# Regulated Tree and Protection Zone Report

Site: 290 Unley Road
Hyde Park SA


Urbanvirons ref: 83966

Prepared for Samaras Construction and Development

11/9/2024

# Contents



## Tree assessment and report by:

### Ross Greene

B.App.Sc (Horticulture)
Dip.Hort. (Arboriculture)
Tree Risk Assessment Qualified (ISA USA)

## 1. Introduction

Urbanvirons was commissioned by Samaras Construction and Developments to assess trees located on a site proposed for development at 290 Unley Road, Hyde Park. Council-owned verge trees adjacent to the site were included in the assessment.

The request was to provide:

1) an assessment of the existing trees on site;
2) provide TPZs and tree protection guidelines.

## 2. Method

- I attended the site on the 5th of September 2024 to inspect the trees.
- The trees' circumferences were measured at 1m above natural ground level to determine their regulated status.
- The species, size, health, structure and growing environment of regulated trees were recorded and comments included where relevant.
- Photographs were taken.
- The trees' retention value was assessed against provisions of the SA Planning and Design Code. Grounds for removal were also assessed under the Code.
- Recommendations are based on observations and the data collected.

## 3. Relevant Documentation

The following legislation, associated planning provision and Australian Standards were referenced during the preparation of this report:

- South Australian Planning, Development and Infrastructure Act 2016
- South Australian Planning, Development and Infrastructure (General) Regulations 2017
- South Australian Planning and Design Code
- AS4970-2009 *Protection of trees on development sites*
- AS4373-2007 *Pruning of amenity trees*

## 4. Limitation

Finalised plans of the proposal were not available at the time of the tree assessment. Indicative TPZs and tree locations have been shown on aerial depictions (Nearmap.com) and the concept drawings provided.

