arboricultural impact assessment report

AIA-01
Revision A, Issued for SSDA
26 June 2026

PROJECT
SOCIAL AND AFFORDABLE HOUSING
72 and 82-86 Menangle Road,
Camden, NSW, 2570

CLIENT / PRINCIPAL
HOMES NSW
6 Parramatta Square, 10 Darcy Street,
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 35 years' experience.

Disclaimer

This document is only to be used in relation to the project referenced in the title of the report and is only to be used for the purpose for which it was commissioned and in accordance with the specific brief and contract between Arterra Design and the Client. Arterra Design accepts no liability or responsibility whatsoever in respect to any use, or reliance upon this report and its supporting material, by any third party.

i EXECUTIVE SUMMARY

This Arboricultural Impact Assessment (AIA) has been prepared by Arterra as part of the Environmental Impact Statement (EIS) for a State Significant Development (SSD) application and concurrent rezoning for a social and affordable housing development at 72 and 82-86 Menangle Road, Camden.

The SSDA seeks approval for the construction of two residential flat buildings comprising a total of 95 social and affordable housing dwellings. Approval has been granted under a separate Part 5 application for demolition of the existing structures and removal of **58** trees. We specifically note that there are **no tree removals** proposed as part of this concurrent rezoning and SSDA. Please see planning history section for tree removal history.

This report assesses the potential impacts of 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).

The subject trees are those trees that would be protected under the provisions of Clause 2.4: Trees and Vegetation of the Camden Development Control Plan 2019 (DCP). Following are the key observations related to the tree population across the site:

- The most significant trees to be retained are predominantly around the periphery of the site, along the eastern and western site boundaries.
- Refer to T-02 'Tree Protection Plan' for details of the trees to be retained and the required tree protection measures.
- Trees on adjacent residential properties, such as those near the eastern site boundary, are also a focus for retention and protection, even though some of these are low or nil value trees. Some of these trees have canopies that overhang the boundary and project into the site. Care will need to be taken to protect the canopies and root systems of these adjacent trees.

The site assessments identified a total of **102** trees.

- **68** trees are within the site boundary.
- **34** trees are located adjacent the sites, of which:
  - **2** are street trees (T69, T70) and
  - **32** trees are located on the adjacent properties.
- **58** are already approved for removal under a separate Part 5 approval.

Table i - Trees to be Retained - SSDA

Tree Retention Values	Trees to be removed	Trees to be retained
High	0	4
Moderate	0	13
Low	0	23
Nil /Should Remove	0	4
TOTAL	(Refer Part 5 approvals) **Nil**	**44**

As defined by AS4970-2025 - Protection of Trees on Development Sites, of the **44** retained trees:

- **39 trees** have nil or minimal foreseeable impacts from the proposed works.
- **3 trees** have what is considered a 'minor encroachment' (<10%) into their notional root zones (NRZs). These impacts are not expected to impact the long-term health of the trees.
- **2 tree** have a very 'moderate encroachment' (10%-20%) into their NRZs.
- **No trees** have a major encroachment' (>20%) into their nominal NRZs.
- Some trees have minor surface impacts due to removal or construction of surface pavements only. It is not considered that this will result in any significant root loss. This work is shown shaded on the Tree Protection Plan (T-02) and noted in the schedule. These minor surface impacts are to be managed. These impacts are not expected to impact the long-term health of the trees.

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 the proposed protocols are strictly implemented and work immediately around some of the more significant trees is closely monitored by a suitably qualified Project Consulting Arborist.

This report outlines the potential tree impacts and how the anticipated works are to be managed and impacts mitigated, including the following key items:

- Meeting of the contractor and the Project Consulting Arborist on site prior to works to discuss tree protection requirements, construction equipment and methods and the site access protocols.
- Installation of the required tree protection measures prior to any works occurring on site;
- On-site monitoring by Project Consulting Arborist in designated key areas such as around tree T53.
- 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 that the required tree protection measures are implemented, are then maintained, and that sufficient care is exercised by all its sub-contractors 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).

ii CONSULTANT DECLARATION

PROJECT DETAILS	
PROJECT NAME	
Application number	SSD-116982991
Address of subject land	72 and 82 to 86 Menangle Road, Camden, NSW,2570.
Lot / DP	Lot/DP: 73/21405, 74/21405, 75/21405, 76/21405, 77/21405, 86/21405, 1/24039, 2/24039, 3/24039.
APPLICANT DETAILS	
Applicant name	Minister Administering the Housing Act 2001 (Homes NSW)
Applicant address	6 Parramatta Square, 10 Darcy Street, Parramatta, NSW 2150
REPORT DETAILS	
Name of report this declaration relates	Arboricultural Impact Assessment Report
Report reference no.	Revision A – Issued For SSDA
Report date	26 June 2026
Company name (inc. ABN / ACN)	Arterra Design Pty Ltd - ABN: 40 069 552 610
Author name	Robert Smart
Author qualifications	Diploma of Horticulture (Arboriculture), Ryde TAFE, 2010 (AQF Level 5 Arborist) B. Landscape Architecture (1st Class Hons) University of NSW, Sydney, 1990 Quantified Tree Risk Assessment (QTRA) Licence, 2014 Business Management Advanced Certificate, North Sydney TAFE, 1993
Author address	602/51 Rawson Street Epping NSW 2121
DECLARATION BY CONSULTANT	
Name	Robert Smart
Organisation and Registration no.	Accredited Member of the Institute of Australian Consulting Arboriculturists (IACA) (No.086) Member - International Society of Arboriculture (ISA) (Member No. 192450) Registered Consulting Arborist - Arboriculture Australia (AA) (No. 1804) Licenced Quantified Tree Risk Assessment (QTRA) Practitioner (No. 3806) Member - Australian Garden History Society (Member No. 7383) Registered Landscape Architect (No. 054)
Declaration	The undersigned declares that Arboricultural Impact Assessment Report (AIA-01): • does not contain information that is false or misleading; • has been prepared in accordance with the following policy, guidelines, or legislative requirements: - AS.4970:2025 Protection of Trees on Development Sites - Industry specific SEARs, issued on 11 May 2026 for the development • contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the Arboricultural Impact Assessment Report relates; • identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project, the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments to which the Arboricultural Impact Assessment Report relates; and • contains a consolidated summary of the proposed or necessary mitigation measures.
Signature	

1.0 INTRODUCTION

1.1 Background

This Arboricultural Impact Assessment (AIA) has been prepared by Arterra as part of the Environmental Impact Statement (EIS) for a State Significant Development (SSD) application and concurrent rezoning for a social and affordable housing development at 72 and 82-86 Menangle Road, Camden.

The SSDA seeks approval for the construction of two residential flat buildings comprising a total of 95 social and affordable housing dwellings. Approval has been granted under a separate Part 5 application for demolition of the existing structures and removal of **58** trees. We specifically note that there are **no tree removals** proposed as part of this concurrent rezoning and SSDA. Please see planning history section for tree removal history.

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 1.1 – 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 JILA.

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 documentation for the site wide landscape plans addressing landscape related matters.

In December 2025, Arterra was engaged by Homes NSW (the client) to undertake an arboricultural assessment of the trees at 72 and 82-86 Menangle Road, Camden, NSW (the site), to inform the proposed redevelopment. Arterra attended the site on the 17 December 2025 to inspect the trees within and immediately adjacent the site that are likely to be impacted by the proposed works.

The proposed works are close to several large and significant existing trees within the site. If the work is not carried out with due care and consideration for the retained trees, it has the potential to negatively impact the existing trees to be retained and their ongoing health and longevity.

1.2 The Site

The site is located at 72 and 82-86 Menangle Road, Camden in the Camden Local Government Area (LGA). The site comprises 9 lots and has a combined site area of 7,184sqm. The lots are legally described as Lot 73-77 in DP21405, Lot 86 in DP21405, and Lots 1-3 in DP24039.

The site is currently occupied by three 1960s brick cottages, the former Camden Nurses' Quarters, and a former NSW Health car park. The site has frontage to Menangle Road and Gilbulla Avenue. It is located opposite Camden Hospital and is approximately 600 metres from the Camden Town Centre, which provides a range of essential services, retail, and civic facilities.

A bus stop is located directly in front of the site on Menangle Road and Don Moon Memorial Reserve is located less than 250m from the site. To the south and east, the site is surrounded by low density residential housing.

Figure 1.1 – Context plan showing the site, outlined in red. (Image: DKO).

Figure 1.2 – View of the site looking south-east from the corner of Menangle Rd and Gilbulla Ave showing typical site conditions. (Photo: Arterra 17 December 2025)

Figure 1.3 – View of the northern parcel looking north from the centre of the site showing typical site conditions and the scattered trees. (Photo: Arterra 17 December 2025)

Figure 1.4 – View of the southern parcel looking east from the street frontage of the site showing typical site conditions and the scattered trees, many of which are low or nil value trees. (Photo: Arterra 17 December 2025)

1.3 Planning History

A separate Part 5 application (P5-2026-75) for the demolition of the existing structures and removal of **58** trees has been submitted and approved prior to the lodgement of the SSDA. We specifically note that there are **no further tree removals** proposed as part of this concurrent rezoning and SSDA. All the assessed trees are shown on the plans and schedules for clarity and stakeholder understanding, however, as they are already approved for removal the trees shown on plans as 'removed' are not part of the scope of this report.

1.4 The Proposed Development

The SSD application seeks consent for the following:

- Site preparation works including excavation.
- Construction of two residential flat buildings containing 95 dwellings for the purpose of social and affordable housing.
- Construction of one level of basement parking for each residential flat building.
- Associated landscaping and communal open space.
- Infrastructure servicing.

A detailed description of the project is included in the EIS.

1.5 Aims of this Report

This arboricultural impact assessment has been prepared to identify the trees to be retained as part of the proposed works 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 works on the trees; and
- provide recommendations on the tree protection measures that will be required during the proposed works to ensure the trees are successfully retained.

The assessment is restricted to the trees within or immediately adjacent the site, that are likely to be impacted by the 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 other 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 TPZs: Arterra must be clearly notified of any proposed alterations to the plans or additional disturbance in the nominal TPZs, so that we can advise on the implications before any work is undertaken.

1.6 Relevant Controls or Legislation

Council Controls - Protected Trees

Trees and Vegetation are protected under the provisions of Clause 2.4: Trees and Vegetation of the Camden Development Control Plan 2019 (DCP). This Section of this DCP is made in accordance with Chapter 2 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (Biodiversity and Conservation SEPP) and describes the trees and vegetation that are protected under Part 2.3 of the Biodiversity and Conservation SEPP. Consent from Council must be obtained before any works can occur to a prescribed tree or vegetation as specified in the DCP.

