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15 December 2021

Rod Kenning
King David School
520 Orrong Road
Armadale VIC 3143

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Ref: Sports Facility project

Arboricultural Assessment and Tree Protection Management Plan for fifteen (15) trees located within the vicinity of proposed Sports Facility project at King David School, 520 Orrong Road, Armadale

Dear Rod,

We are pleased to provide you with the following Arboricultural Impact Assessment for fifteen (15) site trees within the grounds, and adjacent to, the King David School.

Complete use of this report is authorised under the conditions limiting its use as stated in Appendix A Item 7 of "*Arboricultural Reporting Assumptions and Limiting Conditions*".

Should you have any queries relating to this report, its recommendations, or the options considered please do not hesitate to contact us on 1300 272 671.

Regards,



Sita Bresnihan
Consulting Arborist

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1 Executive Summary

- 1.1.1 The following Tree Protection Management Plan (Report) regards fifteen (15) trees located within the grounds and adjacent to, the King David School, 520 Orrong Road, Armadale. The subject site was identified by the client as possessing trees that may be impacted by a proposed development.
- 1.1.2 In part, the project scope was to nominate subject trees that can be retained, or that may require removal to facilitate this development, as well as identify and reduce potential conflicts between subject trees and site development. Accurate information on the area required for tree retention and methods/techniques suitable for tree protection during construction have been provided.
- 1.1.3 The retention status of subject trees has been considered in the context of supplied plans only.
- 1.1.4 An arborist inspection of the subject trees was undertaken on 4 November and 3 December 2021, where tree data was collected.
- 1.1.5 Tree retention values have been determined based upon the assessment of the trees' health, structure, dimensions, age class, life expectancy, location and environmental amenity / significance. The Tree Protection Zone (TPZ) method has been derived from the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*. The TPZ is defined as a specified area above and below ground and at a given distance measured radially away from the centre of the tree's trunk and which is set aside for the protection of its roots and crown in order to ensure viability post construction.
- 1.1.6 Three (3) trees were of High Retention Value (Category A). Typically trees in this category were of a significant size in the landscape, possess fair to good health and structure, a Useful Life Expectancy (ULE) of more than 50 years, made significant amenity contributions to the landscape and made high environmental contributions. Trees 1, 2 and 3 were assigned a High Retention Value.
- 1.1.7 Two (2) trees were of Moderate Retention Value (Category B). Trees in this category were typically of a medium size, had good to fair health and good to fair structure, and a Useful Life Expectancy (ULE) of more than 25 years. Moderate Retention Value trees made moderate amenity contributions to the landscape, and made low to moderate environmental contributions. Trees 5 and 10 were assigned a Moderate Retention Value.
- 1.1.8 Nine (9) trees were of Low Retention Values (Category C). Trees in this category were typically of small-medium size, of low significance in the landscape, may have poor health and/or structure, are easily replaceable, of undesirable species and do not warrant design consideration. Trees 4, 6, 7, 9, 11, 12, 13, 14 and 15 were assigned a Low Retention Value.
- 1.1.9 One (1) tree was of Category U retention value. Trees in this category were typically of poor health and/or structure, of undesirable species and are recommended for removal irrespective of site development. Category U retention value tree is Tree 8.

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2 Introduction

- 2.1.1 ArborSafe Australia Pty Ltd was engaged by King David School to provide an arboricultural report and Tree Protection Management Plan (TPMP) regarding fifteen (15) trees located within and adjacent to King David School, that may be impacted upon by proposed refurbishment works and associated construction activities.
- 2.1.2 The subject trees were numbered between 1 and 15.

3 Scope

- 3.1.1 Carry out a visual examination of any trees which may be impacted upon by proposed demolition activities only around the Sports Facility project.
- 3.1.2 Some very young trees, which were deemed easily and/or cheaply replaced or transplanted, and various smaller shrubs have not been included within this report.
- 3.1.3 Inspect the trees and their growing environment and provide an objective appraisal of the subject trees in relation to their species, estimated age, health, structural condition, form and viability within the landscape.
- 3.1.4 Evaluate the possible demolition methodologies to be used.
- 3.1.5 Based on the findings of this investigation, provide detailed TPZ distances and tree protection and/or demolition measures (to form the TPMP) to minimise the potential impact(s) of the proposed demolition works upon the subject trees.

4 Methodology

- 4.1.1 Justin Herbert of ArborSafe Australia Pty Ltd carried out a site inspection of the subject trees on 4 November and 3 December 2021.
- 4.1.2 The subject trees were inspected from the ground. No soil samples were taken and no aerial or internal investigations were undertaken.
- 4.1.3 Tree height and canopy width were estimated. Trunk Diameter at Breast Height (DBH) was measured with a diameter tape and provided to the nearest centimetre.
- 4.1.4 Tree Protection Zones (TPZ) were calculated in accordance with the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.
- 4.1.5 The location and number of the subject trees were detailed on the site plan (Figure 1) so as they could easily be located.
- 4.1.6 Data collected on site was analysed by analysed by Sita Bresnihan, collated into report format, and relevant recommendations were formulated.

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5 Observations

5.1 Site plan



Figure 1. Location and number of the subject trees at King David School. (ArborSite, December 2021).

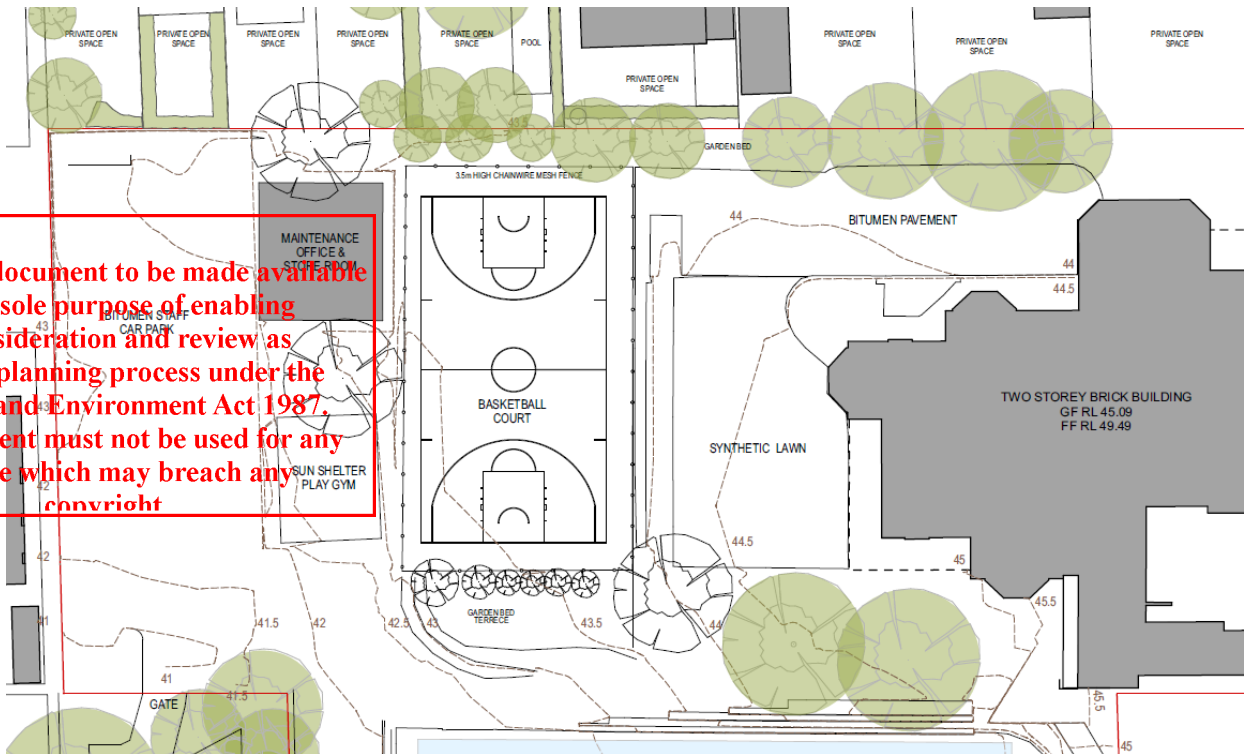


Figure 2. Excerpt from SD1.1 Existing Conditions. (Client, November 2021).