## 5. The Site and Tree Locations

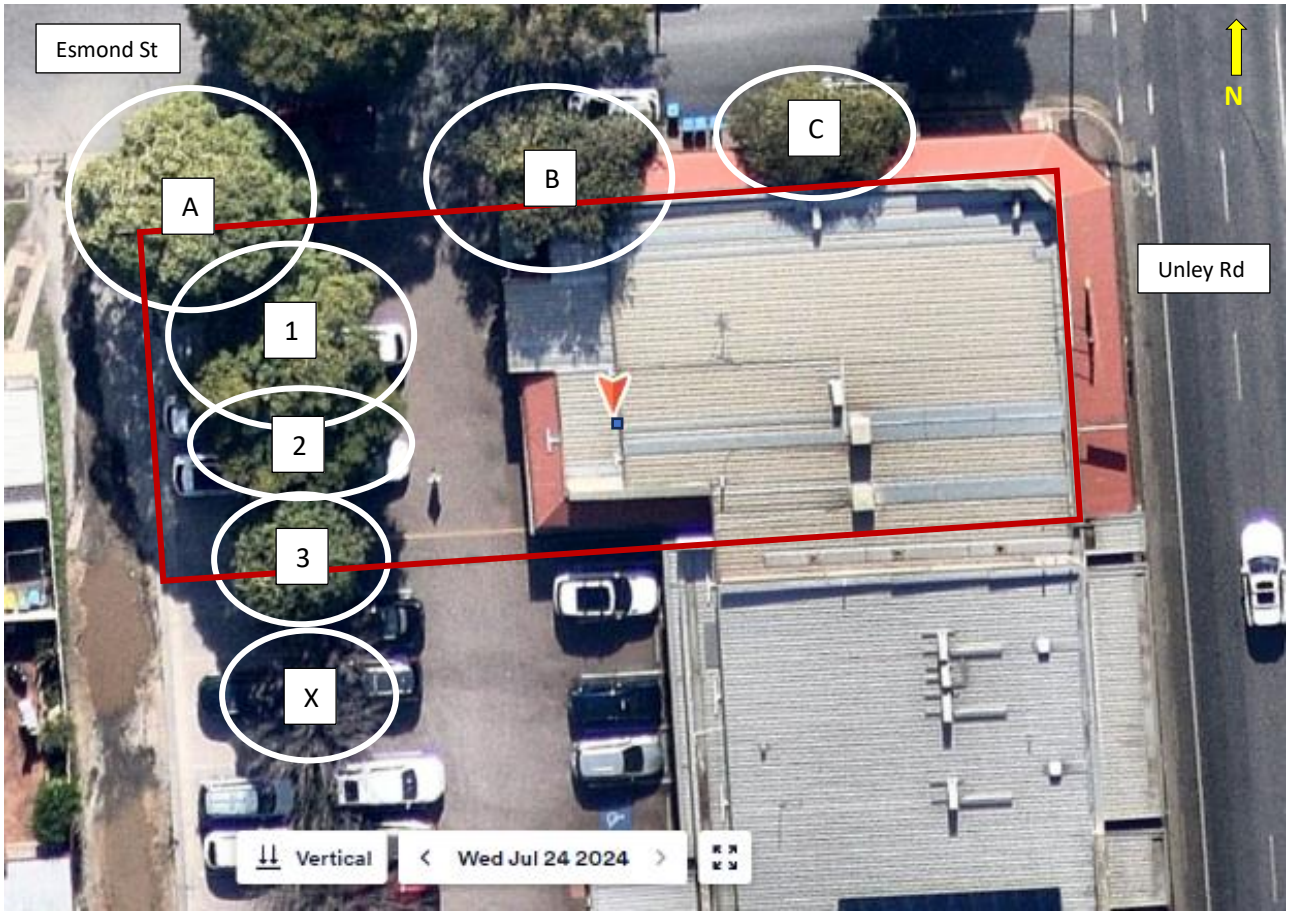


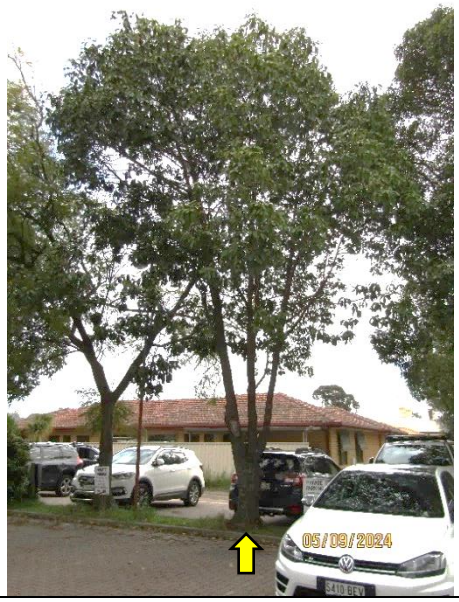

Figure 1. The location of the trees; A, B & C are council-owned verge trees, 1, 2 & 3 located on site. Allotment boundary as shown on Nearmap.com. Tree X is the first of a row of Callery Pears on the allotment to the south. None are regulated.

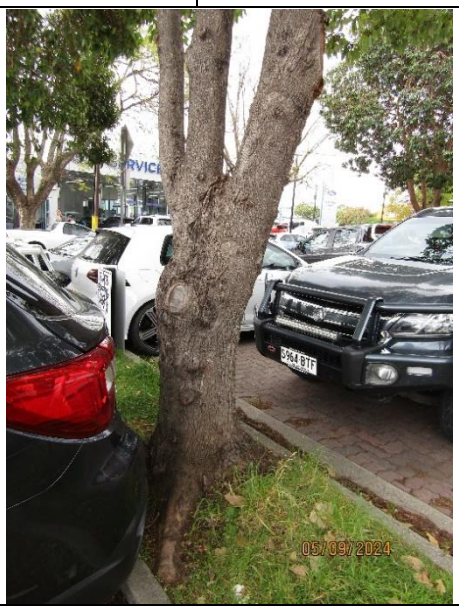

Photo 1. Site trees within the car park.


Photo 2. Street trees on the northern boundary.

## 6. Tree Data and Depictions – Site Trees

| **Tree 1** | *Lophostemon confertus* | **Common Name** | Qld Box |
|---|---|---|---|
| **Legislated status** | Regulated (1.4m @ 1m) | **Health** | Good |
| **Protection zones** | TPZ = 4.8m SRZ = 2.32m | **Structure** | Good |
| **Est. height** | 9m | **Retention value** | Medium |




| **Tree 2** | *Jacaranda mimosifolia* | **Common Name** | Jacaranda |
|---|---|---|---|
| **Legislated status** | Not regulated (0.94m) | **Health** | Good |
| **Protection zones** | TPZ = 4.9m SRZ = 2.37m | **Structure** | Fair |
| **Est. height** | 11m | **Retention value** | Medium |


| | | | |
|---|---|---|---|
| **Tree 3** | *Lophostemon confertus* | **Common Name** | Qld Box |
| **Legislated status** | Significant (2.18m @ 1m) | **Health** | Good |
| **Protection zones** | TPZ = 4.8m SRZ = 2.72m | **Structure** | Poor |
| **Est. height** | 10m | **Retention value** | Medium |
|  | |  | |

Comments on Site Trees

There are three trees in the car park of the allotment at 290. The two Queensland Box trees (1 & 3) are regulated, with Tree 3 being significant. The Jacaranda (2) is exempt. It would once have been regulated but one of the twin trunks was removed, presumably to clear space for car parking. A single trunk remains. The shoot emerging from the cut stump is a branch not a trunk so is not included in a measurement to establish regulated status. No approval is required to remove the Jacaranda.

The two Queensland Box trees are in good condition for a challenging car park location. The health in both is good. Tree 1 presents with a satisfactory structure but the lower trunk of Tree 3 is poor. In this tree three closely located trunks show a linear alignment and both trunk unions are included (shedding bark is unable to be lost from the union and accumulates). As the three trunks continue to expand in girth they will inevitably push each other apart. Partial failure of the structure at some point looks probable, if some time off.

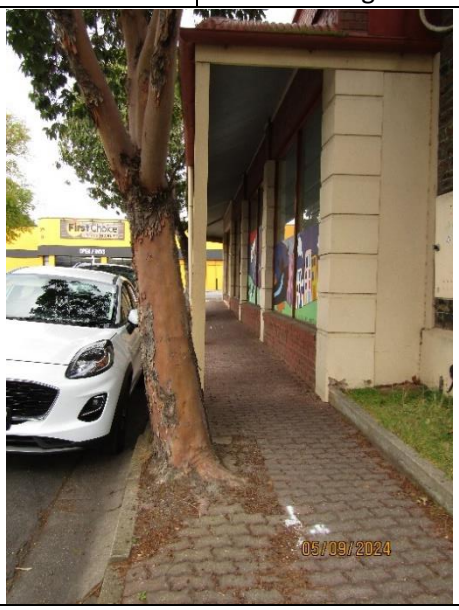
In my opinion Trees 1 & 3 provide various benefits to the car park area but limited benefits to the general locality. An assessment of these trees against the provisions of the Planning and Design Code is provided in Appendix A. Development Approval to remove these trees to accommodate the reasonable development of land under PO 1.4 is feasible but must be determined through appraisal by the relevant authority.