Prescribed trees and vegetation

The definition of a Tree under this DCP is prescribed as being any tree, sapling or shrub which meets or exceeds one of the following:

- 3m or more in height
- Has a circumference of 300mm (100mm) diameter or more at a height of 1m above natural ground level; or
- Has a branch span of 3m or more.

Vegetation is defined as being Native Vegetation including any of the following:

- Trees (including saplings, shrubs or scrub)
- Understorey plants
- Groundcovers (any type of native, herbaceous vegetation)
- Plants occurring in a wetland.

Written consent is required from Council, via either a Tree Permit Application or Development Application for tree works, to damage, prune, or remove any prescribed trees or vegetation, unless the work is exempt under the DCP.

Exempt Tree and Vegetation Works are detailed in DCP clauses 2.4.3. The exempt species are shown in Table 1.

Note the exemptions do not apply to Trees or Vegetation forming part of a heritage item or heritage conservation area or that forms part of an Aboriginal object or is within a place of Aboriginal heritage significance. The DCP does not apply to trees identified as noxious weeds or similar (refer to Weedwise NSW) and the DCP specifies the trees in Table 1.2 as Exempt Species.

Table 1.2 – Exempt Tree Species in Camden LGA – Reproduced from CDCP 2019

Species Name	Common Name
Celtis sinensis	**Hackberry**
Gleditsia triacanthos	**Honey Locust**
Ligustrum sp.	**Privet**
Olea europaea subsp. cuspidata (syn. O. africana)	**African Olive**
Syagrus romanzoffiana	**Cocos Island / Queen Palm**

1.7 Conduct and Author 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.

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 35 years' experience.

Furthermore, Mr Smart confirm that he has read and agrees to be bound by the NSW Uniform Civil Procedure Rules 2005, Part 31 Division 2 Provisions, Schedule 7 - Expert witness code of conduct. The production and content of this report has not utilised, nor relied upon, any Artificial Intelligence (AI) generated content.

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.

1.8 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 close to retained trees. This is often achieved through hand digging using a shovel, trowel and/or fork with care not to damage the bark and wood of any roots. Dry vacuum extraction is an appropriate, non-destructive alternative to hand digging. When this work occurs within a TPZ and/or SRZ of a tree to be retained, a consulting arborist should always be present to monitor the works. Alternatively, services can be installed via under boring at a depth of not less than 1.2m below existing ground levels, when passing the tree(s).

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

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

1.9 Documents Reviewed

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

Total Surveying Solutions - Surveyors:

- Contour & Detail Survey, Service Locating: Sheets 1 to 8, Issued 11 December 2025

DKO Architects:

- Overall – Lower Ground 02, DA200, Rev. A
- Overall – Lower Ground 01, DA201, Rev. A
- Overall – Ground Floor, DA202, Rev. A
- Overall – Level One, DA203, Rev. A
- Overall – Level Two, DA204, Rev. A
- Overall – Level Three / Roof Level, DA205, Rev. A
- Overall – Level Four, DA206, Rev. A

Jane Irwin Landscape Architects:

- LA-003 – Landscape Master Plan, Rev A,
- LA-100 – Landscape GF Plan 1 – North, Rev. A,
- LA-101 – Landscape GF Plan2 – South, Rev. A,
- LA-102 – Landscape Basement 1 – North, Rev. A,
- LA-103 – Landscape Basement 2 – South, Rev. A,
- LA-301 – Sections 1 – North, Rev. A,
- LA-302 – Sections 2 – North, Rev. A,
- LA-303 – Sections 3 – South, Rev. A,

Mott Macdonald Engineers:

- 103419-MMD-CAM-XX-DR-C-0052 – Siteworks and Drainage-Northern Portion (Rev 2)
- 103419-MMD-CAM-XX-DR-C-0053 – Siteworks and Drainage-Southern Portion (Rev 2)

Based on the extent of the proposed works, we believe it can be achieved to avoid major trenching or disturbances to the existing trees that are proposed to be retained. It is assumed that any existing services that are no longer required will be capped off and left in situ, if they are located within the TPZ of trees nominated to be retained.

1.10 Assessment Methodology

Data Collection
On the 17 December 2025, Rob Smart of Arterra carried out a visual inspection of the site including a detailed assessment of the trees within and immediately adjacent the site, 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 works. An assessment was made of the likely extent of impacts on the TPZs, taking into account the likely impacts depending on the type of work being undertaken. Various area calculations and measurements were made in the CAD software of the likely incursions into the NRZs or SRZs.

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

Climatic data was obtained from the Bureau of Meteorology using statistics from Camden Airport which is approximately 2.4km to the north of the site. (http://www.bom.gov.au/climate/data/ accessed 19 February 2026)

1.11 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 ULE (Useful Life Expectancy) developed in 1993. It determines the time a tree may be expected to be retained based on its age, health, condition, safety 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. **"Very Low / 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.

1.12 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 if 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, very specific evidence that the tree will not be unduly impacted by the proposed works.

Whenever an encroachment is made into an 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 & 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 historical aerial imagery of the site shows it was completely cleared farmland in 1947. A few small trees are evident along the eastern site boundary in 1956. The 1990 image shows established trees across both portions of the site, the largest of these appear in the northern portion of the site on the eastern and western site boundaries. The 2010 imagery shows large established trees along the length of the eastern boundary of the northern portion of the site, although many are removed in the subsequent 2025 image. Little has change in the southern portion of the site since 2010 with most trees remaining from this time. Given the tree removals over the years, it appears unlikely that any of the trees on site pre-date 1960.

Refer to the following chronological images showing the progressive development of the site and its trees.

Figure 2.1 – Aerial image from 1947 shows the site as open farmland. (Source: NSW Spatial Services).

Figure 2.2 – Aerial image from 1956 shows the site remains cleared of trees with surrounding residential development under way. (Source: NSW Spatial Services).

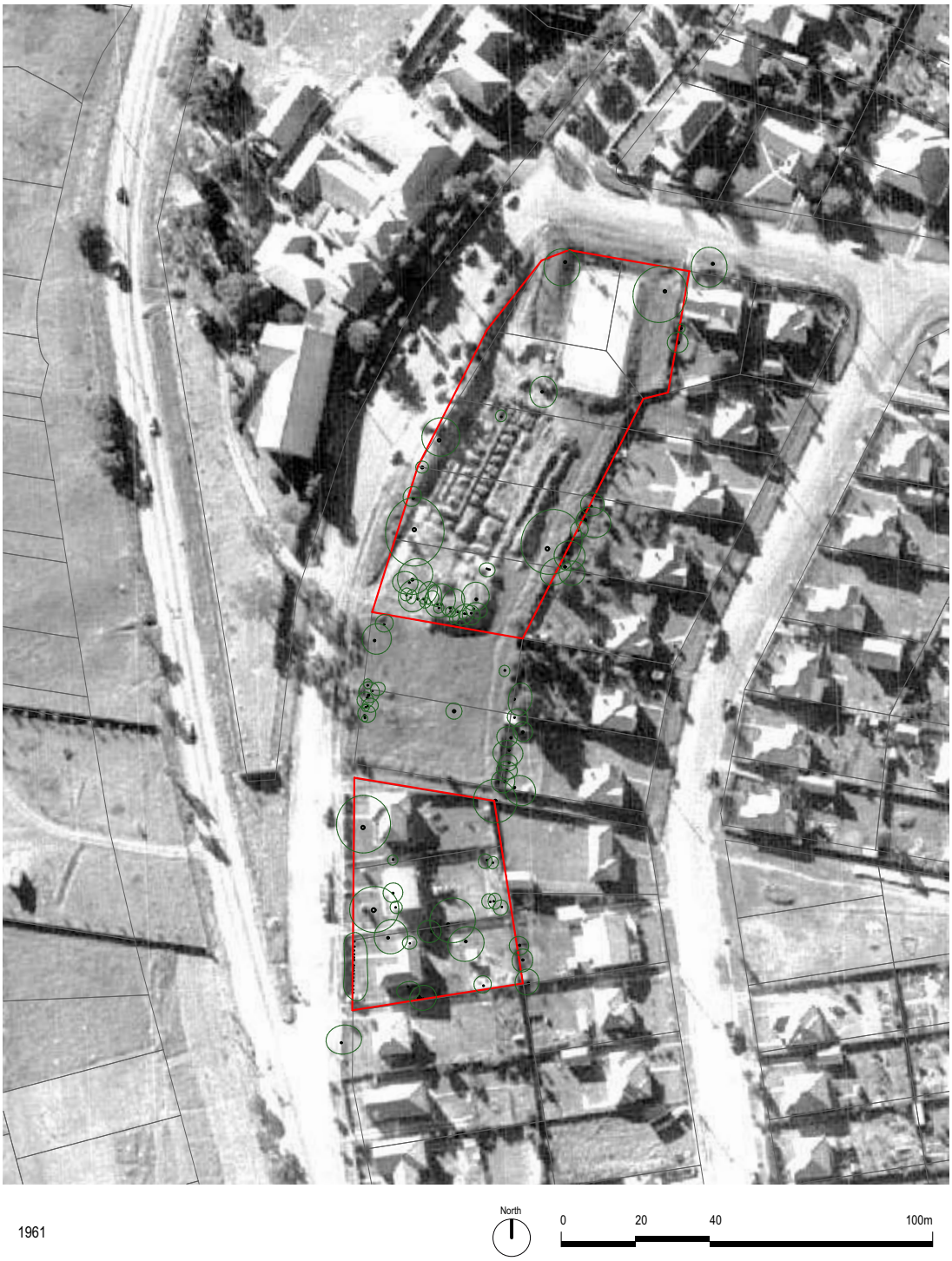


Figure 2.3 – Aerial image from 1961 shows continued residential development, with housing present in the southern portion of the site. The northern portion appears to be a commercial / factory operation of sorts. Some more established trees appear on the eastern site boundary to adjacent residences. (Source: NSW Spatial Services).

Figure 2.4 – Aerial image from 1969, although very poor quality, appears to show the current unit block in the northern portion of the site (Source: NSW Spatial Services).

Figure 2.5 –1990 aerial image shows the existing unit block and the surrounding trees are becoming more established. (Source: NSW Spatial Services).

