

arboricultural impact assessment report - construction

AIA-01

Revision A, Issued for SSDA
25 September 2025



PROJECT

AFFORDABLE HOUSING

150 The Boulevard & 34 Dudley Street,
Punchbowl, NSW, 2196

CLIENT / PRINCIPAL

HOMES NSW

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Parramatta, NSW, 2150



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CONTENTS

i	EXECUTIVE SUMMARY	iv
1.0	INTRODUCTION	1
1.1	Background.....	1
1.2	The Site.....	1
1.3	The Proposed Development	3
1.4	Aims of this Report.....	3
1.5	Relevant Controls or Legislation	4
1.6	Conduct and Author Qualifications	5
1.7	Key Definitions and Abbreviations.....	5
1.8	Documents Reviewed	6
1.9	Assessment Methodology.....	7
1.10	Pre-Development Tree Assessments – Tree Retention Values.....	7
1.11	Tree Assessment – Notional Root Zone and Tree Protection Zone Calculations.....	8
2.0	BACKGROUND, OBSERVATIONS & ASSESSMENT	9
2.1	Site History and Existing Trees.....	9
2.2	Climate and Microclimate	15
2.3	Soils, Landform and Native Vegetation.....	15
2.4	Identification and Assessment of Existing Trees	16
2.5	Tree Biology and Tree Care Basics.....	17
2.6	The Proposed Works.....	18
2.7	Tree Impact and Removal Assessment.....	19
2.8	Existing Canopy Cover	20
3.0	TREE MANAGEMENT RECOMMENDATIONS	22
3.1	Potential Tree Related Impacts Needing to be Managed During Construction.....	22
3.2	Management of Construction Period Tree Impacts.....	22
3.3	Canopy Pruning and Pruning Methodology	23
3.4	Proposed Tree Protection & Construction Activity Sequencing.....	23
3.5	Demolition Work Near Trees or within TPZs.....	24
3.6	Tree Protection Fencing & Definition of TPZs	24
3.7	Ground Protection within TPZs.....	24
3.8	Trunk and Lower Branch Protection.....	25
3.9	Provision of Temporary Irrigation	26
3.10	Final Landscaping within TPZs	26
3.11	Other Tree Protection Measures to be Implemented	26
3.12	References.....	26
4.0	APPENDICES	28
4.1	Tree Plans	28
4.2	Tree Impact Assessment Schedule.....	29
4.3	Tree Data Summary Sheets	30

Acknowledgements & Qualifications

This document has been prepared by Arterra Design Pty Ltd, using the expertise of our in-house (AQF Level 5), consulting arborists, Robert Smart and/or Chloe Bristow.

Robert Smart is a member of the International Society of Arboriculture (ISA), an accredited member of the Institute of Australian Consulting Arboriculturists (IACA), a Registered Consulting Arborist with Arboriculture Australia (AA) and a licenced Quantified Tree Risk Assessment (QTRA) practitioner. Robert Smart has over 25 years' experience in assessing and managing trees in complex development sites. Robert is also a Registered Landscape Architect with over 30 years' experience.



Disclaimer

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i EXECUTIVE SUMMARY

This Arboricultural Impact Assessment report has been prepared by Arterra on behalf of Homes NSW for a State Significant Development Application (SSD-83256463) for construction of a residential flat building for the purposes of affordable housing at 150 The Boulevard and 34 Dudley Street, Punchbowl (the site).

In April 2025, Arterra was engaged by Homes NSW (the client) to undertake an arboricultural assessment of the site, to inform the design for the construction of a residential flat building for the purpose of affordable housing.

This report assesses the potential impacts of only the proposed construction works. A detailed tree assessment and impact schedule was completed for all the existing trees close to the proposed works. (Refer to Appendix 4.2 – Tree Impact Assessment Schedule). The trees were photographed, allocated a unique identification number and plotted onto a scaled survey base plan for referencing and identification throughout the report and for future discussions and co-ordination with all Contractors and relevant stakeholders (Refer to Appendix 4.1 – Tree Plans).

The site assessment identified a total of **30** trees. 15 trees are adjacent to the site, with 8 of these being street trees and 7 located on an adjacent property to the east. The remaining 15 trees are within the site boundary. Trees ranked with 'Low' or 'Very Low/Remove' retention values are due to them being small, insignificant or weed species and should not be considered a constraint to the development.

Following points arise from the impact assessment:

- **21** trees (70%) are to be retained and protected.
- **9** trees (30%) are to be removed. Of those trees
 - **8** are rated with a **Low or Very Low/ Remove** retention value (89%).
 - All these trees are in the footprint of the proposed building or unacceptably impacted by the required site works.
- All **High** Retention Value trees are to be retained.

Table i: Ultimate Disposition - Trees to be Retained and Removed

Tree Retention Values	Trees Retained & Protected	Trees to be Removed	Total Trees
High	2	0	2
Moderate	17	1	18
Low	2	6	8
Nil /Should Remove	0	2	2
TOTAL	21	9	30

Of the **21** trees to be retained and protected:

- **19** are rated as **High / Moderate** retention value (95% of the total of all high and moderate value trees)
- **11** have no, or minimal, foreseeable impact from the proposed works.
- **6** have a 'minor encroachment' (<10%) into their NRZs.
- **1** have a 'moderate encroachment' (10-20%) into their NRZs.
- **1** has a theoretical major encroachment' (>20%) into their NRZs. This is a small street tree and the excavation is occurring in the road carriageway and under the existing gutter. Roots are likely to have favoured the adjoining verge therefore actual root disturbance is likely to be far less and therefore acceptable. Non-destructive digging is specified when close to the tree, and therefore impacts are considered acceptable and tree should be retained rather than removed.
- **3 trees** require canopy pruning considered to be a minor level of pruning (<10%) into their canopy area. This level of pruning is considered acceptable.

It is the author's opinion that the potential tree impacts can be managed with minimal impact to the trees if the proposed tree protection measures and protocols are strictly implemented and the ground level construction work immediately around the trees is closely monitored by a suitably qualified Project Consulting Arborist. This report outlines the potential tree impacts and how the anticipated demolition and future building proposed works are to be managed and mitigated, including the following key items:-

- Installation of the required tree protection measures prior to any works occurring on site.
- Non-destructive digging is employed next to street tree **T21** for the installation of stormwater pipework.
- Meeting of the contractor and the Project Consulting Arborist on site prior to works to discuss the protection requirements, demolition equipment and methods and the site access.
- Site inductions and regular 'tool box talks' by the Contractor reinforcing tree protection as the highest priority.

- It will be vital that the appointed Contractor ensures the required tree protection measures are implemented, then maintained, and that sufficient care is exercised during the works.

This document has been prepared by Arterra, using the expertise of our in-house consulting arborist (AQF Level 5), Robert Smart. Robert Smart is a member of the International Society of Arboriculture (ISA), an accredited member of the Institute of Australian Consulting Arboriculturists (IACA), a Registered Consulting Arborist with Arboriculture Australia (AA) and a licenced Quantified Tree Risk Assessment (QTRA) practitioner.



Robert Smart AAILA , ISA, AA, IACA

Director, Registered Landscape Architect (054), Registered Consulting Arborist (1804).

1.0 INTRODUCTION

1.1 Background

This Arboricultural Impact Assessment (AIA) report has been prepared by Arterra on behalf of Homes NSW for a State Significant Development Application (SSD-83256463) for construction of a residential flat building for the purposes of affordable housing at 150 The Boulevard and 34 Dudley Street, Punchbowl (the site).

The purpose of this AIA report is to provide an assessment of the likely tree impacts and arboricultural advice regarding the development proposal for the site and to address the Secretary's Environmental Assessment Requirements (SEARs) for the project issued on 12 May 2025 which identified the following specific assessment requirements.

Table.1.1 – SEARs Requirements

Item	Description of Requirement	Section Reference (this report)
14. Trees and Landscaping	If the proposal involves impacts to trees, provide and Arboricultural Impact Assessment that assesses the number, location, condition and significance of trees to be removed including: - any existing canopy coverage to be retained on site - tree root mapping if the proposal involves significant impacts to tree protection zones of retained trees identified as being significant.	Refer: - Section 2.4 Number of Trees - Section 2.8 Existing Canopy Cover - Appendix 4.2 – Detailed Schedule of Trees - Appendix 4.1 – Existing Tree Plans
	Provide a landscape plan, that: - Details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage (as a percentage of the site area) - Provides evidence that opportunities to retain significant trees have been explored and/or informs the plan.	Refer: Separate Landscape Plan / Report by others.

Items listed above relating to the existing trees on the site are addressed directly by Arterra, however, the remaining items listed have been addressed in collaboration with the Project Landscape Architect. Refer to Landscape documentation for site wide landscape plan addressing landscape related matters.

Homes NSW has identified the subject site as an opportunity to deliver new, quality affordable housing in a well-located area that is serviced by a high level of amenity, services and public transport.

1.2 The Site

The site is located at 150 The Boulevard and 34 Dudley Street, Punchbowl, in City of Canterbury-Bankstown's Local Government Area (LGA).

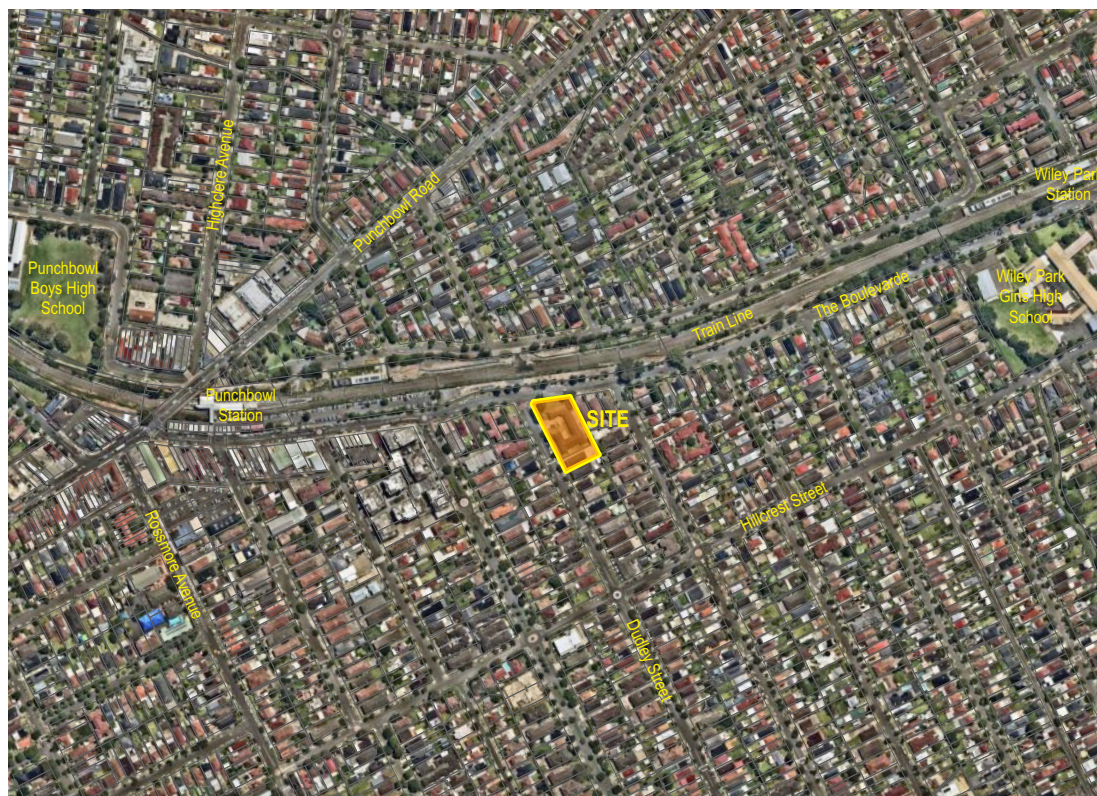
The site has a total site area of 3,889 square metres (sqm) and has two street frontages; The Boulevard to the north and Dudley Street to the west. Refer to Figure 1.1

The site is currently occupied and contains two, two and three storey residential flat buildings comprising 26 units and associated structures including driveways, a bin bay and at grade car parking. A number of existing trees are also located on site.

The site is within 400m of Punchbowl station and Punchbowl local centre. A bus stop is located immediately in front of the site, along Dudley Street providing services to Hurstville, Mortdale and Lakemba.



Figure 1.1 – Site location – site outline shown in red. (Source: Homes NSW)



Context and Location

Figure 1.2 – Site location and the wider context. (Source: Arterra)

1.3 The Proposed Development

The proposed development comprises the construction of a new residential flat building for the purposes of affordable housing.



Figure 1.3 – Proposed Site Plan. (Source: Homes NSW / Arcadia / Collins and Turner Architects)

1.4 Aims of this Report

This arboricultural impact assessment has been prepared to identify the trees to be retained and removed as part of the development project and to assess potential tree impacts. The specific aims of the report are to:

- assess the health and condition of the trees and record all the relevant data for existing trees;
- assess significance, Useful Life Expectancy (ULE) and retention values of the existing trees;
- provide recommendations as to which trees should ideally be retained and protected;
- identify the proposed Tree Protection Zones (TPZ) of the trees being retained;
- identify and assess the likely arboricultural impacts of the development on the trees; and
- provide recommendations on the tree protection measures that will be required during construction to ensure the trees are successfully retained.

The assessment is restricted to the trees within or immediately adjacent the site that are likely to be impacted by the works proposed works. Other trees outside the extent of the proposed works and unlikely to be impacted, are not addressed as part of this report.

The following limitations apply to this report's use:

1. Plans: All plans are based on information provided to Arterra, including site survey and architectural drawings. They should only be used relating to tree issues and are not suitable for any other purpose.
2. Notification of proposed alterations to disturbance within Notional Root Zones (NRZs) or Tree Protection Zones (TPZs): Arterra must be clearly notified of any proposed alterations to the plans or additional disturbance in the NRZs / TPZs, so that we can advise on the implications before any work is undertaken.

1.5 Relevant Controls or Legislation

The site is legally described as 1/DP735045 & 34/4/DP5701, with frontages to The Boulevard and Dudley Street. It is zoned R4 (High Density Residential) under the Canterbury-Bankstown Local Environmental Plan 2023 (LEP).

We understand the site is not heritage listed, nor in a heritage conservation area. The site does not appear to be constrained by any natural area or biodiversity mapping.

Following is a summary of the relevant DCP controls for vegetation.