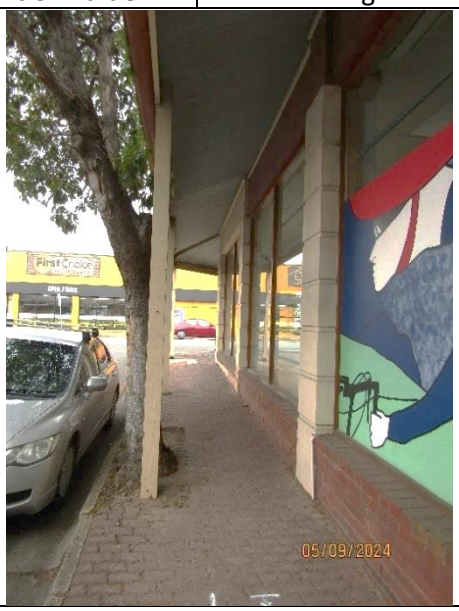
## Tree Data and Depictions – Verge Trees

| **Tree A** | *Lophostemon confertus* | **Common Name** | Qld Box |
|---|---|---|---|
| **Legislated status** | Regulated (1.98m @ 1m) | **Health** | Good |
| **Protection zones** | TPZ = 7.3m SRZ = 2.93m | **Structure** | Good |
| **Est. height** | 14m | **Retention value** | High |



| **Tree B** | *Lophostemon confertus* | **Common Name** | Qld Box |
|---|---|---|---|
| **Legislated status** | Regulated (1.22m @ 1m) | **Health** | Good |
| **Protection zones** | TPZ = 4.5m SRZ = 2.39m | **Structure** | Good |
| **Est. height** | 9m | **Retention value** | High |

| | | | |
|---|---|---|---|
| **Tree C** | *Lophostemon confertus* | **Common Name** | Qld Box |
| **Legislated status** | Regulated (1.02m @ 1m) | **Health** | Good |
| **Protection zones** | TPZ = 3.8m SRZ = 2.25m | **Structure** | Good |
| **Est. height** | 8m | **Retention value** | High |
|  | |  | |

Comments on Verge Trees

There are three Queensland Box trees located along the street verge on the north side of the allotment. There is very little by way of open ground around any of these trees. Cultivating a tree to a mature size in this type of streetscape is challenging, and starting from scratch often ends in failure. The growing environment for Tree C presents as particularly hostile. For this reason retaining these trees in good condition is liable to be important to the City of Unley.

There is potential for damage to these trees during both the demolition and construction stages of the proposal. If the trees are incorporated into a fenced exclusion zone that extends to the kerb some type of protective TPZ barrier is liable to be requested by council. Work within the TPZ must be low impact with the aim of not damaging roots. These trees would now be growing slowly and would correspondingly recover slowly from any setbacks. Relevant tree protection guidelines as listed in AS4970 are provided in Appendix B.

Some pruning appears likely required to the south side of Tree A to install the building. Trees B & C may require work but this appears as though it would be minor. The trunks of Trees B & C are closely aligned with the street kerbing and their crowns are biased north. This facilitates some clearance of the site. This is of such an extent in Tree C that it may not require any pruning at all. An indication of the likely pruning required is shown in Appendix C.

## 7. TPZs and Encroachments

The TPZs of Trees A, B & C is currently almost completely occupied by hard surfacing and building. There are small patches of linear garden beds by Trees A & B but Tree C is completely covered. On this basis there is not actually much new encroachment by the proposed development, but more a replacement of the nature of the encroachment. At this stage of the design process exact details of proposed surfacing and landscaping has not been finalised so I cannot comment in detail on potential impacts to the trees. The approximate areas of like-for-like encroachments are Tree A: 37%, Tree B 30% and Tree C 26% (refer Figure 2). All of these would constitute 'major encroachments' under AS4970 but this would be relative to what is to occur. In general a like-for-like encroachment can be tolerable providing no major damage results while removing the old and installing the new.



Shows the current TPZ occupancy. Mostly compacted hard surfacing and building.


Figure 2. Indicates the nature of the current ground-based TPZ occupancy and areas of like-for-like encroachment.

