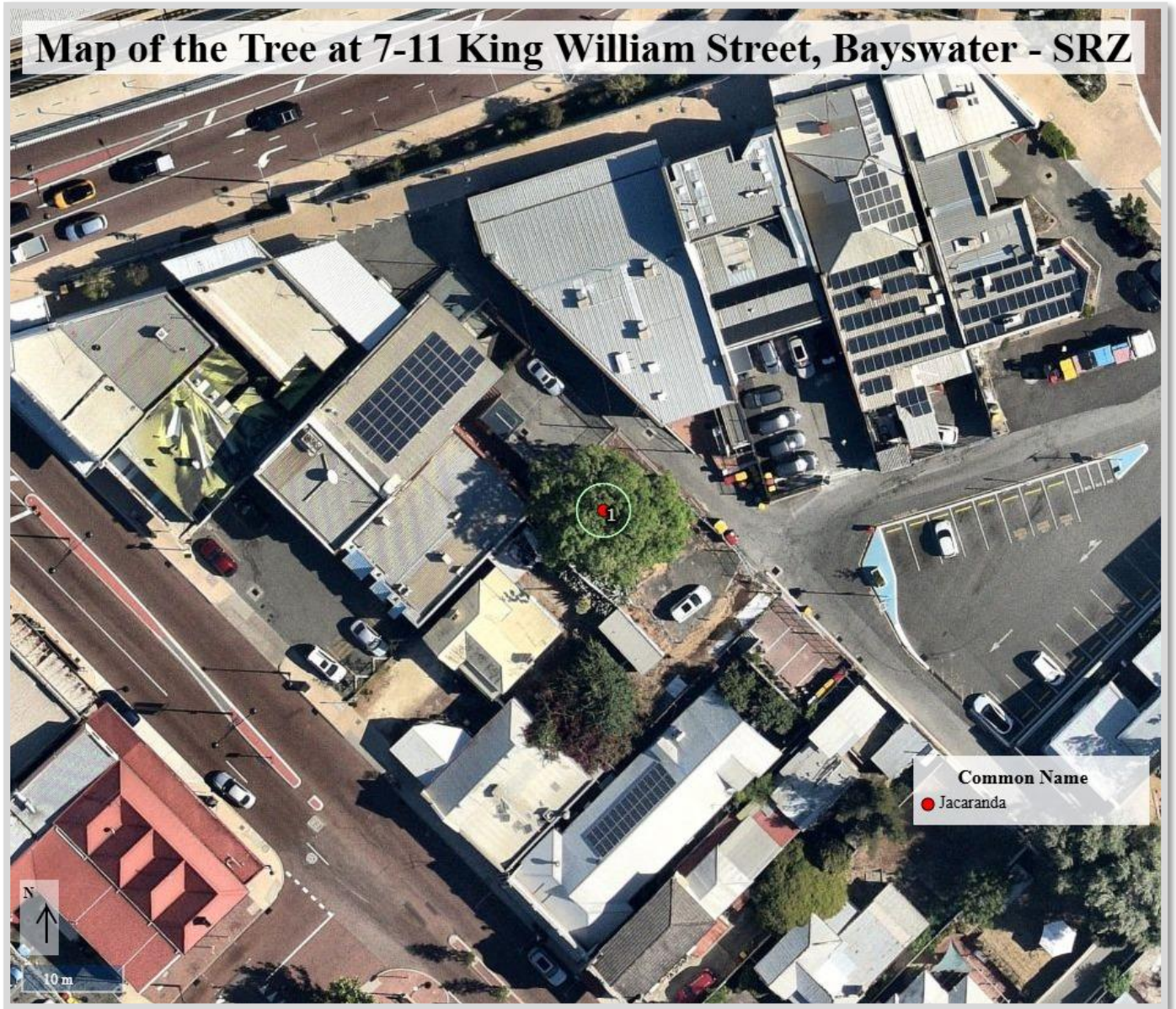



Figure 2: Displays the tree and its location with the Structural Root Zone (SRZ) radius overlay.