Protected Trees

Existing trees are protected under the provisions of Chapter 2 – Site Considerations, 2.3 Tree Management, of the Canterbury-Bankstown DCP 2023 (DCP). This section provides the development controls for the pruning, removal and replacement planting of trees in Canterbury-Bankstown. This section applies to the clearing of non-native vegetation, and the clearing of native vegetation that does not exceed the biodiversity offset scheme threshold.

Clause 2.3 of the DCP defines protected 'trees' as:

- (a) all trees regardless of size, species or origin, located on:
 - (i) public land; or
 - (ii) public places; or
 - (iii) public reserves; or
 - (iv) public roads; and
- (b) trees on all other land that satisfy one or more of the following criteria:
 - (i) all trees that are 5m or more in height; or
 - (ii) all mangroves, regardless of size; or
 - (iii) all trees, regardless of size, listed as Vulnerable or Endangered or a component of an Endangered Ecological Community listed under the Biodiversity Conservation Act 2016; or
 - (iv) all trees, regardless of size, listed under the Environmental Protection and Biodiversity Conservation Act 1999; or
 - (v) all trees, regardless of size, located on land included on the Biodiversity Map under the Canterbury-Bankstown Local Environmental Plan 2023; or
 - (vi) all trees, regardless of size, located on sites listed as a heritage item in Schedule 5 of the Canterbury-Bankstown Local Environmental Plan 2023; or
 - (vii) all trees, regardless of size, located in the foreshore area under the Canterbury-Bankstown Local Environmental Plan 2023.

Section 2.5 Species Exempt, sets out the vegetation that is not protected under the DCP and maybe removed without consent, unless it forms part of a listed heritage item. See Table 1 below, extracted from the DCP.

Table 1.2 – Exempt Tree Species as per Canterbury-Bankstown DCP 2023

Species Name	Common Name
<i>Acacia baileyana</i>	Cootamundra Wattle
<i>Acacia podalyriifolia</i>	Queensland Silver Wattle
<i>Acacia saligna</i>	Golden Wreath Wattle
<i>Ailanthus altissima</i>	Tree of Heaven
<i>Bambusa spp.</i>	Bamboo
<i>Celtis sinensis</i>	Hackberry
<i>Cinnamomum camphora</i> (<10m)	Camphor laurel (less than 10m in height)
<i>Citrus spp</i>	Cumquat, Grape Fruit, Lemon, Lime, Mandarin, Oranges
<i>Cupressocyparis leylandii</i>	Leyland Cypress (and their cultivars)
<i>Eriobotrya japonica</i>	Loquat
<i>Erythrina X sykesii</i>	Coral Tree
<i>Eucalyptus nicholii</i>	Narrow-leaf Peppermint
<i>Eucalyptus scoparia</i>	Willow Gum / Wallangara White Gum
<i>Ficus elastica cvs</i>	Rubber Tree
<i>Gleditsia triacanthos</i>	Honey Locust
<i>Ligustrum lucidum</i>	Large Leaf Privet
<i>Ligustrum sinense</i>	Small Leaf Privet
<i>Liquidambar styraciflua</i>	Liquidambar
<i>Malus domestica and cvs</i>	Apple Tree
<i>Mangifera indica</i>	Mango Tree
<i>Morus spp.</i>	Black Mulberry

<i>Musa spp.</i>	Banana
<i>Olea europaea subsp cuspidata</i>	African Olive
<i>Phoenix canariensis</i> (<4m trunk height)	Canary Island Date Palm
<i>Phyllostachys spp.</i>	Fishpole Bamboo
<i>Phyllostachys nigra</i>	Rhizomatous Bamboo
<i>Pinus radiata</i>	Radiata Pine or Monterey Pine
<i>Populus spp</i>	Poplars
<i>Prunus spp</i>	Apricot, Cherry, Nectarine, Peach, Plum
<i>Pyrus communis</i>	European Pear
<i>Robinia pseudoacacia</i>	Black Locust
<i>Salix spp.</i>	Willow Tree
<i>Schefflera actinophylla</i>	Umbrella Tree
<i>Schinus terebinthifolius</i>	Broad-leaf Pepper Tree
<i>Syagrus romanzoffiana</i>	Cocos Palm
<i>Toxicodendron succedaneum</i>	Rhus Tree

1.6 Conduct and Author Qualifications

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Furthermore, Mr Smart confirm that he has read and agrees to be bound by the NSW Uniform Civil Procedure Rules 2005, Part 31 Division 2 Provisions, Schedule 7 - Expert witness code of conduct.

Arterra provides specialist consulting arborist services only; and does not provide any physical tree services such as climbing, pruning, removal, root investigations or root pruning. Our advice is based on impartial professional assessment, as we do not derive any financial benefit from specifying pruning or other physical arborist services. We do not specify any such activities unless we determine them to be essential to ongoing tree health or stability.

1.7 Key Definitions and Abbreviations

The following abbreviations are used throughout this report.

"NRZ" = Notional Root Zone

This is the area as defined by AS 4970:2025 – "Protection of Trees on Development Sites" and means the typical minimum area above and below ground at a given distance from the trunk to provide for protection of the tree. Most importantly it represents the root zone required to be left undisturbed to maintain a healthy and viable tree. Please note, that roots will usually extend well beyond this zone, so this represents the minimum remaining root zone required, assuming all others are lost or damaged due to construction. It is typically calculated as a circle centred on the trunk unless existing site conditions can be assessed and indicate otherwise.

"TPZ" = Tree Protection Zone

Although based on the NRZ above, this is a consolidated and often more simplified area to be applied during construction for tree protection. This area is often shaped to deal with practical construction realities whilst maintaining appropriate protection of the notional root zone (NRZ) (i.e fencing a nominal circular NRZ can be difficult and impractical. TPZ areas often define a square or rectangular shape which includes the area calculated as the nominal NRZ). It often amalgamates and simplifies tree protection zones, particularly when they are overlapping and can be amended for items such as buildings, walls, pathways and existing fences. It also protects areas that are contiguous to the calculated nominal NRZ, which are to be applied when there is an incursion calculated within the NRZ or the nominal NRZ is not completely circular due to structures potentially impeding growth.

"SRZ" = Structural Root Zone

This is the area as defined by AS 4970:2025 – "Protection of Trees on Development Sites" and means the area immediately around the base of the tree at a given distance from the trunk within which the woody roots and soil cohesion are considered vital to the structural stability of the tree. Disturbance, damage or removal of soil and

roots within this area will typically render the tree unstable and require its removal. It is typically calculated as a circle, centred on the trunk, unless existing site conditions can be assessed and indicate otherwise.

"DSH" = Diameter at Standard Height

This is the diameter of the trunk measured at 1.4m above ground level.

"DGL" = Diameter at Ground Level

This is the diameter of the trunk measured at ground level, but just above any root flare.

Non-Destructive Digging

This is the process of safely excavating the ground surface to minimise the risk of damage to existing tree roots. This method is used to map and locate existing tree roots within the TPZ and/or SRZ and helps to guide and inform the installation and/or construction of proposed services and/or structures which are close to retained trees. This is often achieved through hand digging using a shovel, trowel and/or fork with care not to damage the bark and wood of any roots. Dry vacuum extraction is an appropriate, non-destructive alternative to hand digging. When this work occurs within a TPZ and/or SRZ of a tree to be retained, a consulting arborist should always be present to monitor the works. Alternatively, services can be installed via under boring at a depth of not less than 1.2m below existing ground levels, when passing the tree(s).

Inclusion or Included Bark Branch Union

Growth of bark at the interface of two or more branches on the inner side of the branch union which is unable to be lost from the tree and accumulates, or is trapped, between the acutely divergent branches. This can form a weakened branch union in some species.

Epicormic Growth

Juvenile shoots produced along branches or trunks from dormant or latent buds concealed beneath bark. Production can be stimulated by fire, pruning, wounding or root damage and may also be an indicator of tree stress or decline.

1.8 Documents Reviewed

The following plans and documents were reviewed as part of this tree impact assessment:

Norton Survey Partners - Surveyors:

- Detail and Levels Survey – Job No. 52075 dated 27 March 2025.

Collins and Turner Architects - Architectural Drawings – (as issued for SSDA 22 September 2025):

- A_SSDA_121 Basement Plan
- A_SSDA_122 Ground Floor and Level 1 Plan
- A_SSDA_123 Levels 2 and 3 Plan
- A_SSDA_124 Levels 4 and 5 Plan
- A_SSDA_203 Internal Building A and B Elevation
- A_SSDA_301 Section 1 and 2
- A_SSDA_302 Section 3 and 4

Mott Macdonald – Civil / Structural Engineers:

- Earthworks Cut and Fill Plan (103419-MMD-PUN-XX-DR-C-0020 rev 03)
- Ground Floor Drainage Plan (103419-MMD-PUN-XX-DR-C-0051 rev 02)

Arcadia Landscape Architects:

- Landscape SSD Design Report– Rev B – dated 22 September 2025
- L101 - General Arrangement Plan Rev B – dated 22 September 2025

Based on the proposed architectural and landscape plans and services information currently reviewed we are currently satisfied that the proposed servicing for the development can be achieved and designed to avoid major trenching or disturbance to the existing trees that are proposed to be retained. It is assumed that any existing services that are no longer required will be capped off and left in situ, if they are located with TPZs and under trees to be retained.

1.9 Assessment Methodology

Data Collection

On the 24 April 2025, Rob Smart of Arterra carried out a visual inspection of the site. Arterra attended the site to undertake a detailed assessment of the trees within the site and likely to be impacted by the proposed development. The trees' health and condition were assessed via a visual inspection undertaken from the ground only. Requisite tree data (including DSH, DGL, height & canopy spread, condition & proximity to services) were recorded using an Apple iPad and FileMaker Pro database.

The basic health and condition criteria that were inspected for each tree is summarised as follows:

- tree size, broad age-class and general balance of the tree;
- canopy foliage size, colour and density;
- dieback and epicormic growth;
- trunk or branch wounding, branch tear outs and pruning history;
- structural defects such as co-dominant stems, cracks, splits, included bark, decay;
- pests and disease evidence or occurrence;
- above-ground obstructions; and
- evidence of recent site disturbance.

All trees were photographed, given a unique identification number, and plotted onto a scaled base plan for referencing and identification throughout the report and for future discussions and co-ordination. Tree trunk diameters were measured using a metric diameter tape measure. Tree heights were measured using the two-point clinometer function of a Nikon Forestry Pro laser range finder. Canopy spreads were estimated by pacing out distances along the cardinal axis of the canopy and cross-referencing to survey information and aerial photos.

No specialised equipment or methods were employed to test for the extent of decay in any of the trees, apart from a nylon 'sounding' mallet. No plant samples were analysed or independently tested to verify or formally identify any pests or diseases.

Desktop Review and Research

Digital AutoCAD files of the proposed works were imported into Arterra's standard CAD software (ArchiCAD v27) and superimposed over the tree and site survey information. The extent of site disturbance was analysed for the proposed building works, landscaping, services and other site grading. An assessment was made of the likely extent of impacts on the TPZs, taking into account the likely construction impacts depending on the type of work being undertaken (cut or fill, suspended slabs, decks, service trenches). Various area calculations and measurements were made in the CAD software of the likely incursions into the TPZs or SRZs.

Historical aerial photography was gathered from NSW Spatial viewer. More recent aerial imagery was obtained from the NearMap website with aerial photos of the site dating from January 2025 imported into the above software for cross checking and assessment.

Climatic data was obtained from the Bureau of Meteorology using statistics from Sydney Airport AWS which is approximately 11.0km to the east of the site. (<http://www.bom.gov.au/climate/data/> accessed 29 April 2025)

1.10 Pre-Development Tree Assessments – Tree Retention Values

The information gathered in the field was tabulated and the retention value assessed using a combination of techniques commonly used and recognised in the arboricultural industry. The tree life expectancy was established using the Useful Life Expectance (ULE) system. A summary of these systems is provided below.

Useful Life Expectance (ULE)

ULE is a system based on Jeremy Barrell's work developed in 1993. It determines the time a tree may be expected to be retained based on its age, health, condition, and location. This is then moderated by the economics of maintenance or other costs of retaining the tree. A long ULE means the tree is presently expected to live longer than 40 years with minimal intervention and cost. A short ULE indicates a tree that is not expected to live longer than 5 years or may require substantial intervention or costs to retain it.

Retention Values

The proposed retention value of the trees was determined based on a considered combination of the size, age, condition and suitability of the tree. Each tree was then ranked according to one of 4 retention categories.

1. **"High" Retention Value** – these are trees that are typically in good or very good condition, large and visually prominent, historically or environmentally important. They may also be lesser quality trees, but part of an important grouping of trees. They should represent a serious physical constraint to the development and their removal avoided where possible and feasible.

2. **“Moderate” Retention Value** – these are trees that are in good to reasonable condition and should be retained where possible and feasible to do so. They may also be lesser trees, but part of an important grouping of trees and therefore warrant retention based on the group’s value.
3. **“Low” Retention Value** – these are trees that are in poor condition or have structural defects, are particularly small or commonplace, are not historically, environmentally or socially significant and should not be considered as a constraint to the development. They could be retained only if they are not likely to be impacted by, or constrain potential desirable, development outcomes.
4. **“Should Remove” / Nil Retention Value** – these are trees that are in very poor health, exhibit poor form, or have serious structural defects, are considered weeds or combination of all these, and therefore should be considered for removal regardless of any development.

Consideration has also been given to the relationship of the trees to one another and their proximity to the likely development areas on the site. For example, trees that are part of a closely spaced group, or are likely to be significantly misshapen or unstable with the removal of surrounding trees and structures are considered with these factors in mind.

1.11 Tree Assessment – Notional Root Zone and Tree Protection Zone Calculations

To ensure the long-term survival and growth of any tree to be retained on the development site, a suitable area is required to be protected around the tree. This area should typically be as large as possible. It should also take into consideration: -

- The size and age of the tree;
- Above and below ground properties;
- The health and condition of the tree;
- The species of tree and its tolerance to disturbance;
- Soil conditions, type, depth and site hydrology and
- Site specific conditions and any existing obstructions to root development

The **Notional Root Zones** (NRZs) have been calculated using the formula and criteria outlined in AS 4970:2025 Protection of Trees on Development Sites. In summary the standard applies the calculation for the radius of the NRZ as $12 \times$ (the tree trunk diameter (in metres) calculated at standard height (DSH)). DSH is taken at 1.4m above ground level.

A maximum NRZ radius will be 15m (unless crown protection is required) while the minimum NRZ radius shall be 2m. The NRZ is typically assumed to be radial and centred on the centre of the tree’s trunk unless other site factors or tree canopy size and location dictate an adjustment.