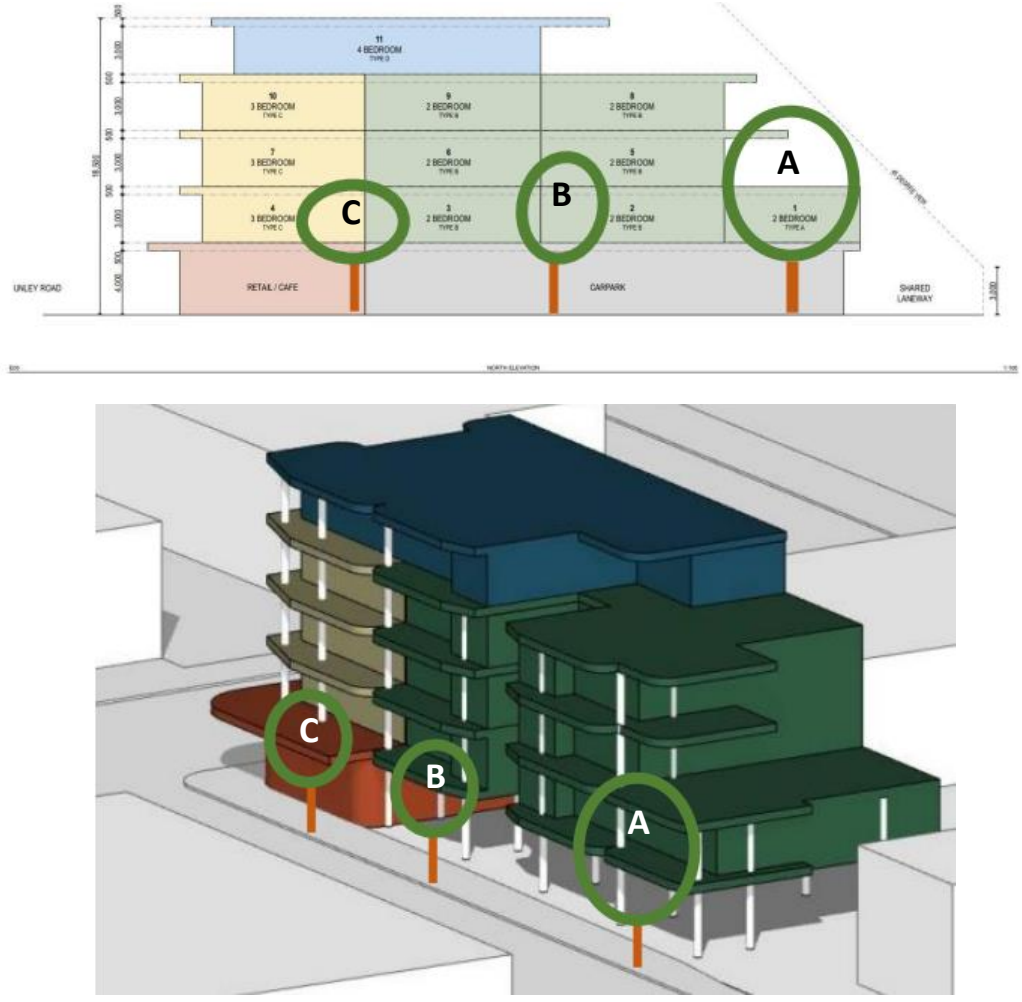



Figure 3. Tree locations relative to building concept. Trees 1, 2 & 3 require removal to facilitate the building indicated. Trees A & B are liable to require pruning on the south side. Tree C may require pruning but the crown of this tree is biased to the north so this is anticipated to be minor (refer Appendix C).

## 8. Summary

1. The proposed development includes extending a building over the current car park and requires the removal of site Trees 1, 2 & 3. Tree 1 is regulated and Tree 3 is significant under SA legislation. Removal of these trees to facilitate the reasonable development of land looks to be feasible but must be approved by the relevant authority.
2. Verge trees A, B & C are mature trees in good condition relative to their locations and in my opinion are good quality amenity trees. Replacement trees would be challenging to establish in these locations and it is likely that the City of Unley will require they are retained in good condition if development approval is granted. Permission to remove any of these trees is unlikely to be granted in my opinion.

## 9. Conclusions

1. Given the site development, an application to remove Trees 1 & 3 can be submitted under the provisions of Performance Outcome 1.4 of the Regulated and Significant Tree Overlay. The relevant approving authority will determine if this can be supported.
2. If the development is approved, Trees A, B & C will need to be protected during both the demolition and construction phases of the project. Protection of the roots of Trees A, B & C is high priority as root damage is unlikely to fully self-repair in Queensland Box trees of this age. AS4970-2009 *Protection of trees on development sites* provides guidelines to successfully implement tree protection (refer Appendix B).
3. Some clearance pruning of the crowns of these trees appears necessary to install the building. The Queensland Box is reasonably amenable to pruning. Approval to undertake pruning needs to be granted by the City of Unley before works proceed. They may request a separate DA for this work. All pruning should be completed compliant with Australian Standard 4373-2007 *Pruning of amenity trees*. An estimate of the pruning required is shown in Appendix C.

## Appendix A – P&D Code Assessment (Trees 1 & 3)

The allotment is listed as being within an Urban Corridor Zone within the Assessment Provisions of the Planning and Design Code.

The *Desired Outcome* of the Regulated and Significant Tree Overlay listed within the Code for this classification is shown in Table 1. Given the similarities in Trees 1 & 3 this assessment is applicable to both trees.

Table 1. Desired Outcome (Tree Retention and Health)

| **Desired Outcome (DO)** | |
|---|---|
| DO 1 | Conservation of regulated and significant trees to provide aesthetic and environmental benefits and mitigate tree loss. |

*Assessment of DO 1*

*In my opinion the aesthetic benefits provided by the trees are moderate and for the most part isolated to the car park. Some environmental value remains. The contribution to canopy cover is minor.*

The *Performance Outcomes* of the Regulated and Significant Tree Overlay listed within the Code for this classification are shown in Tables 2 to 5.

Performance Outcomes 1.1 and 1.2 within the Code provide templates to assess a tree's environmental contribution. The following assessments are provided in relation to Trees 1 & 3.