## 4. Individual tree details

Jacaranda Tree ID #1		Photos	Street View	Map View
<b>Tree Details</b>		 <p>09/02/2026</p>		
Latin Name:	Jacaranda mimosifolia			
Latitude:	-31.91892443056			
Longitude:	115.91267950975			
Tree Height (Estimated) [m]:	12.9			
Canopy Spread [m]:	17			
DSH [cm]:	73			
Health:	Good			
Structure:	Fair			
Problems:	Deadwood minor <50, Epicormic growth, Multi Crown leaders			
Notes:				
Priority:	Not applicable			
Tree Work:	No Works			
Observation Comments:				
Notional Root Zone (NRZ) [m]:	8.76			
Structural Root Zone (SRZ) [m]:	2.78			
Useful Life Expectancy:	20-40 years			
Retention Value:	High			

## 5. Summary of the tree on site

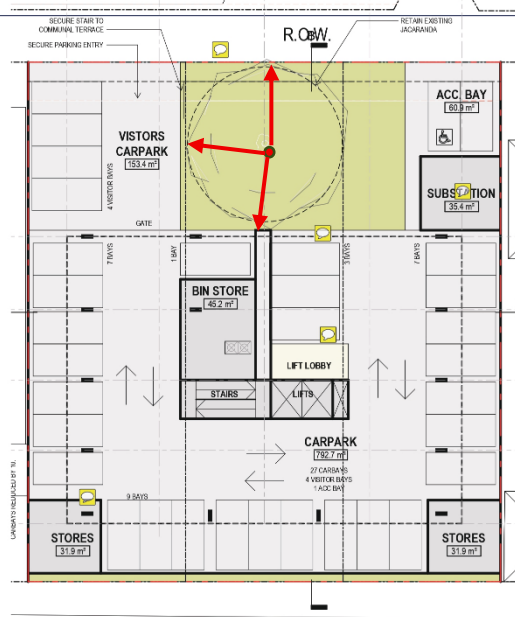
Tree No	Botanical name	Health	Structure	Retention value	NRZ in meters	SRZ in meters	Comments
1	<i>Jacaranda mimosifolia</i>	Good	Fair	High	8.76	2.78	This tree is in good health and structure and has a retention value rated as high.

- The tree was found to be in good health and structural condition. Minor dead wood within the crown is not considered a size or weight to represent a hazard to surrounding targets. Epicormic growth developing on the trunk from an old pruning wound and in the canopy appears soundly attached at this time. The extended second and third order branches were found to remain soundly attached with no evidence of cracking, splitting or separation.
- The tree has a Useful Life expectancy of between 20 - 40+ years and is of high retention value to the area.
- Heritage information was sourced from the WA heritage register (inHERIT) and there was no record of any Significant Trees at this location.
- This tree is not on the City of Bayswater Significant Tree Register.

## 6. Proposed works

- 6.1. The proposed development comprises the construction of a mixed-use ten-storey apartment building (Figure 4).
- 6.2. The proposed building will be located to the south of the subject tree. As a result, the tree is not expected to be adversely affected by shading impacts associated with the development (Figure 4).
- 6.3. Existing soil levels to the north, west and east of the subject tree are not anticipated to be altered as part of the proposed works
- 6.4. The tree is 6 metres away from the visitor's car park, the laneway and the apartment block side of the tree (Figure 3).
- 6.5. There is a retaining wall approximately 1 metre high on the southern side of the tree (Figure 5 and 6). This wall will be replaced as part of the construction, however, will remain in the same position.
- 6.6. Minor pruning of foliage on the southern side of the canopy will be required to achieve building clearance at the first storey level. All pruning works shall be undertaken in accordance with AS 4373–2007 Pruning of Amenity Trees. (Figure 7).
- 6.7. Paperbark Technologies were provided with several plans and the following snips of these plans have been reviewed in relation to the tree.

### 3.2. Level 01



7-11 KING WILLIAM STREET

**rothelowman**

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Figure 3: Displays the position of the tree relative to the surround construction works and the distance from the base of the trunk to the proposed works of 6 metres in each direction.

### 4.4. Section 2

Strategy 1



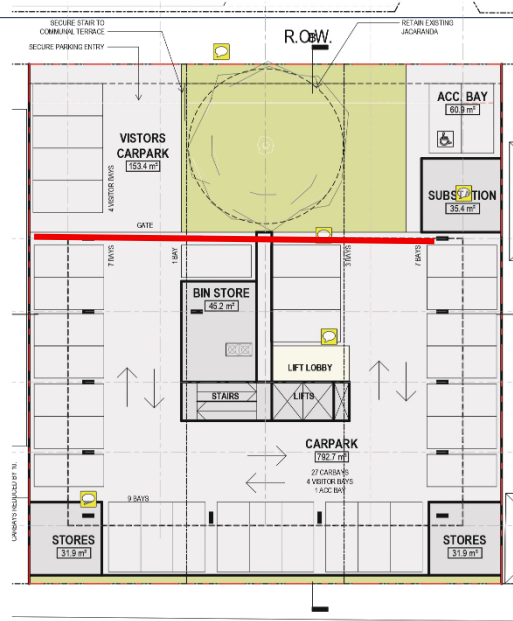
7-11 KING WILLIAM STREET

**rothelowman**

6 FEBRUARY 2024 - REV B 24

Figure 4: Displays the tree on the northern side of the proposed building.

