arboricultural impact assessment report

AIA-02

Revision A, Issued for SSDA
27 October 2025

PROJECT

AFFORDABLE HOUSING

270-278 Burwood Road & 54 Lakemba Street,
Belmore, NSW, 2192

CLIENT / PRINCIPAL

HOMES NSW

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Parramatta, NSW, 2150

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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

In March 2025, Arterra was engaged by Homes NSW (the client) to undertake an arboricultural assessment of the existing trees at 270-278 Burwood Road & 54 Lakemba Street, Belmore, NSW (the site), to inform the design for the construction of affordable housing apartments.

Application to remove some trees impacted during the demolition phase of the project has also been made via a Part 5 assessment under the NSW Environmental Planning and Assessment Act. A separate Arboricultural Impact Assessment (AIA) report by Arterra, dated 5 June 2025 addresses the tree protection and removal during the demolition phase. A total of **52** trees were assessed on or adjacent to the site, with **16** of those trees approved for removal under the Part 5 assessment granted on 9 October 2025. There are no additional trees proposed for removal as part of the SSDA. The **16** trees previously approved for removal, are not discussed further in this report.

This report assesses the potential impacts of all the construction works that are proposed to occur. 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).

Figure i – Image showing the site from the corner of Burwood Road and Lakemba Street showing the group of Casuarina glauca (Swamp She-Oak), most of which are in poor condition and/or dead, on the corner of the site fronting the street (Photo: Arterra 24 April 2025)

There are 31 trees that are adjacent the site, with 1 of these trees being a street tree and 30 located on adjoining properties. The remaining 5 trees are within the site boundary. These are trees that would be considered 'prescribed trees' under the Canterbury-Bankstown Council DCP 2023 (DCP). Small trees (<5.0m), shrubs (<5.0m) and dead trees have typically not been included in our assessment. The following points arise from the impact assessment:
36 trees are to be retained and protected. Their retention values are shown in the table below.

Table i: Trees to be Retained

Tree Retention Values	Trees to be removed	Trees to be retained
High	nil	4
Moderate	nil	28
Low	nil	4
Nil /Should Remove	nil	0
TOTAL	**Nil (already approved for removal)**	**36**

Of the **36** trees to be retained and protected:

- **30 trees** have no or minimal foreseeable impact from the proposed works. These trees are not discussed further.
- **4** have a 'minor encroachment' (<10%) into their NRZs,
- **2** have a 'moderate encroachment' (10-20%) into their NRZs,

- **No** trees have a major encroachment' (>20%) into their NRZs,
- **3** trees (T03, T17 and T19) require some minor canopy pruning for construction and ultimate building clearances, all or which is <10% of the current canopy area, which is considered acceptable,
- Some trees will require minor surface oriented works to be carefully management during the proposed demolition and construction works. This work is shown shaded on the Tree Protection Plan (T-02) and noted in the schedule.

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 demolition and 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 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.
- TPZs to be mulched and irrigated per T-02 Tree Protection Plan.
- Meeting of the contractor and the Project Consulting Arborist on site prior to works to discuss the protection requirements, construction 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 has been prepared by Arterra on behalf of Homes NSW for a State Significant Development Application (SSD-83257708) for construction of a residential flat building for social and affordable housing apartments at 270-278 Burwood Road & 54 Lakemba Street, Belmore, NSW (the site).

The purpose of this 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 which identified the following specific assessment requirements:

Table 1 – SEARs Requirements

Item	Description of Requirement	Section Reference (this report)
14. Trees and Landscaping	If the proposal involves impacts to trees, provide an 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 2.9 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 separate landscape related documentation for the site wide landscape plans addressing landscape related matters.

Application to remove some trees impacted during the demolition phase of the project has also been made via a Part 5 assessment under the NSW Environmental Planning and Assessment Act. A separate Arboricultural Impact Assessment (AIA) report by Arterra, dated 5 June 2025 addresses the tree protection and removal during the demolition phase. A total of **52** trees were assessed on or adjacent to the site, with **16** of those trees approved for removal under the Part 5 assessment granted on 9 October 2025. There are no additional trees proposed for removal as part of the SSDA. The **16** trees previously approved for removal, are not discussed further in this report.

1.2 The Site

The site, located in the Canterbury-Bankstown Local Government Area (LGA) is legally described as Lot 1 in DP124465, has a total approximate site area of 4,280 m^2 with frontages to Burwood Road and Lakemba Street. The existing buildings and other infrastructure on the site will be demolished and removed pursuant to a separate Part 5 approval under the NSW Environmental Planning and Assessment Act.

Figure 1 – Site context and location – site outline shown in red. (Source: Arterra / NearMap January 2025)

Figure 2 – View of the site from Burwood Road showing the two-storey red brick walk-up residential flat buildings with trees of varying retention value fronting the street. (Photo: Arterra 24 April 2025)

Figure 3 – View of the site looking along the western boundary showing the trees from the adjoining neighbouring properties and their canopies that overhang the boundary/fence line. (Photo: Arterra 24 April 2025)

1.3 Aims of this Report

This arboricultural impact assessment has been prepared to identify the trees to be retained and protected as part of the redevelopment 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 adjoining 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.

All tree plans contained in this report are based on information provided to Arterra, including site survey and architectural drawings. The tree plans should only be used for reference and relating to tree issues and are not suitable for any other purpose.

The following limitations apply to this report's use: -

1. Plans: All plans are based on information provided to Arterra. 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.

1.4 Relevant Controls or Legislation

The site 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.

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 2 below, extracted from the DCP.

Table 2 – Exempt Tree Species as per Canterbury-Bankstown DCP 20023

Species Name	Common Name
Acacia baileyana	**Cootamundra Wattle**
Acacia podalyriifolia	**Queensland Silver Wattle**
Acacia saligna	**Golden Wreath Wattle**
Ailanthus altissima	**Tree of Heaven**
Bambusa spp.	**Bamboo**
Celtis sinensis	**Hackberry**
Cinnamomum camphora (<10m)	**Camphor laurel (less than 10m in height)**
Citrus spp	**Cumquat, Grapefruit, Lemon, Lime, Mandarin, Oranges**
Cupressocyparis leylandii	**Leyland Cypress (and their cultivars)**
Eriobotrya japonica	**Loquat**
Erythrina X sykesii	**Coral Tree**
Eucalyptus nicholii	**Narrow-leaf Peppermint**
Eucalyptus scoparia	**Willow Gum / Wallangara White Gum**
Ficus elastica cvs	**Rubber Tree**
Gleditsia triacanthos	**Honey Locust**
Ligustrum lucidum	**Large Leaf Privet**
Ligustrum sinense	**Small Leaf Privet**
Liquidambar styraciflua	**Liquidambar**
Malus domestica and cvs	**Apple Tree**
Mangifera indica	**Mango Tree**
Morus spp.	**Black Mulberry**
Musa spp.	**Banana**
Olea europaea subsp cuspidata	**African Olive**
Phoenix canariensis (<4m trunk height)	**Canary Island Date Palm**
Phyllostachys spp.	**Fishpole Bamboo**
Phyllostachys nigra	**Rhizomatous Bamboo**
Pinus radiata	**Radiata Pine or Monterey Pine**
Populus spp	**Poplars**
Prunus spp	**Apricot, Cherry, Nectarine, Peach, Plum**
Pyrus communis	**European Pear**
Robinia pseudoacacia	**Black Locust**
Salix spp.	**Willow Tree**
Schefflera actinophylla	**Umbrella Tree**
Schinus terebinthifolius	**Broad-leaf Pepper Tree**
Syagrus romanzoffiana	**Cocos Palm**
Toxicodendron succedaneum	**Rhus Tree**

1.5 Conduct and Author Qualifications

This document has been prepared by Arterra, using the expertise of our in-house (AQF Level 5), consulting arborists, 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 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.

Furthermore, Mr Smart confirm that he has read and agree 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.

1.6 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 root 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 in close proximity 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.

1.7 Documents Reviewed

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

DKO Architects
- DA200 – Overall Basement 2 Plan Rev A
- DA201 – Overall Basement 1 Plan Rev A
- DA202 – Overall Ground Floor Plan Rev A
- DA203 – Overall Ground Level 1 Plan Rev A
- DA204 – Overall Ground Level 2 Plan Rev A
- DA205 – Overall Ground Level 3-6 Plan Rev A
- DA206 – Overall Ground Level 7 Plan Rev A

Land and Form Landscape Architects
- LD-DA-100 – Landscape Plan Rev 1 (23.10.25)

Norton Survey Partners - Surveyors:
- Detail and Levels Survey – Sheets 1 to 6 – Job No. 52074 dated 9 April 2025.