Figure 2.6 – 2010 aerial image shows the site largely as it is today. Carparks in the northern portion have been formalised and linked while the residences remain in the southern portion. The trees are well established particularly along the eastern boundary and adjacent the northern carpark. (Source: Nearmap).

Figure 2.7 – 2025 aerial image shows the site layout unchanged since 2010. Many large trees have been removed along the eastern site boundary and a few have been removed from around the northern carpark. (Source: Nearmap).

2.2 Climate and Microclimate

Camden is in the south-western Sydney suburbs, approximately 50 km south-west of the Sydney CBD, and 43km inland from the coast at Cronulla. The general climate of this region is characterised by moderate temperatures, good rainfall and minimal climatic and weather extremes. It is typically described as a "temperate" climate with hot to warm summers and cold winters, with relatively uniform rainfalls greater than 800mm / year. There is no distinct dry season.

Climate data has been taken from Camden Airport AWS, approximately 2.4km north of the site. It has an average annual rainfall of 791mm, 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 March with an average of 101mm and the driest month being September with an average of only 40mm.

Maximum average daily temperatures, recorded at Camden Airport AWS (which is the closest recording station) range from 29.7ºC in January to 17.4ºC in June. The minimum average daily temperatures range from a high of 17.0ºC in January down to lows of 3.1ºC in July.

The site is located atop a highpoint in the local landscape. It may typically be described as a relatively exposed location, open to the elements and prevailing winds. The primary wind direction in winter is from the south-west in both the mornings and the afternoons. The primary wind direction in summer is from the south in the mornings while it is very predominantly from the north-east and east in the afternoons. This is common of coastal areas dominated by "sea breeze" affects. Sea breezes are caused by unequal heating and cooling of adjacent land and sea surfaces. A sea breeze is one that blows from the sea to the land in consequence of this differential heating. With a weak general wind circulation, a sea breeze will commence over the coastline soon after the land temperature begins to exceed the sea temperature (late morning to early afternoon). As the difference increases, so the sea breeze will become stronger and will extend farther inland. (Source: Australian Bureau of Meteorology) The strongest winds (>40km/h) are normally experienced from the westerly directions and later in the day.

There are no significant microclimatic influences, other than the relatively exposed, ridgeline position of the site.
(Source: Australian Bureau of Meteorology - accessed 19/02/2026)

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. (Chapman & Murphy, 1989)

A representative soil sample was taken in the north-east of the site near tree T2 in the north-east corner of the site. The results from the sample taken were very reflective of the naturally occurring soils and did indicate a red podzolic soil. From the topsoil sample taken at 200-250mm depth, the soil structure was weakly pedal with fine sub angular blocky peds. The soil texture was a medium clay with the colour being dark brown. The soil pH was neutral with a pH of 7.0. There was a distinct change from the A to B horizons at around 400-500mm depth. The subsoil from a depth of 700-750mm was also sampled. The subsoil structure was strongly pedal with medium to fine subangular blocky peds. The soil texture was a heavy clay. Its colour was a light mid-brown. The soil pH was unusually alkaline at pH 8.5.

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 very 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.

Figure 2.8– Indicative soil sample taken adjacent tree T02. The topsoil was moderately pedal medium to light clay over a subsoil structure of strongly pedal heavy clay. (Photo: Arterra 24/01/25)

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)

2.4 Identification and Assessment of Existing Trees

The original site assessments identified a total of **102** existing trees.

- **68** trees are within the site boundary.
- **34** trees are located on adjacent the sites, of which:
    - **2** are street trees (T69, T70) and
    - **32** trees are located on the adjacent properties.
- **58** are already approved for removal under separate Part 5 approval.

Approval has already been granted under a separate Part 5 application for the demolition of the existing structures and removal of **58** trees. We specifically note that there are **no tree removals** proposed as part of this concurrent rezoning and SSDA. Please see planning history section for tree removal history. Table 2.1 shows the breakdown of the pre-existing and remaining 44 retained tree population by their retention values.

Table 2.1 – Existing Tree Retention Values

Tree Retention Values	Retained Trees	% Total Retained Population
High	4	9%
Moderate	13	30%
Low	23	52%
Nil /Very Low	4	9%
TOTAL	**44**	**(100%)**

Following are the key observations related to the retained tree population across the site:

- **17** trees within or immediately adjacent the site are rated with either a 'High' or 'Moderate' retention value.
- **27** trees within or immediately adjacent the site are rated with a 'Low' or 'Nil/Very Low' retention value.
- The most significant trees to be retained are predominantly on the periphery of the site, along the eastern and western site boundaries.
- Trees on the adjacent residential properties, near the eastern site boundary, are also a focus for retention and protection. Some of these trees have canopies that overhang the boundary into the site. Care will need to be taken to protect the canopies of these adjacent 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 2.9 – High retention value - trees T25 (Eucalyptus melliodora), left and T53 (Angophora costata) to the right (Photo: Arterra 17/12/25)

Figure 2.10 – High retention value - Trees T07 (Cupressus macrocarpa cv.), left and moderate value tree T02 (Fraxinus pennsylvanica cv.) to the right (Photo: Arterra 17/12/25)

2.5 Tree Biology and Tree Care Basics

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

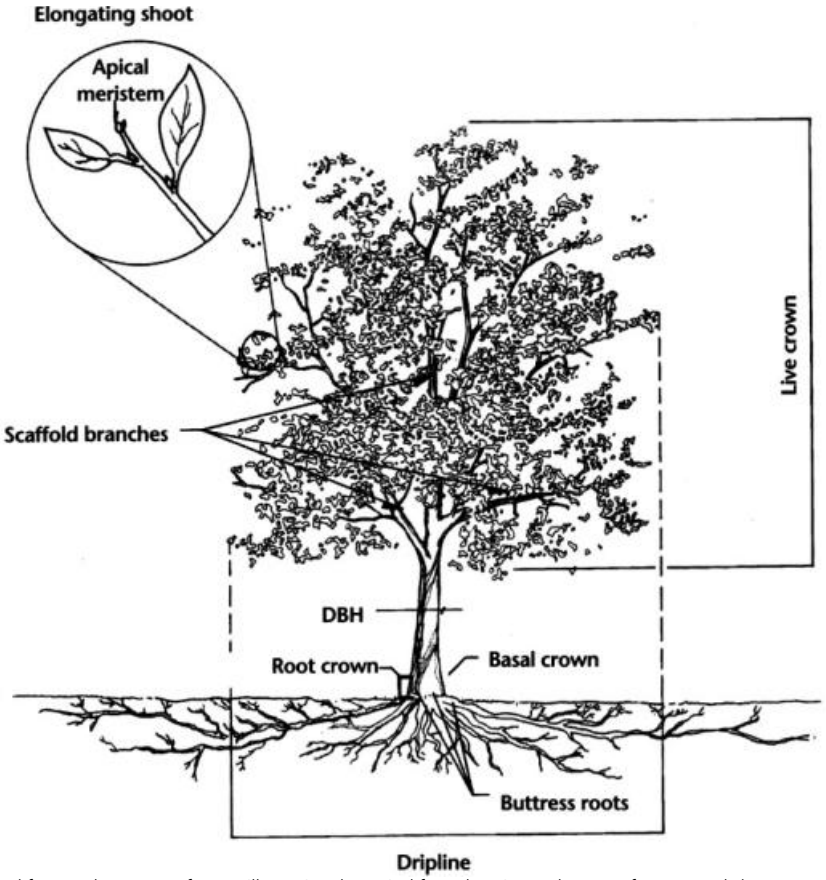


Figure 2.11– Typical form and structure of a tree illustrating the typical form, location and extent of root growth (Source: Matheny and Clark, 1998)

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 Works

The proposed works adjacent the trees within the site will result in some significant site disturbances that have the potential to create serious tree impacts if not well managed. Specifically, the works will involve:

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

Key Assumptions:

- Any new pedestrian paths that are located within the TPZs can and shall be constructed at or above the existing surface levels to minimise surface-oriented root impacts.
- Temporary battering, stockpiling or re-grading will not occur in any of the designated TPZ. Excavation for wall footings or basements adjacent to the TPZs will be undertaken using piling or other temporary vertical shoring methods. For any retaining walls situated near trees, their footings will be oriented away from the trees (ie. footings will extend no further than the wall face closest to the tree). Other construction approaches and details can be considered, with review and approval from Project Consulting Arborist.
- The general line of disturbance outside of the main building line has been typically estimated at a minimum of 1.2-1.5m 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 from Menangle Road and away from trees and designated TPZs, as much as possible.
- Where no spot levels or proposed contours are indicated it is assumed that the existing surface levels are retained.
- It is assumed that any new landscape grading or remediation within the nominated tree protection areas will be minimal and installed using high quality, imported manufactured topsoil. No cultivation of the existing soils shall be undertaken when within the defined TPZs.

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.

Approval has already been granted under a separate Part 5 application for demolition of the existing structures and removal of **58** trees. We specifically note that there are **no tree removals** proposed as part of this concurrent rezoning and SSDA. Please see Section 1.3 for Planning History. Table 2.1 shows the breakdown of the pre-existing and remaining 44 retained tree population by their retention values.

Table 2.2 - Trees to be Retained and Removed

Tree Retention Values	Trees to be removed	Trees to be retained
High	0	4
Moderate	0	13
Low	0	23
Nil /Should Remove	0	4
TOTAL	**Nil** (Refer Part 5 application)	**44**

As defined by AS4970-2025 - Protection of Trees on Development Sites, of the **44** retained trees:

- **39 trees** have nil or minimal foreseeable impacts from the proposed works.
- **3 trees** have what is considered a 'minor encroachment' (<10%) into their notional root zones (NRZs). These minor impacts are not expected to impact the long-term health of the trees.
- **2 trees** have a very 'moderate encroachment' (10%-20%) into their NRZs.
- **No trees** have a major encroachment' (>20%) into their nominal NRZs.
- **1 tree** has acceptable canopy pruning to provide construction period clearances.
- Some trees have minor surface impacts for the construction or removal of surface pavements. It is not considered that this will result in any significant root loss. This work is shown shaded on the Tree Retention and Removal Plan (T-02) and noted in the schedule. These minor surface impacts are to be managed and are not expected to impact the long-term health of the trees.