## 3.2. Level 01



7-11 KING WILLIAM STREET

rothelowman

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Figure 5: Displays the line of the existing retaining wall approximately 1 metre high

## 7. Impact of the proposed development on the tree & recommendations

### 7.1 Design Impacts Within Tree Protection Zones

The proposed apartment block will be 6 metres from the base of the tree. The Notional Root Zone (NRZ) for this tree is 8.76 metres radius from the centre of the trunk, and the Structural Root Zone (SRZ) is a radius of 2.78 metres.

Although the proposed works are within the trees NRZ, the tree is retained with an existing wall, and the root system is unlikely to extend passed the wall.

When the wall is removed, any exposed roots should be inspected by Paperbark to determine their extent and potential impact if removed.

### 7.3 Tree Pruning and Monitoring Requirements

Two of the lowest southern limbs will require pruning to allow for the building as per Figure 7.

### 7.5 Arborist Supervision for Root Zone Encroachment

Any additional open excavation or construction activity within the trees NRZ must be carried out under the supervision of a qualified Arborist, in accordance AS 4970:2025.

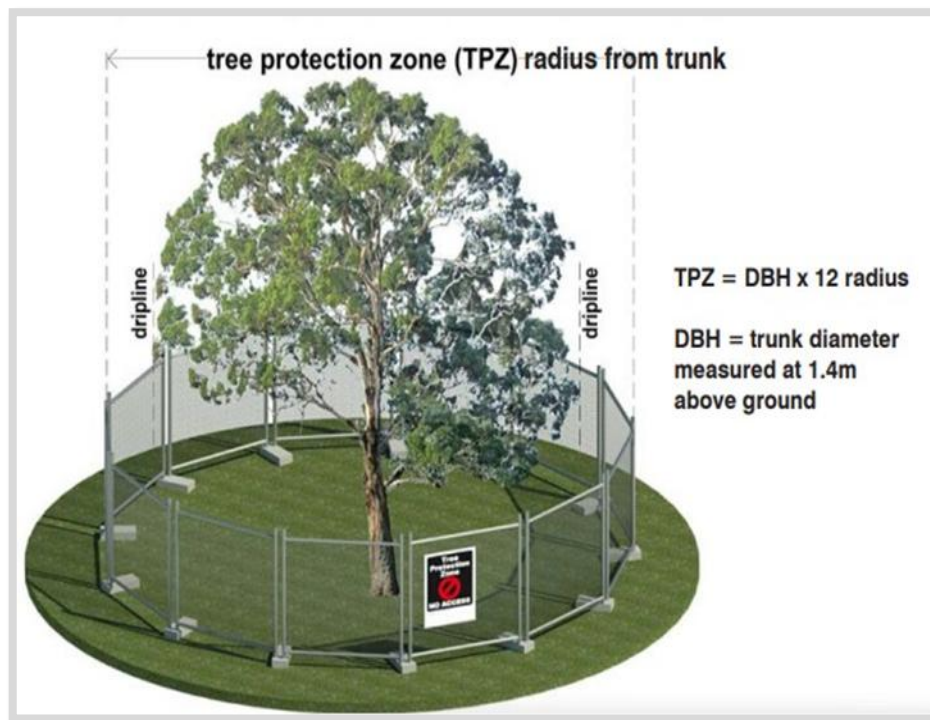
Arborist supervision will:

- Minimise root damage,

- Allow for documentation of any significant roots encountered,
- Provide immediate recommendations for root pruning and protection.

## 7.6 Tree Protection Measures

- Tree Protection Fencing (TPF) must be implemented before construction begins and must be inspected by the Project Arborist before work commences.
- It is recommended that the retained tree is protected by temporary Tree Protection Fencing to delineate tree protection areas consistent with AS 4970:2025 (refer to image below) and that it is installed prior to works commencing.
- Fencing should be erected before any machinery or materials are brought onto the site and before commencement of works, including demolition. Once erected, protective fencing must not be removed or altered without approval by the project Arborist.
- Shade cloth or similar should be attached to reduce the transport of dust, other particulate matter and liquids into the protected area.
- Fence posts and supports should have a diameter greater than 20mm and be located clear of roots and set on concrete blocks.
- Existing perimeter fencing and other structures may be suitable as part of the protective fencing.



- Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site. The lettering on the sign should comply with AS1319 (refer also to image below).



## 8. General tree protection

### 8.1 Root Management

If roots greater than 30 mm in diameter or a significant concentration of smaller roots are encountered, the Project Arborist must assess and authorise any removal.

Root pruning must be:

- Minimised where possible.
- Conducted with sharp, clean tools (e.g., handsaws or secateurs).
- Performed under Arborist supervision.

Roots must not be ripped or torn by machinery or unapproved excavation techniques.

### 8.2 Storage of Materials and Equipment

Storage of materials, equipment, or waste must not occur within any part of the TPZ unless specifically approved by the Project Arborist.

An alternative open and non-sensitive area should be designated for such activities to avoid soil compaction and contamination.

### 8.3 Soil Management and Level Changes

Excavated soil must not be stockpiled within the TPZ or against the tree trunk.

Soil levels within the TPZ must remain unchanged unless approved by the Project Arborist. Both fill and excavation within the TPZ can result in adverse impacts to tree health, including root suffocation and altered water infiltration.

#### **8.4 Impacts of Fill**

The addition of fill over any part of the root system may result in oxygen deprivation and root decline.

Where fill is required within the TPZ, the Project Arborist must assess and approve the method and extent of placement in accordance with AS 4970:2025.

#### **8.5 Tree Pruning and Canopy Works**

All pruning works must be carried out by a qualified Arborist in strict accordance with AS 4373:2007 – Pruning of Amenity Trees, prior to the commencement of construction.

Pruning must aim to retain natural form and structure and must not compromise tree stability or long-term health.

#### **8.6 Damage Prevention from Machinery and Equipment**

Machinery must be selected and operated with consideration of available working space around retained trees.

Unintentional damage to the crown, scaffold branches or trunk may compromise the structural integrity of a tree and must be avoided through proper planning and equipment selection.

#### **8.7 Access Facilitation via Lower Branch Pruning**

If lower canopy clearance is required to facilitate machinery access, this must first be approved by the Project Arborist and completed by a qualified Arborist in accordance with AS 4373:2007. No unapproved or ad hoc canopy removal is permitted.

#### **8.8 Chemical and Waste Containment**

No cement slurry, concrete washout, fuel, oils, paints, or other chemicals are to be stored, mixed, or discharged within the TPZ of any tree.

Contamination may result in root burn, soil pH alteration, or decline in tree health.

#### **8.9 Machinery Operation Within TPZ**

Where light machinery (e.g., bobcats or mini excavators) must traverse the TPZ, movements must be limited to straight-line, forward and reverse motion only.

Turning, pivoting, or "squirreling" within the TPZ is strictly prohibited, as it causes shearing of surface roots and soil compaction.

## 9. Tree Management and ongoing Supervision

- 9.1. The full extent of the impact from the works undertaken cannot be precisely quantified at this stage. However, it is anticipated that the affected tree may exhibit symptoms of accelerated decline over the coming years, particularly during periods of additional environmental stress such as drought, extreme weather events, or increased insect activity. As such, ongoing monitoring and proactive management will be critical to the tree's long-term health.
- 9.2. It is recommended that once the final plans are approved that the plans be reviewed and a Tree Protection Plan be prepared in relation to the demolition and construction of the building. Please ensure that no services or soak wells are placed inside the NRZ radius of this tree in relation to the design.
- 9.3. During the 2026/2027 summer season, supplemental watering will be essential to reduce physiological stress. Deep watering should be undertaken at least once per week, ensuring thorough soaking of the soil beneath the canopy, extending to the drip line. Monitoring and inspections of the tree will be required throughout the project, and this will be detailed in the Tree Protection Plan.
- 9.4. A one-time application of a wetting agent and a seaweed-based soil tonic (e.g., Seasol) is also recommended to improve soil moisture retention and support root health before works commence.
- 9.5. Should you require any further information or clarification, please do not hesitate to contact us.



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### Limitation of liability

Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk.

This report only covers identifiable defects present at the time of inspection. Paperbark Technologies accepts no responsibility and cannot be held liable for any structural defect or unforeseen event/situation or adverse weather conditions that may occur after the time of inspection.

Paperbark Technologies cannot guarantee that the tree/s contained within this report will be structurally sound under all circumstances and is not able to detect every condition that may possibly lead to the structural failure of a tree. Paperbark Technologies cannot guarantee that the recommendations made will categorically result in the tree being made safe.

Unless specifically mentioned this report will only be concerned with above ground inspections, as such all observations have been visually assessed from ground level. Trees are living organisms and as such cannot be classified as safe under any circumstances. Trees fail in ways that the arboriculture industry does not fully understand.