Encroachments of up to **10%** of the NRZ area may be accepted as long as it is also outside of the Structural Root Zone (SRZ). This is known as a **“minor encroachment”**.

Encroachments of between **10% to 20%** of the area are known as a **“moderate encroachment”**. This level of encroachment needs to be carefully assessed by the Project Consulting Arborist. It may be acceptable within the NRZ as long as it is outside of the Structural Root Zone (SRZ) and relevant factors are considered such as the location and distributions of roots, the trees health and tolerance to disturbance, existence or present or past obstacles that may have affected root development, the nature of the disturbance and tree maintenance and care activities to be applied.

Encroachments greater than **20%**, are known as **“major encroachments”**. These will only be accepted with additional and very specific evidence that the tree will not be unduly impacted by the proposed works.

Whenever an encroachment is made into a NRZ, a suitable compensatory area should be made elsewhere and physically contiguous to the remaining TPZ.

The **Structural Root Zone (SRZ)** is the area defined as the minimum area required to retain the **structural stability** of the tree. The formula for calculating the SRZ is outlined in AS 4970:2025 Section 3.5. No encroachments into the SRZ shall typically be warranted or allowed.

2.0 BACKGROUND, OBSERVATIONS & ASSESSMENT

2.1 Site History and Existing Trees

Refer to attached T-01 Tree Retention Value Plan for the locations of the trees currently on, or immediately adjacent to the site. Review of the historical aerial imagery of the site from the 1943 illustrates that the site and surrounding streets had no trees of any significance at this time and the site was cleared commercial land. The site was cleared and vacant in 1986. During the 1990s the site had been developed with the current residential flat buildings with most of the trees likely to date to this period.

The following aerial images demonstrate the general development of the site and the ages of tree planting and changes that have occurred over time.



Figure 2.1 – Aerial image of the site in 1943 illustrating that the site had been partially cleared. (Source: Arterra / NSW Spatial Services)



Figure 2.2 – Aerial image of the site in 1951 illustrating the site had been developed for Department of Housing residential flats. (Source: Arterra / NSW Spatial Services)

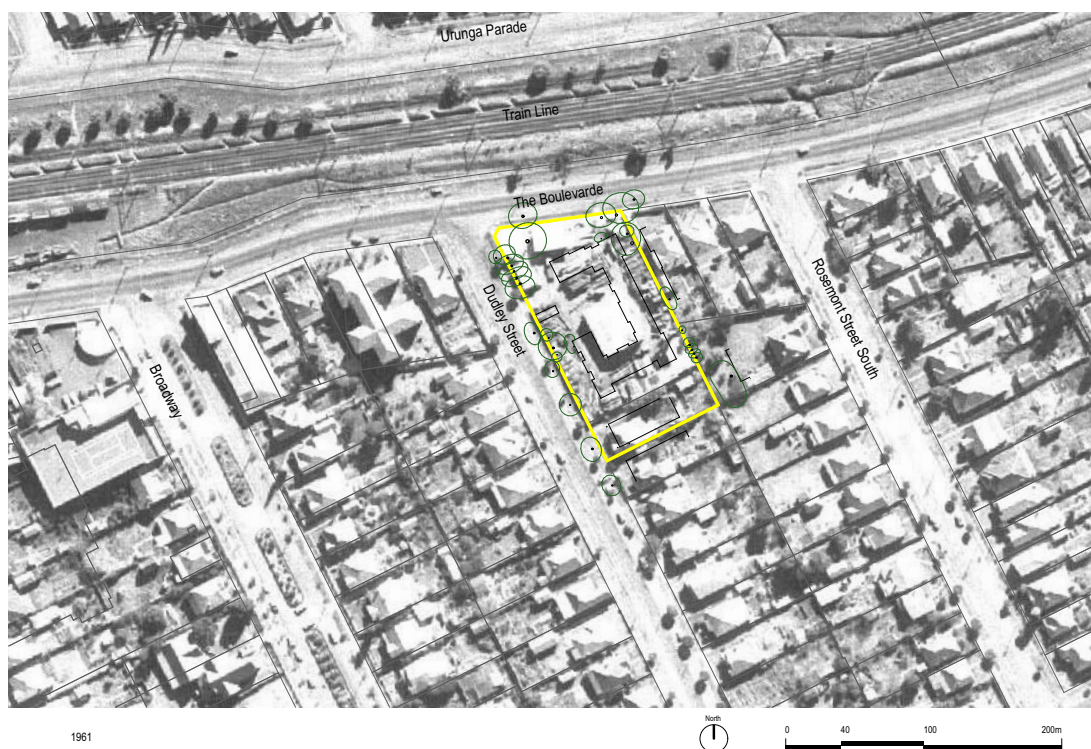


Figure 2.3 – Aerial image of the site in 1961 illustrating the site had been developed for Department of Housing residential flats, mostly devoid of trees but with few younger trees now evident. (Source: Arterra / NSW Spatial Services)

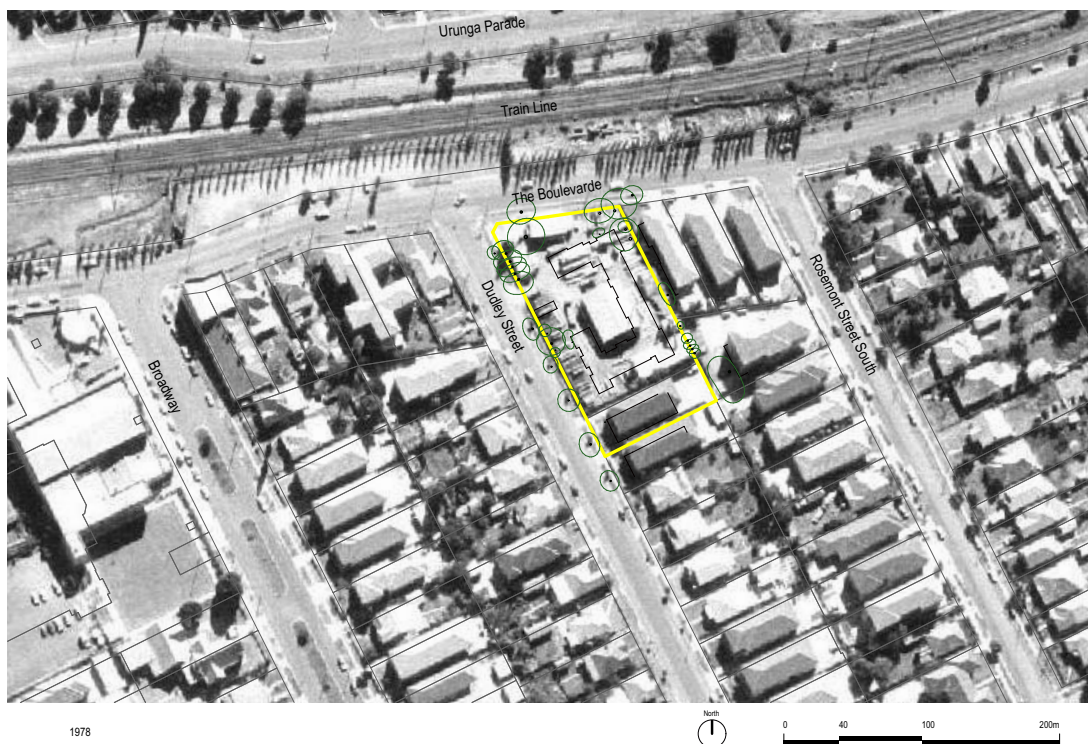


Figure 2.4 – Aerial image of the site in 1978 illustrating the site. Some existing trees now evident in the aerial photos and the large trees remaining on site expected to date from around this period (Source: Arterra / NSW Spatial Services)



Figure 2.5 – Aerial image of the site in 1986 illustrating the site. Numerous trees clearly evident in the aerial photos and the larger trees remaining on site expected to date from this period or earlier. (Source: Arterra / NSW Spatial Services)



Figure 2.6 – Aerial image of the site in 1998 illustrating the site. The site and its trees largely as it occurs today. (Source: Arterra / NSW Spatial Services)



Figure 2.7 – Aerial image of the site in 2010 illustrating the site. The site and its trees largely as it occurs today. (Source: Arterra / NearMap)



Figure 2.8– Aerial image of the site in 2020 illustrating the site. The site and its trees appearing largely as it occurs today. (Source: Arterra / NearMap)



Figure 2.9 – Aerial image of the site in 2025 illustrating the site. The site and its trees as it occurs today. (Source: Arterra / NearMap)



Figure 2.10 – View to the north from Dudley Rd intersection illustrating the prominence and visual importance of the large Spotted Gum and the Melaleucas at the north-east corner of the site. (Photos: Arterra 24 April 25).



Figure 2.11 – View of the large *Corymbia maculata* (Spotted Gum) T06 on the north-east corner. This is a large and locally endemic tree in good condition and has been a focus for retention and protection. (Photos: Arterra 24 April 25).



Figure 2.12 – View of the trees in the neighbouring properties along the eastern boundary. These trees are in good condition and provide valuable screening and amenity to the site. Being neighbouring trees it will be important that the development provides adequate setbacks and minimises disturbance when within 1.5 – 2.0m from the boundary. (Photos: Arterra 24 April 25).

2.2 Climate and Microclimate

Punchbowl is one of Sydney's inner southwestern suburbs and therefore shares the general climate of this region with moderate temperatures, good rainfall and minimal climatic and weather extremes. It is typically described as a temperate climate with hot to warm summers and cool winters, with relatively uniform rainfalls greater than 800mm / year. There is no distinct dry season.

Punchbowl is located approximately 15km southwest of the Sydney CBD, and less than 11km from the coast at Botany Bay. It has an approximate average annual rainfall of 1100mm, fairly evenly spread across the year but with a slightly drier period during the late winter and early spring months. The highest rainfall period is usually June with an average of 124mm and the driest month being September with an average of less than 60mm.

Maximum average daily temperatures range from 26.7°C in January and to 17.2°C in July. The minimum average daily temperatures range from a high of 19.2°C in February down to lows of 7.4°C in July.

The primary wind direction is from the south to the north-east in the afternoons while it is predominantly from the north-west and west in the mornings. This is common of coastal areas dominated by "sea breeze" affects. Review of climate data indicates that the primary direction for strong winds is from the south or west and in the afternoons. There are no significant microclimatic influences that would be considered unusual for an intensively developed urban area.

2.3 Soils, Landform and Native Vegetation

With regard to the expected naturally occurring soils, mapping indicates the site to be within the Blacktown Soil Landscape Association which occurs extensively throughout much of western Sydney. These soils are often related to the remnants of highly weathered shales of the Wianamatta Group. This is typically characterised by undulating low and rolling hills located over the Ashfield and Bringelly Shale geological formations which are mostly interbedded shales with very occasional sandstones. Typically, these areas would be shallow to moderately deep Red Podzolic soils, where the boundary between the topsoil and subsoil is relatively clear. These shale-based soils are generally of low fertility with good water holding capacity. They are therefore also subject to waterlogging and are often acidic.

A representative soil sample was taken in the centre west of the site near the important neighbouring trees. The results from the sample taken were very reflective of the naturally occurring soils and did indicate a red podzolic soil, however the natural profile did appear to be altered with most likely an imported sandy layer of topsoil at the surface overlying a more natural topsoil and subsoil profile below that.



Figure 2.13 – Topsoil sample / profile, noting the somewhat unnatural profile with what appears to be imported topsoil material overlying a thin layer of heavy clay subsoil at 300-400mm, likely from original 1950s development of the site, before returning to a more natural existing soil profile below this disturbed surface. (Photos: Arterra 24 April 25).

A representative soil sample was taken near to **T06**. The results from the sample taken were reasonably very reflective of the naturally occurring soils and did indicate a red podzolic soil, however the natural profile did appear to be altered with most likely an imported layer of topsoil at the surface. From the topsoil sample taken at 300mm depth, the soil structure was very weakly pedal with only a very few fine sub angular blocky peds. The soil texture was a sandy clay loam with the colour being mid brown. The topsoil pH was unnaturally very alkaline with a pH of 8.5. There was a distinct change from the A to B horizons at around 500mm depth. The subsoil from a depth of 700mm was also sampled. The subsoil structure was strongly pedal with fine to medium sub angular blocky peds. The soil texture was a heavy clay. Its colour was an orange brown. The soil pH was acidic at pH of 6, which is to be naturally expected.

The soil would typically have good water holding capacity but may be subject to waterlogging, particularly in flatter areas and depressions. It would have good cation exchange capacity (CEC) and although naturally low fertility, it would have good nutrient holding capacity if fertilisers were applied. The high clay contents of both the topsoil and subsoils however make the soils highly subject to compaction, if trafficked when wet, and would then set hard when dry, often leading to great difficulty in then absorbing surface water and reduced soil oxygenation.

The natural vegetation that once characterised the area and the Blacktown Soil Landscape Association has now been extensively cleared in the local area, but it would have been open woodland (dry sclerophyll forest) and been dominated by the following representative species.

- *Eucalyptus tereticornis* (Forest Red Gum)
- *Eucalyptus crebra* (Narrow-leaved Ironbark)
- *Eucalyptus fibrosa* (Broad-leaved Ironbark)
- *Eucalyptus sideroxylon* (Mugga Ironbark)
- *Eucalyptus moluccana* (Grey Box)
- *Corymbia maculata* (Spotted Gum)
- *Angophora floribunda* (Rough-barked Apple)
- *Eucalyptus globoidea* (White Stringybark)

One of the species, a *Corymbia maculata* (Spotted Gum) occurs on the site. It was only planted around the 1990s but is a large and prominent tree.

2.4 Identification and Assessment of Existing Trees

The site assessment identified a total of **30** trees. 15 trees are adjacent the site, with 8 of these trees being street trees and 7 located on an adjacent property to the east. The remaining 15 trees are within the site boundary. Trees ranked with 'Low' or 'Very Low/Remove' retention values, due to them being small, insignificant and often weed species, should not be considered a constraint to the development.

The following Table 2.1 shows the breakdown of the current tree population, by retention values.