Mott MacDonald Engineers
- Site Works and Drainage Plan (103419-MMD-BEL-XX-DR-C-0051) Rev A

Based on the extent of the proposed construction works, we believe the works can be achieved in a manner that avoids 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, when located under trees to be retained.

1.8 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 8.0km to the east of the site. (http://www.bom.gov.au/climate/data/ accessed 29 April 2025)

1.9 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. The reference to 'safe' useful life expectancy is generally no longer used in the industry as it implies a certainty that cannot be delivered.

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.

1.10 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 x (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 Section 3.5. No encroachments into the SRZ shall typically be warranted or allowed.

2.0 BACKGROUND, OBSERVATIONS & TREE 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 1943 suggests that the site was mostly clear, with no vegetation present. The site was developed by the Department of Housing sometime between 1943 and 1951, and it is expected that many of the existing trees evident today were planted as part of this development, as many of the trees appear relatively established in 1978.

Figure 4 – Aerial image of the site in 1943 illustrating that the site had been partially cleared. (Source: Arterra / NSW Spatial Services)

Figure 5 – 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 6 – 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 7– Aerial image of the site in 1986 illustrating the site. Numerous existing 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 8 – Aerial image of the site in 2010 illustrating the site and its trees largely as it occurs today. (Source: Arterra / NearMap)

Figure 9 – Aerial image of the site in 2025 illustrating the site and its trees as it occurs today. (Source: Arterra / NearMap)

2.2 Climate and Microclimate

Belmore, is one of Sydney's inner city 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.

Belmore is located approximately 12km south west of the Sydney CBD, and lest than 8km 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 26.7ºC in January and to 17.2ºC in July. The minimum average daily temperatures range from a high of 19.2ºC in February down to lows of 7.4ºC 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 layer of topsoil at the surface overlying a thin layer of heavy clay, likely to be excavated and spread during original development and then returning to a more natural topsoil and subsoil profile below that.

Figure 10 – 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. (Photo: Arterra 24 April 25).

From the topsoil sample taken at 400mm depth, the soil structure was very weakly pedal with only a few fine sub angular blocky peds. The soil texture was a clay to clay loam with the colour being mid brown. The soil pH was neutral with a pH of 7.5 There was a weakly distinct change from the A to B horizons at around 700mm depth. The subsoil from a depth of 900mm was sampled. The subsoil structure was moderately pedal with medium to fine subangular blocky peds. The soil texture was a medium to heavy clay. Its colour was an orangey brown. The soil pH was also neutral at pH 7.5.

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)

None of these species occur on the site.

2.4 Identification and Assessment of Existing Trees

The original site assessment identified a total 52 trees of which **36** are proposed for retention and **16** trees have already been approved for removal under a Part 5 approval. For the 36 trees retained:

- **31** trees are adjacent the site.
- **1** of these is a is a street tree (T33).
- **30** of these trees are located on the adjacent properties to the west and are to be retained / protected.
- **5** trees are located within the site boundary.

The table below shows the breakdown of the tree population by retention values.

Table 3 - Retained Tree Population and Retention Value

Retention Value	Number of Trees	%
High	4	11%
Moderate	28	78%
Low	4	11%
Very Low / Remove	0	0%
Total trees on site	**36**	**100%**

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

- 5 trees located within the site are rated with either a 'Moderate' or 'High' retention value.
- The most significant trees on the site are predominantly on the periphery of the site in two isolated groups:
    - 2 trees are located on the north-western corner of the site being T01 and T03, and
    - 3 trees are located on the south-east corner of the site (T17, T18, T19).
- Tree T01 ('Moderate' retention value tree) is a *Lagerstroemia indica* (Crepe Myrtle) and T03 ('High' retention value tree) is a *Lophostemon confertus* (Brush Box). They are both prominent trees providing significant canopy coverage and fronting Lakemba Street and visual screening to the adjoining residential buildings.
- Trees T18 and T19 are both 'High' retention value trees that are large, prominent mature *Eucalyptus microcorys* (Tallowwood) located in the south-east corner of the site. Tree T17 is also a mature *Eucalyptus microcorys* (Tallowwood) associated with this grouping but due to a minor lean and asymmetric canopy it has been allocated as a 'Moderate' retention value. These trees are all visually significant from Burwood Road and provide significant canopy coverage.
- There is a single street tree on Lakemba Street (T33 *Callistemon viminalis cv.*) that is to be a focus for retention.
- 30 trees on the adjacent residential properties, that are near the western 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 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'.

Figure 11 – Image showing 'Moderate' retention value street tree T33 (Callistemon viminalis cv) and 'High' retention value tree T03 (Lophostemon confertus) located within the site fronting Lakemba Street. They are visually prominent and provide good canopy coverage (Photo: Arterra 24 April 2025)

Figure 12 – Image showing a group of three Eucalyptus microcorys (T17, T18 and T19), two of which are 'High' retention value trees. They are located within the site fronting Burwood Road and are visually prominent from the street and surrounds. These trees are to be a focus for retention and protection (Photo: Arterra 24 April 2025)

Figure 13 – Image showing the numerous neighbouring trees adjacent the western boundary. Many of their canopies overhang the boundary and care will need to be taken to protect these trees (Photo: Arterra 24 April 2025).

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.

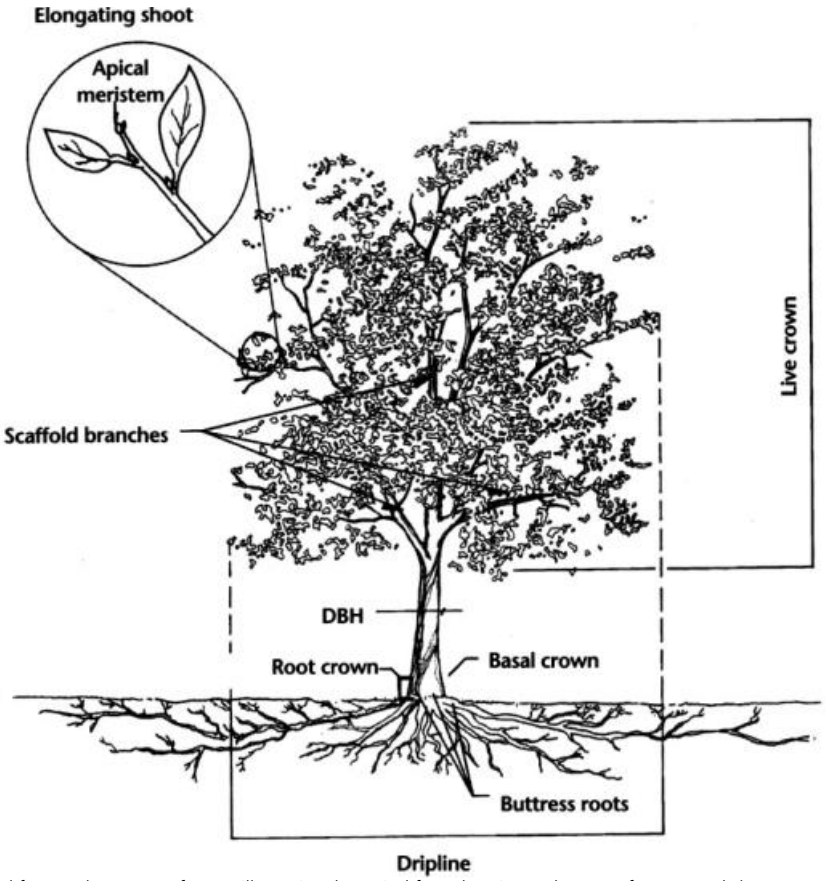

Figure 14 – Typical form and structure of a tree illustrating the typical form, location and extent of root growth (Source: Matheny and Clark, 1998)

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 [CO_2 + H_2O + light = sugar ($C_6H_{12}O_6$ [Glucose]) + 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 Construction Works

The proposed development comprises construction of a new multi-storey residential flat building to accommodate social and affordable housing apartments, communal landscapes and facilities and basement car parking. The project will entail large scale site excavation, tree removal and the associated new landscaping, new tree planting and public domain upgrade works.

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

- Large scale demolition works;
- 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 major and minor 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:

- Any new pedestrian paths or driveways 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 within the designated TPZ. Excavations for footings or the basements adjacent to the TPZs 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.
- It is assumed that any new landscape grading 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 TPZ.
- 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 as part of the proposed works. It is also to determine any incursions into the retained trees' root zones and canopies by the proposed work and evaluate the likely impacts on the existing trees. A detailed listing of the incursions and likely impacts of the proposed works on each tree is shown in Appendix 4.2 - Tree Impact Assessment Schedule and Appendix 4.1 - Tree Plans.