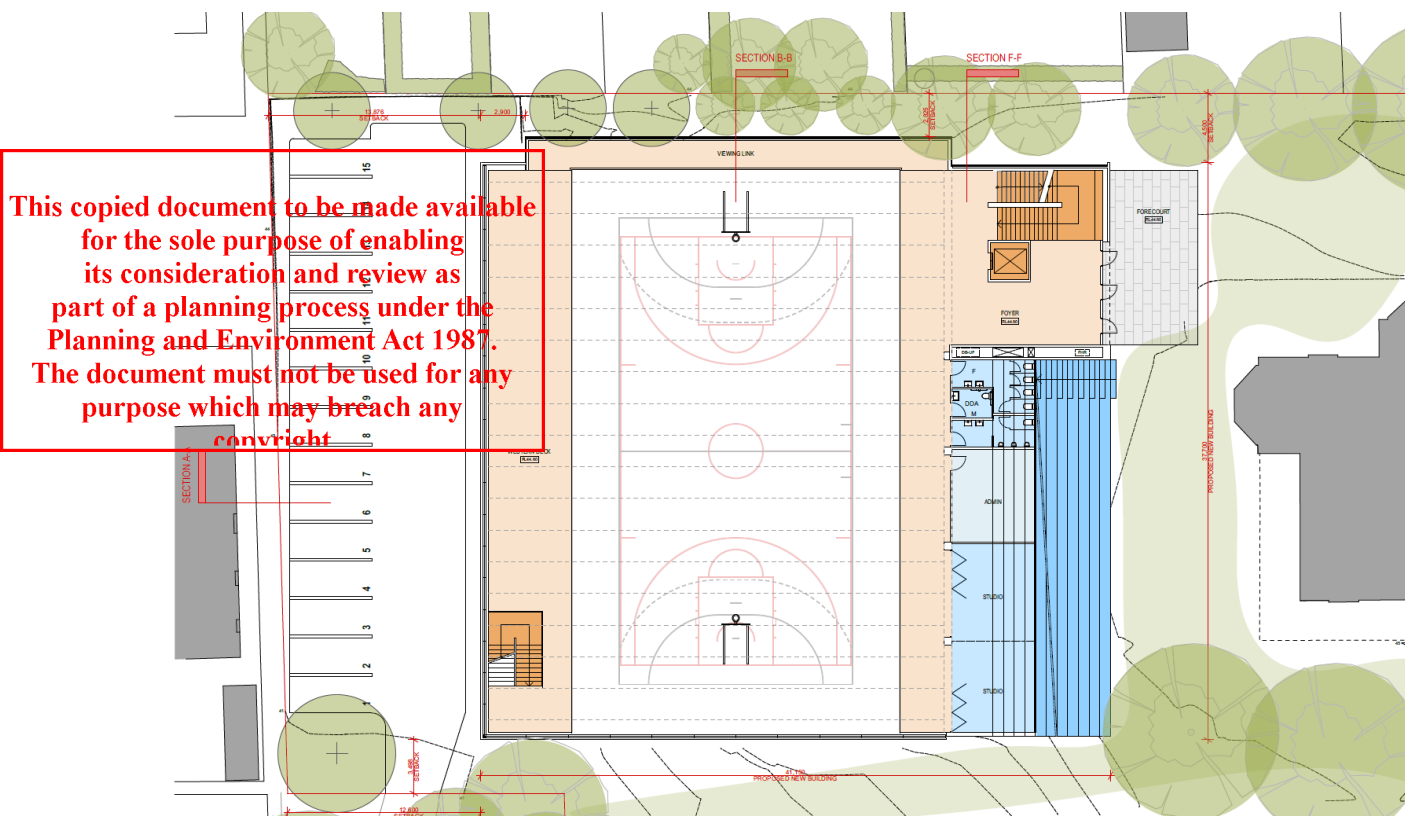


Figure 3. Excerpt from SD2.2 Proposed Upper Floor Plan. (Client, November 2021).

King David School was located on Orrong Road, Armadale. The proposed construction is on the western side of the property. Residential properties border the north and western portions of the site. The southern aspect is flanked by school sports grounds.

- 5.2.1 The trees were found bordering the existing basketball court which is within the footprint of the proposed construction.

5.3 Tree botanical significance

- 5.3.1 The species composition of the subject trees comprised of mixed exotic species in fair to good health.
- 5.3.2 Regulatory controls over the pruning and/or removal of trees on private land, through the Stonnington Planning Scheme and General Local Laws state that a Tree Works Permit must be obtained before any works (pruning or removal) are undertaken on a tree deemed to be 'significant'.
- 5.3.3 The category 'significant' as stated in General Local Law – Part 14: Tree Protection, is as follows;

“Significant Tree” means a tree or palm:

- (a) with a trunk circumference of 140cm (radius 22cm) or greater measured at 1.4 m above its base;
- (b) with a total circumference of all its trunks of 140cm or greater measured at 1.4 m above its base;
- (c) with a trunk circumference of 180cm (radius 29cm) or greater measured at its base; or
- (d) with a total circumference of all its trunks of 180cm or greater measured at its base.

- 5.3.4 As per Section 5.3.3 (above) trees 1, 2, 3, 5, 6 and 10 are considered 'Significant Trees'.

5.4 Historical significance

5.4.1 One (1) site listing was found through the Victorian Heritage Register (VHR). Larnook House, 519 Orrong Road, Armadale is included in Heritage Overlay ID30672. Larnook House has state significance for architectural reasons, as a good example of an 1880s mansion house of the 'pre-boom period' in Melbourne. No mention is made of the surrounding trees in the Statement of Significance.

5.5 Tree observations

5.5.1 Tree 1

5.5.2 Tree 1 was identified as a semi-mature example of *Ulmus parvifolia* (Chinese Elm) that was situated in the south east corner of the development site. The tree displayed good health and fair structure and had a noticeable presence within the surrounding landscape. It also contributed strongly to the surrounding tree canopy.

5.5.3 Due to the current age, health, and structural condition of the tree in combination with its known longevity under cultivation in Victoria, it was allocated a useful life expectancy (ULE) of 25–50 years, during which time its physical size was expected to increase significantly.

5.5.4 The tree was subsequently allocated a Category A, High retention value.



Figure 4. View of Tree 1 at King David School. (Justin Herbert, 4 November 2021).

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5.5.5 Tree 2

5.5.6 Tree 2 was identified as a semi-mature example of *Quercus rubra* (Red Oak) that was situated in the south east corner of the development site. The tree presented in good health, evidenced by the size, colour and density of its foliage that was consistent with healthy examples of this species under cultivation in Victoria.

5.5.7 Its structural condition was rated as fair as a result of the presence of deadwood, epicormic growth and evidence of poor pruning practices. The tree's structural condition in regards to branch attachment was rated as good with no previous signs of branch failure observed.

5.5.8 Based on the tree's current arboricultural traits and location it was allocated a ULE of 25–50 years, during which time its physical size could be expected to increase significantly however, this would likely occur at a slow to moderate rate. Tree 2 had a noticeable presence within the surrounding landscape and it also contributed strongly to the surrounding tree canopy.