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

Tree ID	Species	NRZ Area	NRZ Incursion	NRZ % Incursion	Comment
T02	*Fraxinus pennsylvanica*	163m2	10m2	6%	Minor incursion considered acceptable
T07	*Cupressus macrocarpa cv.*	219m2	16m2	7%	Minor incursion considered acceptable.
T25	*Eucalyptus melliodora*	312m2	35m2	11%	Very Moderate incursion and considered acceptable.
T41	*Jacaranda mimosifolia*	113m2	6m2	5%	Minor incursion considered acceptable.
T53	*Angophora costata*	290m2	28m2	11%	Very Moderate incursion and considered acceptable.

Table 2.4 – Proposed Tree Canopy Pruning

Tree ID	Species	Canopy Area	Canopy Area Pruned	% Pruning	Comment
T07	*Cupressus macrocarpa cv.*	84	3	<5%	Minor pruning to accommodate scaffolding and underside of canopy for pedestrian clearance - considered acceptable.

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

Figure 2.12 – High retention value tree T07 (Cupressus macrocarpa cv.), will require some minor canopy pruning to a portion of the canopy for the building and scaffold clearances. This is to be minimised, as nominated on the plans with a narrow scaffold provision at an isolated corner of the building. This species is not tolerant of heavy pruning. Some minor pruning of lower branches may also be required for ultimate pedestrian access clearances. All pruning to be guided and overseen by the Project Consulting Arborist. (Photo: Arterra 17/12/25)

2.8 Surface and Other Impacts to be Managed

T1 – *Podocarpus elatus* (Plumb Pine) – Moderate Retention Value

- Contractor to retain and protect the low hanging canopy during any work.
- Surface impacts are expected to be managed during the removal of landscape pathways and reinstatement of gardens. Minimal root loss or impacts are expected. Levels are not to be excavated below the current pavement subbase.
- Upon completion of pavement demolition works, the temporary tree protection fencing for initial demolition is to be moved and expanded to fence the full extent of nominal TPZ.
- Exposed TPZ to be mulched and protected following demolition and during construction, to protect any exposed roots, as specified.

T2 – *Fraxinus pennsylvanica* (Green Ash) – Moderate Retention Value

- Contractor to retain and protect the low hanging canopy during any work.
- Surface impacts are expected to be managed during the removal of landscape pathways. Minimal root loss or impacts are expected. Levels are not to be excavated below current pavement subbase.
- Upon completion of demolition works, the temporary tree protection fencing is to be moved and expanded to fence the full extent of nominal TPZ for the remainder of the works.
- Exposed TPZ to be mulched following demolition and during construction, to protect any exposed roots, as specified.

T25 – *Eucalyptus melliodora* (Yellow Box) – High Retention Value,

- Surface impacts are expected to be managed during the removal of driveway and kerbs. Minimal root loss or impacts are expected. Levels are not to be excavated below current pavement subbase.
- Upon completion of the demolition works, the temporary tree protection fencing is to be moved and expanded to fence the extent of the TPZ as noted on the plans for the remainder of works.
- The exposed TPZ is to be mulched following demolition and during construction, to protect any exposed roots, as specified.

T53 *Angophora costata* (Smooth-barked Apple) – High Retention Value

It is highly likely that roots from this tree will have extended under the existing building and under adjacent landscape structures. The existing building does not have any below ground basement or structure, and is unlikely to have significant footings, therefore, it is highly likely that tree roots have travelled and grown beneath the existing building favouring the more desirable moist and cool environment provided by the building. Therefore, the NRZ of this tree is shown extending under the pre-existing adjacent building. The following points must be observed to retain and protect this tree.

- Contractor to retain and protect all lower hanging canopy.
- Trunk protection battens are to be installed.
- The existing concrete driveway running past T53 is to be maintained as 'ground protection' until all major truck movements are completed and may only be demolished and removed at the completion of the major construction in this area of the site.
- The area beneath the existing suspended and relatively light weight building to be demolished is to be treated as a TPZ despite being outside of the initial demolition period temporary protection fencing.
- Any existing services are to be capped off and left in situ, if below ground and inside the TPZ.
- Some hand tool demolition and construction may be required to protect any obvious surface tree roots. Surface impacts are expected to be managed during the construction and reinstatement of surrounding landscape pathways or decking.
- Typically, no access, stockpiling or machinery movement will be permitted in the construction period TPZ area without arborist's endorsement.

Figure 2.13 – T53 is a prominent High Value tree on the Menangle Road frontage. This tree is to be retained and protected, with the project consulting arborist present to oversee any construction works within the demarcated TPZ (Photo: Arterra 24 April 25).

2.9 Existing Canopy Cover

Existing canopy coverage has been calculated as a percentage (%) of the total site area (total site area 7,184m^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. The ultimate proposed canopy coverage, once a new development is planned and new tree planting is undertaken, would exceed this existing coverage. The loss of canopy cover is consider acceptable and adequately compensated by the proposed new tree planting.

Table 2.5 - Existing Canopy Cover

Tree Canopy Coverage	Canopy Coverage (m^2)	% of Total Site Area
Existing Study Area	7,184 m2	100%
Existing Canopy Coverage – Total	1,817 m2	25%
Existing Canopy Coverage – To be retained	730 m2	10%
Existing Canopy Coverage – To be removed	1,087 m2	15%

Figure 2.14 – Overall site plan showing existing urban canopy cover and relative percentages. (Source: Arterra)

3.0 TREE MANAGEMENT RECOMMENDATIONS

3.1 Potential Tree Related Impacts to be Managed During Works

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

- Unnecessary root loss and disturbance due to careless construction, excavations and stockpiling of materials;
- Compaction, crushing, scalping or disturbance of the surface roots and soils of the tree root zones from careless excavations, trafficking, or placement, storage and stockpiling of materials;
- Contamination of the soils from the preparation of chemicals, wash down and cleaning of equipment, refuelling of vehicles/ machinery or dumping of waste;
- Compaction of the tree root zones from general trafficking and the parking of vehicles/ plant equipment;
- Root disturbance or severance from any undocumented or careless trenching, cutting and soil level changes;
- Physical damage to the tree trunks and canopy from cranes, demolition equipment, passing heavy machinery or vehicles.

The following section of this report provides the recommendations and proposed measures that 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 impacts on the existing trees identified to be retained.

- Appropriately fence all TPZs for the duration of all major site work. See Appendix 4.1 Tree Plans for locations and extent.
- 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.
- Mulching of the exposed TPZ where specified in Tree Plans. This will protect exposed roots, aid tree health with soil moisture retention, limit possible compaction from pedestrian traffic, and improve soil conditions within the TPZs.
- **The project Arborist must be present to observe and direct all ground level works within the defined TPZ near T53.**
- **There shall be no machinery trafficking of the exposed ground within the defined TPZs following the demolition of overlying structures, ground floor slabs or driveway pavements. If trafficking is required, suitable protective boards or filling sand shall be placed over any exposed roots.**
- Any removal of remaining minor structures or slabs by machine shall commence from a point nearest the tree, with the machinery positioned on the existing pavement/slab and any spoil to be dragged out or otherwise removed via the existing pavement/slab.
- 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 Consulting Arborist before proceeding further.
- Carefully control and fence access within the site so that unauthorised movement and parking does not occur through any TPZs.
- Ensure all the above and below ground existing services running through any TPZs are left in place and simply capped off in situ.
- Minimise the re-grading of the ground surface within the identified TPZs. No excavation is to occur below pre-existing sub-base levels. Visible surface roots are to be retained and protected and some hand tool work may be required.
- Do not allow storage or stockpiling of any materials or site sheds within established TPZs unless it can be demonstrated that this will not impact on the tree retention, and it is specifically approved in writing by the Project Consulting Arborist.

3.3 Canopy Pruning and Pruning Methodology

To be constructed, the proposal will require canopy pruning to **1 tree** to provide building and construction clearances. Refer to Table 2.4 and Appendix 4.1 for details. All pruning should be minimised where possible. In the author's opinion, the proposed pruning is considered acceptable and the general habit and suitable amounts of foliage are maintained. Where pruning is required, the following must be undertaken:

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

3.4 Proposed Tree Protection & Activity Sequencing

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

1. This Tree Protection Specification & Plan is to be prepared and issued as part of the construction contract prior to commencement of work.
2. The Project Consulting Arborist, 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, etc.).
3. Contractor 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. Ground protection boards, or equivalent, are to be place in areas where the TPZ cannot be completely fenced or unanticipated access or scaffold placement is required.
5. The TPZ is to be clearly defined and fenced off with a 1.8m high metal or plywood temporary fence prior to any work in the vicinity of the trees as shown on the Tree Plans. Any required rumble boards shall be installed to protect TPZs where temporary access is required.
6. The designated TPZs are to be mulched with 75mm of recycled hardwood woodchip mulch to improve soil conditions around tree where indicated on the plans, or roots are exposed.
7. Plywood (or similar) is to be placed under any scaffolds or pedestrian works paths when they are running through any identified TPZs.
8. Building works to be completed (external).
9. Contractor to remove the TPZ fencing and only then install final pathways and landscaping within the TPZs under the trees, but only after construction of the building exterior and all civil works are completed.

3.5 Work Near Trees or within TPZs

All work within TPZs shall be supervised and overseen by a qualified project consulting arborist. Any remaining and existing paving sections that are being removed must not be dragged across exposed roots. With existing pavement removed, the ground and roots are to be appropriately protected until new paving is installed and trafficking of the area minimised.

3.6 Tree Protection Fencing & Definition of TPZs

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

3.7 Ground Protection within TPZs

Vehicular movement and access shall typically not be required or approved through the TPZs. If it is unavoidable 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 3.1 – Example of acceptable Tree Protection Area ground protection (Photo: Arterra)

Figure 3.2 – Example of acceptable Tree Protection Area ground protection (Source: Samson)

3.8 Trunk and Lower Branch Protection

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

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

3.9 Provision of Temporary Irrigation

No temporary irrigation system is anticipated for the site. If unexpected ground disturbance, other climatic factors or pest and disease dictate, at the sole discretion of the Project Consulting Arborist, a temporary and automated (battery powered timer is sufficient) watering system may need to be placed within the TPZs to maintain adequate water to the retained trees and help maintain their healthy condition. This can be a surface mounted 'residential-style' soaker hose and/or surface sprinkler systems. It is to be surface visible and spray delivered so that 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.

3.10 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.

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.

3.11 Final Landscaping within TPZs

Once final levels are set by the finished structural elements. The final trimming and landscaping shall be judiciously undertaken. The final pedestrian pavements shall be installed without undue excavation or compaction to the soil and all soft landscaping within the tree protection zone will be installed with care to avoid root disturbance via irrigation trenching, lighting installation and the planting of larger plants. The installation of 200-300mm of new garden mix topsoil over the pre-existing soil will provide a suitable medium in which to plant new plants without damage to existing tree roots. Permanent irrigation (if used) shall be installed as spray heads located outside of TPZs and spraying inwards. All other services such as electrical services shall also be designed and installed to avoid any excavation or trenching around the trees.