The following points arise from the impact assessment:

- **36** trees (69%) are to be retained and protected.
- **16** trees (31%) are to be removed (and are already approved in the demolition phase).
- Most of the trees removed **(12)** are rated with a **Low or Very Low/ Remove** retention value, with many of these trees being the *Casuarina glauca* (Swamp She-Oak) on the corner of Lakemba Street and Burwood Road that are in relatively poor condition and some other small and insignificant trees.

Table 4 - Trees to be Retained

Tree Retention Values	Trees to be removed	Trees to be retained
High	nil	4
Moderate	nil	28
Low	nil	4
Nil /Should Remove	nil	0
TOTAL	**Nil (already approved for removal)**	**36**

Of the **36** trees to be retained and protected:

- **30 trees** have no or minimal foreseeable impact from the proposed works. These trees are not discussed further.
- **4** have a 'minor encroachment' (<10%) into their NRZs,
- **2** have a 'moderate encroachment' (10-20%) into their NRZs,
- **No** trees have a major encroachment' (>20%) into their NRZs,
- **3** trees (T03, T17 and T19) require some minor canopy pruning for construction and ultimate building clearances, all or which is <10% of the current canopy area, which is considered acceptable,
- Some trees will require minor surface oriented works to be carefully management during the proposed demolition and construction works. This work is shown shaded on the Tree Retention and Removal Plan (T-02) and noted in the schedule.

Table 5 –TPZ Incursions Involving Potential Root Loss (as per AS4970-2025)

Tree ID	Species	NRZ Area	NRZ Incursion	NRZ % Incursion	Comment
T01	*Lagerstroemia indica*	92m2	6m2	7%	Minor incursion considered acceptable
T03	*Lophostemon confertus*	209m2	27m2	13%	Moderate incursion but considered acceptable due to area affected being under existing buildings and root development likely to be restricted in zone affected.
T17	*Eucalyptus microcorys*	297m2	45m2	15%	Moderate incursion but considered acceptable due to area affected being under existing buildings and root development likely to be restricted in zone affected.
T18	*Eucalyptus microcorys*	222m2	3m2	2%	Very minor incursion considered acceptable
T19	*Eucalyptus microcorys*	209m2	5m2	2%	Very minor incursion considered acceptable
T33	*Callistemon viminalis*	49m2	2m2	4%	Minor incursion considered acceptable

Table 6 – Proposed Tree Canopy Pruning

Tree ID	Species	Canopy Area	Canopy Area Pruned	% Pruning	Comment
T03	*Lophostemon confertus*	96m2	9m2	9%	Very minor pruning to non- public facing side of tree - considered acceptable
T17	*Eucalyptus microcorys*	145m2	6m2	4%	Very minor pruning to non- public facing side of tree - considered acceptable
T19	*Eucalyptus microcorys*	122m2	11m2	9%	Very minor pruning to non- public facing side of tree - considered acceptable

Despite the proximity of the works to some of the existing trees it is the author's opinion that the trees proposed to be retained can be successfully retained and protected. There will need to be very careful oversight during critical periods of demolition and construction. If this is successfully applied, the trees should experience only minor impacts.

Prior to commencement of works, the TPZ is to be fully fenced, mulched and temporary irrigation installed. The works shall be undertaken with care to protect the adjacent trees including overhead canopy and the existing ground surface within the TPZ. All work must be undertaken sensitively and roots greater than 40mm in diameter are to be retained and protected. Importantly, the Project Consulting Arborist must be present to oversee all works within the defined construction period TPZ.

2.8 Key Recommendations and the Management of Minor Surface Impacts

It is expected that there will be some minor surface impacts due to the demolition and the removal of the surrounding buildings and very minor landscape structures, including minor landscape walls and concrete footpaths. It is anticipated that much of the demolition work will occur above the existing ground surface, with the existing surface levels expected to be retained. There are proposed to be minor surface-oriented and new tree sensitive landscape works around the trees to be retained. The works are minor and have been designed to be at or above surface levels and root impacts are expected to be very minimal and include minor pathways, mulching and raised timber decking only.

T17, T18 and T19 *Eucalyptus microcorys (Tallowood),* **T01** *Lagerstroemia indica* (Crepe Myrtle), **T03** *Lophostemon confertus (Brush Box)* – Minor Surface Impacts to be Managed

Trees T17, T18 and T19 are 'High' and 'Moderate' retention value trees growing as a group on the south-eastern corner of the site between the existing building and the eastern boundary. They provide excellent canopy and screening fronting Burwood Road and can be viewed from the street and surrounds. Trees T01 and T03 trees are 'High' and 'Moderate' retention value trees growing on the north-western corner of the site between the existing building and the western boundary. They provide excellent canopy and screening fronting Lakemba Street. Tree T33 is a 'Moderate' retention value street tree located on the verge fronting Lakemba Street.

Though these trees are located within the landscaped gardens and street frontages, it is highly likely that roots from these trees may have extended under the existing buildings and landscape structures. The buildings do not have basements, and they are unlikely to have significant footings, therefore, it is highly likely that tree roots have travelled and grown beneath the existing building slabs favouring the more desirable moist and cool environment provided by the buildings. Therefore, the NRZs of these trees is shown extending under the existing adjoining buildings. There will need to be very careful oversight during critical periods of demolition and the future construction.

Figure 15 – Trees T17, T18 and T19 are a group of three Eucalyptus microcorys fronting Burwood Road. These trees are to be retained and protected, with the project consulting arborist present to oversee all proposed demolition and construction works when within the associated TPZ (Photo: Arterra 24 April 25).

2.9 Existing Canopy Cover

Canopy coverage has been calculated as a percentage (%) of the total site area (total site area 4,280m^2). This has been calculated using the m^2 of 'projected' canopy onto the underlying ground surface and only within the site boundary. Overlapping canopy is not counted twice. The table below outlines the existing canopy cover for the site. It would be hoped that the ultimate proposed canopy coverage, once a new development is planned and new tree planting is undertaken, would exceed the existing coverage.

Table 7 - Existing Canopy Cover

Tree Canopy Coverage	Canopy Coverage (m^2)	% of Total Site Area
Existing Canopy Coverage – Total	932 m2	22%
Existing Canopy Coverage – Likely to be retained	307 m2	7%
Existing Canopy Coverage – Likely to be removed	625 m2	145%
Existing Study Area	4,280 m2	100%

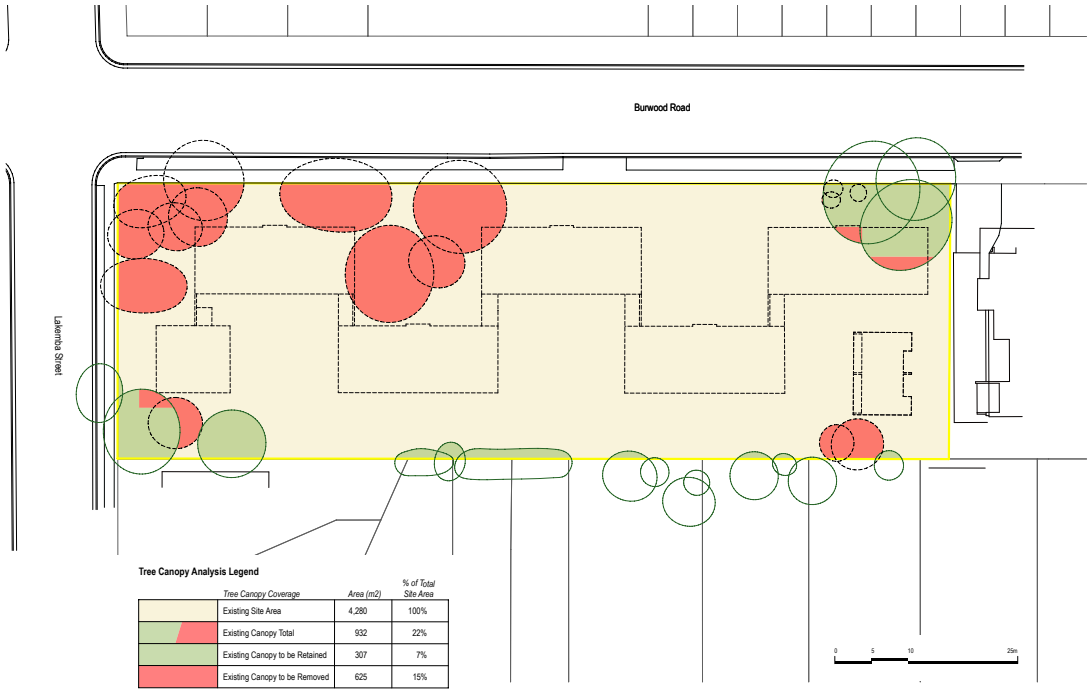

Figure 16 – Overall site plan showing the site and its existing urban canopy cover and relative percentages. (Source: Arterra)

3.0 TREE MANAGEMENT RECOMMENDATIONS

3.1 Potential Tree Related Impacts Needing to be Managed During Construction

The potential impacts from the proposed construction and activity discussed above 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 provides the recommendations and proposed measures that will aim to minimise and avoid these impacts as much as realistically possible.