Table 2. Performance Outcome Assessment of Tree 1 (Tree Retention and Health)

| **Performance Outcome (PO)** | | ***Assessment*** |
|---|---|---|
| Tree Retention and Health | | |
| PO 1.1 | | |
| Regulated trees are retained where they: | | |
| (a) | make an important visual contribution to the local character and amenity | In my opinion the visual contribution is of modest value and would not assess as *important.* |
| (b) | are indigenous to the local area and listed under the National Parks and Wildlife Act 1972 as a rare or endangered native species | Not indigenous. Not listed as rare or endangered. |
| (c) | provide an important habitat tree for native fauna. | No. Possibly some perching shelter for birds but not assessed as *important.* No nests or hollows observed. |

*Conclusion PO 1.1*

*The conclusion of this part of the assessment is that the tree provides modest benefits by way of its contribution to local character, amenity and habitat provision for native fauna. Whilst of some value, the contribution does not assess as being 'important'.*

Table 3. Performance Outcome Assessment of Tree 3 (Tree Retention and Health)

| **Performance Outcome (PO)** | | ***Assessment*** |
|---|---|---|
| Tree Retention and Health | | |
| PO 1.2 | | |
| Significant trees are retained where they: | | |
| (a) | make an important contribution to the character or amenity of the local area | In my opinion the visual contribution is of modest value and would not assess as *important.* |
| (b) | are indigenous to the local area and listed under the National Parks and Wildlife Act 1972 as a rare or endangered native species | Not indigenous. Not listed as rare or endangered. |
| (c) | represent an important habitat for native fauna | No. Possibly some perching shelter for birds but not assessed as *important.* No nests or hollows observed. |
| (d) | are part of a wildlife corridor or a remnant area of native vegetation | No |
| (e) | are important to the maintenance of biodiversity in the local environment and/or | Not *important* to biodiversity. |
| (f) | form a notable visual element to the landscape of the local area. | No, not a prominent tree given its modest height and car park yard location. |

*Conclusion PO 1.2*

*The conclusion of this part of the assessment is that the tree provides modest benefits by way of its contribution to local character, amenity and habitat provision for native fauna. Whilst of some value, the contribution does not assess as being 'important'.*

Grounds to Remove a Regulated Tree (Trees 1 & 3)

Performance Outcome 1.3 within the Code provides a template to assess cases where tree-damaging activity on a *regulated* (or *significant*) tree may be warranted. The following assessment is provided as it relates to Trees 1 & 3.

Table 4. Performance Outcome Assessment (Tree Retention and Health)

| **Performance Outcome (PO)** | | | **Assessment** |
|---|---|---|---|
| Tree Retention and Health | | | |
| PO 1.3 | | | |
| A tree damaging activity **not in connection with other development** satisfies (a) and (b): | | | |
| (a) | tree damaging activity is only undertaken to: | | |
| | (i) | remove a diseased tree where its life expectancy is short | No disease observed. |
| | (ii) | mitigate an unacceptable risk to public or private safety due to limb drop or the like | The level of risk assesses as *low* in both cases. Tree 3 looks sound at this time but the structure is faulty. No remediation is possible. |
| | (iii) | rectify or prevent extensive damage to a building of value as comprising any of the following:<br>A. a Local Heritage Place<br>B. a State Heritage Place<br>C. a substantial building of value<br>and there is no reasonable alternative to rectify or prevent such damage other than to undertake a tree-damaging activity | Given the distances involved damage to a substantial building of value is virtually impossible. |
| | (iv) | reduce an unacceptable hazard associated with a tree within 20m of an existing residential, tourist accommodation or other habitable building from bushfire | Not applicable |
| | (v) | treat disease or otherwise in the general interests of the health of the tree<br>and/or | Not applicable |
| | (vi) | maintain the aesthetic appearance and structural integrity of the tree | Not applicable to the conclusion of this assessment. |
| (b) | in relation to a significant tree, tree-damaging activity is avoided unless all reasonable remedial treatments and measures have been determined to be ineffective. | | Applies to Tree 3. A major redesign would be required to avoid TDA. |

| PO 1.4 | | |
|---|---|---|
| A tree-damaging activity **in connection with other development** satisfies the following: | | |
| (a) | it accommodates the reasonable development of land in accordance with the relevant zone or subzone where such development might not otherwise be possible. | An application to remove these trees can be forwarded under this provision. There is obvious conflict between the proposal and retention of Trees 1 & 3. The approving authority will determine if the requirement is satisfied. |
| (b) | In the case of a significant tree, all reasonable development options and design solutions have been considered to prevent substantial tree-damaging activity occurring. | Applies to Tree 3. To be assessed by the approving authority. |

*Conclusions PO 1.3 & PO 1.4*

i. *There are no arboricultural-based grounds within PO 1.3 (health or risk) to remove either tree. No other clause of PO 1.3 is applicable.*
ii. *An application to remove Tree 1 & 3 can be made under PO 1.4. This determination is at the discretion of the approving authority.*

Ground Work Affecting Trees

Performance Outcome 2.1 within the Code is a requirement of tree protection to protect the ground area (including sub-surface) of a TPZ during the implementation of development. The following relates to development work near to verge Trees A, B & C.

Table 5. Performance Outcome Assessment of Trees A, B & C (Ground Work Affecting Trees)

| **Performance Outcome (PO)** | ***Assessment*** |
|---|---|
| Ground Work Affecting Trees | |
| PO 2.1 | |
| Regulated and significant trees, including their root systems, are not unduly compromised by excavation and/or filling of land, or the sealing of surfaces within the vicinity of trees to support their retention and health. | This is a requirement for the TPZs of Trees A, B & C to be observed during works and protected in line with recommendations within AS4970. |

## Appendix B – Tree Protection Guidelines

Protective measures during demolition and construction activities have shown to be beneficial to maintaining trees in good condition. In relation to development in general the following guidelines are provided.

**Site access**

- Site access should be directed around any tree protection zones.