5.5.9 The tree was subsequently allocated a Category A, High retention value.



Figure 5. View of Tree 2 at King David School. (Justin Herbert, 4 November 2021).

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5.5.10 Tree 3

5.5.11 Tree 3 was identified as a mature example of *Magnolia grandiflora* (Bull Bay) that was situated in the south east corner of the existing basketball court. The tree presented in good health, evidenced by the size, colour and density of its foliage that was consistent with healthy examples of this species under cultivation in Victoria

5.5.12 Its structural condition was rated as fair as a result of the presence of deadwood, epicormic growth, wounds and evidence of poor pruning practices. The tree's structural condition in regards to branch attachment was rated as good with no previous signs of branch failure observed.

5.5.13 Based on the tree's current arboricultural traits and location it was allocated a ULE of 15–25 years, during which time its physical size could not be expected to increase significantly. The tree had a noticeable presence within the surrounding landscape as a commemorative tree. It also contributed strongly to the surrounding tree canopy.

5.5.14 The tree was subsequently allocated a Category A, High retention value.



Figure 6. View of Tree 3 at King David School. (Justin Herbert, 4 November 2021).

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5.5.15 Tree 5

5.5.16 Tree 5 was identified as a semi-mature example of *Liquidambar styraciflua* (Sweet Gum) that was situated to the west of the existing basketball court. The tree presented in good health with good overall foliage cover.

5.5.17 Its structural condition was rated fair due to evidence of previous failures and included bark. Based on the tree's current arboricultural traits and location it was allocated a ULE of 10–15 years

5.5.18 The tree was subsequently allocated a Category B, Medium retention value.



Figure 7. View of Tree 5 at King David School. (Justin Herbert, 4 November 2021).

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5.5.19 Tree 10

5.5.20 Tree 10 was identified as a semi-mature example of a semi-mature *Fagus sylvatica* (European Beech) that was situated in the north east corner of the proposed construction area. The tree presented in good health with good overall foliage cover.

5.5.21 Its structural condition was rated fair due to evidence of previous failures and historical poor pruning. Based on the tree's current arboricultural traits and location it was allocated a ULE of 15–25 years

5.5.22 The tree was subsequently allocated a Category B, Medium retention value.



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Figure 8. View of Tree 10 at King David School. (Justin Herbert, 4 November 2021).

5.5.23 Trees 4 and 8

5.5.24 Trees 4 and 8 were identified as examples of *Olea europaea* (European Olive). Tree 4 is a row of eight (8) juvenile specimens in good health with fair structure, located along the southern border of the existing basketball court. Tree 8 was a semi-mature specimen in good health with poor structure located in the north east corner of the existing basketball court.

5.5.25 The trees did not have a substantial impact on the surrounding landscape and were not considered botanically significant.

5.5.26 The trees were subsequently allocated a Category C, Low retention value (Tree/Group 4) and Category U retention value (Tree 8).

5.5.27 Trees 6, 7 and 9

5.5.28 Trees 6, 7 and 9 were mixed exotic species in fair to poor condition. Tree 6 was situated to the west of the existing basketball court. Trees 7 and 9 were located on the northern boundary of the proposed construction site.

5.5.29 These trees were allocated a Category C, Low retention value.

5.5.30 A summary of the observations made as part of this visual tree assessment (VTA) can be found in Appendix E – Tree Assessment Data.

5.5.31 Trees 11–15

5.5.32 Trees 11–15 were Council street trees located in Stawell Street (Figure 9). Tree species were *Acer negundo* (Box Elder) and *Grevillea robusta* (Silky Oak). The trees were in generally fair-good condition and provided shade and amenity to the street and nearby residents, although *Acer negundo* (Box Elder) may be considered undesirable by some due to weed potential via often prolific seed production and viability. Trees 11 and 12 were the closest trees to the existing, and aged, masonry fence (Figure 10) while Trees 12–15 were located adjacent to the concrete retaining wall. Currently, Trees 11 and 12 were not directly affecting the masonry fence via root expansion and growth, however as the trees mature root growth may impact the fence directly, or indirectly via the natural process of soil wetting and drying. Trees 12–15 were not observed to be impacting the concrete retaining wall.

5.5.33 TPZ and SRZ distances must be observed with regard to Council tree assets and any proposed work inside these distances must be supervised by a suitably qualified consulting arborist.



Figure 9. View of Trees 11–15. (Justin Herbert, 3 December 2021).

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Figure 10. View of existing masonry fence. (Justin Herbert, 3 December 2021).

6.1 Planning, design and tree protection zones

- 6.1.1 Invariably during the planning and design phases of construction projects, Tree Protection Zones (TPZ) are calculated by Arborists to guide the planning, design and construction phases in relation to the successful retention of trees. TPZ are designed to provide adequate space for the protection of the above and below ground components of a tree to ensure health and stability. The area allocated for a TPZ is determined by the tree's species, age, size, tolerance to changes in site conditions and site constraints.
- 6.1.2 The method for determining the TPZ in this report is based on the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites* which states that the TPZ is equal to twelve (12) times the measured DBH. The TPZ is measured radially away from the centre of the tree's trunk and is measured in metres (m). This standard also states that no tree shall have a TPZ greater than 15m nor less than 2m.
- 6.1.3 Within the TPZ and closer to the tree's base is an area known as the structural root zone (SRZ). Root damage/severance at, or within the SRZ can not only heavily deplete a tree's health but can jeopardise its stability within the soil profile.

6.1.4 Limited encroachment/manipulation of the TPZ (~10%) may occur however this is dependent on the type of the works proposed, the characteristics of the tree and the site. If encroachment into the TPZ greater than 10% is proposed clear demonstration that the tree will remain viable must be shown e.g. via non-destructive soil excavations. Work within or modifications to the designated TPZ should only be made under the guidance and supervision of a suitably qualified and experienced consulting Arborist. Refer to the table of results in Section 5 of this report for individual TPZ and SRZ distances.

6.1.5 A summary of the calculated TPZs and SRZs can be found in Appendix E of this report.

6.2 Potential impacts upon the subject trees

6.2.1 Under the current design proposal four (4) trees, Tree 3, 4, 5 and 6, would be located within the development/building footprint and cannot be retained. The design would require modification to retain these trees. Proposed removal would require an application to The City of Stonnington for a tree removal/works permit. In addition, one (1) tree, Tree 8, has been recommended for removal irrespective of development.

6.2.2 Given the positioning of the proposed construction and its proximity to Tree 2, there is the potential for above and below ground components of the subject tree to be damaged during the proposed works. Such damage may result from (but is not limited to) the following activities:

- Compaction of the root zone via vehicles and/or machinery
- Mechanical damage to above ground tree parts by vehicles and/or machinery.
- The creation of open trenches for underground services.
- Changes in soil grade and hydrology.

7 Tree Protection Management Plan (TPMP)

7.1.1 This section of the report forms the basis of the TPMP and will be broken up into recommendations to be undertaken before, during and after the proposed construction works. These include:

- Preconstruction Activities
- Activities During Construction
- Post Construction Activities

7.1.2 All the recommendations made within the TPMP are congruent with the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites* and as such it would be prudent that all parties involved with the in-situ and ex-situ management of this project obtain and copy of and be familiar with this document.

8 Pre-construction activities

8.1 Tree retention/removal

8.1.1 Under the current design proposal, four (4) trees, Tree 3, 4, 5 and 6, would require removal to facilitate the proposed development – a redesign/modification would be required to retain these trees. Where tree removal is proposed, an application to The City of Stonnington must be submitted.