3.2 Management of Tree Impacts

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

- The project Arborist must be present to observe and direct all ground level demolition within the defined NRZs / TPZs.
- There shall be no machinery trafficking of the exposed ground surface within the defined NRZ / TPZ during or following the demolition of the ground floor slabs. If trafficking is required, suitable protective boards shall be placed over any exposed roots or TPZs.
- 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.
- Project arborist to observe and direct all tree pruning per Tree Protection Plan T-02.
- 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 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 TPZ and irrigate 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.
- Stumps of trees removed are to be ground out (must not be grubbed out using an excavator) to limit root damage to retained trees.
- Roots uncovered at the edge of any site disturbance shall be cleanly cut at the face of the excavation.
- 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 and pathway areas to a maximum of 200-300mm to enable the new planting to occur without disturbing existing tree roots.
- Minor footings required in the TPZ are to be hand dug.
- 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 Proposed Tree Protection & Demolition 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, cranage 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 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 place 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 TPZ areas 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.

3.4 Demolition Work Near Trees or within NRZs or 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 or ground floor slab 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.

3.5 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 with the exception of 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.

3.6 Ground Protection within NRZs and 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 withstanding vehicle weights up to 80 tonnes.

Figure 17 – Example of acceptable Tree Protection Area ground protection (Photo: Arterra)

Figure 18 – Example of acceptable Tree Protection Area ground protection (Photo: Arterra)

3.7 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 19 – Example of acceptable Trunk Protection batten installation. (Photo: Arterra)

3.8 Provision of Temporary Irrigation

A small amount of temporary irrigation system is anticipated for the proposed works to maintain tree health. The requirements for this are outlined below. Further irrigation may be needed if unexpected ground disturbance, other climatic factors or pest and disease dictate, at the sole discretion of the Project Consulting Arborist. The temporary irrigation shall consist of a temporary and automated (battery powered timer is sufficient) watering system 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 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 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.

3.9 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.

3.10 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
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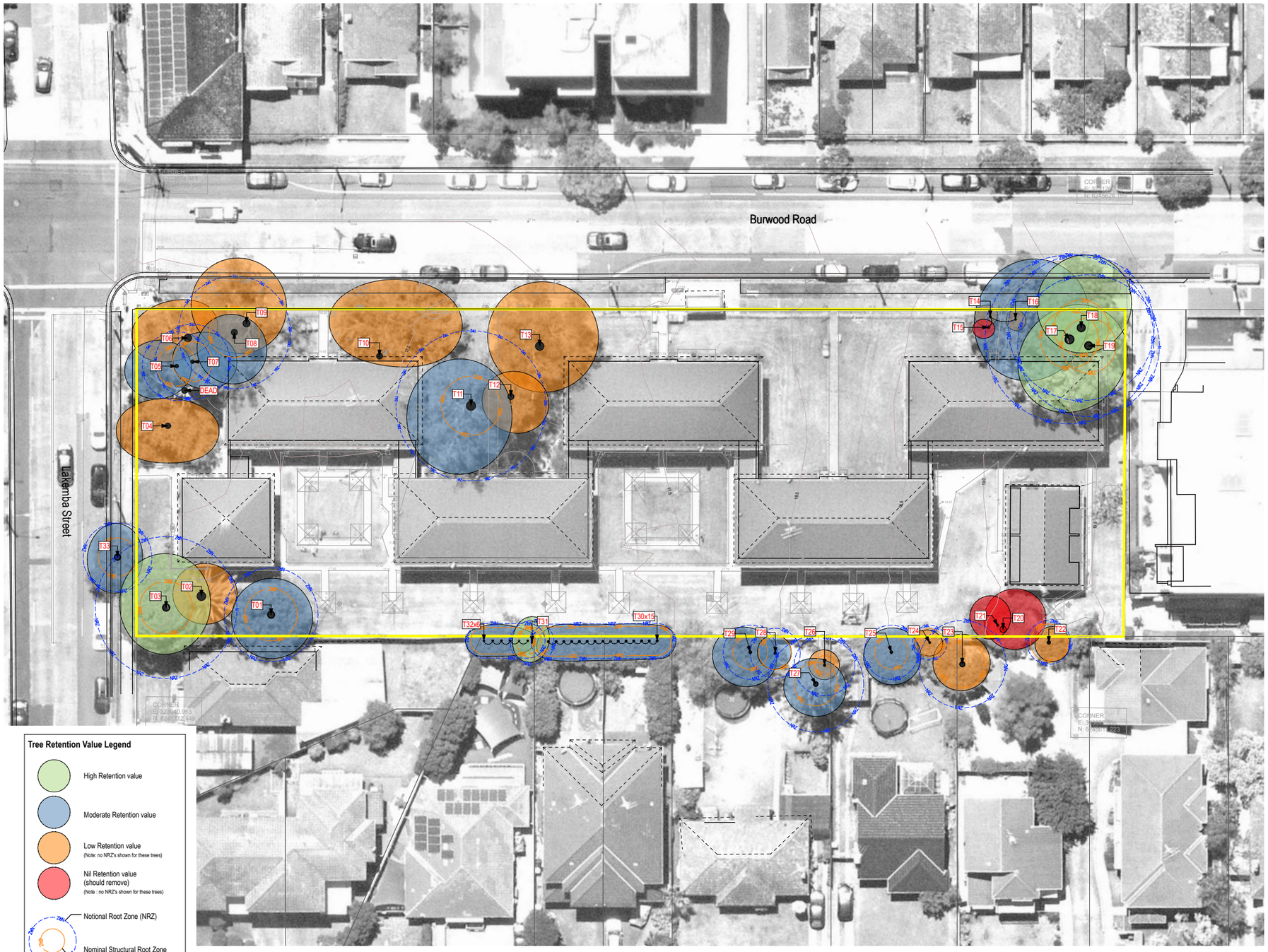
- Roberts, J. Jackson, N. and Smith, M. 2006. *Tree roots in the built environment. No.8* Research for Amenity Trees, Dept. for Communities and Local Government, London.
- Standards Australia, 2007, *AS 4373-2007 Pruning of amenity trees*. Standards Australia, Sydney.
- Standards Australia, 2025, *AS 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



Tree Retention Value Legend

- High Retention value
- Moderate Retention value
- Low Retention value (Note: no NRZ's shown for these trees)
- Nil Retention value (should remove) (Note : no NRZ's shown for these trees)
- Notional Root Zone (NRZ)
- Nominal Structural Root Zone (SRZ)
- Extent of canopy as verified by site measure and aerial photos
- Tree Identification Number