3.12 References

- Chapman, G.A and Murphy, C.L 1989, Soil landscapes of the Sydney 1:100 000 Sheet Report, Soil Conservation Service of NSW, Sydney, NSW.
- Harris, R.W, Clark, J.R & Matheny, Nelda P, 1999*, Arboriculture: Integrated management of landscape trees, shrubs and vines*. 3rd Ed. Prentice Hall. New Jersey, US
- Matheny, Nelda P and Clark J.R, 1998, *Trees and development - a technical guide to preservation of trees during land development*, International Society of Arboriculture, Illinois, US.
- Roberts, J. Jackson, N. and Smith, M. 2006. *Tree roots in the built environment. No.8* Research for Amenity Trees, Dept. for Communities and Local Government, London.
- Standards Australia, 2007, *AS 4373-2007 Pruning of amenity trees*. Standards Australia, Sydney.
- Standards Australia, 2009, *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 NOTES

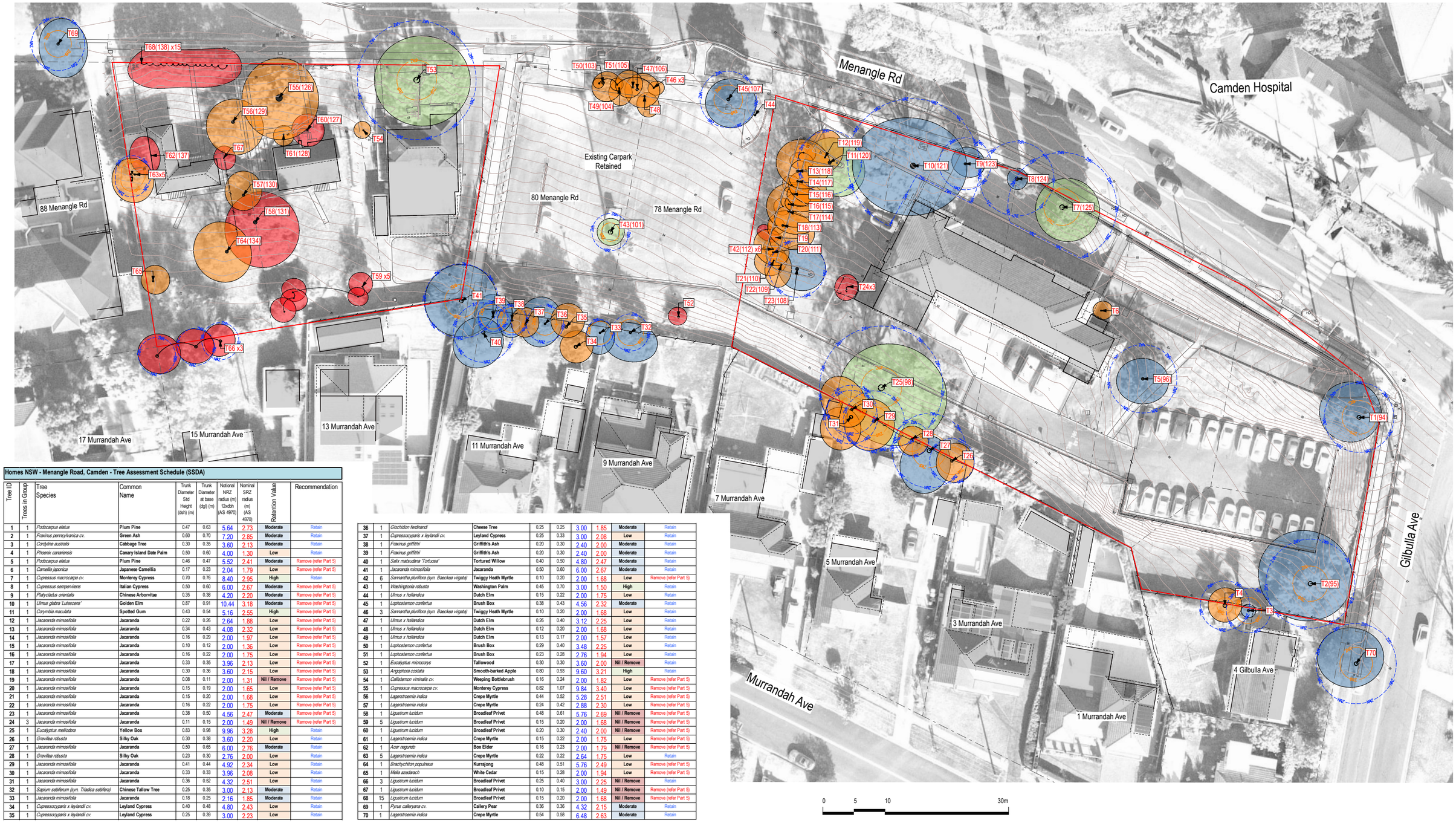
The proposed retention value of the trees was determined based on a considered combination of the size, age, condition and suitability of the tree. Each tree was then ranked according to one of 4 retention categories;

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.

Tree Retention Value Legend

- High Retention value
- Moderate Retention value
- Low Retention value (Note: typically no NRZ's shown for these trees)
- Nil Retention value (should remove) (Note : typically 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
- T26 — Tree Identification Number (No. in brackets (eg.126) = physical tag no. when present)



Homes NSW - Menangle Road, Camden - Tree Assessment Schedule (SSDA)

Tree ID	Trees in Group	Tree Species	Common Name	Trunk Diameter Std Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	Notional NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	*Podocarpus elatus*	**Plum Pine**	0.47	0.63	5.64	2.73	Moderate	Retain
2	1	*Fraxinus pennsylvanica cv.*	**Green Ash**	0.60	0.70	7.20	2.85	Moderate	Retain
3	1	*Cordyline australis*	**Cabbage Tree**	0.30	0.35	3.60	2.13	Moderate	Retain
4	1	*Phoenix canariensis*	**Canary Island Date Palm**	0.50	0.60	4.00	1.30	Low	Retain
5	1	*Podocarpus elatus*	**Plum Pine**	0.46	0.47	5.52	2.41	Moderate	Remove (refer Part 5)
6	1	*Camellia japonica*	**Japanese Camellia**	0.17	0.23	2.04	1.79	Low	Remove (refer Part 5)
7	1	*Cupressus macrocarpa cv.*	**Monterey Cypress**	0.70	0.76	8.40	2.95	High	Retain
8	1	*Cupressus sempervirens*	**Italian Cypress**	0.50	0.60	6.00	2.67	Moderate	Remove (refer Part 5)
9	1	*Platycladus orientalis*	**Chinese Arborvitae**	0.35	0.38	4.20	2.20	Moderate	Remove (refer Part 5)
10	1	*Ulmus glabra 'Lutescens'*	**Golden Elm**	0.87	0.91	10.44	3.18	Moderate	Remove (refer Part 5)
11	1	*Corymbia maculata*	**Spotted Gum**	0.43	0.54	5.16	2.55	High	Remove (refer Part 5)
12	1	*Jacaranda mimosifolia*	**Jacaranda**	0.22	0.26	2.64	1.88	Low	Remove (refer Part 5)
13	1	*Jacaranda mimosifolia*	**Jacaranda**	0.34	0.43	4.08	2.32	Low	Remove (refer Part 5)
14	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.29	2.00	1.97	Low	Remove (refer Part 5)
15	1	*Jacaranda mimosifolia*	**Jacaranda**	0.10	0.12	2.00	1.36	Low	Remove (refer Part 5)
16	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.22	2.00	1.75	Low	Remove (refer Part 5)
17	1	*Jacaranda mimosifolia*	**Jacaranda**	0.33	0.35	3.96	2.13	Low	Remove (refer Part 5)
18	1	*Jacaranda mimosifolia*	**Jacaranda**	0.30	0.36	3.60	2.15	Low	Remove (refer Part 5)
19	1	*Jacaranda mimosifolia*	**Jacaranda**	0.08	0.11	2.00	1.31	Nil / Remove	Remove (refer Part 5)
20	1	*Jacaranda mimosifolia*	**Jacaranda**	0.15	0.19	2.00	1.65	Low	Remove (refer Part 5)
21	1	*Jacaranda mimosifolia*	**Jacaranda**	0.15	0.20	2.00	1.68	Low	Remove (refer Part 5)
22	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.22	2.00	1.75	Low	Remove (refer Part 5)
23	1	*Jacaranda mimosifolia*	**Jacaranda**	0.38	0.50	4.56	2.47	Moderate	Remove (refer Part 5)
24	3	*Jacaranda mimosifolia*	**Jacaranda**	0.11	0.15	2.00	1.49	Nil / Remove	Remove (refer Part 5)
25	1	*Eucalyptus maellodora*	**Yellow Box**	0.83	0.98	9.96	3.28	High	Retain
26	1	*Grevillea robusta*	**Silky Oak**	0.30	0.38	3.60	2.20	Low	Retain
27	1	*Jacaranda mimosifolia*	**Jacaranda**	0.50	0.65	6.00	2.76	Moderate	Retain
28	1	*Grevillea robusta*	**Silky Oak**	0.23	0.30	2.76	2.00	Low	Retain
29	1	*Jacaranda mimosifolia*	**Jacaranda**	0.41	0.44	4.92	2.34	Low	Retain
30	1	*Jacaranda mimosifolia*	**Jacaranda**	0.33	0.33	3.96	2.08	Low	Retain
31	1	*Jacaranda mimosifolia*	**Jacaranda**	0.36	0.52	4.32	2.51	Low	Retain
32	1	*Sapium sebiferum (syn. Triadica sebifera)*	**Chinese Tallow Tree**	0.25	0.35	3.00	2.13	Moderate	Retain
33	1	*Jacaranda mimosifolia*	**Jacaranda**	0.18	0.25	2.16	1.85	Moderate	Retain
34	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.40	0.48	4.80	2.43	Low	Retain
35	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.25	0.39	3.00	2.23	Low	Retain
36	1	*Glochidion ferdinandi*	**Cheese Tree**	0.25	0.25	3.00	1.85	Moderate	Retain
37	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.25	0.33	3.00	2.08	Low	Retain
38	1	*Fraxinus griffithii*	**Griffith's Ash**	0.20	0.30	2.40	2.00	Moderate	Retain
39	1	*Fraxinus griffithii*	**Griffith's Ash**	0.20	0.30	2.40	2.00	Moderate	Retain
40	1	*Salix matsudana 'Tortuosa'*	**Tortured Willow**	0.40	0.50	4.80	2.47	Moderate	Retain
41	1	*Jacaranda mimosifolia*	**Jacaranda**	0.50	0.60	6.00	2.67	Moderate	Retain
42	6	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	0.10	0.20	2.00	1.68	Low	Remove (refer Part 5)
43	1	*Washingtonia robusta*	**Washington Palm**	0.45	0.70	3.00	1.50	High	Retain
44	1	*Ulmus x hollandica*	**Dutch Elm**	0.15	0.22	2.00	1.75	Low	Retain
45	1	*Lophostemon confertus*	**Brush Box**	0.38	0.43	4.56	2.32	Moderate	Retain
46	3	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	0.10	0.20	2.00	1.68	Low	Retain
47	1	*Ulmus x hollandica*	**Dutch Elm**	0.26	0.40	3.12	2.25	Low	Retain
48	1	*Ulmus x hollandica*	**Dutch Elm**	0.12	0.20	2.00	1.68	Low	Retain
49	1	*Ulmus x hollandica*	**Dutch Elm**	0.13	0.17	2.00	1.57	Low	Retain
50	1	*Lophostemon confertus*	**Brush Box**	0.29	0.40	3.48	2.25	Low	Retain
51	1	*Lophostemon confertus*	**Brush Box**	0.23	0.28	2.76	1.94	Low	Retain
52	1	*Eucalyptus microcorys*	**Tallowood**	0.30	0.30	3.60	2.00	Nil / Remove	Retain
53	1	*Angophora costata*	**Smooth-barked Apple**	0.80	0.93	9.60	3.21	High	Retain
54	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.16	0.24	2.00	1.82	Low	Remove (refer Part 5)
55	1	*Cupressus macrocarpa cv.*	**Monterey Cypress**	0.82	1.07	9.84	3.40	Low	Remove (refer Part 5)
56	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.44	0.52	5.28	2.51	Low	Remove (refer Part 5)
57	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.24	0.42	2.88	2.30	Low	Remove (refer Part 5)
58	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.48	0.61	5.76	2.69	Nil / Remove	Remove (refer Part 5)
59	5	*Ligustrum lucidum*	**Broadleaf Privet**	0.15	0.20	2.00	1.68	Nil / Remove	Remove (refer Part 5)
60	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.20	0.30	2.40	2.00	Nil / Remove	Remove (refer Part 5)
61	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.15	0.22	2.00	1.75	Low	Remove (refer Part 5)
62	1	*Acer negundo*	**Box Elder**	0.16	0.23	2.00	1.79	Nil / Remove	Remove (refer Part 5)
63	5	*Lagerstroemia indica*	**Crepe Myrtle**	0.22	0.22	2.64	1.75	Low	Retain
64	1	*Brachychiton populneus*	**Kurrajong**	0.48	0.51	5.76	2.49	Low	Remove (refer Part 5)
65	1	*Melia azedarach*	**White Cedar**	0.15	0.28	2.00	1.94	Low	Remove (refer Part 5)
66	3	*Ligustrum lucidum*	**Broadleaf Privet**	0.25	0.40	3.00	2.25	Nil / Remove	Retain
67	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.10	0.15	2.00	1.49	Nil / Remove	Remove (refer Part 5)
68	15	*Ligustrum lucidum*	**Broadleaf Privet**	0.15	0.20	2.00	1.68	Nil / Remove	Remove (refer Part 5)
69	1	*Pyrus calleryana cv.*	**Callery Pear**	0.36	0.36	4.32	2.15	Moderate	Retain
70	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.54	0.58	6.48	2.63	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.