**Trunk and branch protection**

- Where works are in close proximity to trees and impact by machinery is possible, trunk and branch protection can be utilised. Soft padding and timber battens can be installed around trunks and branches to avoid wounding.

**Associated activities**

- Areas for parking, storage, waste disposal, mixing and wash out areas must be clearly defined, and well away from tree protection zones.

**Site preparation and excavation**

- Any approved earthworks within the TPZ must be carried out with caution under the supervision of a project arborist. No grade changes (cut or fill) within any TPZ without approval from the relevant authority. Excavation machinery should stand in a position away from the TPZ to avoid soil compaction and conflict with the trunk and branches. No stockpiling of soil within any TPZ.

**Underground services**

- No underground services should be installed within any TPZ. If underground services must pass through any TPZ they must be installed with a low impact method. This may require directional boring or hydro excavation.

**Paving**

- Paving materials located within a TPZ must use permeable base preparations and permeable paving materials.

**TPZ fencing**

- Council may request TPZ fencing is utilised on this project relative to the works proposed. This is particularly likely if site access is excluded to the kerb. If scaffolding is required near the trees and within the TPZ a further assessment of how to proceed is recommended. TPZ fencing can be removed to implement finalisation of the project once the potential for tree-damaging activity has passed.

**Scaffolding**

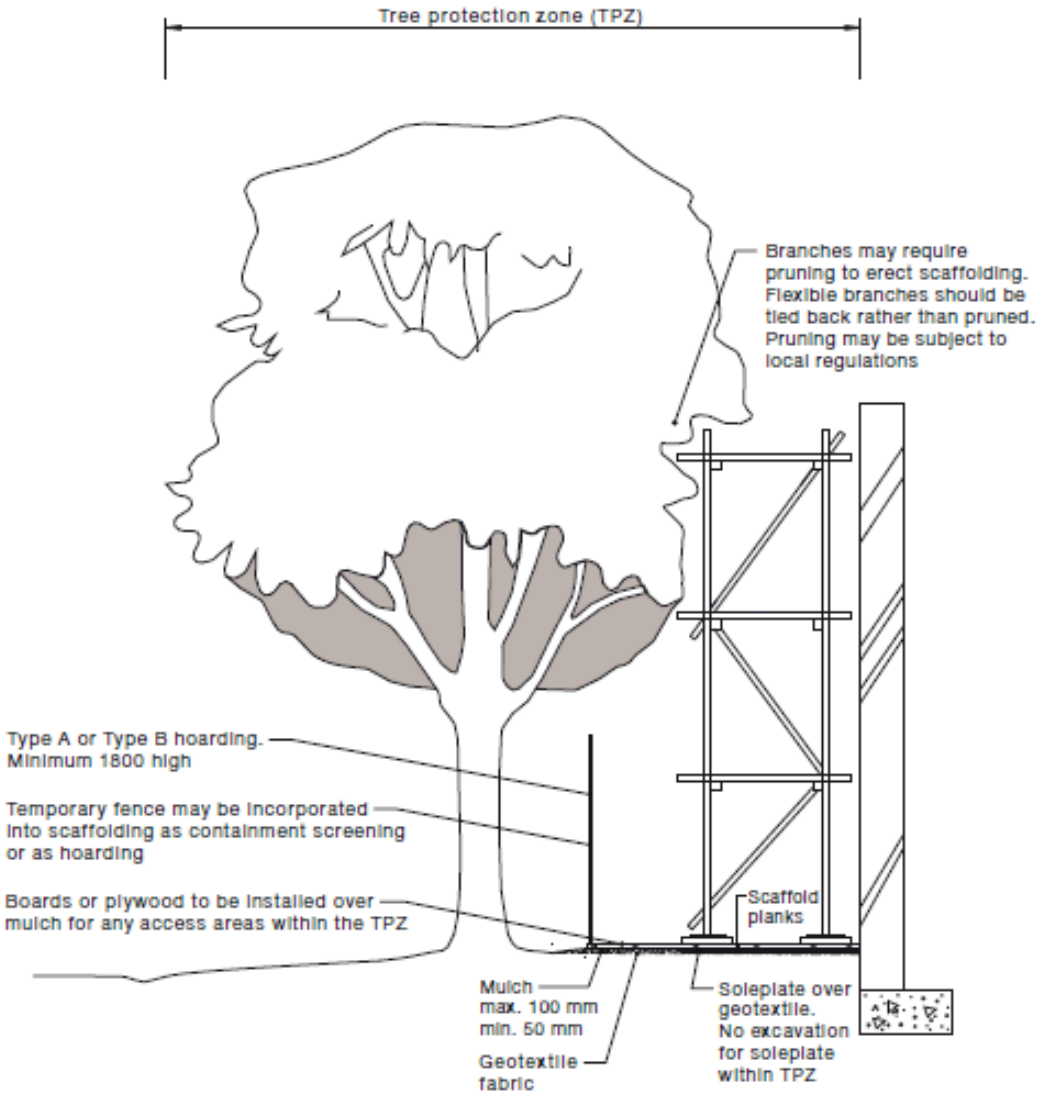
- If scaffolding is required to be installed within a TPZ AS4970 Clause 4.5.6. states:

### 4.5.6 Scaffolding

Where scaffolding is required it should be erected outside the TPZ. Where it is essential for scaffolding to be erected within the TPZ, branch removal should be minimized. This can be achieved by designing scaffolding to avoid branches or tying back branches. Where pruning is unavoidable it must be specified by the project arborist in accordance with AS 4373.