The recommendations are made on the basis of what can be reasonably identified at the time of inspection therefore Paperbark Technologies accepts no liability for any recommendations made.

All care has been taken to obtain information from reliable sources, however Paperbark Technologies can neither guarantee nor be responsible for the accuracy of information provided by others. In the event that reinspection of the tree/s is recommended it is the client's responsibility to make arrangements with Paperbark Technologies.

## 10. Site Photos



*Figure 6: Displays the retaining wall from the side which is a height of 1 metre.*



*Figure 7: Displays the foliage overhanging the new building line that will require pruning to sound growth points.*



*Figure 8-10: Display the distance from the trunk of the tree (6 metres) on the three sides of the tree.*

## 11. References

Lonsdale David, (1999) *Principles of Tree Hazard Assessment and Management*. London TSO (The Stationery Office).

Mattheck, C & Breloer H, (1994) *The body language of trees, a handbook for failure analysis*. London TSO (The Stationery Office)

Mattheck, Claus, (2007) *Updated Field Guide for Visual Tree Assessment*. Karlsruhe, Karlsruhe Research Centre.

Roberts, John, Jackson, Nick & Smith, Mark (2006) *Tree Roots in the Built Environment*. London TSO (The Stationery Office).

Urban, James, (2008) *Up by Roots, Healthy Soils and Trees in the Built Environment*. (International Society of Arboriculture)

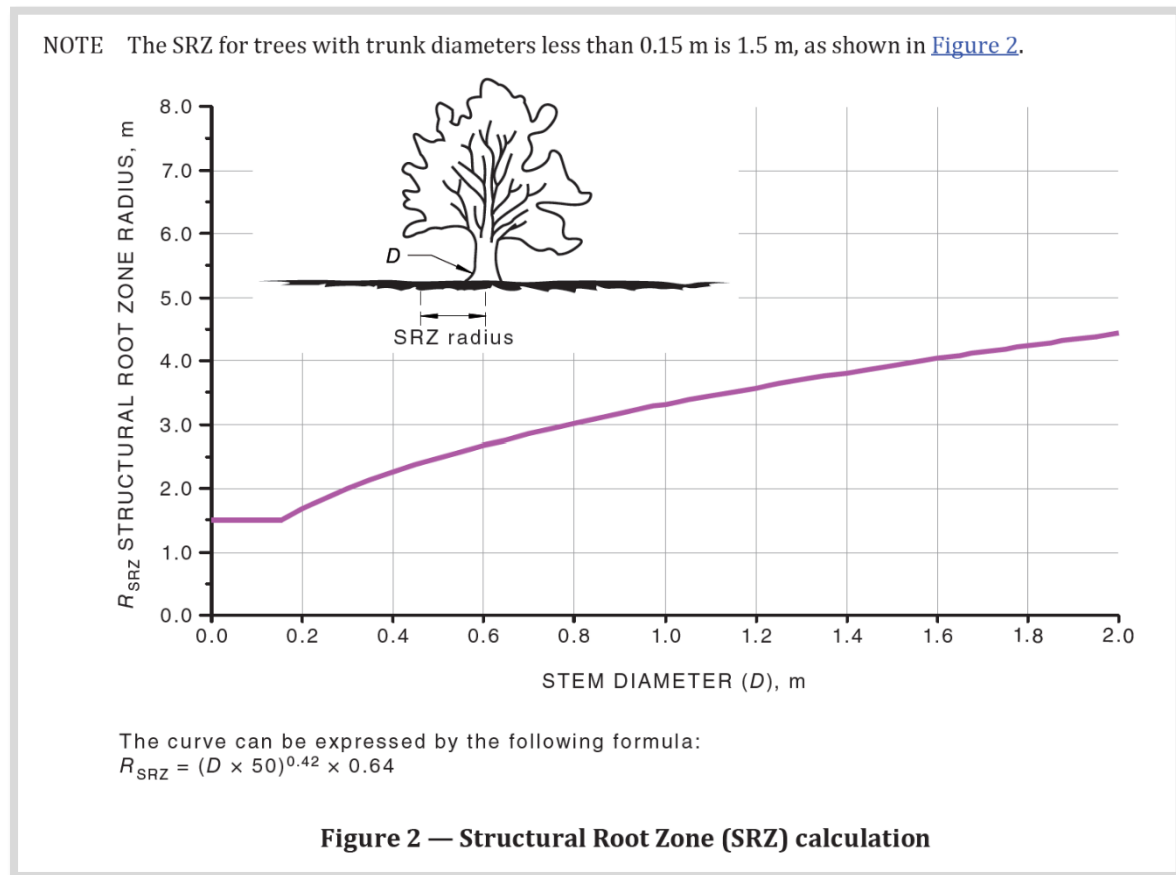
Australian Standard 4970-2025 *Protection of trees on development sites*. Standards Australia