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REVISION	DESCRIPTION	CHKD	DATE
A	For SSDA Submission	RWS	26/6/26

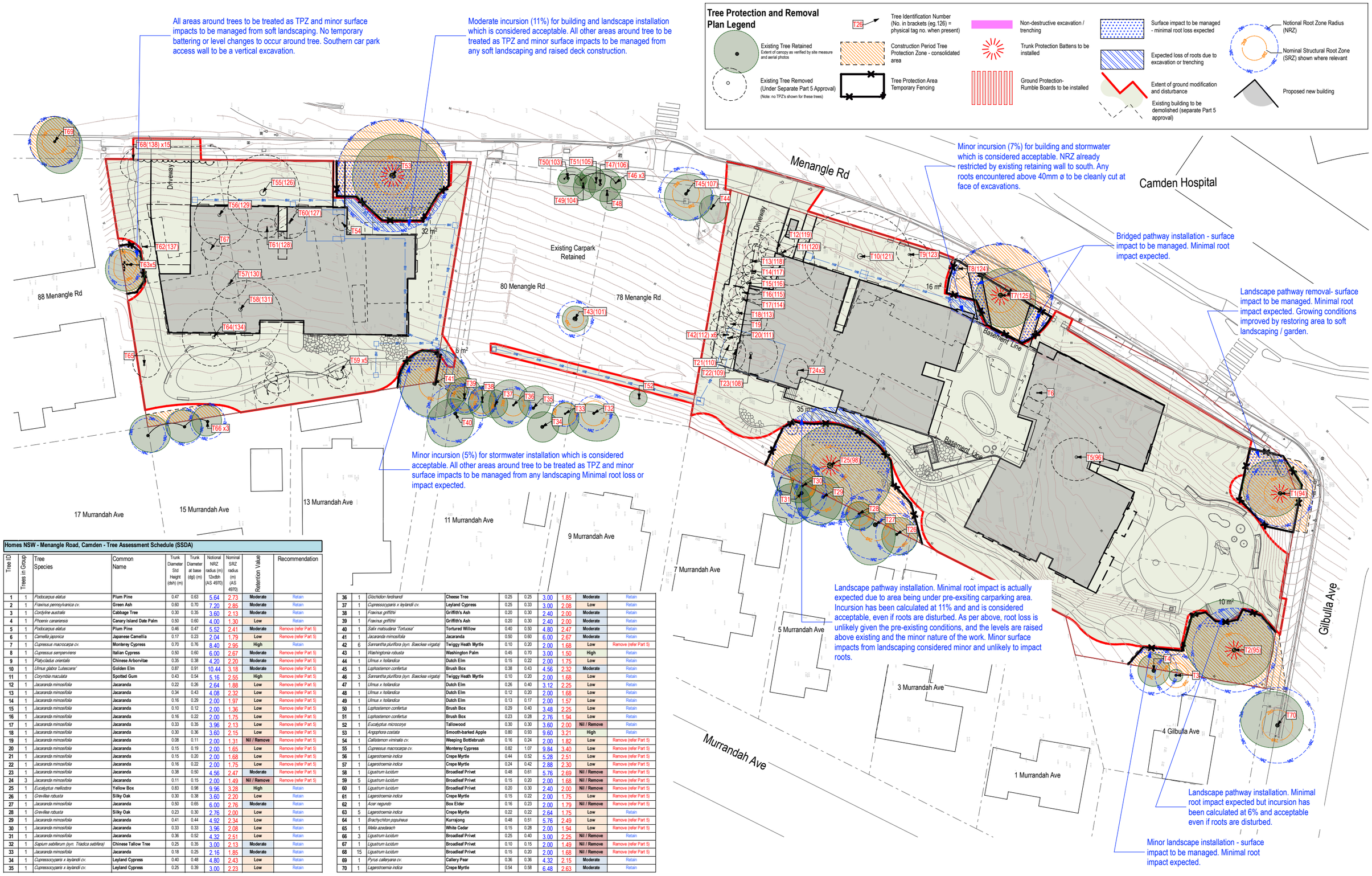
PROJECT & CLIENT
Homes NSW Menangle Road, Camden
Homes NSW

Project No : 25.23
Designed : RWS
Drawn : RWS/DD
North Scale : 1:300@A1/1:600@A3

DRAWING TITLE
Tree Retention Value Plan

DRAWING NUMBER T-01 REVISION A

Plotted at : 8:31 am 26/6/2026



Homes NSW - Menangle Road, Camden - Tree Assessment Schedule (SSDA)