Homes NSW - HAFF2, Belmore - Tree Assessment Schedule

Tree ID	Trees in Group	Tree Species	Common Name	Trunk Diameter Std Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.45	0.79	5.40	3.00	**Moderate**	Retain
2	1	*Phoenix canariensis*	**Canary Island Date Palm**	0.69	1.03	4.00	1.52	**Low**	Remove
3	1	*Lophostemon confertus*	**Brush Box**	0.68	0.82	8.16	3.04	**High**	Retain
4	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.54	0.65	6.48	2.76	**Low**	Remove
5	1	*Casuarina glauca*	**Swamp She-Oak**	0.33	0.42	3.96	2.30	**Moderate**	Remove
6	1	*Casuarina glauca*	**Swamp She-Oak**	0.54	0.88	6.48	3.14	**Low**	Remove
7	1	*Casuarina glauca*	**Swamp She-Oak**	0.36	0.42	4.32	2.30	**Moderate**	Remove
8	1	*Casuarina glauca*	**Swamp She-Oak**	0.54	0.71	6.48	2.87	**Moderate**	Remove
9	1	*Casuarina glauca*	**Swamp She-Oak**	0.61	0.84	7.32	3.08	**Low**	Remove
10	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.57	0.69	6.84	2.83	**Low**	Remove
11	1	*Casuarina glauca*	**Swamp She-Oak**	0.72	1.07	8.64	3.40	**Moderate**	Remove
12	1	*Casuarina glauca*	**Swamp She-Oak**	0.51	0.71	6.12	2.87	**Low**	Remove
13	1	*Casuarina glauca*	**Swamp She-Oak**	0.73	0.99	8.76	3.30	**Low**	Remove
14	1	*Cupressus sempervirens*	**Italian Cypress**	0.24	0.27	2.88	1.91	**Low**	Remove
15	1	*Cupressus sempervirens*	**Italian Cypress**	0.28	0.30	3.36	2.00	**Nil / Remove**	Remove
16	1	*Cupressus sempervirens*	**Italian Cypress**	0.18	0.22	2.16	1.75	**Low**	Remove
17	1	*Eucalyptus microcorys*	**Tallowood**	0.81	1.02	9.72	3.34	**Moderate**	Retain
18	1	*Eucalyptus microcorys*	**Tallowood**	0.70	0.91	8.40	3.18	**High**	Retain
19	1	*Eucalyptus microcorys*	**Tallowood**	0.68	0.90	8.16	3.17	**High**	Retain
20	1	*Cotoneaster glaucophyllus*	**Cotoneaster**	0.34	0.74	4.08	2.92	**Nil / Remove**	Remove
21	1	*Ligustrum sinense*	**Small-leaf Privet**	0.19	0.27	2.28	1.91	**Nil / Remove**	Remove
22	1	*Punica granatum*	**Pomegranate**	0.21	0.35	2.52	2.13	**Low**	Retain
23	1	*Malus sp. Hybrid cv.*	**Crabapple**	0.42	0.58	5.04	2.63	**Low**	Retain
24	1	*Morus nigra*	**Mulberry**	0.16	0.18	2.00	1.61	**Low**	Retain
25	1	*Prunus sp.*	**Plum**	0.26	0.28	3.12	1.94	**Moderate**	Retain
26	1	*Syagrus romanzoffiana*	**Queen Palm**	0.22	0.23	3.50	1.12	**Low**	Retain
27	1	*Araucaria heterophylla*	**Norfolk Island Pine**	0.46	0.52	5.52	2.51	**Moderate**	Retain
28	1	*Ficus benjamina*	**Weeping Fig**	0.24	0.26	2.88	1.88	**Moderate**	Retain
29	1	*Ficus benjamina*	**Weeping Fig**	0.26	0.30	3.12	2.00	**Moderate**	Retain
30	15	*Murraya paniculata*	**Murraya**	0.15	0.20	2.00	1.68	**Moderate**	Retain
31	1	*Cupaniopsis anacardioides*	**Tuckeroo**	0.21	0.22	2.52	1.75	**High**	Retain
32	6	*Syzygium paniculatum*	**Magenta Cherry**	0.12	0.16	2.00	1.53	**Moderate**	Retain
33	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.33	0.39	3.96	2.23	**Moderate**	Retain

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.

REVISION	DESCRIPTION	CHKD	DATE
A	For SSD Lodgement	RWS	26/10/25

PROJECT & CLIENT
270-278 Burwood Rd Belmore
Homes NSW

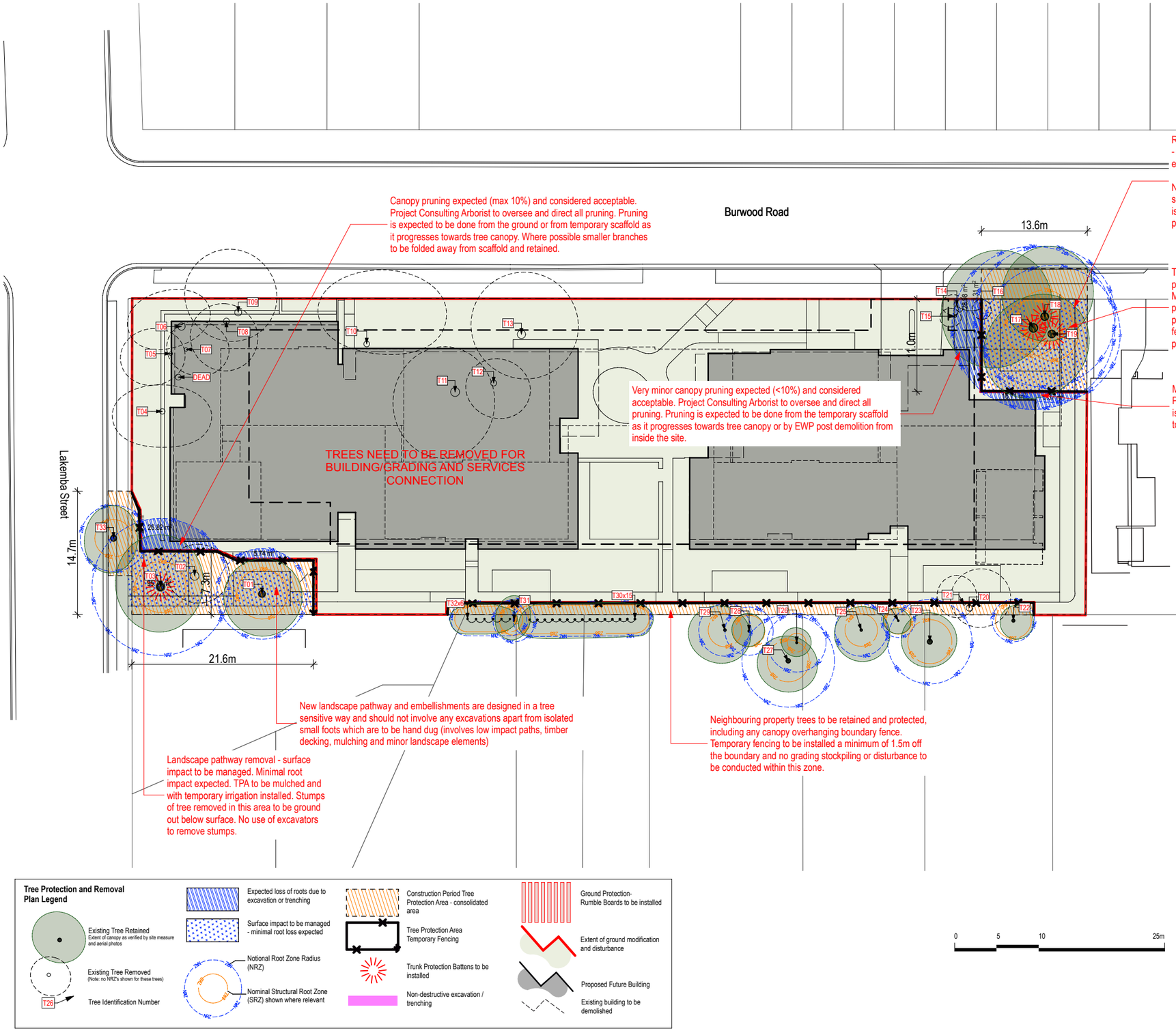
Project No : 24.20
Designed : RWS
Drawn : RWS
Scale : 1:250@A1/1:500@A3

DRAWING TITLE
Tree Retention Value Plan

DRAWING NUMBER
T-01

REVISION
A

Plotted at : 5:17pm 26/10/2025



Tree Protection and Removal Plan Legend

- Existing Tree Retained — Extent of canopy as verified by site measure and aerial photos
- Existing Tree Removed (Note: no NRZ's shown for these trees)
- Tree Identification Number (T26)
- Expected loss of roots due to excavation or trenching
- Surface impact to be managed - minimal root loss expected
- Notional Root Zone Radius (NRZ)
- Nominal Structural Root Zone (SRZ) shown where relevant
- Construction Period Tree Protection Area - consolidated area
- Tree Protection Area Temporary Fencing
- Trunk Protection Battens to be installed
- Non-destructive excavation / trenching
- Ground Protection- Rumble Boards to be installed
- Extent of ground modification and disturbance
- Proposed Future Building
- Existing building to be demolished