Australian Standard 4373-2007 *Pruning of amenity trees*. Standards Australia

<https://www.wa.gov.au/government/document-collections/the-state-register-and-other-heritage-listings#inherit>

## 12. Glossary

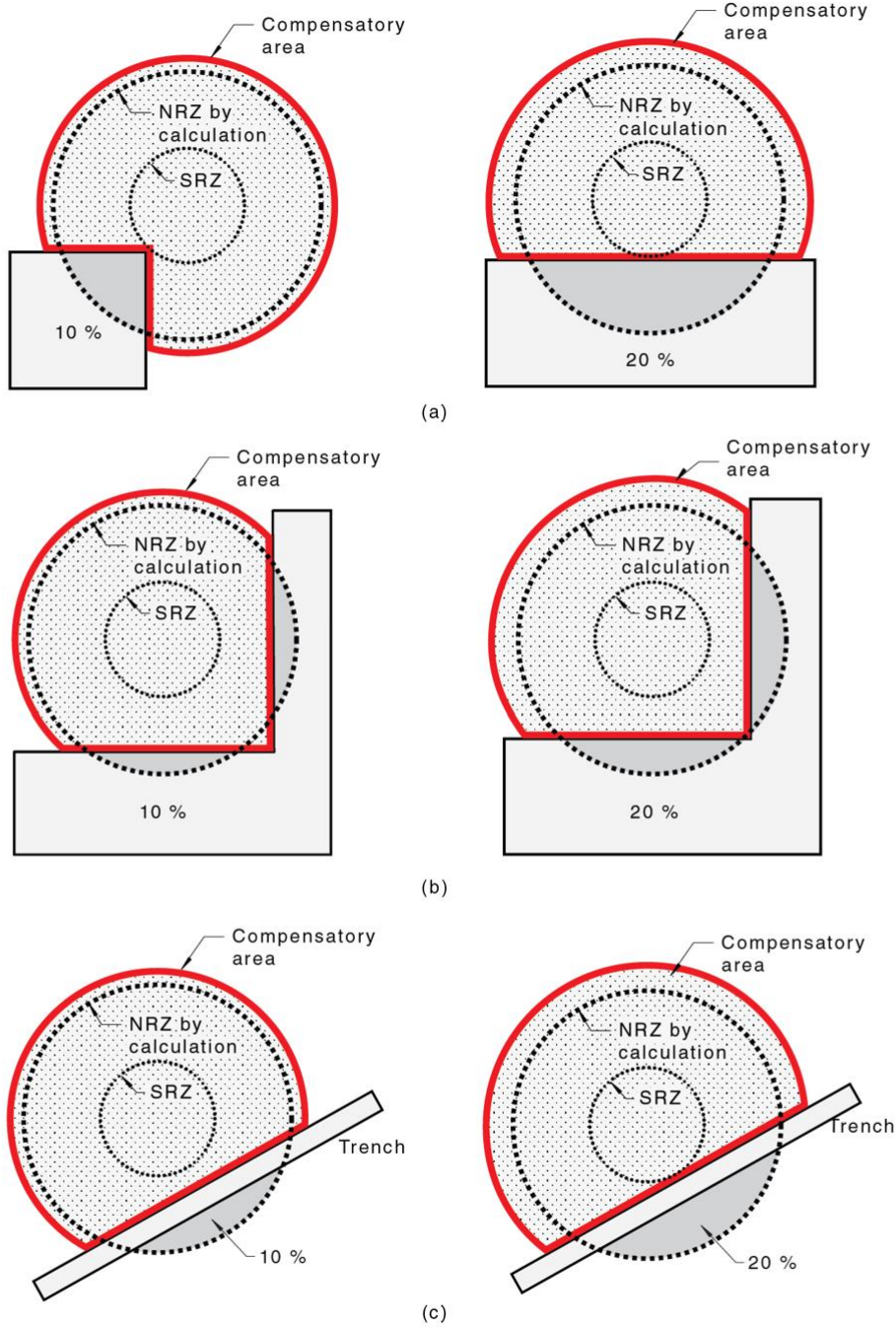
**Structural Root Zone (SRZ)** The area required for tree stability. The SRZ radius is calculated by the diameter at root flare using the following formula  $(D \times 50)^{0.42} \times 0.64$ .