Table 2.1: Tree Population and Retention Value

Retention Value	Total Trees	% Population
<i>High</i>	2	6.5%
<i>Moderate</i>	18	60.0%
<i>Low</i>	8	27.0%
<i>Very Low / Remove</i>	2	6.5%
Total trees	30	100%

Following are the key observations related to the tree population within this site:

- **7** trees located within the site are rated with either a 'Moderate' or 'High' retention value.
- **8** trees located within the site are rated with a 'Low' or 'Very Low/Remove' retention value and should not be considered a constraint to the proposed works.
- The most significant trees on the site are predominantly in the north-west corner:
 - 1 being (T06) *Corymbia maculata* (Spotted Gum), and
 - 5 trees (T07, T08, T09, T10, T11) *Melaleuca bracteata* (Black-Tea Tree)
- Tree (T16) is a 'High' retention value street tree. The other street trees on Dudley Street and The Boulevard are also to be a focus for retention.
- **7** trees on the adjacent residential properties, that are near the eastern site boundary, are also a focus for retention and protection. Some of these trees have canopies that overhang the boundary and project into the site. Care will need to be taken to protect the canopies and roots of these adjoining trees.

Detailed information on each tree including heights, trunk diameters, canopy spreads, age classes and condition are all provided in Appendix 4.2 - 'Tree Impact Assessment Schedule'.

2.5 Tree Biology and Tree Care Basics

Trees are dynamic living organisms. Trees can be very susceptible to damage, stress and declining rapidly if overly impacted by construction. Trees take decades to grow but can be injured and killed in a very short time frame. This is particularly due to the irreparable damage to the often shallow, extensive and unseen root systems. It is rarely possible to repair a stressed or damaged tree, after the damage has occurred. Proper protection is the key to minimising construction related impacts. Severing of roots within the Structural Root Zone (SRZ) can also lead to potentially unsafe instability of the tree as a structure.

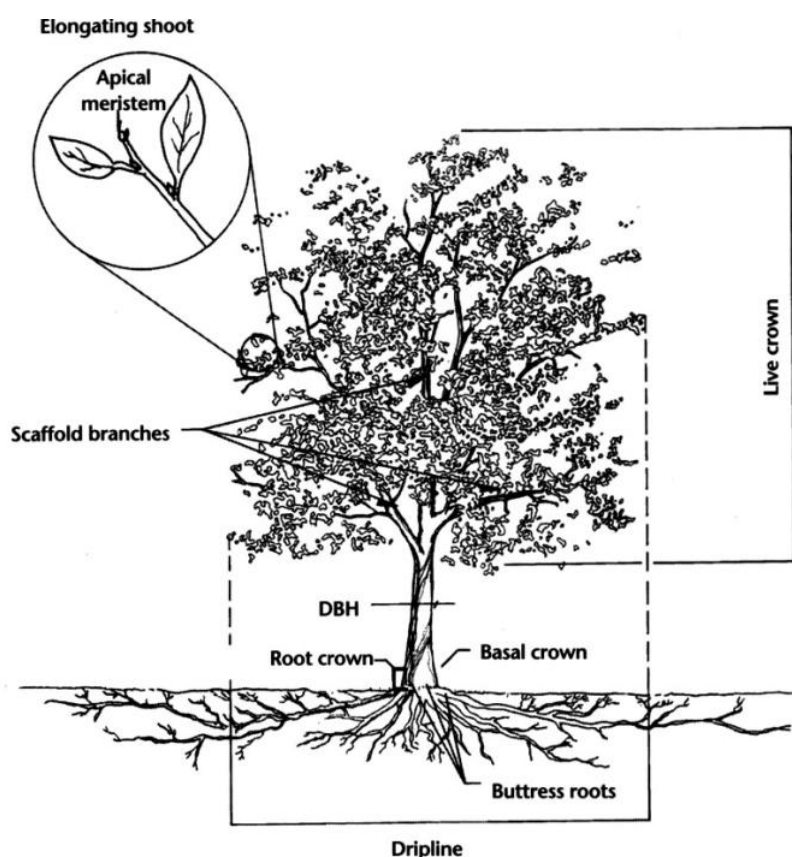


Figure 2.14 – Typical form and structure of a tree illustrating the typical form, location and extent of root growth (Source: Matheny and Clark, 1998)

Basic Tree Needs

As a living organism a tree remains alive by completing the following chemical reaction - Carbon Dioxide and water in combination with chlorophyll and light is converted to Glucose and Oxygen $[\text{CO}_2 + \text{H}_2\text{O} + \text{light} = \text{sugar (C}_6\text{H}_{12}\text{O}_6 \text{ [Glucose])} + \text{O}_2]$

The process ultimately leads to the plant cells 'respiring' and producing energy for survival, a natural requirement for all living cells. Anything that affects a plant's photosynthesis and then cellular respiration will affect the overall

plant health. The limiting factors of photosynthesis and respiration will typically be the availability of oxygen, water and nutrients that make up the important chemical molecules and reactions.

Trees therefore have five basic requirements to survive and successfully grow:-

1. Oxygen (and particularly oxygen within the soil);
2. Water (a cellular necessity and primarily taken up by the tree roots);
3. Light & Sufficient Foliage (to photosynthesise and create the resources needed for cellular survival);
4. Soil (for physical anchorage and critical chemical nutrients) and
5. Physical Space (both above and below ground to grow).

Importantly, a minimum of 15% soil oxygen is required for active root growth and nutrient uptake. Less than 10% available soil oxygen starts to restrict root extension and growth and a minimum of 3% soil oxygen is required to just maintain root existence. Less than this will result in root death (Harris 1999).

One of the most insidious effects of construction on trees is often that of soil compaction or covering of root zones with impervious surfaces, as it:

- Reduces infiltration rates of surface water;
- Reduces the availability of water to the roots as they can't naturally extract remaining moisture when soil becomes too dry;
- Reduces air to roots (roots cease to function properly and die without oxygen);
- Increased soil strength caused by compaction mean that roots need more energy to growth through it or can't even physically penetrate the soil;
- Roots are physically broken or crushed and there is increased potential for fungal and pathogen attack. (Harris 1999).

Tree Tolerance

Typically, older and larger trees are less tolerant of construction impacts. Different species also have different tolerance of injury and disturbance. Importantly it needs to be stressed, that a tree does not "heal" from injury as animals do. Typically, any injury made to a tree, results in the tree expending considerable energy reserves to create new growth that "seals" and surrounds a wound and then attempting to compensate structurally and physically for any losses. Impacts to trees are therefore cumulative and a series of otherwise small and unrelated impacts can easily result in the death of a tree.

A tree that is already compromised or showing signs of stress is far less likely to tolerate construction impacts due to its lower levels of energy reserves and already weakened state. Therefore, a tree that is only in a fair condition or poor condition is less likely to tolerate construction impacts than a young tree in good or excellent condition.

Weakened or stressed trees are also far less able to combat the myriad of normal environmental stresses and pathogens that are naturally imposed against them such as drought, decay, fungi, bacteria and insect pests.

2.6 The Proposed Works

The proposed works will result in a major site disturbance which may have potentially significant impacts on the trees within and adjacent to the site.

The proposed development will involve:

- Use of large scale civil and earthmoving equipment;
- Access to and from the site with large trucks and construction plant;
- Major excavations;
- Large stockpiles of excavated material and demolition waste;
- Stockpiles/ storage of building materials;
- Trenching for services;
- Major building works involving concreting, painting and general construction;
- Use of large cranes;
- Parking for site personnel and deliveries;
- Paving and retaining walls and;
- Landscaping.

Key Assumptions:

- New pedestrian paths within the TPZs shall be constructed at or above the existing surface levels to minimise surface root impacts.
- Temporary battering, stockpiling or grading will not occur in the designated TPZ. Excavation for footings or basements adjacent to the TPZ will be undertaken using piling or other temporary vertical shoring methods.
- Despite the above, the line of disturbance outside of the building line has been typically estimated at a minimum of 1.5m from the face of the building to allow for provision of water proofing, services, access and scaffolding around the building during construction.
- All construction access, haulage routes and deliveries are to be away from trees and TPZs as much as possible.
- Where no spot levels or proposed contours are indicated it is assumed that the existing surface levels are retained.
- It is assumed that any new landscape grading or remediation within the nominated tree protection areas will be minimal and installed using high quality, imported manufactured topsoil. No cultivation of the existing soils shall be undertaken within the defined TPZs.
- For any retaining walls situated near trees, their footings will be oriented away from the trees (ie footings will extend no further than the face closest to the tree). Other construction approaches and details can be considered, with review and approval from Project Consulting Arborist.

2.7 Tree Impact and Removal Assessment

The intention of this assessment is to clearly illustrate the trees to be retained and removed as part of the development. It is also to determine any incursions into the retained trees' root zones and canopies by the proposed development and evaluate the likely impacts of the proposed works on the trees. A detailed listing of the incursions and likely impacts of the proposed development on each tree is shown in Appendix 4.2 - Tree Impact Assessment Schedule and Appendix 4.1 - Tree Plans.

Following points arise from the impact assessment:

- **21** trees (70%) are to be retained and protected.
- **9** trees (30%) are to be removed. Of those trees
 - **8** are rated with a **Low or Very Low/ Remove** retention value (89%).
 - All these trees are in the footprint of the proposed building or unacceptably impacted by the required site works.
- All **High** Retention Value trees are to be retained.

Table 2.2: Ultimate Disposition - Trees to be Retained and Removed

Tree Retention Values	Trees Retained & Protected	Trees to be Removed	Total Trees
High	2	0	2
Moderate	17	1	18
Low	2	6	8
Nil /Should Remove	0	2	2
TOTAL	21	9	30

Of the **21** trees to be retained and protected:

- **19** are rated as **High / Moderate** retention value (95% of the total of all high and moderate value trees)
- **11** have no, or minimal, foreseeable impact from the proposed works.
- **6** have a 'minor encroachment' (<10%) into their NRZs.
- **1** has a 'moderate encroachment' (10-20%) into their NRZs.
- **1** has a theoretical major encroachment' (>20%) into their NRZs. This is a small street tree and the excavation is occurring in the road carriageway and under the existing gutter for stormwater pipe work. Roots are likely to have favoured the adjoining verge therefore actual root disturbance is likely to be far less and therefore acceptable. Non-destructive digging is specified when close to the tree, and therefore impacts are considered acceptable and tree should be retained rather than removed.
- **3 trees** require canopy pruning considered to be a minor level of pruning (<10%) into their canopy area. This level of pruning is considered acceptable.

Table 2.3 –TPZ Incursions Involving Potential Root Loss (as per AS4970-2025)

Tree ID	Species	NRZ Area	NRZ Incursion	NRZ % Incursion	Comment
T06	<i>Corymbia maculata</i>	312m ²	36m ²	12%	Moderate incursion at extremity of TPZ and considered acceptable with proper management and temporary irrigation applied
T07	<i>Melaleuca bracteata</i>	92m ²	5m ²	5%	Very minor incursion and considered acceptable with proper ground protection applied
T08	<i>Melaleuca bracteata</i>	80m ²	2m ²	3%	Very minor incursion and considered acceptable with proper ground protection applied
T10	<i>Melaleuca bracteata</i>	80m ²	5m ²	6%	Very minor incursion and considered acceptable with proper ground protection applied
T11	<i>Melaleuca bracteata</i>	106m ²	9m ²	8%	Very minor incursion and considered acceptable with proper ground protection applied
T17	<i>Tristaniopsis laurina</i>	80m ²	7m ²	9%	Minor incursion and considered acceptable
T20	<i>Tristaniopsis laurina</i>	46m ²	4m ²	9%	Minor incursion and considered acceptable
T21	<i>Tristaniopsis laurina</i>	15m ²	4m ²	27%	Theoretical major incursion. This is a small street tree and the excavation is occurring in the road carriageway and under the existing gutter for stormwater pipework. Roots are likely to have favoured the adjoining verge therefore actual root disturbance is likely to be far less and therefore acceptable. Non-destructive digging is specified when close to the tree, and therefore impacts are considered acceptable and tree should be retained rather than removed.

Table 2.4 – Proposed Tree Canopy Pruning

Tree ID	Species	Canopy Area	Canopy Area Pruned	% Pruning	Comment
T09	<i>Melaleuca bracteata</i>	56m ²	2m ²	4%	Very minor pruning considered acceptable
T10	<i>Melaleuca bracteata</i>	58m ²	6m ²	10%	Minor pruning considered acceptable
T11	<i>Melaleuca bracteata</i>	71m ²	4m ²	6%	Very minor pruning considered acceptable

2.8 Existing Canopy Cover

Canopy coverage has been calculated as a percentage (%) of the total site area (total site area 3,889m²). This has been calculated using the m² of 'projected' canopy onto the underlying ground surface and only within the site boundary. Overlapping canopy is not counted twice. Table 2.5 outlines the existing canopy cover for the site. Refer to accompanying and separate Landscape Plans and Report prepared by Arcadia Landscape Architects for the proposed canopy coverage expected as part of the ultimate landscape and development outcomes.

Table 2.5 - Existing Canopy Cover

Tree Canopy Coverage	Canopy Coverage (m ²)	% of Total Site Area
Existing Canopy Coverage – Total	492 m ²	13%
Existing Canopy Coverage – Likely to be retained	253 m ²	7%
Existing Canopy Coverage – Likely to be removed	239 m ²	6%
Existing Site Area	3,889 m ²	100%

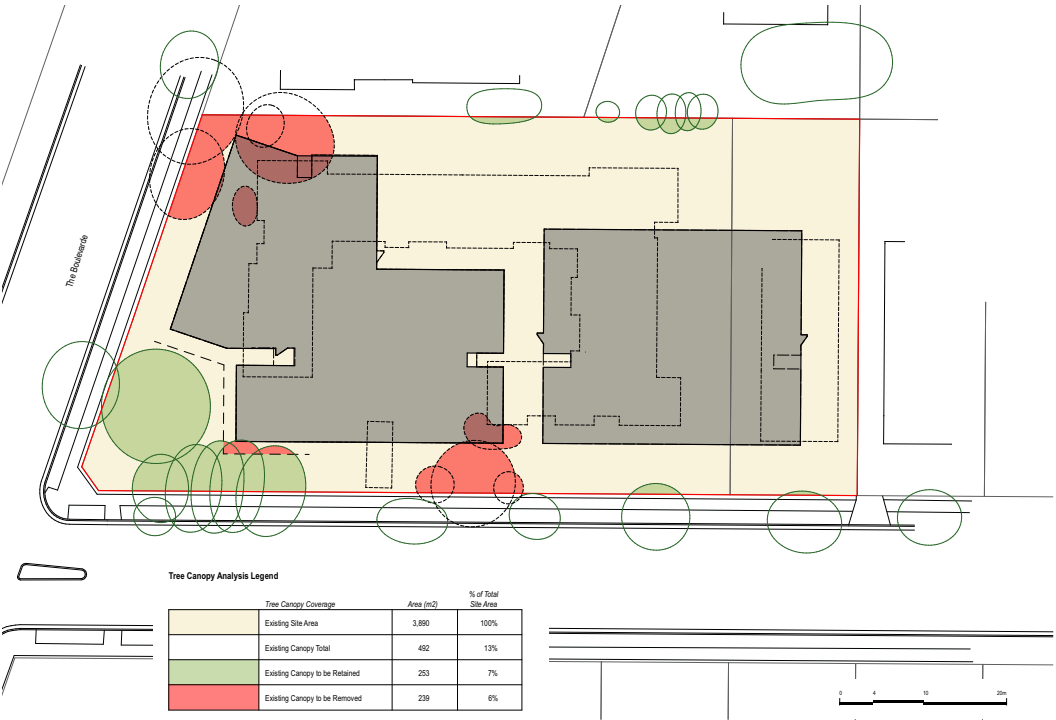


Figure 2.15 – Overall site plan showing the site and its existing urban canopy cover and relative percentages. (Source: Arterra)

3.0 TREE MANAGEMENT RECOMMENDATIONS

3.1 Potential Tree Related Impacts Needing to be Managed During Construction

The potential impacts from the proposed construction can be summarised as tree damage and 'reduced life expectancy' caused by:

- Root loss and disturbance due to inappropriate excavation for the building and services;
- Compaction of the root zone from storage or stockpiling of materials;
- Contamination of the soil from; the preparation of chemicals, wash down/ cleaning of equipment, refuelling of vehicles and dumping of waste;
- Compaction of the root zones from haul roads and the parking or use of vehicles/ plant equipment;
- Root disturbances from unauthorised cut and fill and soil level changes;
- Physical damage to the tree trunks and branches from passing machinery;
- Damage to the tree roots from landscaping and pedestrian pathway construction; and
- Inappropriate or excessive pruning for construction access.