Homes NSW - HAFF2, Belmore - Tree Assessment Schedule

Tree ID	Trees in Group	Tree Species	Common Name	Trunk Diameter Std Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
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3	1	*Lophostemon confertus*	**Brush Box**	0.68	0.82	8.16	3.04	High	Retain
4	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.54	0.65	6.48	2.76	Low	Remove
5	1	*Casuarina glauca*	**Swamp She-Oak**	0.33	0.42	3.96	2.30	Moderate	Remove
6	1	*Casuarina glauca*	**Swamp She-Oak**	0.54	0.88	6.48	3.14	Low	Remove
7	1	*Casuarina glauca*	**Swamp She-Oak**	0.36	0.42	4.32	2.30	Moderate	Remove
8	1	*Casuarina glauca*	**Swamp She-Oak**	0.54	0.71	6.48	2.87	Moderate	Remove
9	1	*Casuarina glauca*	**Swamp She-Oak**	0.61	0.84	7.32	3.08	Low	Remove
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12	1	*Casuarina glauca*	**Swamp She-Oak**	0.51	0.71	6.12	2.87	Low	Remove
13	1	*Casuarina glauca*	**Swamp She-Oak**	0.73	0.99	8.76	3.30	Low	Remove
14	1	*Cupressus sempervirens*	**Italian Cypress**	0.24	0.27	2.88	1.91	Low	Remove
15	1	*Cupressus sempervirens*	**Italian Cypress**	0.28	0.30	3.36	2.00	Nil / Remove	Remove
16	1	*Cupressus sempervirens*	**Italian Cypress**	0.18	0.22	2.16	1.75	Low	Remove
17	1	*Eucalyptus microcorys*	**Tallowood**	0.81	1.02	9.72	3.34	Moderate	Retain
18	1	*Eucalyptus microcorys*	**Tallowood**	0.70	0.91	8.40	3.18	High	Retain
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24	1	*Morus nigra*	**Mulberry**	0.16	0.18	2.00	1.61	Low	Retain
25	1	*Prunus sp.*	**Plum**	0.26	0.28	3.12	1.94	Moderate	Retain
26	1	*Syagrus romanzoffiana*	**Queen Palm**	0.22	0.23	3.50	1.12	Low	Retain
27	1	*Araucaria heterophylla*	**Norfolk Island Pine**	0.46	0.52	5.52	2.51	Moderate	Retain
28	1	*Ficus benjamina*	**Weeping Fig**	0.24	0.26	2.88	1.88	Moderate	Retain
29	1	*Ficus benjamina*	**Weeping Fig**	0.26	0.30	3.12	2.00	Moderate	Retain
30	15	*Murraya paniculata*	**Murraya**	0.15	0.20	2.00	1.68	Moderate	Retain
31	1	*Cupaniopsis anacardioides*	**Tuckeroo**	0.21	0.22	2.52	1.75	High	Retain
32	6	*Syzygium paniculatum*	**Magenta Cherry**	0.12	0.16	2.00	1.53	Moderate	Retain
33	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.33	0.39	3.96	2.23	Moderate	Retain

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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.

REVISION	DESCRIPTION	CHKD	DATE
A	For SSD Lodgement	RWS	27/10/25

PROJECT & CLIENT
270-278 Burwood Rd Belmore
Homes NSW

Project No : 24.20
Designed : RWS
Drawn : RWS
North
Scale : 1:250@A1/1:500@A3

DRAWING TITLE
Tree Protection Plan

DRAWING NUMBER T-02
REVISION A

Plotted at : 3:01 pm 27/10/2025

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 matts 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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REVISION	DESCRIPTION	CHKD	DATE
A	For SSD Lodgement	RWS	26/10/25