NOTE: Pruning works may require approval by determining authority.

Ground below the scaffolding should be protected by boarding (e.g. scaffold board or plywood sheeting) as shown in Figure 5. Where access is required, a board walk or other surface material should be installed to minimize soil compaction. Boarding should be placed over a layer of mulch and impervious sheeting to prevent soil contamination. The boarding should be left in place until the scaffolding is removed.

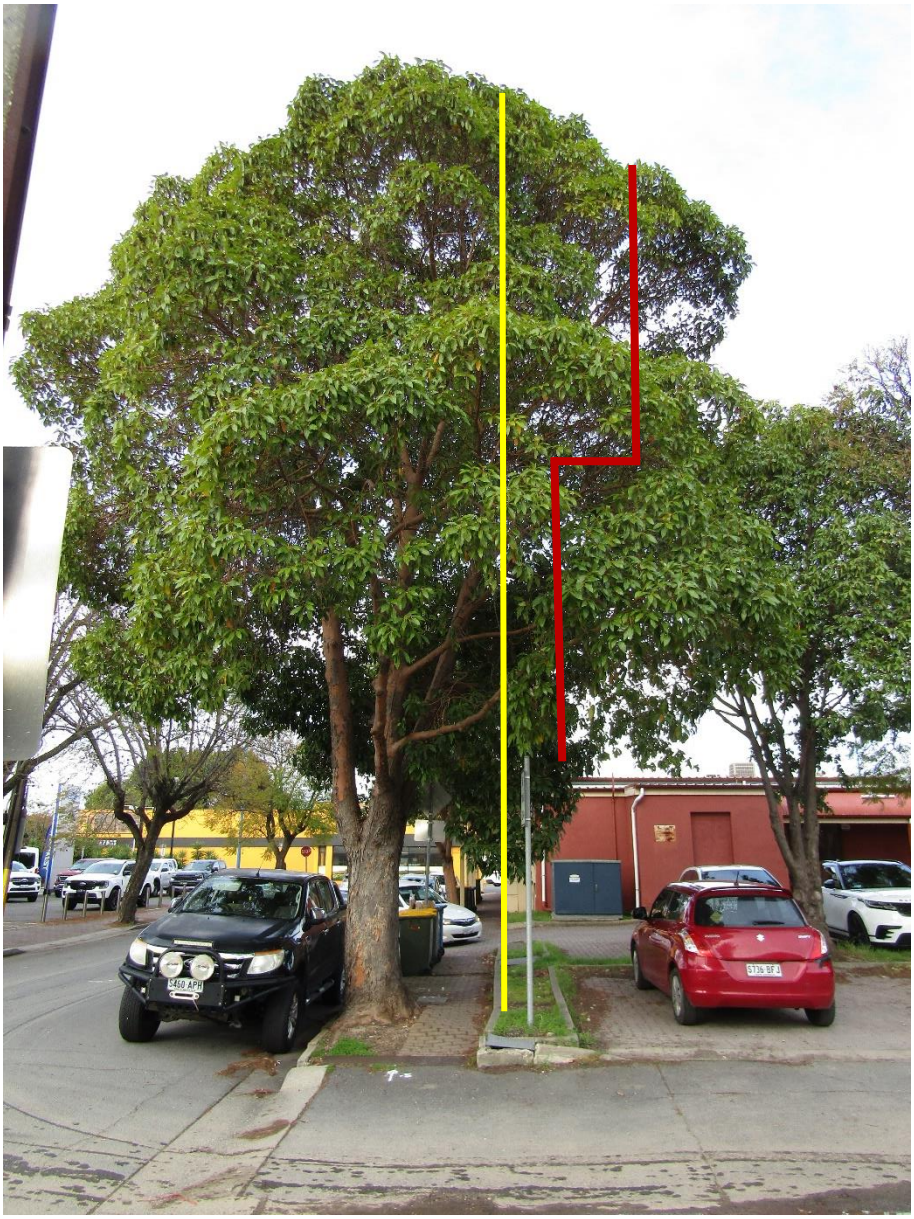



NOTE: Excavation required for the insertion of support posts for tree protection fencing should not involve the severance of any roots greater than 20 mm in diameter, without the prior approval of the project arborist.

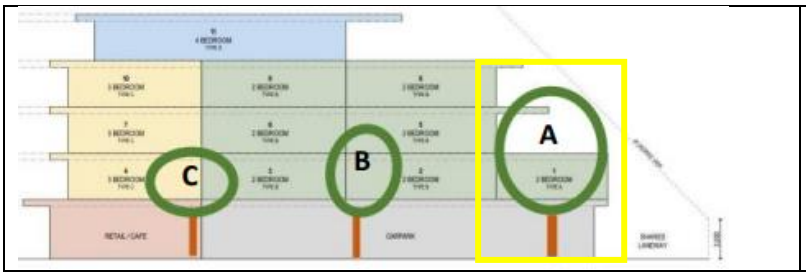
FIGURE 5 INDICATIVE SCAFFOLDING WITHIN A TPZ

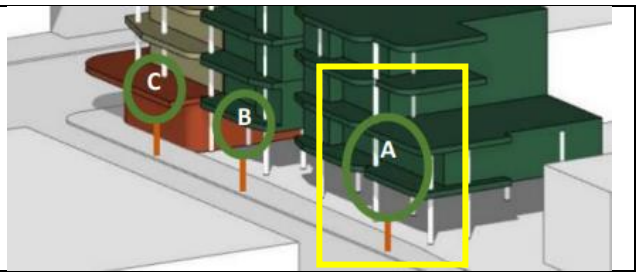
## Appendix C – Pruning Requirement (Trees A, B & C)

### Tree A



Shows the property boundary relative to the crown of Tree A. Based on the plans the south side requires clearance pruning. An estimate of the extent required indicated in red.