8.1.2 In addition, Tree 8 has been recommended for removal irrespective of development due to poor structural form and a diminished ULE.

8.1.3 Under the current design proposal, five (5) trees, Tree 1, 2, 7, 9 and 10–15, can be retained.

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- 8.1.4 Tree 2 would require a combination of specific and generic tree protection measures, due to the tree's proximity to the proposed construction zone, in order to remain viable post project completion.
- 8.1.5 Tree 1, 7, 9 and 10 would require generic tree protection measures to remain viable in the landscape post project completion.
- 8.1.6 Trees 11–15 are Council owned trees and must be subject to appropriate tree protection measures.
- 8.1.7 A summary of the calculated TPZs and SRZs can be found in Appendix E of this report.

8.2 Tree 2

- 8.2.1 An encroachment of approximately 10–20% into the TPZ of Tree 2 is expected as part of the proposed design. With further information on the demolition and construction methodology, greater detail of the specific protection can be provided.
- 8.2.2 In the first instance, the TPZ of Tree 2 is to be extended in a contiguous manner in a direction away from development. Seasoned tree mulch should be spread within the TPZ to a depth of ~75mm – mulch should not be in contact with the tree's trunk.
- 8.2.3 In order to off-set any proposed feeder root severance, slow/deep irrigation is recommended during extended dry periods (i.e. periods of 5–7 days or more with no/limited rainfall). A slow/drip irrigation system extending throughout the TPZ is recommended so as to be able to deliver approximately 500–1000 litres of water per week as required. The soil should not be allowed to become overly saturated/water logged, refer to Appendix C for further guidance.
- 8.2.4 Excavation is to be carried out only under arborist supervision. No excavation should occur within the SRZ of this tree. It was recommended that the proposed excavation commence at the outer extent of the TPZ and move inwards to minimise root damage to the trees.
- 8.2.5 Works should be undertaken using techniques that are sensitive to tree roots to avoid unnecessary damage. Such techniques include:
- Excavation using a low-pressure water jet and vacuum truck
 - Excavation using an air spade with vacuum truck
 - Excavation by hand.
- 8.2.6 Machine excavation is prohibited within the TPZs of retained trees unless undertaken at the direct consent/supervision of the project arborist.
- 8.2.7 Roots discovered are to be treated with care and minor roots (<40mm diameter) pruned with a sharp, sterile handsaw or secateurs. All significant roots (>40mm diameter) are to be recorded, photographed and reported to/by the project arborist.
- 8.2.8 Other proposed surfacing within the TPZ of Tree 2 is to be installed above the existing grade and be of a permeable nature to allow the passage of air and moisture. If the surfacing is to be load bearing, then it is suggested that a geogrid/web or similar is incorporated to ensure the rooting area below does not become compacted.
- 8.2.9 Tree 2 would likely require light crown reduction/encroachment pruning (to not exceed 10% of live crown mass) to accommodate scaffolding and the final design projection. Refer to supplied SD 2.3 Roof Terrace Plan.

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8.3 Quality of arboricultural works

- 8.3.1 To ensure a high standard of works is achieved, all arboricultural works administered to the subject trees must be completed by a suitably qualified and experienced arborist(s) (minimum AQF Level 3) in accordance with the Australian Standard AS 4373–2007: *Pruning of Amenity Trees*.
- 8.3.2 After pruning has been completed, no further material is to be removed from the subject trees without the consent of the project arborist and/or the City of Stonnington. At no time are personnel working on the project to remove branches, foliage, bark or roots from subject trees designated for retention.

8.4 Preparation of Tree Protection Zones (TPZ)

8.4.1 Tree protection fencing

- 8.4.2 After all arboricultural works have been completed (should they be required), tree protection fencing must be erected for each subject tree to protect their above and below ground structures. The positioning of tree protection fencing will need to be modified for all the subject trees to accommodate boundary fencing, roads and the designated construction zone. Tree protection fencing must be made from sturdy materials such as chain and mesh panels or plywood hoarding and posts and should be permanent, locked/eliminate access by contractors and be incapable of being readily moved or adjusted once erected. Any holes that need to be dug to support the fencing where possible should be located outside of the TPZ, otherwise such holes should be hand dug under the supervision of the Project Arborist. Materials such as rope or orange para webbing must not be used. Tree protection zones are to be erected in the following locations:

8.4.3 TPZ Signs

- 8.4.4 Signs must be placed on the tree protection fencing on each aspect adjacent to each subject tree and is to display at a minimum that the area is a tree protection zone and should not be accessed and the contact phone numbers of the site manager and the Project Arborist.



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Figure 11. Depicts standard fencing techniques. (AS 4970–2008).

8.4.5 Temporary irrigation

8.4.6 Monitoring of soil moisture levels during hot and/or dry weather should be undertaken by the Project Arborist during construction and additional water added to the TPZ when required as directed by him/her should soil moisture levels be deemed inadequate.

8.4.7 Site sheds and storage areas

8.4.8 All site sheds and storage areas associated with the development must be located outside of the TPZ of all subject trees designated for retention. This will serve to negate excessive soil compaction of their root zones and root damage/severance that may occur as a result of the installation of temporary services for the sheds (such as water and electricity etc) and excessive use around the sheds. In this regard the carpark area west of the building would be considered a suitable location for site sheds to be positioned.

8.4.9 Arborist's inspection

8.4.10 After all tasks listed in Section 8.1–8.4 have been completed, the Project Arborist is to be called to the site to approve of the pruning works and the TPZ set up including their location and the materials from which they are made. Requirements for any alterations and/or additions to the TPZ's must be discussed with the site manager at this time. The City of Stonington is to be notified of any changes to this TPMP.

9 Activities during construction

9.1 Pre-start induction

9.1.1 Any and all construction contractors who are to work onsite as part of the development project are to undertake a pre-start induction in regard to the importance and significance of the subject trees, the need to ensure all tree protection measures are observed and maintained.

9.1.2 Whilst well intentioned, documents such as this are only effectual if all parties involved with the in-situ and ex-situ management of demolition and/or construction projects are furnished with a copy of the document and become cognisant with its requirements. The successful protection of trees on development sites can only occur in these circumstances and can only occur if there is a genuine interest to do so. Trees in many cases seem large and robust, however their above and below ground components can easily be damaged by construction related activities. Therefore, it is imperative that all the recommendations made in this report are carried out in full and at the times prescribed.

9.1.3 In the case of protecting the above and below ground components of trees during construction works there is one chance to get it right. A failure to do so often results in damage to tree parts which can have lasting, and sometimes fatal consequences on their future health. The measures needed to repair construction related damage are more often than not ongoing and costly, and in the case of mature trees is not always effective.

9.2 Contacting the Project Arborist

9.2.1 The project arborist must be contacted and/or called to the site at any time during the proposed works where issues and/or concerns arise regarding any of the subject trees. Issues can sometimes be dealt with over the course of a phone call while other times may require a site visit. The initial phone contact will establish the exact requirements to resolve the issue, with the negation of damage occurring to the tree(s) being the primary motivation.

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9.2.2 Other than in an emergency, the project arborist will be afforded at least five (5) working days' notice of a requirement to attend the site. Notice of less than this period will not guarantee their attendance on the day required.

9.3 Site visits by the Project Arborist

9.3.1 The following is a schedule of site visits (as they are currently understood) for attendance to site by the Project Arborist.