PROJECT & CLIENT
270-278 Burwood Rd Belmore
Homes NSW

Project No : 24.20
Designed : RWS
Drawn : RWS
Scale : N/A
North

DRAWING TITLE
Tree Protection Specifications

DRAWING NUMBER
T-03

REVISION
A

Plotted at : 5:18pm 26/10/2025

4.2 Tree Impact Assessment Schedule

Homes NSW - HAFF2, Belmore - 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	SULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation
1	1	*Lagerstroemia indica*	**Crepe Myrtle**	9.0	8.0	0.45	0.79	5.40	3.00	Mature	Good	Average	Exotic	Co-dominant Stems	Long (>40 years)	**Moderate**		Minor incursion (7%) due to building to eastern side. Considered acceptable. Minor surface only impacts from demolition and new landscape construction. Minimal root loss expected.	Retain
2	1	*Phoenix canariensis*	**Canary Island Date Palm**	8.0	6.0	0.69	1.03	4.00	1.52	Mature	Good	Average	Exotic		Long (>40 years)	**Low**	Ibis nesting in tree.	Undesirable species - remove.	Remove - Part 5 Approval
3	1	*Lophostemon confertus*	**Brush Box**	14.5	9.0	0.68	0.82	8.16	3.04	Mature	Good	Average	Native		Long (>40 years)	**High**	Prominent tree in good condition.	Moderate incursion of 13% due to building to eastern side. Pruning of canopy at 9% to eastern quadrant. Species toleratent of impacts and in good condition therefore both considered acceptable. Minor surface only impacts from demolition and new landscape construction. Minimal root loss expected.	Retain
4	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	9.0	10.0	0.54	0.65	6.48	2.76	Mature	Fair	Average	Native	Epicormic Growth, Co-dominant Stems	Medium (15-40 years)	**Low**		Within building and re-grading footprint	Remove - Part 5 Approval
5	1	*Casuarina glauca*	**Swamp She-Oak**	14.5	7.0	0.33	0.42	3.96	2.30	Mature	Fair	Average	Native	Very Asymmetric Form, Deadwood-Minor	Long (>40 years)	**Moderate**	Asymmetric canopy towards the north.	Within building and re-grading footprint	Remove - Part 5 Approval
6	1	*Casuarina glauca*	**Swamp She-Oak**	16.5	6.0	0.54	0.88	6.48	3.14	Mature	Poor	Average	Native	Deadwood-Minor, Tip Dieback	Short (5-15 years)	**Low**	Tip die back and sparse canopy. Deadwood.	Within building and re-grading footprint	Remove - Part 5 Approval
7	1	*Casuarina glauca*	**Swamp She-Oak**	16.0	6.0	0.36	0.42	4.32	2.30	Mature	Fair	Average	Native		Medium (15-40 years)	**Moderate**		Within building and re-grading footprint	Remove - Part 5 Approval
8	1	*Casuarina glauca*	**Swamp She-Oak**	15.0	7.0	0.54	0.71	6.48	2.87	Mature	Fair	Average	Native		Medium (15-40 years)	**Moderate**		Within building and re-grading footprint	Remove - Part 5 Approval
9	1	*Casuarina glauca*	**Swamp She-Oak**	17.5	10.0	0.61	0.84	7.32	3.08	Mature	Poor	Average	Native	Tip Dieback, Deadwood-Major	Short (5-15 years)	**Low**	Extensive dieback and sparse canopy.	Within building and re-grading footprint	Remove - Part 5 Approval
10	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	7.5	8.0	0.57	0.69	6.84	2.83	Mature	Good	Poor	Native	Lean-Major, Root Impacts, Very Asymmetric Form	Medium (15-40 years)	**Low**	Growing hard against base of building. Extreme lean to trunk and very asymmetric from to east.	Within building and re-grading footprint	Remove - Part 5 Approval
11	1	*Casuarina glauca*	**Swamp She-Oak**	20.0	9.0	0.72	1.07	8.64	3.40	Mature	Fair	Average	Native		Medium (15-40 years)	**Moderate**		Within building and re-grading footprint	Remove - Part 5 Approval
12	1	*Casuarina glauca*	**Swamp She-Oak**	19.5	6.0	0.51	0.71	6.12	2.87	Mature	Good	Average	Native	Branch Tearouts	Medium (15-40 years)	**Low**	Large surface roots visible against path. Previous large branch tearout at 6.0m above ground to west.	Within building and re-grading footprint	Remove - Part 5 Approval
13	1	*Casuarina glauca*	**Swamp She-Oak**	20.5	10.0	0.73	0.99	8.76	3.30	Mature	Good	Average	Native	Buldges, Inclusions, Co-dominant Stems	Medium (15-40 years)	**Low**		Within building and re-grading footprint	Remove - Part 5 Approval
14	1	*Cupressus sempervirens*	**Italian Cypress**	9.0	3.0	0.24	0.27	2.88	1.91	Mature	Good	Average	Exotic	Lean-Minor	Medium (15-40 years)	**Low**		Within building and re-grading footprint	Remove - Part 5 Approval
15	1	*Cupressus sempervirens*	**Italian Cypress**	9.5	3.0	0.28	0.30	3.36	2.00	Mature	Good	Poor	Exotic	Lean-Minor, Cracks/Splits	Long (>40 years)	**Nil / Remove**	Surface roots to south. Canopy minimal to south. Noticable crack in one of the trunks at 1.5m	Within building and re-grading footprint	Remove - Part 5 Approval
16	1	*Cupressus sempervirens*	**Italian Cypress**	7.0	3.0	0.18	0.22	2.16	1.75	Mature	Poor	Poor	Exotic	Lean-Minor	Short (5-15 years)	**Low**	Suppressed form under larger trees.	Within building and re-grading footprint	Remove - Part 5 Approval
17	1	*Eucalyptus microcorys*	**Tallowood**	18.5	10.0	0.81	1.02	9.72	3.34	Mature	Good	Average	Native	Epicormic Growth, Very Asymmetric Form, Lean-Minor	Long (>40 years)	**Moderate**	Distinct lean and general bias towards north. Part of a prominent grouping on the south-east corner contributing significantly to wider streetscape, canopy and public domain of area.	Moderate theoretical incursion of 15% due to building to north and western side. Moderate incursion acceptable because area that is impacted is already significantly under existing buildings that are to be demolished and root development expected to have been restricted already in this area. Pruning of canopy at <4% to western quadrant is minor and acceptable. Species typically toleratent of impacts and in good condition therefore impacts considered acceptable. Minor surface impacts from demolition and new tree sensitive landscape treatments to be monitored and managed.	Retain
18	1	*Eucalyptus microcorys*	**Tallowood**	19.0	9.0	0.70	0.91	8.40	3.18	Mature	Good	Average	Native		Long (>40 years)	**High**	Part of a prominent grouping on the south-east corner contributing significantly to wider streetscape, canopy and public domain of area.	Minor theoretical incursion of 2% due to building to north-western side. Minor surface impacts from demolition and new tree sensitive landscape treatments to be monitored and managed.	Retain
19	1	*Eucalyptus microcorys*	**Tallowood**	18.5	8.0	0.68	0.90	8.16	3.17	Mature	Good	Average	Native		Long (>40 years)	**High**	Part of a prominent grouping on the south-east corner contributing significantly to wider streetscape, canopy and public domain of area.	Minor theoretical incursion of 2% due to building to north-western side. Pruning of canopy at <9% to western quadrant is minor and acceptable. Species typically toleratent of impacts and in good condition therefore impacts considered acceptable. Minor surface impacts from demolition and new tree sensitive landscape treatments to be monitored and managed.	Retain
20	1	*Cotoneaster glaucophyllus*	**Cotoneaster**	7.0	6.0	0.34	0.74	4.08	2.92	Over-mature	Poor	Poor	Exotic	Co-dominant Stems, Deadwood-Major, Tip Dieback, Decay-Major, Very Asymmetric Form	Remove (<5 years)	**Nil / Remove**	Asymmetric to east. Multi-trunked from base with numerous defects. Generally undesirable species.	Poor quality tree, remove regardless of development.	Remove - Part 5 Approval
21	1	*Ligustrum sinense*	**Small-leaf Privet**	8.0	6.0	0.19	0.27	2.28	1.91	Semi-mature	Good	Average	Weed		Remove (<5 years)	**Nil / Remove**	Weed species. Should remove.	Poor quality tree, remove regardless of development.	Remove - Part 5 Approval
22	1	*Punica granatum*	**Pomegranate**	9.0	6.0	0.21	0.35	2.52	2.13	Semi-mature	Fair	Average	Exotic		Medium (15-40 years)	**Low**	Neighbouring property tree. Planted hard against fence, multi-trunked from base.	Neighbouring tree - minimal impact expected.	Retain
23	1	*Malus sp. Hybrid cv.*	**Crabapple**	7.0	7.0	0.42	0.58	5.04	2.63	Mature	Fair	Poor	Exotic	Co-dominant Stems, Major Wounding, Deadwood-Major, Decay-Minor	Medium (15-40 years)	**Low**	Neighbouring property fruit tree.	Neighbouring tree - minimal impact expected.	Retain
24	1	*Morus nigra*	**Mulberry**	7.0	5.0	0.16	0.18	2.00	1.61	Semi-mature	Fair	Average	Exotic	Co-dominant Stems	Medium (15-40 years)	**Low**	Small neighbouring property tree planted hard against fence.	Neighbouring tree - minimal impact expected.	Retain
25	1	*Prunus sp.*	**Plum**	9.0	6.0	0.26	0.28	3.12	1.94	Mature	Good	Average	Exotic	Co-dominant Stems, Inclusions, Epicormic Growth	Medium (15-40 years)	**Moderate**	Neighbouring property tree, growing at back of shed.	Neighbouring tree - minimal impact expected.	Retain
26	1	*Syagrus romanzoffiana*	**Queen Palm**	7.0	5.0	0.22	0.23	3.50	1.12	Mature	Good	Average	Exotic		Long (>40 years)	**Low**	Neighbouring property tree. Well back from fenceline.	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	SULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation
27	1	*Araucaria heterophylla*	**Norfolk Island Pine**	15.0	8.0	0.46	0.52	5.52	2.51	Mature	Fair	Average	Exotic		Long (>40 years)	**Moderate**		Neighbouring tree - minimal impact expected.	Retain
28	1	*Ficus benjamina*	**Weeping Fig**	5.0	6.0	0.24	0.26	2.88	1.88	Mature	Excellent	Average	Exotic		Long (>40 years)	**Moderate**	Neighbouring property tree. Reasonable distance from fence. Very multi-trunked from base.	Neighbouring tree - minimal impact expected.	Retain
29	1	*Ficus benjamina*	**Weeping Fig**	8.5	8.0	0.26	0.30	3.12	2.00	Mature	Good	Average	Exotic		Long (>40 years)	**Moderate**	Neighbouring property tree. Reasonable distance from fence. Very multi-trunked from base.	Neighbouring tree - minimal impact expected.	Retain
30	15	*Murraya paniculata*	**Murraya**	9.0	6.0	0.15	0.20	2.00	1.68	Mature	Good	Average	Exotic		Long (>40 years)	**Moderate**		Neighbouring tree - minimal impact expected.	Retain
31	1	*Cupaniopsis anacardioides*	**Tuckeroo**	9.0	8.0	0.21	0.22	2.52	1.75	Mature	Excellent	Average	Native		Long (>40 years)	**High**	Neigbouring property tree. Very good tree which should be protected.	Neighbouring tree - minimal impact expected.	Retain
32	6	*Syzygium paniculatum*	**Magenta Cherry**	9.5	5.0	0.12	0.16	2.00	1.53	Mature	Good	Average	Native		Long (>40 years)	**Moderate**	Neighbouring property trees grown as a border hedge. Now quite large and intrergrown canopies. Should be retained and protected from development impacts.	Neighbouring tree - minimal impact expected.	Retain
33	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	7.5	7.0	0.33	0.39	3.96	2.23	Mature	Good	Average	Native	Co-dominant Stems, Epicormic Growth	Medium (15-40 years)	**Moderate**	Public street tree in Lakemba St. Growing under overhead powerlines. Reasonable tree which should be retained and protected.	Street tree. Minimal impact expected. Very minor incursion of less than 4% to southern side due to site works. Considered acceptable.	Retain

4.3 Tree Data Summary Sheets

ID # 001
Species: Lagerstroemia indica
Common: Crepe Myrtle
Height: 9.0
Qty in Grp 1
DBH: 0.45 DGL: 0.79
TPZ: 5.4 SRZ: 3
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**
Comments

ID # 002
Species: Phoenix canariensis
Common: Canary Island Date Palm
Height: 8.0
Qty in Grp 1
DBH: 0.69 DGL: 1.03
TPZ: 8.28 SRZ: 3.35
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Low**
Comments

Ibis nesting in tree.

ID # 003
Species: Lophostemon confertus
Common: Brush Box
Height: 14.50
Qty in Grp 1
DBH: 0.68 DGL: 0.82
TPZ: 8.16 SRZ: 3.04
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **High**
Comments

Prominent tree in good condition.

ID # 004
Species: Callistemon viminalis cv.
Common: Weeping Bottlebrush
Height: 9.0
Qty in Grp 1
DBH: 0.54 DGL: 0.65
TPZ: 6.48 SRZ: 2.76
Current Form: Average
Current Vigour: Fair
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Low**
Comments

ID # 005
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 14.5
Qty in Grp 1
DBH: 0.33 DGL: 0.42
TPZ: 3.96 SRZ: 2.3
Current Form: Average
Current Vigour: Fair
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**
Comments

Asymmetric canopy towards the north.

ID # 006
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 16.5
Qty in Grp 1
DBH: 0.54 DGL: 0.88
TPZ: 6.48 SRZ: 3.14
Current Form: Average
Current Vigour: Poor
Age Class: Mature
SULE: Short (5-15 years)
Retention Value: **Low**
Comments

Tip die back and sparse canopy. Deadwood.

ID # **007**
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 16.0
Qty in Grp 1
DBH: 0.36 DGL: 0.42
TPZ: 4.32 SRZ: 2.3
Current Form: Average
Current Vigour: Fair
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Moderate**
Comments

ID # **008**
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 15.0
Qty in Grp 1
DBH: 0.54 DGL: 0.71
TPZ: 6.48 SRZ: 2.87
Current Form: Average
Current Vigour: Fair
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Moderate**
Comments

ID # **009**
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 17.5
Qty in Grp 1
DBH: 0.61 DGL: 0.84
TPZ: 7.32 SRZ: 3.08
Current Form: Average
Current Vigour: Poor
Age Class: Mature
SULE: Short (5-15 years)
Retention Value: **Low**
Comments

Extensive dieback and sparse canopy.