Tree ID	Trees in Group	Tree Species	Common Name	Trunk Diameter Std Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	Notional NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	*Podocarpus elatus*	**Plum Pine**	0.47	0.63	5.64	2.73	**Moderate**	Retain
2	1	*Fraxinus pennsylvanica cv.*	**Green Ash**	0.60	0.70	7.20	2.85	**Moderate**	Retain
3	1	*Cordyline australis*	**Cabbage Tree**	0.30	0.35	3.60	2.13	**Moderate**	Retain
4	1	*Phoenix canariensis*	**Canary Island Date Palm**	0.50	0.60	4.00	1.30	**Low**	Retain
5	1	*Podocarpus elatus*	**Plum Pine**	0.46	0.47	5.52	2.41	**Moderate**	Remove (refer Part 5)
6	1	*Camellia japonica*	**Japanese Camellia**	0.17	0.23	2.04	1.79	**Low**	Remove (refer Part 5)
7	1	*Cupressus macrocarpa cv.*	**Monterey Cypress**	0.70	0.76	8.40	2.95	**High**	Retain
8	1	*Cupressus sempervirens*	**Italian Cypress**	0.50	0.60	6.00	2.67	**Moderate**	Remove (refer Part 5)
9	1	*Platycladus orientalis*	**Chinese Arborvitae**	0.35	0.38	4.20	2.20	**Moderate**	Remove (refer Part 5)
10	1	*Ulmus glabra 'Lutescens'*	**Golden Elm**	0.87	0.91	10.44	3.18	**Moderate**	Remove (refer Part 5)
11	1	*Corymbia maculata*	**Spotted Gum**	0.43	0.54	5.16	2.55	**High**	Remove (refer Part 5)
12	1	*Jacaranda mimosifolia*	**Jacaranda**	0.22	0.26	2.64	1.88	**Low**	Remove (refer Part 5)
13	1	*Jacaranda mimosifolia*	**Jacaranda**	0.34	0.43	4.08	2.32	**Low**	Remove (refer Part 5)
14	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.29	2.00	1.97	**Low**	Remove (refer Part 5)
15	1	*Jacaranda mimosifolia*	**Jacaranda**	0.10	0.12	2.00	1.36	**Low**	Remove (refer Part 5)
16	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.22	2.00	1.75	**Low**	Remove (refer Part 5)
17	1	*Jacaranda mimosifolia*	**Jacaranda**	0.33	0.35	3.96	2.13	**Low**	Remove (refer Part 5)
18	1	*Jacaranda mimosifolia*	**Jacaranda**	0.30	0.36	3.60	2.15	**Low**	Remove (refer Part 5)
19	1	*Jacaranda mimosifolia*	**Jacaranda**	0.08	0.11	2.00	1.31	**Nil / Remove**	Remove (refer Part 5)
20	1	*Jacaranda mimosifolia*	**Jacaranda**	0.15	0.19	2.00	1.65	**Low**	Remove (refer Part 5)
21	1	*Jacaranda mimosifolia*	**Jacaranda**	0.15	0.20	2.00	1.68	**Low**	Remove (refer Part 5)
22	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.22	2.00	1.75	**Low**	Remove (refer Part 5)
23	1	*Jacaranda mimosifolia*	**Jacaranda**	0.38	0.50	4.56	2.47	**Moderate**	Remove (refer Part 5)
24	3	*Jacaranda mimosifolia*	**Jacaranda**	0.11	0.15	2.00	1.49	**Nil / Remove**	Remove (refer Part 5)
25	1	*Eucalyptus maillodora*	**Yellow Box**	0.83	0.98	9.96	3.28	**High**	Retain
26	1	*Grevillea robusta*	**Silky Oak**	0.30	0.38	3.60	2.20	**Low**	Retain
27	1	*Jacaranda mimosifolia*	**Jacaranda**	0.50	0.65	6.00	2.76	**Moderate**	Retain
28	1	*Grevillea robusta*	**Silky Oak**	0.23	0.30	2.76	2.00	**Low**	Retain
29	1	*Jacaranda mimosifolia*	**Jacaranda**	0.41	0.44	4.92	2.34	**Low**	Retain
30	1	*Jacaranda mimosifolia*	**Jacaranda**	0.33	0.33	3.96	2.08	**Low**	Retain
31	1	*Jacaranda mimosifolia*	**Jacaranda**	0.36	0.52	4.32	2.51	**Low**	Retain
32	1	*Sapium sebiferum (syn. Triadica sebifera)*	**Chinese Tallow Tree**	0.25	0.35	3.00	2.13	**Moderate**	Retain
33	1	*Jacaranda mimosifolia*	**Jacaranda**	0.18	0.25	2.16	1.85	**Moderate**	Retain
34	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.40	0.48	4.80	2.43	**Low**	Retain
35	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.25	0.39	3.00	2.23	**Low**	Retain
36	1	*Glochidion ferdinandi*	**Cheese Tree**	0.25	0.25	3.00	1.85	**Moderate**	Retain
37	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.25	0.33	3.00	2.08	**Low**	Retain
38	1	*Fraxinus griffithii*	**Griffith's Ash**	0.20	0.30	2.40	2.00	**Moderate**	Retain
39	1	*Fraxinus griffithii*	**Griffith's Ash**	0.20	0.30	2.40	2.00	**Moderate**	Retain
40	1	*Salix matsudana 'Tortuosa'*	**Tortured Willow**	0.40	0.50	4.80	2.47	**Moderate**	Retain
41	1	*Jacaranda mimosifolia*	**Jacaranda**	0.50	0.60	6.00	2.67	**Moderate**	Retain
42	6	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	0.10	0.20	2.00	1.68	**Low**	Remove (refer Part 5)
43	1	*Washingtonia robusta*	**Washington Palm**	0.45	0.70	3.00	1.50	**High**	Retain
44	1	*Ulmus x hollandica*	**Dutch Elm**	0.15	0.22	2.00	1.75	**Low**	Retain
45	1	*Lophostemon confertus*	**Brush Box**	0.38	0.43	4.56	2.32	**Moderate**	Retain
46	3	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	0.10	0.20	2.00	1.68	**Low**	Retain
47	1	*Ulmus x hollandica*	**Dutch Elm**	0.26	0.40	3.12	2.25	**Low**	Retain
48	1	*Ulmus x hollandica*	**Dutch Elm**	0.12	0.20	2.00	1.68	**Low**	Retain
49	1	*Ulmus x hollandica*	**Dutch Elm**	0.13	0.17	2.00	1.57	**Low**	Retain
50	1	*Lophostemon confertus*	**Brush Box**	0.29	0.40	3.48	2.25	**Low**	Retain
51	1	*Lophostemon confertus*	**Brush Box**	0.23	0.28	2.76	1.94	**Low**	Retain
52	1	*Eucalyptus microcorys*	**Tallowood**	0.30	0.30	3.60	2.00	**Nil / Remove**	Retain
53	1	*Angophora costata*	**Smooth-barked Apple**	0.80	0.93	9.60	3.21	**High**	Retain
54	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.16	0.24	2.00	1.82	**Low**	Remove (refer Part 5)
55	1	*Cupressus macrocarpa cv.*	**Monterey Cypress**	0.82	1.07	9.84	3.40	**Low**	Remove (refer Part 5)
56	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.44	0.52	5.28	2.51	**Low**	Remove (refer Part 5)
57	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.24	0.42	2.88	2.30	**Low**	Remove (refer Part 5)
58	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.48	0.61	5.76	2.69	**Nil / Remove**	Remove (refer Part 5)
59	5	*Ligustrum lucidum*	**Broadleaf Privet**	0.15	0.20	2.00	1.68	**Nil / Remove**	Remove (refer Part 5)
60	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.20	0.30	2.40	2.00	**Nil / Remove**	Remove (refer Part 5)
61	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.15	0.22	2.00	1.75	**Low**	Remove (refer Part 5)
62	1	*Acer negundo*	**Box Elder**	0.16	0.23	2.00	1.79	**Nil / Remove**	Remove (refer Part 5)
63	5	*Lagerstroemia indica*	**Crepe Myrtle**	0.22	0.22	2.64	1.75	**Low**	Retain
64	1	*Brachychiton populneus*	**Kurrajong**	0.48	0.51	5.76	2.49	**Low**	Remove (refer Part 5)
65	1	*Melia azedarach*	**White Cedar**	0.15	0.28	2.00	1.94	**Low**	Remove (refer Part 5)
66	3	*Ligustrum lucidum*	**Broadleaf Privet**	0.25	0.40	3.00	2.25	**Nil / Remove**	Retain
67	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.10	0.15	2.00	1.49	**Nil / Remove**	Remove (refer Part 5)
68	15	*Ligustrum lucidum*	**Broadleaf Privet**	0.15	0.20	2.00	1.68	**Nil / Remove**	Remove (refer Part 5)
69	1	*Pyrus calleryana cv.*	**Callery Pear**	0.36	0.36	4.32	2.15	**Moderate**	Retain
70	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.54	0.58	6.48	2.63	**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.

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REVISION	DESCRIPTION	CHKD	DATE
A	For SSDA Submission	RWS	26/6/26

PROJECT & CLIENT
Homes NSW Menangle Road, Camden
Homes NSW

Project No : 25.23
Designed : RWS
Drawn : RWS/DD
Scale : 1:300@A1/1:600@A3

DRAWING TITLE
Tree Protection Plan

DRAWING NUMBER T-02
REVISION A

Plotted at : 8:32 am 26/6/2026

NOTE : All pruning to be overseen and directed by nominated Project Consulting Arborist and in accordance with AS4373.

SPECIAL NOTE : This small portion of building is to have a special scaffold provision with a maximum width of 1.2m width outside building facade to limit pruning impacts to T7 which is a dense tree intolerant of pruning. The builder is to cater for this and allow for any necessary additional access and egress requirements, that are to be outside of the tree canopy being protected, and to allow for this narrowing provision.

Tree Canopy Impact - Pruning Plan Legend

- Existing Tree Retained — Extent of Canopy as verified by site measure and aerial photos
- T26 — Tree Identification Number
- 1537 m² — Extent of required canopy pruning for construction and proposed building clearances
- Tree Protection Area Temporary Fencing
- Proposed new building
- Temporary Scaffolding Line

T7 - Pruning of outer lying branchlets required for building construction and piling rig and machinery clearances. Pruning represents approximately <5% of the canopy area and is considered tolerable. Lower branchlets may require pruning for final pedestrian clearance but must be overseen and directed by Project Consulting Arborist.

Menangle Rd
Camden Hospital
88 Menangle Rd
80 Menangle Rd
78 Menangle Rd
Existing Carpark Retained
Driveway
Scaffold Line
Basement Line
17 Murrandah Ave
15 Murrandah Ave
13 Murrandah Ave
11 Murrandah Ave
9 Murrandah Ave
7 Murrandah Ave
5 Murrandah Ave
3 Murrandah Ave
1 Murrandah Ave
4 Gilbulla Ave
Gilbulla Ave
Murrandah Ave

Homes NSW - Menangle Road, Camden - Tree Assessment Schedule (SSDA)