Item	Purpose of Visit	Timing of Visit(s)	Prerequisites
1	Pre-start induction	Following sign off from Item 1. Contractor to provide a minimum of 5 days advance notice for this visit.	Prior to commencement of works. All parties involved in the project to attend.
2	Supervision of works in TPZ's including all regrading and excavations.	Whenever there is work planned to be performed within the TPZ's. Contractor to provide a minimum of 5 days advance notice for such visits.	
3	Regular site inspections.	Minimum frequency monthly for the duration of the project.	The checklist must be completed by the Project Arborist at each site inspection and signed by both parties.
4	Final sign off.	Following completion of works.	Practical completion of works and prior to tree protection removal.

9.3.2 The Project Arborist may need to attend site at other times during the project at the request of Fontic, King David School or City of Stonnington. These requests may be to provide further guidance related to the trees, if there are potential impacts upon the trees that need to be discussed and agreed upon, if there has been a breach of the TPMP, attendance at site meetings etc.

9.3.3 The Project Arborist is to make at a minimum monthly visits to the site to ensure that all tree protection measures are being complied with. A site inspection checklist form is to be completed by the Project Arborist at the time of each inspection and signed by the Project Arborist and the project manager/foreman. Should there be any breaches of or changes to the TPMP, these are to be documented within a site inspection checklist form and signed off by both the Project Arborist and the site/project manager. City of Stonnington is to be notified of any changes to this TPMP.

9.3.4 City of Stonnington must be notified within 24 hrs of any breach of the TPMP or where damage has occurred to any tree. Should such an event(s) occur the Project Arborist is to be immediately contacted and requested to attend site and to document the event in the checklist and provide guidance on the course of action.

9.4 Site hygiene

9.4.1 Before any demolition and/or construction related vehicles enter the site they are to be washed down thoroughly to remove all soil from upon and under them. This is to ensure that no vehicle can transfer soil borne plant diseases onto the site, particularly the destructive soil borne fungus *Phytophthora cinnamomi* (Cinnamon Fungus) which is known to cause root rot in a wide range of species.

9.4.2 After working at the King David School site, vehicles that visit other work sites must be washed down prior to their re-entry to site.

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9.5 Demolition guidelines

- 9.5.1 As a result of the proximity of works to **Tree 2**, all demolition must be conducted in a careful manner so as to avoid damaging the tree's crown and/or root system.
- 9.5.2 Small machinery/excavators combined with hand excavation is the preferred method of demolition within TPZ's. If large machinery must be used around the trees, spotters must assist to help guide and direct operations. Large machinery should be positioned outside the TPZ and/or within the existing building footprint and move carefully toward to the tree to minimise root/canopy conflict. If large machinery is used to demolish the building structure all material should be brought back within the existing building footprint to minimise the risk of soil compaction and/or trunk/canopy damage.
- 9.5.3 Minor crown modification pruning (crown lifting) may be required on **Tree 2** to enable demolition works to proceed. In this event all pruning works must be completed by a suitably qualified and experienced arborist(s) (minimum AQF Level 3) in accordance with the Australian Standard AS 4373–2007: *Pruning of Amenity Trees*.

9.6 Underground service installation

- 9.6.1 The installation of underground services (including drainage) must not encroach within the TPZ of any of the subject trees (to be retained) unless authorised by the Project Arborist in which case underground boring will invariably be recommended. As a guide, the boring of services is to occur at a minimum depth of 800mm (top of pipe) below the existing grade for trees with a trunk DBH of <100cm, 950mm for trees with a trunk DBH of 100–150cm and 1100mm for trees with a trunk DBH of >150cm. To minimise soil disturbance associated with service installation communal service lines must be used where appropriate. The entry and exit pits for boring must be positioned outside the designated TPZ for each tree.

10 Post construction activities

10.1 Tree protection fencing

- 10.1.1 After the completion of all proposed construction works, tree protection fencing may be dismantled.

10.2 Arborist inspection

- 10.2.1 Prior to dismantling of the tree protection zones the Project Arborist is to be called to the site and make a final inspection of the trees. At this time any applicable arboricultural and/or plant health care works are to be discussed with King David School. The City of Stonnington must be contacted when these works are completed to assess the street tree assets.

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11 References

- City of Stonnington. (2021, November). *Local Laws – General Local Law 2018*. Retrieved from <https://www.stonnington.vic.gov.au/About/Corporate-documents/Local-Laws>
- City of Stonnington. (2021, November). *Trees on Private Property*. Retrieved from <https://www.stonnington.vic.gov.au/Services/Trees/Trees-on-private-property>
- Matheny, N. a. (1993). *A Photographic Guide to the Evaluation of Trees in Urban Areas*. Champaign, IL 61826–3129, USA: International Society of Arboriculture.
- Standards Australia. (2007). *AS 4373–2007: Pruning of Amenity Trees*. GPO Box 476 Sydney NSW 2001: Standards Australia.
- Standards Australia. (2009). *AS 4970–2009: Protection of Trees on Development Sites*. GPO Box 476 Sydney NSW 2001: Standards Australia.
- The British Standards Institution. (2012). *BS 5837–2012: Trees in relation to design, demolition and construction*. London: BSI Standards Limited.
- Victorian Heritage Database. (2021, November). *Larnook House*. Retrieved from Heritage Council Victoria: <https://vhd.heritagecouncil.vic.gov.au/places/30672>

Plans of the existing site and of the proposed development were provided to ArborSafe in November 2021 and include:

- Various plans/elevations and site layout documents (SD 0.1–SD 3.7)

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12.1 Appendix A – Arboricultural Reporting Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership of any property are assumed to be good. No responsibility is assumed for matters legal in character.
2. It is assumed that any property/project is not in violation of any applicable codes, ordinances, statutes or other government regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified in so far as possible, however, the consultant can neither guarantee nor be responsible for the accuracy of the information provided by others.
4. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by anyone but the person to whom it is addressed, without the prior written consent of the consultant.
7. Neither all nor any part of the contents of this report, nor any copy thereof, shall be used for any purpose by anyone but the person to whom it is addressed, without the written consent of the consultant. Nor shall it be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the written consent of the consultant.
8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise.
10. Information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection.
11. Inspection is limited to visual examination of accessible components without dissection, excavation or probing. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the plants or property in question may not arise in the future.

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12.2 Appendix B – Explanation of Tree Assessment Terms

Tree number: Refers to the individual identification number assigned within the ArborSafe software to each assessed tree on the site and the number which appears of the tree’s tag.

Tree location: Refers to the easting and northing coordinates assigned to the location of the tree as obtained from the geo-referenced aerial image within the ArborSafe software.

Tree species: Provides the botanic name (genus, species, sub-species, variety and cultivar where applicable) in accordance with the International Code of Botanical Nomenclature (ICBN), and the accepted common name.

Trees in group: The number of trees encompassing a collective assessment of more than one tree. Typically grouped trees have similar attributes that can be encompassed within one data record.

Height: The estimated range in metres attributed to the tree from its base to the highest point of the canopy. Where required height will be estimated to the nearest metre.

Diameter at Breast Height (DBH): Refers to the tree’s estimated trunk diameter measured 1.4m from ground level for a single trunked tree. These estimates increase in 50mm increments. Where required DBH will be measured to give an accurate measurement for single trunked trees, trees with multiple trunks, significant root buttressing, bifurcating close to ground level or trunk defects and will be measured as per the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*.

Canopy spread: The estimated range in metres attributed to the spread of the tree’s canopy on its widest axis. Where required crown spread will be estimated to the nearest metre.

Health: Refers to the health and vigour of the tree.