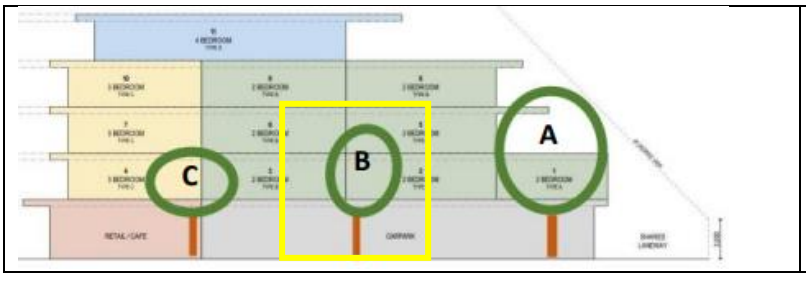



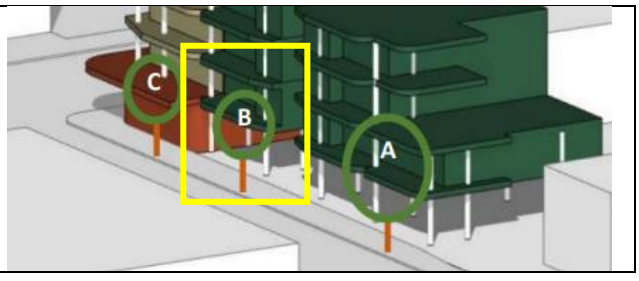
There is a crown void on the south side with a low density of lateral branches.

Shows the mid-crown void southern side. The crown in this area is crescent shaped which somewhat accommodates the estimated pruning requirement.

Tree B

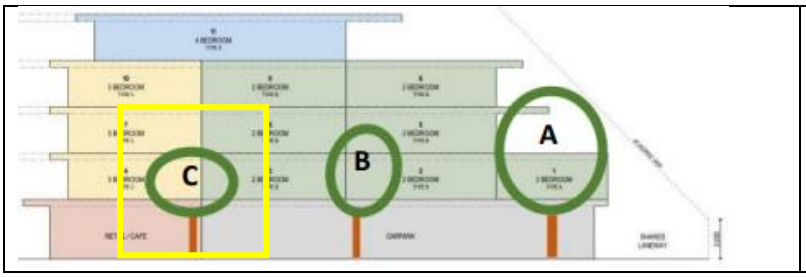
Shows the property boundary relative to the crown of Tree B. Based on the plans the south side will likely require clearance pruning to near boundary. An estimate of the extent required indicated in red.

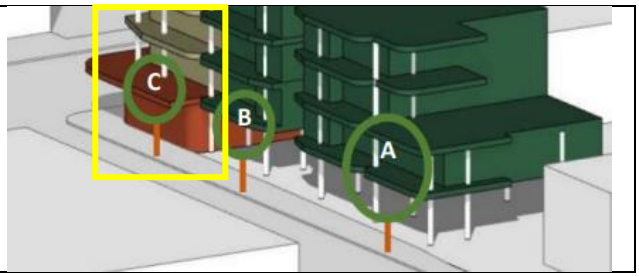


Tree C

Shows the property boundary relative to the crown of Tree C. Based on the plans clearance pruning is avoidable. An estimate of possible pruning required indicated in red.



## Glossary

| | |
|---|---|
| crown | The upper part of the tree supported by the trunk. The leaves and associated supporting branches. |
| health | The best indicator of tree health at any one time is the condition of new growth. If new growth is normal in size, colour and density this usually indicates a healthy tree. This can be the case despite older leaves looking poor or lacking in density. The health of bark and evidence of occlusive (sealing) growth over wounds is also noted during an assessment of health. |
| regulated tree | Defined within the *SA Planning, Development and Infrastructure Act 2016* (PDI Act 2016) as a tree, or a tree within a class of trees, declared to be regulated by the regulations ie the *SA Planning, Development and Infrastructure (General) Regulations 2017* (PDI Regulations 2017). Trees termed as 'significant' are included in the umbrella term of 'regulated'. A tree, or a tree within a stand of trees, can also be declared as significant under the Planning and Design Code whether or not the tree is also declared as regulated by the regulations. Regulated trees are protected from removal or tree-damaging activity under the regulations.<br><br>Under the PDI Regulations 2017 (amended 2024) a regulated tree is defined as a tree with a trunk circumference of 1 metre or more or, in the case of trees that have multiple trunks, that have trunks with a total circumference of 1 metre or more and an average circumference of 310mm or more, measured at a point 1 metre above natural ground level. A significant tree is defined as a tree with a trunk circumference of 2 metres or more or, in the case of trees that have multiple trunks, that have trunks with a total circumference of 2 metres or more and an average circumference of 625mm or more<br><br>The PDI Regulations 2017 also lists a number of trees which are exempt from the regulated tree provisions and can be removed without Development Approval. The consulting arborist will enact these provisions where appropriate. This includes trees that are *not* of the genera *Eucalyptus, Corymbia* and *Angophora* or the species *Agonis flexuosa* and are located within 3m of an existing dwelling or existing in-ground swimming pool. |