**Notional Root Zone (NRZ)** The Notional Root Zone is the principal means of protecting trees on development sites. It is an area isolated from construction disturbance, so that the tree remains viable. The radius of the NRZ is calculated for each tree by multiplying its DSH x 12.

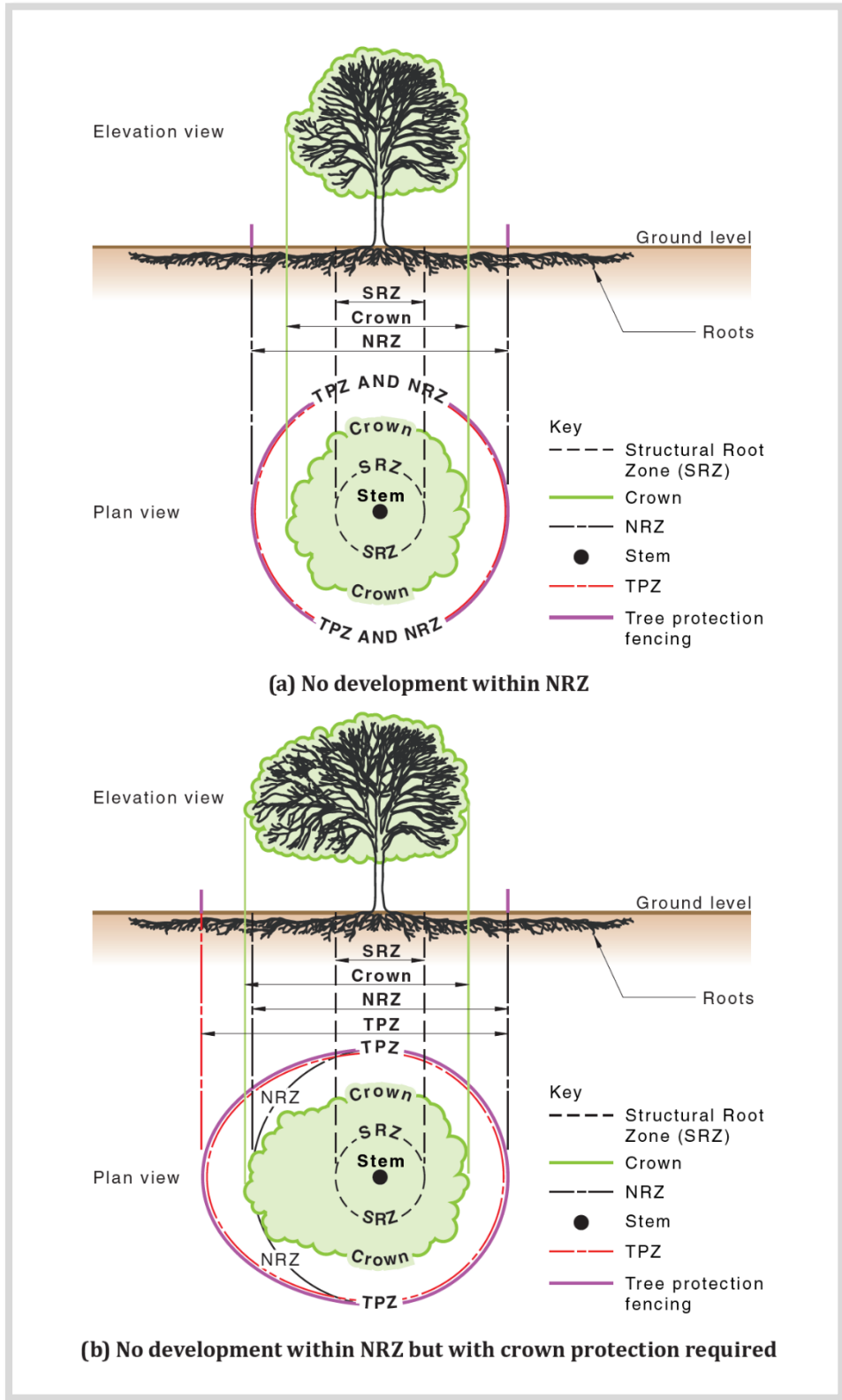
**Encroachment Classification** When excavation is unavoidable, the extent of encroachment is typically classified as:

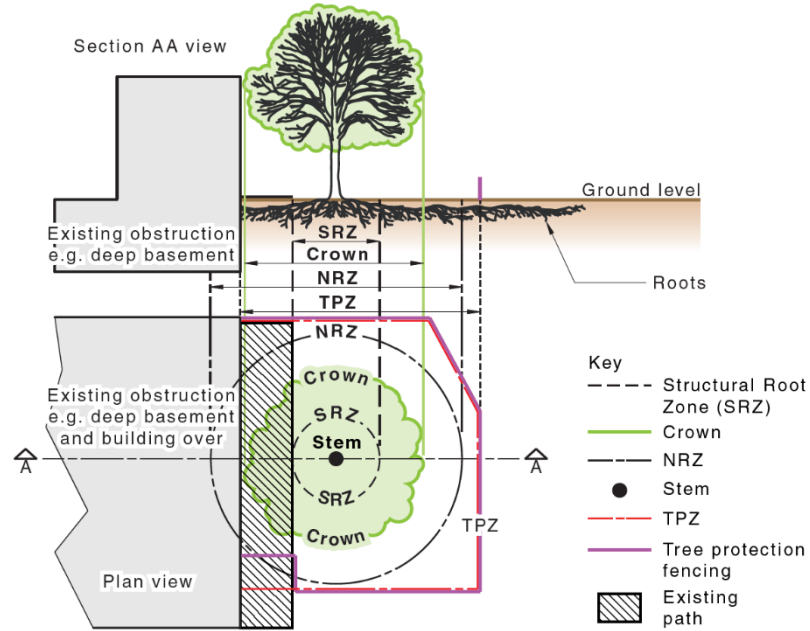
- **Minor:** ≤10% of the NRZ.
- **Moderate:** 10 – 20% of NRZ.
- **Major:** >20% of the NRZ.



NOTE These examples are not to scale and are for illustrative purposes. The proposed encroachment is considered minor if it is less than or equal to 10 % of the area of the NRZ, has not had recent TPZ encroachments and is outside of the SRZ (see [Clause 3.4](#)). 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 of the SRZ (see [Clause 3.4](#)).

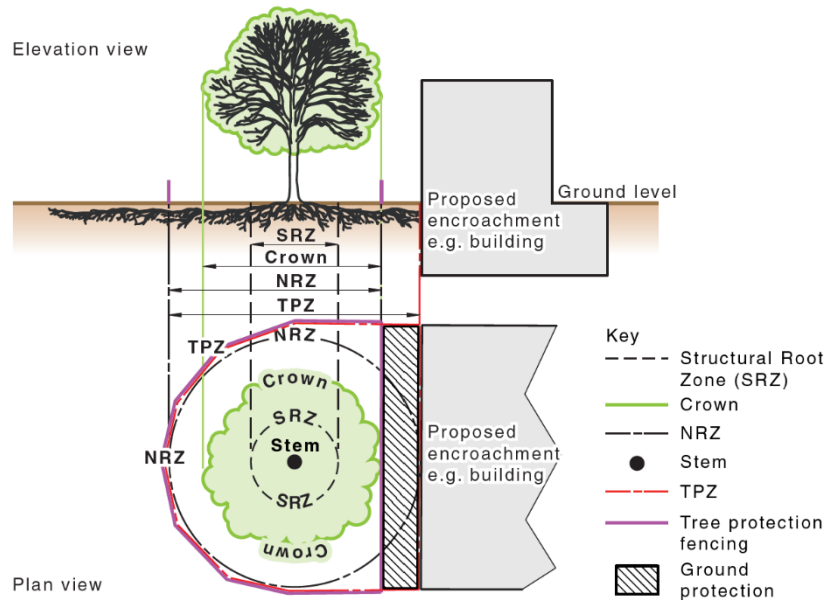
**Figure 1 — Sample minor and moderate encroachments**





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 health:****Good**

The tree is demonstrating good or exceptional growth for the species. The tree should exhibit a full canopy of foliage and have only minor pest or diseases problems. Foliage colour, size and density should be typical of a healthy specimen of that species.

**Fair**

The tree is in reasonable condition and growing well for the species. The tree should exhibit an adequate canopy of foliage. There may be some dead wood present in the crown, some grazing by insects 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. Significant pest and disease problems may be evident or symptoms of stress indicating tree decline.

**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 deadwood may be present in the canopy or pest and disease problems may be causing a severe decline in tree health.

**Tree structure:****Good**

The tree has a well-defined and balanced crown. Branch unions appear to be strong, with no defects evident in the trunk or the branches. Major limbs are well defined. The tree would be considered a good example of 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, and some branch unions or branches may be exhibiting minor structural faults. If the tree is single trunked, 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 probable in the immediate future.

**Has Failed**

A significant section of the tree or the whole tree has failed.