Category	Description
Excellent	Canopy full with even foliage density throughout, leaves are entire and are of an excellent size and colour for the species with no visible pathogen damage. Excellent growth indicators, e.g. seasonal extension growth. Exceptional specimen.
Good	Canopy full with minor variations in foliage density throughout, leaves are entire and are of good size and colour for the species with minimal or no visible pathogen damage. Good growth indicators, none or minimal deadwood.
Fair	Canopy with moderate variations in foliage density throughout, leaves not entire with reduced size and/or atypical in colour, moderate pathogen damage. Reduced growth indicators, visible amounts of deadwood, may contain epicormic growth.
Poor	Canopy density significantly reduced throughout, leaves are not entire, are significantly reduced in size and/or are discoloured, significant pathogen damage. Significant amounts of deadwood and/or epicormic growth, noticeable dieback of branch tips, possibly extensive.
Dead	No live plant material observed throughout the canopy, bark may be visibly delaminating from the trunk and/or branches.

Age: Refers to the life cycle of the tree.

Category	Description
Young	Newly planted small tree not fully established may be capable of being transplanted or easily replaced.
Juvenile	Tree is small in terms of its potential physical size and has not reached its full reproductive ability.
Semi-mature	Tree in active growth phase of life cycle and has not yet attained an expected maximum physical size for its species and/or its location.
Mature	Tree has reached an expected maximum physical size for the species and/or location and is showing a reduction in the rate of seasonal extension growth.
Senescent	Tree is approaching the end of its life cycle and is exhibiting a reduction in vigour often evidenced by natural deterioration in health and structure.

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Structure: Refers to the structure of the tree from roots to crown.

Category	Description
Good	Sound branch attachments with no visible structural defects, e.g. included bark or acute angled unions. No visible wounds to the trunk and/or root plate. No fungal pathogens present.
Fair	Minor structural defects present, e.g. apical leaders sharing common union(s). Minor damage to structural roots. Small wounds present where decay could begin. No fungal pathogens present.
Poor	Moderate structural defects present, including bifurcations with included bark with union failure likely within 0–5 years. Wounding evident with cavities and/or decay present. Damage to structural roots.
Hazardous	Significant structural defects with failure imminent (3–6 months). Defects may include active splits and/or partial branch or root plate failures. Tree requires immediate arboricultural works to alleviate the associated risk.

Useful Life Expectancy (ULE): Useful life expectancy refers to an expected period of time the tree can be retained within the landscape before its amenity value declines to a point where it may detract from the appearance of the landscape and/or presents a greater risk and/or more hazards to people and/or property. ULE values consider tree species, current age, health, structure and location. ULE values are based on the tree at the time of assessment and do not consider future changes within the tree’s location and environment which may influence the ULE value.

Category
0 Years
<5 Years
5–10 Years
10–15 Years
15–25 Years
25–50 Years
>50 Years

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Defects: Visual observations made of the presenting defects of the tree and its growing environment that are, or have the capacity to impact upon, the health, structural condition and/or the useful life expectancy of the tree. Defects may include adverse physical traits or conditions, signs of structural weaknesses, plant disease and/or pest damage, tree impacts to assets or soil related issues.

Tree Significance: Includes environmental, social or historical reasons why the tree is significant to the site. The tree may also be rare under cultivation or have a rare or localised natural distribution.

Arborist Actions: A list of arboricultural and/or plant health care works that are aimed at maintaining or improving the tree’s health, structural condition or form. Actions may also directly or indirectly reduce the risk potential of the tree such as via the removal of a particular branch or the moving of infrastructure from under its canopy.

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12.3 Appendix C – Tree protection measures and recommendations

Adopted from the Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*

Version 2 (October 2010)

Introduction

Tree protection guidelines relate specifically to the protection of trees before, during and after construction with each site requiring specific tree protection measures. Tree protection, or exclusion zones are necessary to prevent detrimental effects resulting from a range of construction activities. To be effective exclusion zones should be installed to protect the designated tree protection zone (TPZ). Tree protection zones should be secured by a lockable gate and identified with signs. The area of the TPZ should be mulched and kept free of weeds. Where encroachment is required within the TPZ, this should be done only with the approval of a consulting Arborist.

Signs

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 AS 1319.

The sign should display the following information:

- No persons, vehicles or machinery are to enter the tree protection/exclusion zone without the consent of the site manager or project Arborist
- No fuels, chemicals, building material, equipment or temporary buildings shall be stored within the tree protection/exclusion zone
- Servicing and refuelling of equipment and vehicles should be undertaken away from the tree protection/exclusion zone
- Attaching temporary service wires, nails, screw or any other fixing device is strictly prohibited
- Contact phone number of the project Arborist.

Restricted activities within the TPZ

Activities to be excluded from the TPZ include:

1. Machine excavation (including trenching of underground services)
2. Excavation for silt fencing
3. Soil cultivation
4. Storage of all building materials
5. Preparation of chemicals, including preparation of cement products
6. Parking of vehicles and plant
7. Refuelling of machinery
8. Dumping of waste and/or building debris
9. Wash down and cleaning of plant and equipment
10. Placement of fill
11. Soil level changes.

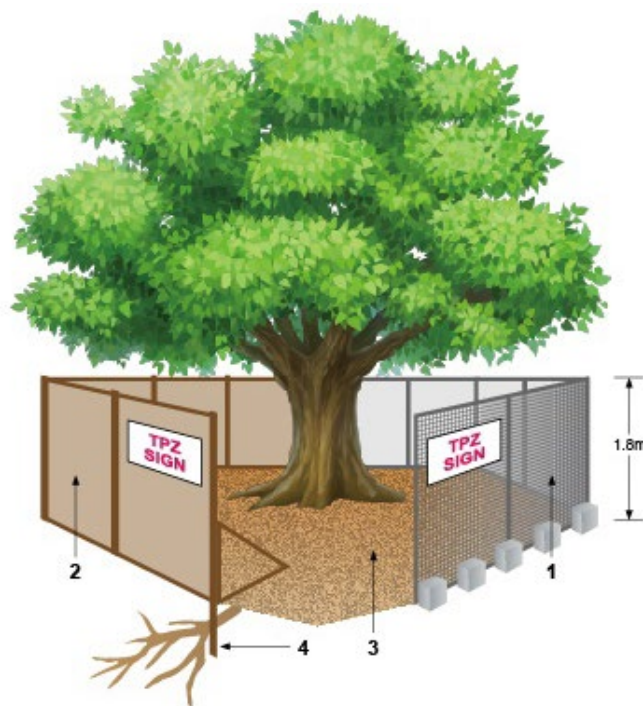
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Fencing

Tree protection fencing needs to be erected before any materials or machinery is brought to the site and before any demolition or development works commence, including the erection of site sheds; tree removal or pruning being the exception). Once erected, protective fencing should not be removed or altered without prior approval by the Project Arborist and/or the responsible authority.

Tree protection fencing must be made from sturdy material so as it is not readily moved or blown over, thereby ensuring the protection area is not altered once established. Fencing used needs to be self-supporting and be of a minimum height of 1.8 metres and type (such as chain wire or reinforcing mesh fencing) to restrict access by persons and equipment, and to prevent depositing of waste materials and storage of materials. Where fence posts are placed in the ground within the TPZ, they should be located so as to avoid damage to roots with a diameter greater than 20mm. Existing perimeter fencing may be suitable as part of the protective fencing where appropriate.



Legend:

1. Chain wire mesh panels with shade cloth attached (if required), held in place with concrete feet
2. Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ
3. Mulch installation across surface of TPZ (at discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage materials of any kind are permitted within the TPZ
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

Figure 12. Standard tree protection fencing techniques, AS 4970-2009

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Mulching

Mulching should be undertaken around the tree to the extent of the TPZ and can also include areas outside the tree protection/exclusion zone if necessary. If weeds and/or grass are present within the TPZ they must be sprayed with a non-selective herbicide and allowed to turn yellow/brown in colour or wilt before the mulch is applied.