The following sections of this report provide the recommendations and proposed measures that will aim to minimise and avoid these impacts as much as realistically possible.

3.2 Management of Construction Period Tree Impacts

The following recommendations are made to specifically reduce the negative construction impacts on the existing trees identified to be retained.

- Ensure that all work within the identified TPZs is carried out with appropriate skill and care to limit surface impacts. If roots greater than 40mm Ø are encountered, works shall cease and direction sought from the project arborist before proceeding further.
- Undertake non-destructive digging techniques to install stormwater pipework near T21 to ensure roots within verge and directly behind existing kerb and gutter are retained and protected during work. Ideally retain existing kerb and gutter adjoining tree.
- Install ground protection boards adjoining the new building line in the north-west corner to protect ground from compaction as the temporary fencing is set back to allow construction period access to the building facade. No excavation or disturbance to be undertaken other than already accounted for incursion for basement construction. Basement wall to be formed via piling or other suitable shoring to prevent the need for any temporary battering into the adjacent TPZ.
- Appropriately fence all TPZs outside of the already noted incursions for the duration of all major site construction work. See Appendix 4.1 Tree Plans for locations and extent.
- Carefully control and fence access to and from the construction areas so that movement does not occur through any TPZs other than for the already identified building and basement construction incursions.
- Ensure all the new above and below ground services are excluded from running through any TPZs beyond any already noted incursions.
- Minimise the re-grading of the ground surface within the identified TPZs, beyond the noted building incursions, to meet and match proposed pathways and other building levels. No excavation below existing levels shall typically be allowed.
- Mulching of the entire TPZ areas as specified in Tree Plans. This will aid tree health with moisture retention, limit possible compaction from pedestrian traffic, and improve soil conditions within the TPZs.
- Avoid digging into existing root zones for the installation of any proposed landscaping around the trees and the installation sizes of new plants to be 5L or less to ensure that excavations are less than 200mm in depth. It is recommended to build up soil levels for any new planting areas to a maximum of 200-300mm to enable the new planting to occur without disturbing existing tree roots.
- Do not allow storage or stockpiling of any materials or site sheds within established TPZs unless it can be demonstrated that this will not impact on the tree retention, and it is specifically approved in writing by the Project Consulting Arborist.

3.3 Canopy Pruning and Pruning Methodology

To be constructed, the proposal will potentially require minor canopy pruning to **3 trees** (*Melaleuca bracteata*) to provide building and construction clearances. All pruning should be minimised, and branches pushed out of the way and secured to the outside of the scaffolding where possible. It is likely and expected that the pruning will be less than 10% of the canopy and be minor branchlets only. In the author's opinion, this is considered acceptable. Should pruning be required, the following must be undertaken:

- A suitably qualified Tree Contractor/Utility Arborist shall be employed to undertake the pruning and they shall be a member of Arboriculture Australia or equivalent body. They are to be employed, instructed, and directly supervised in their activities by an Arborist with a minimum AQF level 4 qualification in arboriculture.
- The Head Contractor/Development Manager is to submit to the Project Consulting Arborist the name(s), relevant qualifications, trade certificates, first aid and memberships, licenses and experience of the chosen utility arborist personnel.
- Only the specified 'selective pruning' is to be undertaken as overseen and directed by the Project Consulting Arborist. Work shall be done 'incrementally' until the appropriate building or scaffold clearance is achieved.
- All pruning works are to be completed according to AS4373 Pruning of Amenity Trees.
- The Tree Contractor shall prune only the parts of trees as directed by the Project Consulting Arborist. The resulting pruning wounds are not to be treated.
- The Tree Contractor shall minimise the size and number of wounds resulting from all pruning and ensure the remaining canopy is balanced with appropriate foliage weight and crown distribution. They shall use only clean, sharp pruning implements for all pruning work, ensuring that cuts are made without damage, tearing, or bruising to remaining vascular tissue.
- Access to the foliage shall be from the ground using equipment with suitable reach to access the required canopy. This is considered possible once demolition is complete or during placement of required scaffold.
- Where the tree work can result in a danger to other workers on the site, 'spotter' personnel shall be placed to ensure the work is undertaken safely.
- All branches and foliage that is pruned is to be chipped and removed from the site. All chipping activities shall be undertaken within the site boundaries, where feasible.

3.4 Proposed Tree Protection & Construction Activity Sequencing

The following sequence of activities should be followed for this project:

1. A Tree Protection Specification & Plan is to be prepared and issued as part of the construction contract prior to any construction work.
2. The Project Consulting Arborist, Landscape Architect, Civil and Structural Engineers, Client and Contractor Site Foreman are to meet prior to beginning any work on the site to discuss and review all work procedures, construction access routes, stockpiling and tree protection measures (including fence types and locations, access, craneage points, piling methods etc.).
3. Contractors to discuss locations and type of any sediment and erosion controls (if any) and install them with minimal tree impact when within or passing through the TPZ.
4. Trees identified for removal on the Tree Protection and Removal Plan (T-02) are to be identified on site and clearly marked. Removal and clearing of existing trees should be done by qualified arboricultural staff with care not to impact or damage other surrounding trees throughout the process. Stumps are to be ground when near remaining trees to avoid the use of excavators and the like from grubbing out stumps, which may lead to damage of any intertwined roots.
5. Designated TPZs are to be mulched with 75mm of recycled hardwood woodchip mulch to improve soil conditions around tree and remain in place until future final landscaping.
6. Ground protection boards, or equivalent, are to be placed in areas where the Tree Protection Area is not able to be completely fenced or unanticipated access is required.
7. The Construction Phase TPZ is to be clearly defined and fenced off with a 1.8m high metal or plywood temporary fence prior to any further work within the vicinity of the trees as shown on the Tree Plans. Any required rumble boards shall be installed to protect TPZs where temporary access is required.
8. Plywood (or similar) is to be placed under any scaffolds or pedestrian works paths when they are running through any identified TPZs.
9. Building works to be completed (external).
10. Contractor to remove the TPZ fencing and only then install final pathways and landscaping within the TPZs under the trees, but only after construction of the building exterior and all civil works are completed.

3.5 Demolition Work Near Trees or within TPZs

Demolition of paths and other structures required within a TPZ shall be done with small, tracked equipment or by hand, with care to limit surface damage and disturbance of the root zone. All such work within TPZs shall be supervised and overseen by a qualified project consulting arborist. Paving sections being removed must not be dragged across exposed roots. With existing pavement removed, the ground and roots are to be appropriately protected until new paving is installed and trafficking of the area minimised.

3.6 Tree Protection Fencing & Definition of TPZs

Establish a clearly defined tree protection zone as indicated in Appendix 4.1 Tree Plans. Install a 1.8m high temporary fence with either plywood hoarding or temporary steel mesh or chain wire fencing with adequate lateral bracing. Fencing shall comply with the requirements of AS 4687-2007 Temporary fencing and hoardings. These areas around the trees shall be delineated as a "Tree Protection Zone" during the remaining construction process, via appropriate weatherproof signage at not more than 50m spacing. Access will typically be excluded from these zones and the levels will be left largely at the existing levels except for the installation of the 75mm of mulch where noted. No stockpiling, excavation, trenching, re-fuelling or material storage should be allowed in this area without prior approval from the project consulting arborist.

3.7 Ground Protection within TPZs

Vehicular movement and access shall typically not be required or approved through the TPZs. If it is absolutely necessary and it is proposed to create any access or haul road, or similar, within the TPZ of a retained tree, the Contractor shall install rumble strips / boards over the designated TPZ ground surface. No excavation shall be allowed. Contractor shall first place a suitable permeable geotextile to the extent required and then a 100mm thick layer of wood chip mulch or coarse no-fines gravel over the extent to be covered with the rumble strip / boards. Then place hardwood boards (minimum 3600 x 200 x 75mm) on their flat edge, side by side, with a 30 - 50mm gap to form a rumble strip. These boards are to be held together with three galvanised metal bracing straps nailed to each board. The two outer straps are to be approximately 200mm in from the ends of the boards. The third strap is to be along the centre line of the boards.

Another appropriate alternative would be to install HDPE Ground Protection Mats. This mat can be laid as two parallel tracks or a single roadway, linked together with metal connections. These are extremely durable and manoeuvrable and can withstand vehicle weights up to 80 tonnes.



Figure 3.1 – Example of acceptable Tree Protection Area ground protection (Photo: Arterra)



Figure 3.2 – Example of acceptable Tree Protection Area ground protection (Photo: Arterra)

3.8 Trunk and Lower Branch Protection

A trunk barrier is to be erected around the circumference of the tree trunk and root buttress where shown. This barrier will consist of two to three 'rings' of 50mm diameter unsocked ag-line wrapped around tree trunk or branch and the ends cable tied to secure in place. A layer of battens is to be placed over and tight to the ag-lines. The battens are to have a maximum spacing of 50mm. The height of the battens is to be at least 2.4 meters or to the height of the first branches. Lower large branches may require the same protection if likely to be damaged by passing vehicles or equipment. Secure battens in place with galvanised steel bracing straps. Do not nail or screw into or otherwise injure the trunk or bark. Battens may be made from any suitable waste timber of similar sizes and depths. All sharp or protruding edges are to be properly covered with tape or similar padding.



Figure 3.3 – Acceptable Trunk Protection batten installation – height of boards to be at least 2.4m or to the first branches. (Photo: Arterra)

3.9 Provision of Temporary Irrigation

A temporary irrigation system is proposed for some trees. Refer to T-02 Tree protection and Removal Plan for specific locations. If unexpected ground disturbance, other climatic factors or pest and disease dictate, at the sole discretion of the Project Consulting Arborist, a temporary and automated (battery powered timer is sufficient) watering system may need to be placed within the TPZs to maintain adequate water to the retained trees and help maintain their healthy condition. This can be a surface mounted 'residential-style' soaker hose and/or surface sprinkler systems. It is to be surface visible and spray delivered so that its operation can be easily visible and verified. It should be on a designated supply line, separate from other construction related water supplies to minimise its likelihood of being disconnected.

Typically, during spring and summer months it should be set to run for a minimum of 20 minutes every day, in the early morning. During, autumn and winter months it should be set to run for 1 hour once every week. The operation can be suspended temporarily in periods of extensive and/or prolonged rain.

The system is to remain in place for the duration of construction, or until the Project Consulting Arborist approves its removal. It may be removed to allow the final landscape treatments to proceed. If accidentally disturbed or damaged by construction activities, it is to be reinstated as soon as practicable.

3.10 Final Landscaping within TPZs

Once final levels are set by the finished structural elements. The final trimming and landscaping shall be judiciously undertaken. The final pedestrian pavements shall be installed without undue excavation or compaction to the soil and all soft landscaping within the tree protection zone will be installed with care to avoid root disturbance via irrigation trenching, lighting installation and the planting of larger plants. The installation of 100-200mm of new garden mix topsoil over the pre-existing soil will provide a suitable medium in which to plant new plants without damage to existing tree roots. Permanent irrigation (if used) shall be installed as spray heads located outside of TPZs and spraying inwards. All other services such as electrical services shall also be designed and installed to avoid any excavation or trenching around the trees.

3.11 Other Tree Protection Measures to be Implemented

The following is a summary of the main measures that will be required during construction. These should be adopted for the Construction Contract and conditioned by Council.

Controlled Construction Access & Parking

Construction access points and stockpiling and storage areas shall be clearly identified and fenced where appropriate. Uncontrolled access points and parking of vehicles outside of designated areas is to be avoided. If temporary access is required through a tree protection zone, ground protection shall be employed to limit soil compaction and root damage and disturbance.

Clearing and Removal of Trees to be Removed

Removal and clearing of existing trees should be done by qualified arboricultural staff with care not to impact or damage other surrounding trees throughout the process. Existing stumps should be grubbed out or ground in a controlled fashion to remove wood that may decay and promote unwanted pathogens.

Communication - Tool Box Meetings and Construction Inductions

All contractors and subcontractors shall be inducted prior to working on the site. All inductions shall include description and identification of the Tree Protection Zones and the restriction on work and activities with regard to trees. The site foreman shall ensure that all new staff and contractors are appropriately inducted and that brief "tool box" meetings are conducted regularly to ensure Tree Protection is maintained at the forefront of all construction workers minds.

3.12 References

- Chapman, G.A and Murphy, C.L 1989, Soil landscapes of the Sydney 1:100 000 Sheet Report, Soil Conservation Service of NSW, Sydney, NSW.
- Harris, R.W, Clark, J.R & Matheny, Nelda P, 1999, *Arboriculture: Integrated management of landscape trees, shrubs and vines*. 3rd Ed. Prentice Hall. New Jersey, US
- Matheny, Nelda P and Clark J.R, 1998, *Trees and development - a technical guide to preservation of trees during land development*, International Society of Arboriculture, Illinois, US.
- Roberts, J. Jackson, N. and Smith, M. 2006. *Tree roots in the built environment. No.8* Research for Amenity Trees, Dept. for Communities and Local Government, London.