ID # **010**
Species: Callistemon viminalis cv.
Common: Weeping Bottlebrush
Height: 7.5
Qty in Grp 1
DBH: 0.57 DGL: 0.69
TPZ: 6.84 SRZ: 2.83
Current Form: Poor
Current Vigour: Good
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Low**
Comments

Growing hard against base of building. Extreme lean to trunk and very asymmetric from to east.

ID # **011**
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 20.0
Qty in Grp 1
DBH: 0.72 DGL: 1.07
TPZ: 8.64 SRZ: 3.4
Current Form: Average
Current Vigour: Fair
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Moderate**
Comments

ID # **012**
Species: Casuarina glauca
Common: Swamp She-Oak
Height: 19.5
Qty in Grp 1
DBH: 0.51 DGL: 0.71
TPZ: 6.12 SRZ: 2.87
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Low**
Comments

Large surface roots visible against path. Previous large branch tearout at 6.0m above ground to west.

ID #	**013**
Species:	Casuarina glauca
Common:	Swamp She-Oak
Height:	20.5
Qty in Grp	1
DBH: 0.73	DGL: 0.99
TPZ: 8.76	SRZ: 3.3
Current Form:	Average
Current Vigour:	Good
Age Class:	Mature
SULE:	Medium (15-40 years)
Retention Value:	**Low**

Comments

ID #	**016**
Species:	Cupressus sempervirens
Common:	Italian Cypress
Height:	7.0
Qty in Grp	1
DBH: 0.18	DGL: 0.22
TPZ: 2.16	SRZ: 1.75
Current Form:	Poor
Current Vigour:	Poor
Age Class:	Mature
SULE:	Short (5-15 years)
Retention Value:	**Low**

Comments

Suppressed form under larger trees.

ID #	**014**
Species:	Cupressus sempervirens
Common:	Italian Cypress
Height:	9.0
Qty in Grp	1
DBH: 0.24	DGL: 0.27
TPZ: 2.88	SRZ: 1.91
Current Form:	Average
Current Vigour:	Good
Age Class:	Mature
SULE:	Medium (15-40 years)
Retention Value:	**Low**

Comments

ID #	**017**
Species:	Eucalyptus microcorys
Common:	Tallowood
Height:	18.5
Qty in Grp	1
DBH: 0.81	DGL: 1.02
TPZ: 9.72	SRZ: 3.34
Current Form:	Average
Current Vigour:	Good
Age Class:	Mature
SULE:	Long (>40 years)
Retention Value:	**Moderate**

Comments

Distinct lean and general bias towards north. Part of a prominent grouping on the south-east corner contributing significantly to wider streetscape, canopy and public domain of area.

ID #	**015**
Species:	Cupressus sempervirens
Common:	Italian Cypress
Height:	9.5
Qty in Grp	1
DBH: 0.28	DGL: 0.30
TPZ: 3.36	SRZ: 2
Current Form:	Poor
Current Vigour:	Good
Age Class:	Mature
SULE:	Long (>40 years)
Retention Value:	**Nil / Remove**

Comments

Surface roots to south. Canopy minimal to south. Noticable crack in one of the trunks at 1.5m

ID #	**018**
Species:	Eucalyptus microcorys
Common:	Tallowood
Height:	19.0
Qty in Grp	1
DBH: 0.70	DGL: 0.91
TPZ: 8.4	SRZ: 3.18
Current Form:	Average
Current Vigour:	Good
Age Class:	Mature
SULE:	Long (>40 years)
Retention Value:	**High**

Comments

Part of a prominent grouping on the south-east corner contributing significantly to wider streetscape, canopy and public domain of area.

ID # 019
Species: Eucalyptus microcorys
Common: Tallowood
Height: 18.5
Qty in Grp 1
DBH: 0.68 DGL: 0.90
TPZ: 8.16 SRZ: 3.17
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **High**

Comments

Part of a prominent grouping on the south-east corner contributing significantly to wider streetscape, canopy and public domain of area.

ID # 020
Species: Cotoneaster glaucophyllus
Common: Cotoneaster
Height: 7.0
Qty in Grp 1
DBH: 0.34 DGL: 0.74
TPZ: 4.08 SRZ: 2.92
Current Form: Poor
Current Vigour: Poor
Age Class: Over-mature
SULE: Remove (<5 years)
Retention Value: **Nil / Remove**

Comments

Asymmetric to east. Multi-trunked from base with numerous defects. Generally undesirable species.

ID # 021
Species: Ligustrum sinense
Common: Small-leaf Privet
Height: 8.0
Qty in Grp 1
DBH: 0.19 DGL: 0.27
TPZ: 2.28 SRZ: 1.91
Current Form: Average
Current Vigour: Good
Age Class: Semi-mature
SULE: Remove (<5 years)
Retention Value: **Nil / Remove**

Comments

Weed species. Should remove.

ID # 022
Species: Punica granatum
Common: Pomegranate
Height: 9.0
Qty in Grp 1
DBH: 0.21 DGL: 0.35
TPZ: 2.52 SRZ: 2.13
Current Form: Average
Current Vigour: Fair
Age Class: Semi-mature
SULE: Medium (15-40 years)
Retention Value: **Low**

Comments

Neighbouring property tree. Planted hard against fence, multi-trunked from base.

ID # 023
Species: Malus sp. Hybrid cv.
Common: Crabapple
Height: 7.0
Qty in Grp 1
DBH: 0.42 DGL: 0.58
TPZ: 5.04 SRZ: 2.63
Current Form: Poor
Current Vigour: Fair
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Low**

Comments

Neighbouring property fruit tree.

ID # 024
Species: Morus nigra
Common: Mulberry
Height: 7.0
Qty in Grp 1
DBH: 0.16 DGL: 0.18
TPZ: 2 SRZ: 1.61
Current Form: Average
Current Vigour: Fair
Age Class: Semi-mature
SULE: Medium (15-40 years)
Retention Value: **Low**

Comments

Small neighbouring property tree planted hard against fence.

ID # 025
Species: Prunus sp.
Common: Plum
Height: 9.0
Qty in Grp 1
DBH: 0.26 DGL: 0.28
TPZ: 3.12 SRZ: 1.94
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Moderate**
Comments

Neighbouring property tree, growing at back of shed.

ID # 026
Species: Syagrus romanzoffiana
Common: Queen Palm
Height: 7.0
Qty in Grp 1
DBH: 0.22 DGL: 0.23
TPZ: 2.64 SRZ: 1.79
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Low**
Comments

Neighbouring property tree. Well back from fenceline.

ID # 027
Species: Araucaria heterophylla
Common: Norfolk Island Pine
Height: 15.0
Qty in Grp 1
DBH: 0.46 DGL: 0.52
TPZ: 5.52 SRZ: 2.51
Current Form: Average
Current Vigour: Fair
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**
Comments

ID # 028
Species: Ficus benjamina
Common: Weeping Fig
Height: 5.0
Qty in Grp 1
DBH: 0.24 DGL: 0.26
TPZ: 2.88 SRZ: 1.88
Current Form: Average
Current Vigour: Excellent
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**
Comments

Neighbouring property tree. Reasonable distance from fence. Very multi-trunked from base.

ID # 029
Species: Ficus benjamina
Common: Weeping Fig
Height: 8.50
Qty in Grp 1
DBH: 0.26 DGL: 0.30
TPZ: 3.12 SRZ: 2
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**
Comments

Neighbouring property tree. Reasonable distance from fence. Very multi-trunked from base.

ID # 030
Species: Murraya paniculata
Common: Murraya
Height: 9.0
Qty in Grp 12
DBH: 0.15 DGL: 0.20
TPZ: 2 SRZ: 1.68
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**
Comments

ID # **031**
Species: Cupaniopsis anacardioides
Common: Tuckeroo
Height: 9.0
Qty in Grp 1
DBH: 0.21 DGL: 0.22
TPZ: 2.52 SRZ: 1.75
Current Form: Average
Current Vigour: Excellent
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **High**

Comments

Neigbouring property tree. Very good tree which should be protected.

ID # **032**
Species: Syzygium paniculatum
Common: Magenta Cherry
Height: 9.50
Qty in Grp 5
DBH: 0.12 DGL: 0.16
TPZ: 2 SRZ: 1.53
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Long (>40 years)
Retention Value: **Moderate**

Comments

Neighbouring property trees grown as a border hedge. Now quite large and intrergrown canopies. Should be retained and protected from development impacts.

ID # **033**
Species: Callistemon viminalis cv.
Common: Weeping Bottlebrush
Height: 7.50
Qty in Grp 1
DBH: 0.33 DGL: 0.39
TPZ: 3.96 SRZ: 2.23
Current Form: Average
Current Vigour: Good
Age Class: Mature
SULE: Medium (15-40 years)
Retention Value: **Moderate**

Comments

Public street tree in Lakemba St. Growing under overhead powerlines. Reasonable tree which should be retained and protected.