After spraying, a layer of composted organic mulch should be placed over the TPZ area to a depth of 75–100 millimetres to regulate soil moisture and temperature levels, suppress weeds and reduce the impact of compaction. After construction activities are completed organic mulch may be substituted with other materials, which may include permeable surfaces such as granitic sands, crushed rock, or surface cultivation landscaping such as the establishment of garden bed areas and lawns subject to the approval of a qualified Arborist. Silt fencing may need to be installed around the edges of the fence in readily eroded soil or on steep sites. Where the existing landscape within the TPZ is to remain unaltered (e.g. garden beds or turf) mulch may not be required.

Irrigation

Temporary irrigation lines (~300–400mm apart) should be established within the TPZ under the mulch to maintain optimum soil moisture. The installation of a low-pressure, drip irrigation system connected to a timer is recommended and should be installed and maintained by a competent individual. Soil moisture levels should be regularly monitored.

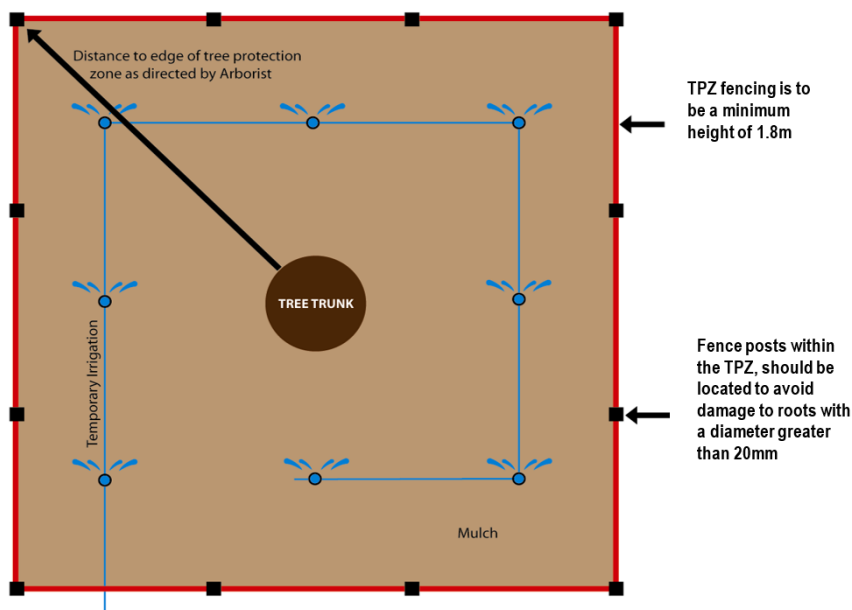


Figure 13. Plan view of a typical tree protection zone with tree protection fencing, mulch and temporary irrigation installed.

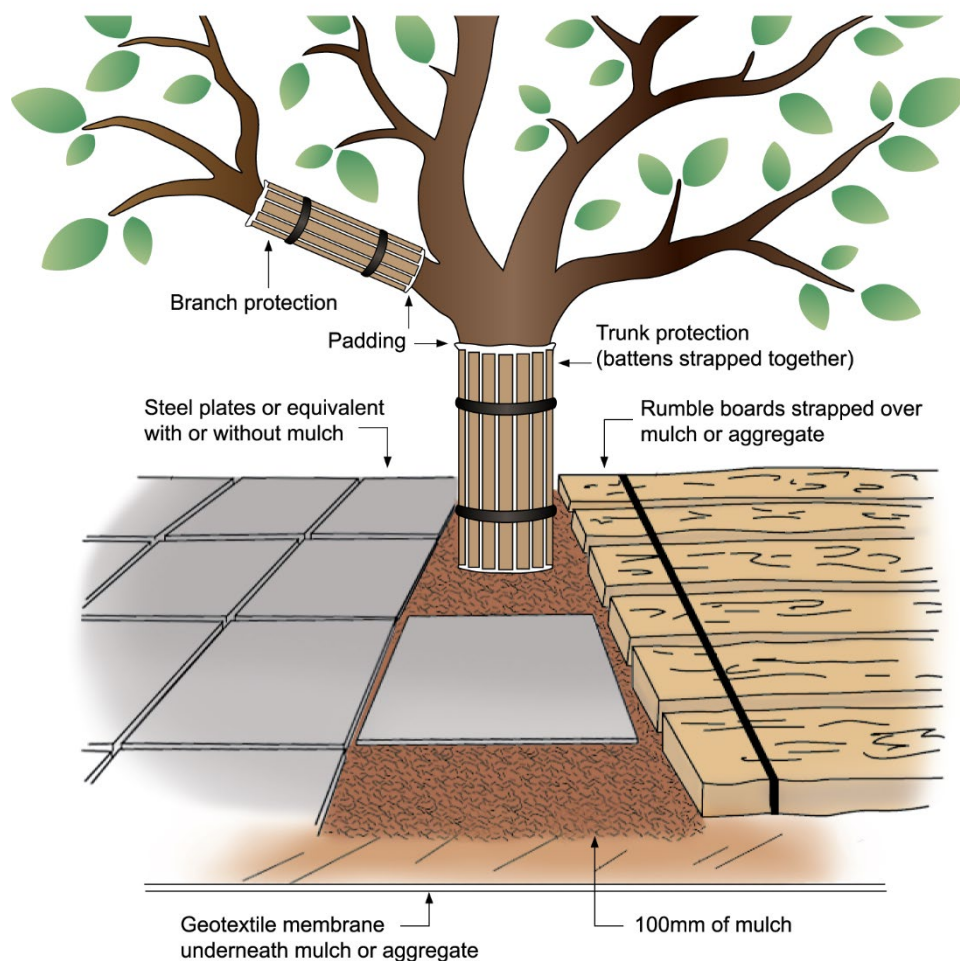
Nutrient and plant health care requirements

Any nutrient deficiencies and/or plant health care issues such as pest attack need to be treated as part of the installation of tree protection zones.

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Branch and trunk protection



Notes:

1. For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
2. Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

Figure 14. Depicts trunk and ground protection techniques. (AS 4970-2009).

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12.4 Appendix D – Tree Retention Values

Based upon a modified version of the British Standard BS 5837–2012: *Trees in Relation to Design, Demolition and Construction* – recommendations.

Category and definition	Criteria (including sub-categories where appropriate)		
Category U			
Trees in such a condition that they cannot realistically be retained as viable trees in the context of the current land use for longer than 5 years.	<ul style="list-style-type: none"> Trees that have a severe structural defect that are not remediable such that their failure is expected within 12 months. Trees that will become unviable after removal of other Category U trees (e.g. where for whatever reason the loss of companion shelter cannot be mitigated by pruning). Trees that are dead or are showing signs of significant, immediate and irreversible overall decline. Trees infected with pathogens of significance to the health and or safety of other trees nearby Low quality trees suppressing adjacent trees of better quality. Noxious weeds or species categorised as weeds within the local area. <p>Note: Category U trees can have existing or potential conservation value* which might make it desirable to preserve.</p>		
<p style="color: red; font-weight: bold;">This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright</p>	1. Arboricultural Qualities	2. Landscape qualities	3. Cultural and environmental values
	Category A		
Trees of High Quality with an estimated remaining life expectancy of at least 25 years and of dimensions and prominence that it cannot be readily replaced in <20 years.	Trees that are particularly good examples of their species, especially if rare or unusual (in the wild or under cultivation); or those that are important components of groups or avenues.	Trees or groups of significant visual importance as arboricultural and/or landscape features. (e.g. feature and landmark trees).	Trees, groups or plant communities of significant conservation, historical, commemorative or other value (e.g. remnant trees, aboriginal scar trees, critically endangered plant communities, trees listed specifically within a Heritage statement of significance).
Category B			
Trees of Moderate Quality with an estimated remaining life expectancy of 15–25 years and of dimensions and prominence that cannot be readily replaced within 10 years.	Trees that might be included within Category A but are downgraded because of diminished condition such that they are unlikely to be suitable for retention beyond 25 years.	Trees that are visible from surrounding properties and/or the street but make little visual contribution to the wider locality.	Trees with conservation or other cultural value (trees within conservation areas or landscapes described within a statement of significance, locally indigenous species).
Category C			
Trees of Low Quality with an estimated remaining life expectancy of 5–15 years, or young trees that are easily replaceable.	Trees of very limited value or such impaired condition that they do not qualify in higher categories.	Trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.