- Standards Australia, 2007, *AS 4373-2007 Pruning of amenity trees*. Standards Australia, Sydney.
- Standards Australia, 2025, *AS 4970:2025 Protection of Trees on Development Sites*. Standards Australia, Sydney.
- Standards Australia, 2007, *AS 4687-2007 Temporary fencing and hoardings*. Standards Australia, Sydney.

- End of report -

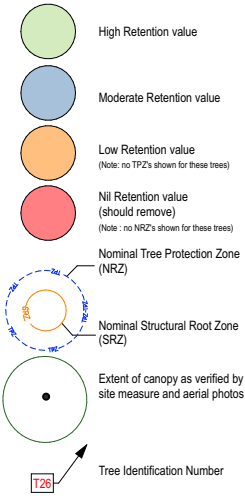
4.0 APPENDICES

4.1 Tree Plans



Homes NSW - HAFF2, Punchbowl - Tree Assessment Schedule									
Tree ID	Tree in Group	Tree Species	Common Name	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgb) (m)	NRZ radius (m) (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	0.72	1.02	8.64	3.34	Low	Remove
2	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	0.53	0.65	6.36	2.76	Nil / Remove	Remove
3	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	0.71	0.81	8.52	3.03	Low	Remove
4	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	0.66	0.77	7.92	2.97	Low	Remove
5	1	<i>Mangifera indica</i>	Mango	0.13	0.25	2.00	1.85	Low	Remove
6	1	<i>Corymbia maculata</i>	Spotted Gum	0.93	1.13	11.16	3.48	High	Retain
7	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.45	0.51	5.40	2.49	Moderate	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.42	0.52	5.04	2.51	Moderate	Retain
9	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.33	0.40	3.96	2.25	Moderate	Retain
10	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.42	0.53	5.04	2.53	Moderate	Retain
11	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.49	0.62	5.88	2.71	Moderate	Retain
12	1	<i>Ficus benjamina</i>	Weeping Fig	0.20	0.32	2.40	2.05	Low	Remove
13	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.48	0.56	5.76	2.59	Moderate	Remove
14	1	<i>Eriobotrya japonica</i>	Loquat	0.17	0.24	2.04	1.82	Nil / Remove	Remove
15	1	<i>Pyrus calleryana</i> cv.	Callery Pear	0.22	0.23	2.64	1.79	Low	Remove
16	1	<i>Tristanopsis laurina</i>	Water Gum	0.25	0.35	3.00	2.13	High	Retain
17	1	<i>Tristanopsis laurina</i>	Water Gum	0.42	0.52	5.04	2.51	Moderate	Retain
18	1	<i>Tristanopsis laurina</i>	Water Gum	0.27	0.32	3.24	2.05	Moderate	Retain
19	1	<i>Tristanopsis laurina</i>	Water Gum	0.20	0.32	2.40	2.05	Moderate	Retain
20	1	<i>Tristanopsis laurina</i>	Water Gum	0.32	0.51	3.84	2.49	Moderate	Retain
21	1	<i>Tristanopsis laurina</i>	Water Gum	0.18	0.32	2.16	2.05	Low	Retain
22	1	<i>Sapum sebiferum</i> (syn. <i>Triadica sebifera</i>)	Chinese Tallow Tree	0.50	0.78	6.00	2.98	Moderate	Retain
23	1	<i>Sapum sebiferum</i> (syn. <i>Triadica sebifera</i>)	Chinese Tallow Tree	0.35	0.50	4.20	2.47	Moderate	Retain
24	1	<i>Prunus</i> sp.	Plum	0.23	0.34	2.76	2.10	Moderate	Retain
25	1	<i>Cupressus sempervirens</i>	Italian Cypress	0.29	0.36	3.48	2.15	Moderate	Retain
26	1	<i>Cupressus sempervirens</i>	Italian Cypress	0.36	0.40	4.32	2.25	Moderate	Retain
27	1	<i>Cupressus sempervirens</i>	Italian Cypress	0.38	0.42	4.56	2.30	Moderate	Retain
28	1	<i>Cupressus sempervirens</i>	Italian Cypress	0.32	0.38	3.84	2.20	Moderate	Retain
29	1	<i>Cupressus sempervirens</i>	Italian Cypress	0.40	0.44	4.80	2.34	Moderate	Retain
30	1	<i>Acer negundo</i>	Box Elder	0.56	0.74	6.72	2.92	Low	Retain

Tree Retention Value Legend



TREE RETENTION VALUE NOTES

The proposed retention value of the trees was determined based on a considered combination of the size, age, condition and suitability of the tree. Each tree was then ranked according to one of 4 retention categories;

1. **“High” Retention Value** — these are trees that are typically in good or very good condition, large and visually prominent, historically or environmentally important. They should represent a serious physical constraint to development and their removal avoided where possible and feasible.

2. **“Moderate” Retention Value** — these are trees that are in good to reasonable condition, with no major structural defects and could be retained where possible and feasible to do so.

3. **“Low” Retention Value** — these are trees that are of poor condition or have structural defects, are particularly small or common place, are not historically, environmentally or socially significant and should not be considered as a constraint to development. They could be retained only if they are not likely to be impacted by or constrain potentially desirable development outcomes.

4. **“Nil” Retention Value** — these are trees that are in very poor health, or poor form, or have serious structural defects, are considered weeds or combination of all these, and therefore should be considered for removal regardless of any development.

Consideration has also been given to the relationship of the trees to one another and their proximity to the likely development areas on the site. For example, trees that are part of a closely spaced group, or are likely to be significantly misshapen or unstable with the removal of surrounding trees and structures are considered with these factors in mind.



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NOTE

Refer to the accompanying Arboricultural Impact Assessment Report for full description of trees, measurements and methods used to assess the trees, and proposed tree protection measures.

A For SSDA
REVISION DESCRIPTION
RWS 25/9/25
CHD DATE

PROJECT & CLIENT

The Boulevard, Punchbowl, Affordable Housing

Homes NSW

DRAWING TITLE

Tree Retention Value Plan

Project No : 24_20

Designed : RWS

Drawn : RWS

North Scale : 1:200@A1/1:400@A3

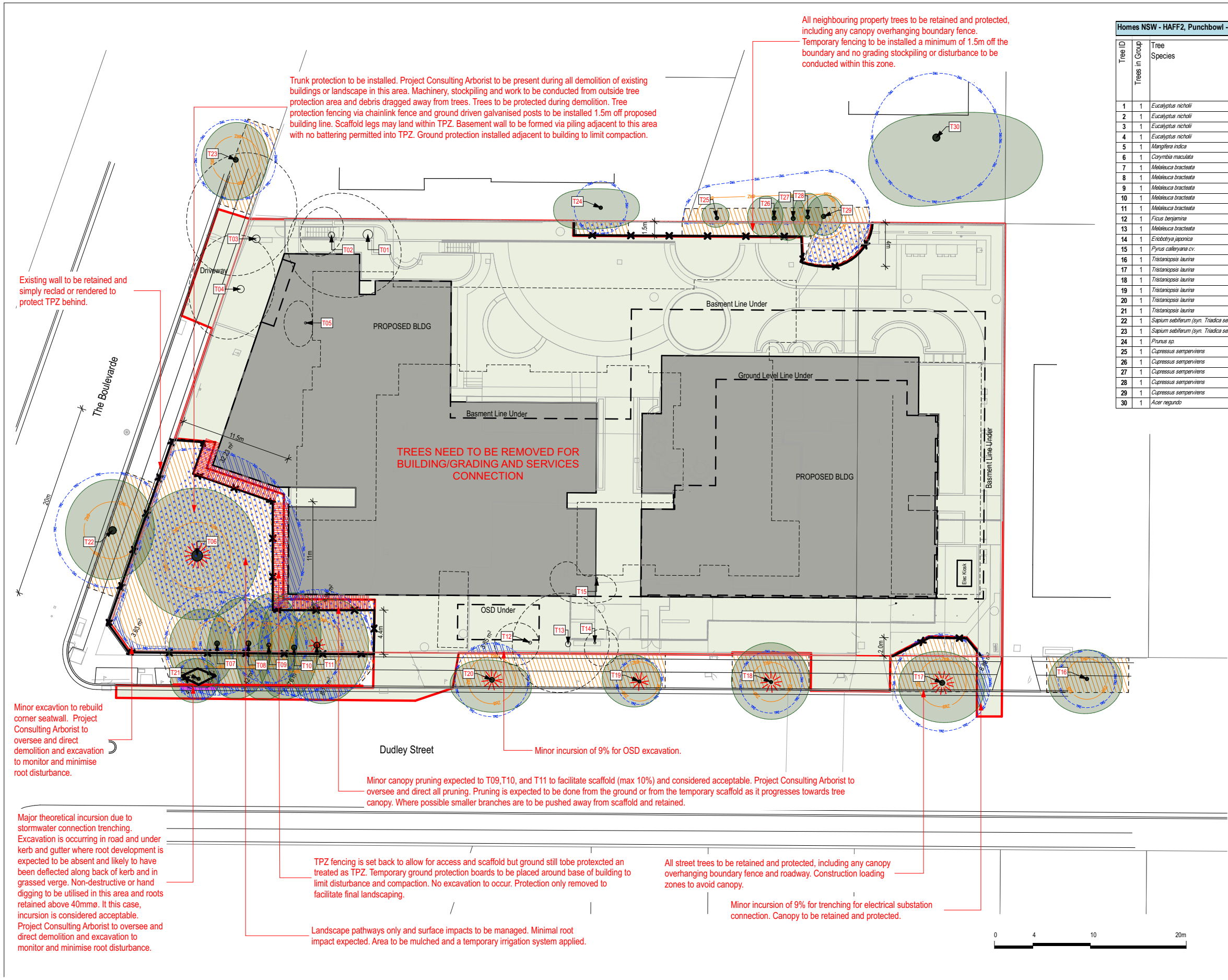
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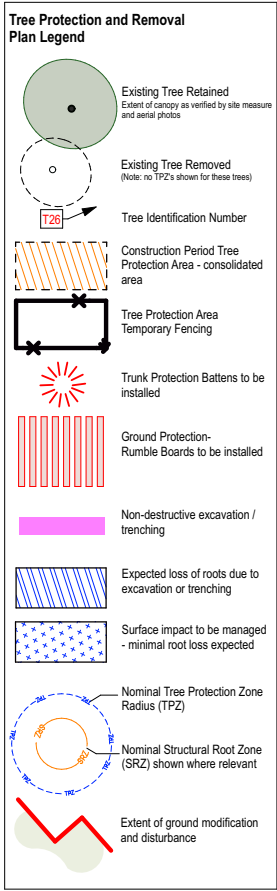
REVISION

A

Plotted at : 12:09 pm 25/09/2025



Homes NSW - HAFF2, Punchbowl - Tree Assessment Schedule									
Tree ID	Tree in Group	Tree Species	Common Name	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgb) (m)	NRZ radius (m) (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	0.72	1.02	8.64	3.34	Low	Remove
2	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	0.53	0.65	6.36	2.76	NH / Remove	Remove
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21	1	<i>Tristanopsis laurina</i>	Water Gum	0.18	0.32	2.16	2.05	Low	Retain
22	1	<i>Sapum sebiferum (syn. Triadica sebifera)</i>	Chinese Tallow Tree	0.50	0.78	6.00	2.98	Moderate	Retain
23	1	<i>Sapum sebiferum (syn. Triadica sebifera)</i>	Chinese Tallow Tree	0.35	0.50	4.20	2.47	Moderate	Retain
24	1	<i>Prunus sp.</i>	Plum	0.23	0.34	2.76	2.10	Moderate	Retain
25	1	<i>Cupressus sempervirens</i>	Italian Cypress	0.29	0.36	3.48	2.15	Moderate	Retain
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30	1	<i>Acer negundo</i>	Box Elder	0.56	0.74	6.72	2.92	Low	Retain



TREE PROTECTION SPECIFICATIONS

1. Tree Protection Measures and Protocols.

All work around existing trees to be retained shall be in accordance with AS 4970-2025 Protection of trees on development sites with the clear establishment of the required Tree Protection Zones (TPZ's). If the scope of work allowed within or the extent of the Tree Protection Zones of existing trees is not clear, please refer to the Contract Manager or Project Consulting Arborist for clarification.

Before any site works commence tree protection zones and other measures must be established and conveyed to those all working on the site. The Contractor shall ensure all subcontractors are inducted prior to working on the site. All inductions shall include description and identification of the Tree Protection Zones and the restriction on work and activities with regard to trees.

Damage to roots or degradation of the soil through compaction and/or excavation within TPZ's is likely to cause serious damage to the tree. Any work operations required within TPA's must be carried out with extreme care. All trees, palms and other shrubs within TPZ's are to be retained unless shown otherwise on the Tree Protection Plan(s). Trees marked for retention shall not be used to display signage, or as fence or cable supports for any reason. No materials stockpiling, chemicals or washout areas are permitted immediately upslope of or within the Tree Protection Area. The washing down of wheel barrows, paint cans/brushes, acids and the like shall not to be done near existing trees as the runoff is very harmful to tree roots.

No fuel powered pumps or generators or air compressors are to be placed within TPZ's. No fuel or chemicals shall be stored and no equipment or vehicles shall be serviced or re-fuelled within a TPZ.

2. Controlled Construction Access

Construction access points, stockpiling and storage areas shall be clearly identified on site and fenced off where appropriate. Uncontrolled access and parking of vehicles inside TPZ's shall be avoided. If access is required through a tree protection area, the access way shall be treated with ground protection.

3. Tree Protection Fencing & Signage

The Tree Protection Plan(s) shows the extent of areas to be fenced and protected. Protection measures shall be certified as adequate by the Project Consulting Arborist. This fencing may form part of the general construction site fencing, where practical. It shall remain in place as long as possible and typically not be removed until the final landscape installation in those areas begins.

All tree protection fencing shall be 1800mm high galvanised chain wire or welded steel mesh. Fencing must be bolted together and secured with the necessary back stays and bracing.

Star pickets with bunting or danger tape shall not constitute acceptable tree protection fencing.

Suitable signage as defined by AS 4970-2025 Appendix C shall be affixed to the external side of the fencing at a spacing of not less than 1 sign per 50 lineal metres of fence, with at least one sign per designated area.

If fence locations conflict with the proposed works, contact the Project Consulting Arborist and Contract Manager for resolution. No new services (unless under-bored) shall be located within or through the Tree Protection Area.

4. Trunk and Lower Branch Protection

A trunk barrier is to be erected around the circumference of the tree trunk and root buttress where shown. This barrier will consist of two to three 'rings' of 50mm diameter socked ag-line wrapped around tree trunk or branch and the ends cable tied to secure in place. A layer of battens is to be placed over and tight to the ag-lines. The battens are to have a maximum spacing of 50mm. The height of the battens is to be 2 metres or to the height of the first branches. Lower large branches may require the same protection if likely to be damaged by passing vehicles or equipment. Secure battens in place with galvanised steel bracing straps. Do not nail into or otherwise injure the trunk or bark. Battens may be made from any suitable waste timber of similar sizes and depths. All sharp or protruding edges are to be properly covered with tape or similar padding.

5. Works within the TPZ's

All work within the root zone of existing trees shall be undertaken with the utmost care. If by necessity a tree requires removal of branches for building or access, pruning shall be done in strict accordance with accepted arboriculture techniques and AS 4373-2007. No rubbish, spoil or new materials shall be placed on the root zone of any existing tree or against their trunks.

6. Ground Protection

If it is proposed to create any access route, or similar, within the TPZ of a retained tree, the Contractor shall install rumble boards over the TPA ground surface. No excavation shall be allowed. Contractor shall first place a suitable permeable geotextile to the extent required and then a 100mm thick layer of wood chip mulch or coarse no-fines gravel over the extent to be covered. Then place hardwood boards (minimum 3600 x 200 x 75mm) on their flat edge, side by side, with a 30 - 50mm gap to form a rumble strip. These boards are to be held together with three galvanised metal bracing straps nailed to each board. The two outer straps are to be approximately 200mm in from the ends of the boards. The third strap is to be along the centre line of the boards. Suitably robust and proprietary ground protection mats or boards manufactured for ground protection and heavy vehicle access may also be used.

7. Provision of Temporary Irrigation

A small amount of temporary irrigation requirement is anticipated for this project. Temporary irrigation may also be required to be installed if accidental damage or other weather extremes dictate and the Project Consulting Arborist considers one is necessary it shall be installed as per the following. A temporary and automated (battery powered timer is sufficient) watering system to be placed within the specified TPZs of the trees nominated to maintain adequate water to the retained trees and help maintain their healthy condition. This shall be a surface mounted 'residential-style' soaker hose and/or similar surface sprinkler systems. It is to be surface visible and spray delivered so that is operation can be easily visible and verified. It should be on a designated supply line, separate from other construction related water supplies to minimise its likelihood of being disconnected.

Typically, during spring and summer months it should be set to run for a minimum of 30 minutes every day, in the early morning. During, autumn and winter months it should be set to run for 1 hour once every week. The operation can be suspended temporarily in periods of extensive and prolonged rain. The system is to remain in place for the duration of construction, or until the Project Consulting Arborist approves it's removal. It may be removed to allow final landscape treatments to proceed. If accidentally disturbed or damaged by construction activities, it is to be reinstated as soon as practicable.

8. Structural Demolition Within TPZ's

Project Consulting Arborist shall be on site during all demolition work within the TPZ's to monitor and advise on tree protection. Secateurs and a handsaw shall be available to deal with and cleanly cut any exposed roots that have to be cut. Machines with a long reach may be used if they can work from outside TPZ's or from protected areas within TPZ's. They shall not encroach onto unprotected soil in TPZ's.

Debris to be removed from TPZ's must be moved across existing hard surfacing or temporary ground protection in a way that prevents compaction and disturbance of soil. Alternatively, it can be lifted out by machines provided this does not disturb TPZ's or damage the canopy. If appropriate, leave below ground structures such as footings and disused pipes in place if their removal will cause excessive root disturbance.

When pulling up existing paving the Contractor shall work backwards, lifting demolished paving back onto the existing paving. Roots may be found growing under the pavement and should not be trafficked. Roots growing into existing sub-base should be left and new surface finishes placed over the top without disturbance.

9. Excavations or Trenching within TPZ's

Excavation within TPA's shall not be allowed using mechanical equipment such as excavators or backhoes. Excavation within TPZ's shall only be carried out carefully by hand taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air (air spade), or water vacuum extraction shall be an appropriate alternative to hand digging and is the preferred method.

Exposed roots to be removed shall be cut cleanly with a sharp saw or secateurs at the face of the excavation. Roots temporarily exposed must be protected by appropriate covering with damp hessian or sand. Roots greater than 50mm in diameter are to be retained and shall only be cut in exceptional circumstances and only after consultation with the Project Consulting Arborist. Roots greater than 100mm in diameter shall typically not be allowed to be cut and must be worked around.

10. Soft Landscaping Installation

Final trimming and planting shall be judiciously undertaken around trees. All soft landscaping within the tree protection zones will be installed with care to avoid root disturbance from irrigation trenching, lighting installation and the planting of larger plants. Permanent irrigation (if used) shall be installed as spray heads located outside of TPZ's and spraying inwards. All other services such as small-scale electrical services shall also be designed and installed to avoid any excavation or trenching around the trees.

No significant excavation or cultivation, especially by rotary hoes or excavators, shall occur within TPZ's. Where new designs require the levels to be increased, good quality and permeable top soil shall be used. It should be firmed into place but not over compacted. All areas close to tree trunks shall be kept at the original ground level. Where turf is to be installed tree trunks shall have mulched rings applied rather than grass laid up to the trunk.

The size of the installed plants shall typically be less than 5L pots so that the maximum depth of the new root balls is less than 200mm. Any planting proposed that is larger than this shall be only installed outside of the SRZ and with care to not injure roots while digging planting holes.

11. Canopy Pruning

The Contractor shall prune branches of protected trees only as directed by the Project Consulting Arborist. Pruning is only to be undertaken by a qualified arborist (under the supervision of a person with AQF Level 4 or above). The Project Consulting Arborist is to be present at all times during the pruning work. Work is to be in strict accordance with AS4373 Pruning of Amenity Trees. Do not treat wounds.

12. Root Pruning

Pruning of roots of protected trees shall only be as directed the Project Consulting Arborist. The Tree Contractor shall use only a qualified arborist (AQF Level 4 or above). The Project Consulting Arborist is to be present at all times during the root pruning.

Roots are not to be cut using normal excavation machinery of any sort. This usually results in splitting and massive disturbance well past the intended line of cut. When required to cut roots, use hand methods and sharp hand tools (e.g. secateurs, hand saw) such that the remaining root systems are preserved intact and undamaged. Roots are to be cut back by hand square to the direction of the root travel (or edge of the excavation). Do not cut any tree roots exceeding 40mm diameter unless permitted. Excavations within root zones should be kept open for as short a period as possible. Any excavated face containing roots is to be temporarily supported, where necessary, to prevent soil loss from around the other retained roots.

13. Accidental Tree Damage

Should a tree be accidentally damaged, the Contractor shall immediately notify the Project Consulting Arborist. Timing can be of the essence, particularly with bark injuries, trunk damage or chemical contaminations.

If a branch has been broken, it shall be removed and the damaged end pruned to a suitable branch collar. If the branch has been torn out of the trunk, assessment shall be made and the damage cleaned up by as much as possible without further damage to the tree.

If roots are accidentally disturbed or excavated, any broken, crushed and torn sections shall be exposed and pruned leaving clean cuts to minimise risk of infection by fungal pathogens and promote good conditions for new root growth.

Example image of acceptable tree protection fencing measures to be applied. (1.8m high chainlink fencing with posts driven into ground)



Example image of acceptable tree protection fencing measures to be applied. (1.8m high rigid metal fencing with appropriate lateral bracing)



Example image of acceptable trunk protection battens



Example image of acceptable ground protection rumble boards



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A For SSDA RWS 25/9/25
 REVISION DESCRIPTION CHD DATE

PROJECT & CLIENT
 The Boulevard, Punchbowl, Affordable Housing
 Project No : 24_20
 Designed : RWS
 Drawn : RWS
 Scale : N/A
 North
 HOMES NSW
 DRAWING TITLE
 Tree Protection Specifications
 DRAWING NUMBER
 T-03
 REVISION
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 Plotted at : 12:09 pm 25/09/2025

4.2 Tree Impact Assessment Schedule

Homes NSW - HAFF2, Punchbowl - Tree Assessment Schedule																			
Tree ID	Trees in Group	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Age Class	Current Vigour	Current Form	Tree Origin	Noted Defects	ULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation
1	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	13.5	9.0	0.72	1.02	8.64	3.34	Mature	Fair	Average	Native	Lean-Major, Root Impacts, Tip Dieback	Medium (15-40 years)	Low	Lean and canopy overhanging building. Root impacts to adjoining driveway slabs. Numerous surface roots visible	Undesirable species - remove.	Remove
2	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	9.0	3.0	0.53	0.65	6.36	2.76	Mature	Poor	Poor	Native	Branch Tearouts, Major Wounding	Remove (<5 years)	Nil / Remove	Severe and very recent failure of most of tree canopy and trunk. Damage to neighbouring fence and power lines.	Tree be removed.	Remove
3	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	18.0	10.0	0.71	0.81	8.52	3.03	Mature	Fair	Poor	Native	Epicormic Growth, Tip Dieback, Deadwood-Major	Short (5-15 years)	Low	Very close to 1.0m high retaining wall on boundary. Multi-trunked with extensive deadwood and dieback to southern side.	Undesirable species - remove. Within building and re-grading footprint	Remove
4	1	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	16.5	9.0	0.66	0.77	7.92	2.97	Mature	Fair	Average	Native	Deadwood-Major	Short (5-15 years)	Low	Growing very close to 1.0m high retaining wall along boundary. Significant deadwood to western side.	Undesirable species - remove. Within building and re-grading footprint	Remove
5	1	<i>Mangifera indica</i>	Mango	5.0	4.0	0.13	0.25	2.00	1.85	Mature	Good	Poor	Exotic	Very Asymmetric Form, Root Impacts	Short (5-15 years)	Low	Multi-trunked specimen planted hard against existing building wall. Very asymmetric canopy.	Within building and re-grading footprint	Remove
6	1	<i>Corymbia maculata</i>	Spotted Gum	18.0	12.0	0.93	1.13	11.16	3.48	Mature	Good	Excellent	Endemic	Deadwood-Minor	Long (>40 years)	High	Some large and small deadwood within canopy. Remove deadwood, otherwise excellent specimen and highly prominent. Endemic to local area. Nearby retaining wall would have inhibited root development.	Moderate incursion (<12%) for construction of building and basement. Minor surface impacts from landscaping to be managed with minimal root loss expected. Impacts considered acceptable- at periphery of TPZ	Retain
7	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	8.0	7.0	0.45	0.51	5.40	2.49	Mature	Good	Average	Native	Co-dominant Stems, Inclusions, Very Asymmetric Form	Medium (15-40 years)	Moderate	Part of a consistent row planting along western frontage. Asymmetric to north.	Minor incursion (5%) for stormwater excavation in street. Minor surface impacts from landscaping to be managed. Impacts considered acceptable.	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	8.0	6.0	0.42	0.52	5.04	2.51	Mature	Good	Average	Native	Co-dominant Stems, Inclusions	Medium (15-40 years)	Moderate	Part of a consistent row planting along western frontage.	Minor incursion (3%) for stormwater excavation in street. Minor surface impacts from landscaping to be managed. Impacts considered acceptable.	Retain
9	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	9.0	5.0	0.33	0.40	3.96	2.25	Mature	Good	Average	Native	Co-dominant Stems, Inclusions	Medium (15-40 years)	Moderate	Part of a consistent row planting along western frontage.	Minor surface impacts from landscaping to be managed. Minor canopy pruning (<4%) for building clearances to east. Impacts considered acceptable.	Retain
10	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	9.0	6.0	0.42	0.53	5.04	2.53	Mature	Good	Average	Native	Co-dominant Stems, Inclusions	Medium (15-40 years)	Moderate	Part of a consistent row planting along western frontage.	Minor incursion (6%) for stormwater excavation in street. Minor canopy pruning (<10%) for building clearances to east. Minor surface impacts from landscaping to be managed. Impacts considered acceptable.	Retain
11	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	8.0	7.0	0.49	0.62	5.88	2.71	Mature	Good	Average	Native	Very Asymmetric Form, Co-dominant Stems, Inclusions	Medium (15-40 years)	Moderate	Part of a consistent row planting along western frontage. Asymmetric to south.	Minor incursion (8%) for stormwater excavation in street. Minor canopy pruning (<6%) for building clearances to east. Minor surface impacts from landscaping to be managed. Impacts considered acceptable.	Retain
12	1	<i>Ficus benjamina</i>	Weeping Fig	7.0	5.0	0.20	0.32	2.40	2.05	Semi-mature	Fair	Poor	Exotic	Very Asymmetric Form, Root Impacts	Medium (15-40 years)	Low	Asymmetric to north. Planted too close to wall and footpath.	Within building and re-grading footprint	Remove
13	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	10.0	8.0	0.48	0.56	5.76	2.59	Mature	Good	Average	Native	Deadwood-Minor, Co-dominant Stems	Medium (15-40 years)	Moderate		Within building and re-grading footprint	Remove
14	1	<i>Eriobotrya japonica</i>	Loquat	6.0	4.0	0.17	0.24	2.04	1.82	Mature	Poor	Poor	Exotic	Co-dominant Stems, Inclusions, Deadwood-Minor, Very Asymmetric Form	Short (5-15 years)	Nil / Remove		Within building and re-grading footprint	Remove
15	1	<i>Pyrus calleryana cv.</i>	Callery Pear	8.0	6.0	0.22	0.23	2.64	1.79	Mature	Good	Poor	Exotic	Lean-Minor, Root Impacts, Very Asymmetric Form	Medium (15-40 years)	Low	Growing hard against exiting building wall. Very poor form.	Within building and re-grading footprint	Remove
16	1	<i>Tristaniopsis laurina</i>	Water Gum	7.0	6.0	0.25	0.35	3.00	2.13	Mature	Good	Average	Native		Long (>40 years)	High	Street tree along Dudley St.	Street tree. Minimal impact expected.	Retain
17	1	<i>Tristaniopsis laurina</i>	Water Gum	8.0	6.0	0.42	0.52	5.04	2.51	Mature	Good	Average	Native	Co-dominant Stems	Long (>40 years)	Moderate	Street tree along Dudley St.	Street tree. Minor incursion (9%) for electrical connection excavation in street. Minimal impact expected.	Retain
18	1	<i>Tristaniopsis laurina</i>	Water Gum	8.0	6.0	0.27	0.32	3.24	2.05	Mature	Good	Average	Native	Co-dominant Stems	Long (>40 years)	Moderate	Street tree along Dudley St.	Street tree. Minimal impact expected.	Retain
19	1	<i>Tristaniopsis laurina</i>	Water Gum	7.0	5.0	0.20	0.32	2.40	2.05	Mature	Fair	Average	Native		Medium (15-40 years)	Moderate	Street tree along Dudley St.	Street tree. Minimal impact expected.	Retain
20	1	<i>Tristaniopsis laurina</i>	Water Gum	7.0	7.0	0.32	0.51	3.84	2.49	Mature	Fair	Average	Native	Co-dominant Stems, Inclusions	Medium (15-40 years)	Moderate	Street tree along Dudley St.	Street tree. Minor incursion (9%) from nearby OSD construction. Incursion considered acceptable.	Retain
21	1	<i>Tristaniopsis laurina</i>	Water Gum	6.0	4.0	0.18	0.32	2.16	2.05	Mature	Poor	Poor	Native	Very Asymmetric Form, Co-dominant Stems, Epicormic Growth	Short (5-15 years)	Low	Street tree along Dudley St. Asymmetric to north-west and with relatively sparse canopy.	Small low quality street tree. Theoretical major incursion (27%) for stormwater excavation in street. Excavation taking place in road carriageway and under existing kerb. Roots expected to be deflected along verge and not wheel excavavtion is occurring. Excavation to be undertaken non-destructively or by hand when close to tree and any roots >40mm ø retained and the pipe installed under. Impacts therefore considered acceptable.	Retain
22	1	<i>Sapium sebiferum (syn. Triadica sebifera)</i>	Chinese Tallow Tree	8.0	9.0	0.50	0.78	6.00	2.98	Mature	Good	Poor	Exotic	Root Impacts, Epicormic Growth	Medium (15-40 years)	Moderate	Street tree along The Boulevard. Heavily pruned and topped for overhead powerline clearance.	Street tree. Minimal impact expected.	Retain
23	1	<i>Sapium sebiferum (syn. Triadica sebifera)</i>	Chinese Tallow Tree	8.0	5.0	0.35	0.50	4.20	2.47	Mature	Good	Poor	Exotic	Epicormic Growth	Medium (15-40 years)	Moderate	Street tree along The Boulevard. Heavily pruned and topped for overhead powerline clearance.	Street tree. Minimal impact expected.	Retain
24	1	<i>Prunus sp.</i>	Plum	7.5	7.0	0.23	0.34	2.76	2.10	Mature	Good	Average	Exotic		Medium (15-40 years)	Moderate	Neighbouring property tree. Well setback from fenceline.	Neighbouring tree - minimal impact expected.	Retain
25	1	<i>Cupressus sempervirens</i>	Italian Cypress	9.0	2.0	0.29	0.36	3.48	2.15	Mature	Good	Average	Exotic		Medium (15-40 years)	Moderate	Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.	Neighbouring tree - minimal impact expected.	Retain
26	1	<i>Cupressus sempervirens</i>	Italian Cypress	8.0	3.0	0.36	0.40	4.32	2.25	Mature	Good	Average	Exotic		Medium (15-40 years)	Moderate	Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.	Neighbouring tree - minimal impact expected.	Retain