*Where trees would otherwise be categorised as U, B or C but have significant identifiable conservation, heritage or landscape value even though only for the short term, they may be upgraded, although they might be suitable for retention only.

Tree Quality

		Health**			
		Excellent/ Good	Fair	Poor	Dead
Structure	Good	A	B	C	U
	Fair	B	B	C	U
	Poor	C	C	U	U
	Hazard*	U	U	U	U

*Structural hazard that cannot be remediated through mitigation works to enable safe retention.

** Trees of short term reduced health that can be remediated via basic, low cost plant health care works (e.g. mulching, irrigation etc.) may be designated in a higher health rating to ensure correct retention value nomination.

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12.5 Appendix E – Tree Assessment Data

Tree no.	Botanical Name	Common Name	Origin	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Health	Structure	Age	TLE (Yrs.)	Defects	Significance	Arborist comments	Tree Quality Score	Tree Retention value subcategory	Recommendation
1	<i>Ulmus parvifolia</i>	Chinese Elm	Exotic	1	45	61	5.4	91.61	2.7	5-10	10-15	Good	Fair	Semi-Mature	25-50	Co-dominant stems; Damaging infrastructure; Deadwood/stubs > 30mm; Epicormic growth; Exposed root(s); Soil compaction;	Amenity value/shade; Attractive landscape feature; Dominant landscape feature;		A	12	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
2	<i>Quercus rubra</i>	Red Oak	Exotic	1	95	100	11.4	408.28	3.3	10-15	10-15	Good	Fair	Semi-Mature	25-50	Deadwood/stubs > 30mm; Epicormic growth; Poor pruning; Soil compaction;	Amenity value/shade; Attractive landscape feature; Dominant landscape feature;		A	12	Retain tree with specific protection requirements (i.e. Generic measures plus supervision of works within the TPZ and/or use of root sensitive construction techniques).
3	<i>Magnolia grandiflora</i>	Bull Bay	Exotic	1	69	85	8.3	215.38	3.1	5-10	<5	Good	Fair	Mature	15-25	Decay; Epicormic growth; Poor pruning; Soil compaction; Soil grade changes; Wound(s);	Amenity value/shade; Attractive landscape feature; Dominant landscape feature; Commemorative tree;		A	12	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
4	<i>Olea europaea</i>	European Olive	Exotic	8	10	12	2.0	12.57	1.5	<5	<5	Good	Fair	Juvenile	15-25	Co-dominant stems; Epicormic growth;	Amenity value/shade; Attractive landscape feature;		C	12	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
5	<i>Liquidambar styraciflua</i>	Sweet Gum	Exotic	1	57	74	6.8	146.98	2.9	10-15	5-10	Good	Fair	Semi-Mature	10-15	Disease pathogens; Epicormic growth; Included bark; Previous failure(s); Soil compaction; Soil grade changes; Wound(s);	Amenity value/shade; Attractive landscape feature;	04-11-2021 : Justin Herbert : Recent stem failure has resulted in reduced structure and ULE. Historic evidence of Bleeding Necrosis on lower trunk however now appears inactive. Crown somewhat co dependant with tree 6.	B	12	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
6	<i>Acer negundo</i>	Box Elder Maple	Exotic	1	30	42	3.6	40.72	2.3	5-10	5-10	Fair	Fair	Semi-Mature	5-10	Deadwood/stubs < 30mm; Dieback; Epicormic growth; Soil compaction; Soil grade changes; Undesirable species;	Weed species;	04-11-2021 : Justin Herbert : no photo of tree 6, kids in the way 04-11-2021 : Justin Herbert : Species has weed potential in certain settings. Numerous seedlings observed here with drainage systems nearby. Crown somewhat co dependant with tree 5.	C	12	Remove - tree located within proposed development footprint or has major encroachment into its TPZ.
7	<i>Pyrus calleryana</i>	Callery Pear	Exotic	7	18	21	2.2	14.66	1.7	<5	<5	Good	Poor	Semi-Mature	5-10	Co-dominant stems; Epicormic growth; Included bark;	Amenity value/shade;	04-11-2021 : Justin Herbert : Numerous bark inclusions throughout this group of trees, typical for the species.	C	12	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
8	<i>Olea europaea</i>	European Olive	Exotic	1	20	20	2.4	18.19	1.7	<5	<5	Good	Poor	Semi-Mature	<5	Co-dominant stems; Epicormic growth; Weak union(s);		04-11-2021 : Justin Herbert : Trees consist of coppice regrowth from previous incomplete removals. One stem had recently failed.	U		Remove tree irrespective of future development.
9	<i>Pittosporum undulatum</i>	Sweet Pittosporum	Australian native	4	18	22	2.2	14.66	1.8	5-10	<5	Fair	Fair	Juvenile	5-10	Deadwood/stubs < 30mm; Dieback; Epicormic growth; Poor pruning; Wound(s);			C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
10	<i>Fagus sylvatica</i>	European Beech	Exotic	1	48	61	5.8	104.23	2.7	5-10	5-10	Good	Fair	Semi-Mature	15-25	Deadwood/stubs < 30mm; Decay; Epicormic growth; Poor pruning; Previous failure(s); Wound(s);	Amenity value/shade; Attractive landscape feature;		B	12	Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
11	<i>Acer negundo</i>	Box Elder Maple	Exotic	1	27	36	3.2	32.75	2.2	5-10	5-10	Good	Fair	Semi-Mature	15-25	Co-dominant stems; Epicormic growth; Soil compaction;		03-12-2021 : Justin Herbert : Council tree not tagged.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
12	<i>Acer negundo</i>	Box Elder Maple	Exotic	1	21	32	2.5	19.95	2.1	5-10	5-10	Good	Fair	Semi-Mature	15-25	Epicormic growth; Soil compaction; Suppressed;		03-12-2021 : Justin Herbert : Council tree not tagged.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
13	<i>Acer negundo</i>	Box Elder Maple	Exotic	1	24	33	2.9	26.06	2.1	5-10	5-10	Good	Fair	Semi-Mature	15-25	Epicormic growth; Soil compaction; Suppressed;		03-12-2021 : Justin Herbert : Council tree not tagged.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
14	<i>Grevillea robusta</i>	Silky Oak	Australian native	1	26	33	3.1	30.58	2.1	5-10	<5	Fair	Fair	Semi-Mature	15-25	Co-dominant stems; Deadwood/stubs < 30mm; Epicormic growth;		03-12-2021 : Justin Herbert : Council tree not tagged.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).
15	<i>Grevillea robusta</i>	Silky Oak	Australian native	1	19	23	2.3	16.33	1.8	5-10	<5	Fair	Fair	Semi-Mature	10-15	Deadwood/stubs < 30mm; Epicormic growth; Suppressed;		03-12-2021 : Justin Herbert : Council tree not tagged.	C		Retain tree with generic protection requirements (i.e. protective fencing and restriction of activities within the TPZ).

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