Tree ID	Trees in Group	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Age Class	Current Vigour	Current Form	Tree Origin	Noted Defects	ULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation
27	1	<i>Cupressus sempervirens</i>	Italian Cypress	9.5	3.0	0.38	0.42	4.56	2.30	Mature	Good	Average	Exotic		Medium (15-40 years)	Moderate	Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.	Neighbouring tree - minimal impact expected.	Retain
28	1	<i>Cupressus sempervirens</i>	Italian Cypress	9.0	3.0	0.32	0.38	3.84	2.20	Mature	Good	Average	Exotic		Medium (15-40 years)	Moderate	Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.	Neighbouring tree - minimal impact expected.	Retain
29	1	<i>Cupressus sempervirens</i>	Italian Cypress	11.0	3.0	0.40	0.44	4.80	2.34	Mature	Good	Average	Exotic		Medium (15-40 years)	Moderate	Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.	Neighbouring tree - minimal impact expected. Existing ground levels to be maintained to the south-west of the street within development site.	Retain
30	1	<i>Acer negundo</i>	Box Elder	11.0	10.0	0.56	0.74	6.72	2.92	Mature	Fair	Average	Exotic	Very Asymmetric Form, Co-dominant Stems, Inclusions, Deadwood-Minor, Decay-Minor, Epicormic Growth	Short (5-15 years)	Low	Neighbouring property tree, well set back from boundary. Unlikely to be affected by development.	Neighbouring tree - minimal impact expected.	Retain

4.3 Tree Data Summary Sheets

ID # 001

Species: Eucalyptus nicholii

Common: Narrow-leaved Black Peppermint

Height: 13.50

DBH: 0.72 DGL: 1.02

TPZ: 8.64 SRZ: 3.34

Current Form: Average

Current Vigour: Fair

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Low

Comments

Lean and canopy overhanging building. Root impacts to adjoining driveway slabs. Numerous surface roots visible



ID # 004

Species: Eucalyptus nicholii

Common: Narrow-leaved Black Peppermint

Height: 16.50

DBH: 0.66 DGL: 0.77

TPZ: 7.92 SRZ: 2.97

Current Form: Average

Current Vigour: Fair

Age Class: Mature

SULE: Short (5-15 years)

Retention

Value: Low

Comments

Growing very close to 1.0m high retaining wall along boundary. Significant deadwood to western side.



ID # 002

Species: Eucalyptus nicholii

Common: Narrow-leaved Black Peppermint

Height: 9.0

DBH: 0.53 DGL: 0.65

TPZ: 6.36 SRZ: 2.76

Current Form: Poor

Current Vigour: Poor

Age Class: Mature

SULE: Remove (<5 years)

Retention

Value: Nil / Remove

Comments

Severe and very recent failure of most of tree canopy and trunk. Damage to neighbouring fence and power lines.



ID # 005

Species: Mangifera indica

Common: Mango

Height: 5.0

DBH: 0.13 DGL: 0.25

TPZ: 2 SRZ: 1.85

Current Form: Poor

Current Vigour: Good

Age Class: Mature

SULE: Short (5-15 years)

Retention

Value: Low

Comments

Multi-trunked specimen planted hard against existing building wall. Very asymmetric canopy.



ID # 003

Species: Eucalyptus nicholii

Common: Narrow-leaved Black Peppermint

Height: 18.0

DBH: 0.71 DGL: 0.81

TPZ: 8.52 SRZ: 3.03

Current Form: Poor

Current Vigour: Fair

Age Class: Mature

SULE: Short (5-15 years)

Retention

Value: Low

Comments

Very close to 1.0m high retaining wall on boundary. Multi-trunked with extensive deadwood and dieback to southern side.



ID # 006

Species: Corymbia maculata

Common: Spotted Gum

Height: 18.0

DBH: 0.93 DGL: 1.13

TPZ: 11.16 SRZ: 3.48

Current Form: Excellent

Current Vigour: Good

Age Class: Mature

SULE: Long (>40 years)

Retention

Value: High

Comments

Some large and small deadwood within canopy. Remove deadwood, otherwise excellent specimen and highly prominent. Endemic to local area. Nearby retaining wall would have inhibited root development.



ID # 007

Species: Melaleuca bracteata

Common: Black Tea-Tree

Height: 8.0

DBH: 0.45 DGL: 0.51

TPZ: 5.4 SRZ: 2.49

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Moderate

Comments

Part of a consistent row planting along western frontage. Asymmetric to north.



ID # 010

Species: Melaleuca bracteata

Common: Black Tea-Tree

Height: 9.0

DBH: 0.42 DGL: 0.53

TPZ: 5.04 SRZ: 2.53

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Moderate

Comments

Part of a consistent row planting along western frontage.



ID # 008

Species: Melaleuca bracteata

Common: Black Tea-Tree

Height: 8.0

DBH: 0.42 DGL: 0.52

TPZ: 5.04 SRZ: 2.51

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Moderate

Comments

Part of a consistent row planting along western frontage.



ID # 011

Species: Melaleuca bracteata

Common: Black Tea-Tree

Height: 8.0

DBH: 0.49 DGL: 0.62

TPZ: 5.88 SRZ: 2.71

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Moderate

Comments

Part of a consistent row planting along western frontage. Asymmetric to south.



ID # 009

Species: Melaleuca bracteata

Common: Black Tea-Tree

Height: 9.0

DBH: 0.33 DGL: 0.40

TPZ: 3.96 SRZ: 2.25

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Moderate

Comments

Part of a consistent row planting along western frontage.



ID # 012

Species: Ficus benjamina

Common: Weeping Fig

Height: 7.0

DBH: 0.20 DGL: 0.32

TPZ: 2.4 SRZ: 2.05

Current Form: Poor

Current Vigour: Fair

Age Class: Semi-mature

SULE: Medium (15-40 years)

Retention

Value: Low

Comments

Asymmetric to north. Planted too close to wall and footpath.



ID # 013

Species: *Melaleuca bracteata*

Common: Black Tea-Tree

Height: 10.0

DBH: 0.48 DGL: 0.56

TPZ: 5.76 SRZ: 2.59

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Moderate

Comments



ID # 016

Species: *Tristaniaopsis laurina*

Common: Water Gum

Height: 7.0

DBH: 0.25 DGL: 0.35

TPZ: 3 SRZ: 2.13

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Long (>40 years)

Retention

Value: High

Comments

Street tree along Dudley St.



ID # 014

Species: *Eriobotrya japonica*

Common: Loquat

Height: 6.0

DBH: 0.17 DGL: 0.24

TPZ: 2.04 SRZ: 1.82

Current Form: Poor

Current Vigour: Poor

Age Class: Mature

SULE: Short (5-15 years)

Retention

Value: Nil / Remove

Comments



ID # 017

Species: *Tristaniaopsis laurina*

Common: Water Gum

Height: 8.0

DBH: 0.42 DGL: 0.52

TPZ: 5.04 SRZ: 2.51

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Long (>40 years)

Retention

Value: Moderate

Comments

Street tree along Dudley St.



ID # 015

Species: *Pyrus calleryana* cv.

Common: Callery Pear

Height: 8.0

DBH: 0.22 DGL: 0.23

TPZ: 2.64 SRZ: 1.79

Current Form: Poor

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention

Value: Low

Comments

Growing hard against exiting building wall. Very poor form.



ID # 018

Species: *Tristaniaopsis laurina*

Common: Water Gum

Height: 8.0

DBH: 0.27 DGL: 0.32

TPZ: 3.24 SRZ: 2.05

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Long (>40 years)

Retention

Value: Moderate

Comments

Street tree along Dudley St.



ID # 019

Species: *Tristania laurina*

Common: Water Gum

Height: 7.0

DBH: 0.20 DGL: 0.32
TPZ: 2.4 SRZ: 2.05

Current Form: Average

Current Vigour: Fair

Age Class: Mature

SULE: Medium (15-40 years)

Retention
Value: Moderate

Comments

Street tree along Dudley St.



ID # 022

Species: *Sapium sebiferum*
(syn. *Triadica*)

Common: Chinese Tallow Tree

Height: 8.0

DBH: 0.50 DGL: 0.78
TPZ: 6 SRZ: 2.98

Current Form: Poor

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention
Value: Moderate

Comments

Street tree along The Boulevard. Heavily pruned and topped for overhead powerline clearance.



ID # 020

Species: *Tristania laurina*

Common: Water Gum

Height: 7.0

DBH: 0.32 DGL: 0.51
TPZ: 3.84 SRZ: 2.49

Current Form: Average

Current Vigour: Fair

Age Class: Mature

SULE: Medium (15-40 years)

Retention
Value: Moderate

Comments

Street tree along Dudley St.



ID # 023

Species: *Sapium sebiferum*
(syn. *Triadica*)

Common: Chinese Tallow Tree

Height: 8.0

DBH: 0.35 DGL: 0.50
TPZ: 4.2 SRZ: 2.47

Current Form: Poor

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention
Value: Moderate

Comments

Street tree along The Boulevard. Heavily pruned and topped for overhead powerline clearance.



ID # 021

Species: *Tristania laurina*

Common: Water Gum

Height: 6.0

DBH: 0.18 DGL: 0.32
TPZ: 2.16 SRZ: 2.05

Current Form: Poor

Current Vigour: Poor

Age Class: Mature

SULE: Short (5-15 years)

Retention
Value: Low

Comments

Street tree along Dudley St. Asymmetric to north-west and with relatively sparse canopy.



ID # 024

Species: *Prunus* sp.

Common: Plum

Height: 7.50

DBH: 0.23 DGL: 0.34
TPZ: 2.76 SRZ: 2.1

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention
Value: Moderate

Comments

Neighbouring property tree. Well setback from fenceline.



ID # 025

Species: Cupressus sempervirens

Common: Italian Cypress

Height: 9.0

DBH: 0.29 DGL: 0.36

TPZ: 3.48 SRZ: 2.15

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention Value: Moderate



Comments

Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.

ID # 028

Species: Cupressus sempervirens

Common: Italian Cypress

Height: 9.0

DBH: 0.32 DGL: 0.38

TPZ: 3.84 SRZ: 2.2

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention Value: Moderate



Comments

Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.

ID # 026

Species: Cupressus sempervirens

Common: Italian Cypress

Height: 8.0

DBH: 0.36 DGL: 0.40

TPZ: 4.32 SRZ: 2.25

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention Value: Moderate



Comments

Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.

ID # 029

Species: Cupressus sempervirens

Common: Italian Cypress

Height: 11.0

DBH: 0.40 DGL: 0.44

TPZ: 4.8 SRZ: 2.34

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention Value: Moderate



Comments

Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.

ID # 027

Species: Cupressus sempervirens

Common: Italian Cypress

Height: 9.50

DBH: 0.38 DGL: 0.42

TPZ: 4.56 SRZ: 2.3

Current Form: Average

Current Vigour: Good

Age Class: Mature

SULE: Medium (15-40 years)

Retention Value: Moderate



Comments

Neighbouring property tree. Part of a screening row planting. Low concrete retaining wall and concrete driveway likely to have restricted root growth into site. Should be retained and protected.

ID # 030

Species: Acer negundo

Common: Box Elder

Height: 11.0

DBH: 0.56 DGL: 0.74

TPZ: 6.72 SRZ: 2.92

Current Form: Average

Current Vigour: Fair

Age Class: Mature

SULE: Short (5-15 years)

Retention Value: Low



Comments

Neighbouring property tree, well set back from boundary. Unlikely to be affected by development.