Tree ID	Trees in Group	Tree Species	Common Name	Trunk Diameter Std Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	Notional NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	*Podocarpus elatus*	**Plum Pine**	0.47	0.63	5.64	2.73	**Moderate**	Retain
2	1	*Fraxinus pennsylvanica cv.*	**Green Ash**	0.60	0.70	7.20	2.85	**Moderate**	Retain
3	1	*Cordyline australis*	**Cabbage Tree**	0.30	0.35	3.60	2.13	**Moderate**	Retain
4	1	*Phoenix canariensis*	**Canary Island Date Palm**	0.50	0.60	4.00	1.30	**Low**	Retain
5	1	*Podocarpus elatus*	**Plum Pine**	0.46	0.47	5.52	2.41	**Moderate**	Remove (refer Part 5)
6	1	*Camellia japonica*	**Japanese Camellia**	0.17	0.23	2.04	1.79	**Low**	Remove (refer Part 5)
7	1	*Cupressus macrocarpa cv.*	**Monterey Cypress**	0.70	0.76	8.40	2.95	**High**	Retain
8	1	*Cupressus sempervirens*	**Italian Cypress**	0.50	0.60	6.00	2.67	**Moderate**	Remove (refer Part 5)
9	1	*Platycladus orientalis*	**Chinese Arborvitae**	0.35	0.38	4.20	2.20	**Moderate**	Remove (refer Part 5)
10	1	*Ulmus glabra 'Lutescens'*	**Golden Elm**	0.87	0.91	10.44	3.18	**Moderate**	Remove (refer Part 5)
11	1	*Corymbia maculata*	**Spotted Gum**	0.43	0.54	5.16	2.55	**High**	Remove (refer Part 5)
12	1	*Jacaranda mimosifolia*	**Jacaranda**	0.22	0.26	2.64	1.88	**Low**	Remove (refer Part 5)
13	1	*Jacaranda mimosifolia*	**Jacaranda**	0.34	0.43	4.08	2.32	**Low**	Remove (refer Part 5)
14	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.29	2.00	1.97	**Low**	Remove (refer Part 5)
15	1	*Jacaranda mimosifolia*	**Jacaranda**	0.10	0.12	2.00	1.36	**Low**	Remove (refer Part 5)
16	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.22	2.00	1.75	**Low**	Remove (refer Part 5)
17	1	*Jacaranda mimosifolia*	**Jacaranda**	0.33	0.35	3.96	2.13	**Low**	Remove (refer Part 5)
18	1	*Jacaranda mimosifolia*	**Jacaranda**	0.30	0.36	3.60	2.15	**Low**	Remove (refer Part 5)
19	1	*Jacaranda mimosifolia*	**Jacaranda**	0.08	0.11	2.00	1.31	**Nil / Remove**	Remove (refer Part 5)
20	1	*Jacaranda mimosifolia*	**Jacaranda**	0.15	0.19	2.00	1.65	**Low**	Remove (refer Part 5)
21	1	*Jacaranda mimosifolia*	**Jacaranda**	0.15	0.20	2.00	1.68	**Low**	Remove (refer Part 5)
22	1	*Jacaranda mimosifolia*	**Jacaranda**	0.16	0.22	2.00	1.75	**Low**	Remove (refer Part 5)
23	1	*Jacaranda mimosifolia*	**Jacaranda**	0.38	0.50	4.56	2.47	**Moderate**	Remove (refer Part 5)
24	3	*Jacaranda mimosifolia*	**Jacaranda**	0.11	0.15	2.00	1.49	**Nil / Remove**	Remove (refer Part 5)
25	1	*Eucalyptus melliodora*	**Yellow Box**	0.83	0.98	9.96	3.28	**High**	Retain
26	1	*Grevillea robusta*	**Silky Oak**	0.30	0.38	3.60	2.20	**Low**	Retain
27	1	*Jacaranda mimosifolia*	**Jacaranda**	0.50	0.65	6.00	2.76	**Moderate**	Retain
28	1	*Grevillea robusta*	**Silky Oak**	0.23	0.30	2.76	2.00	**Low**	Retain
29	1	*Jacaranda mimosifolia*	**Jacaranda**	0.41	0.44	4.92	2.34	**Low**	Retain
30	1	*Jacaranda mimosifolia*	**Jacaranda**	0.33	0.33	3.96	2.08	**Low**	Retain
31	1	*Jacaranda mimosifolia*	**Jacaranda**	0.36	0.52	4.32	2.51	**Low**	Retain
32	1	*Sapium sebiferum (syn. Triadica sebifera)*	**Chinese Tallow Tree**	0.25	0.35	3.00	2.13	**Moderate**	Retain
33	1	*Jacaranda mimosifolia*	**Jacaranda**	0.18	0.25	2.16	1.85	**Moderate**	Retain
34	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.40	0.48	4.80	2.43	**Low**	Retain
35	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.25	0.39	3.00	2.23	**Low**	Retain
36	1	*Glochidion ferdinandi*	**Cheese Tree**	0.25	0.25	3.00	1.85	**Moderate**	Retain
37	1	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	0.25	0.33	3.00	2.08	**Low**	Retain
38	1	*Fraxinus griffithii*	**Griffith's Ash**	0.20	0.30	2.40	2.00	**Moderate**	Retain
39	1	*Fraxinus griffithii*	**Griffith's Ash**	0.20	0.30	2.40	2.00	**Moderate**	Retain
40	1	*Salix matsudana 'Tortuosa'*	**Tortured Willow**	0.40	0.50	4.80	2.47	**Moderate**	Retain
41	1	*Jacaranda mimosifolia*	**Jacaranda**	0.50	0.60	6.00	2.67	**Moderate**	Retain
42	6	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	0.10	0.20	2.00	1.68	**Low**	Remove (refer Part 5)
43	1	*Washingtonia robusta*	**Washington Palm**	0.45	0.70	3.00	1.50	**High**	Retain
44	1	*Ulmus x hollandica*	**Dutch Elm**	0.15	0.22	2.00	1.75	**Low**	Retain
45	1	*Lophostemon confertus*	**Brush Box**	0.38	0.43	4.56	2.32	**Moderate**	Retain
46	3	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	0.10	0.20	2.00	1.68	**Low**	Retain
47	1	*Ulmus x hollandica*	**Dutch Elm**	0.26	0.40	3.12	2.25	**Low**	Retain
48	1	*Ulmus x hollandica*	**Dutch Elm**	0.12	0.20	2.00	1.68	**Low**	Retain
49	1	*Ulmus x hollandica*	**Dutch Elm**	0.13	0.17	2.00	1.57	**Low**	Retain
50	1	*Lophostemon confertus*	**Brush Box**	0.29	0.40	3.48	2.25	**Low**	Retain
51	1	*Lophostemon confertus*	**Brush Box**	0.23	0.28	2.76	1.94	**Low**	Retain
52	1	*Eucalyptus microcorys*	**Tallowood**	0.30	0.30	3.60	2.00	**Nil / Remove**	Retain
53	1	*Angophora costata*	**Smooth-barked Apple**	0.80	0.93	9.60	3.21	**High**	Retain
54	1	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	0.16	0.24	2.00	1.82	**Low**	Remove (refer Part 5)
55	1	*Cupressus macrocarpa cv.*	**Monterey Cypress**	0.82	1.07	9.84	3.40	**Low**	Remove (refer Part 5)
56	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.44	0.52	5.28	2.51	**Low**	Remove (refer Part 5)
57	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.24	0.42	2.88	2.30	**Low**	Remove (refer Part 5)
58	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.48	0.61	5.76	2.69	**Nil / Remove**	Remove (refer Part 5)
59	5	*Ligustrum lucidum*	**Broadleaf Privet**	0.15	0.20	2.00	1.68	**Nil / Remove**	Remove (refer Part 5)
60	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.20	0.30	2.40	2.00	**Nil / Remove**	Remove (refer Part 5)
61	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.15	0.22	2.00	1.75	**Low**	Remove (refer Part 5)
62	1	*Acer negundo*	**Box Elder**	0.16	0.23	2.00	1.79	**Nil / Remove**	Remove (refer Part 5)
63	5	*Lagerstroemia indica*	**Crepe Myrtle**	0.22	0.22	2.64	1.75	**Low**	Retain
64	1	*Brachychiton populneus*	**Kurrajong**	0.48	0.51	5.76	2.49	**Low**	Remove (refer Part 5)
65	1	*Melia azedarach*	**White Cedar**	0.15	0.28	2.00	1.94	**Low**	Remove (refer Part 5)
66	3	*Ligustrum lucidum*	**Broadleaf Privet**	0.25	0.40	3.00	2.25	**Nil / Remove**	Retain
67	1	*Ligustrum lucidum*	**Broadleaf Privet**	0.10	0.15	2.00	1.49	**Nil / Remove**	Remove (refer Part 5)
68	15	*Ligustrum lucidum*	**Broadleaf Privet**	0.15	0.20	2.00	1.68	**Nil / Remove**	Remove (refer Part 5)
69	1	*Pyrus calleryana cv.*	**Callery Pear**	0.36	0.36	4.32	2.15	**Moderate**	Retain
70	1	*Lagerstroemia indica*	**Crepe Myrtle**	0.54	0.58	6.48	2.63	**Moderate**	Retain

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.

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REVISION	DESCRIPTION	CHKD	DATE
A	For SSDA Submission	RWS	26/6/26

PROJECT & CLIENT
Homes NSW Menangle Road, Camden
Homes NSW

Project No : 25.23
Designed : RWS
Drawn : RWS/DD
North Scale : 1:300@A1/1:600@A3

DRAWING TITLE
Tree Canopy Pruning Plan

DRAWING NUMBER T-03
REVISION A

Plotted at : 8:32 am 26/6/2026

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

No temporary irrigation requirement is anticipated for this project. However 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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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.

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REVISION	DESCRIPTION	CHKD	DATE
A	For SSDA Submission	RWS	26/6/26

PROJECT & CLIENT
Homes NSW Menangle Road, Camden
Homes NSW

Project No : 25.23
Designed : RWS
Drawn : RWS/DD
Scale : N/A
North

DRAWING TITLE
Tree Protection Specifications

DRAWING NUMBER
T-04

REVISION
A

Plotted at : 8:32 am 26/6/2026

4.2 Tree Impact Assessment Schedule

Homes NSW - Menangle Road, Camden - Tree Assessment Schedule (SSDA)

Tree ID	Trees in Group	Family	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	Notional NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Age Class	Current Vigour	Current Form	Tree Origin	Tree Type	Noted Defects	ULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation	Tree Within Site
1	1	*Podocarpaceae*	*Podocarpus elatus*	**Plum Pine**	8.0	9.5	0.47	0.63	5.64	2.73	Mature	Good	Average	Native	Conifer		Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 094. Minor tip dieback to east.	Surface impacts to be managed, Minimal impact expected.	Retain	Yes
2	1	*Oleaceae*	*Fraxinus pennsylvanica cv.*	**Green Ash**	10.0	14.0	0.60	0.70	7.20	2.85	Mature	Excellent	Average	Exotic	Deciduous	Deadwood-Minor	Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 095.	Landscape pathway installation. Minimal root impact expected but incursion has been calculated at 6% and acceptable even if roots are disturbed. Minimal impact expected.	Retain	Yes
3	1	*Asteliaceae*	*Cordyline australis*	**Cabbage Tree**	7.0	2.0	0.30	0.35	3.60	2.13	Mature	Good	Average	Exotic	Evergreen		Medium (15-40 years)	**Moderate**	Neighbouring property tree.	Nil impacts expected.	Retain	No
4	1	*Arecaceae*	*Phoenix canariensis*	**Canary Island Date Palm**	6.0	6.0	0.50	0.60	4.00	1.30	Semi-mature	Good	Average	Exotic	Palm-SingleStem		Medium (15-40 years)	**Low**	Neighbouring property tree.	Nil impacts expected.	Retain	No
5	1	*Podocarpaceae*	*Podocarpus elatus*	**Plum Pine**	8.5	7.5	0.46	0.47	5.52	2.41	Mature	Good	Average	Native	Conifer		Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 096.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
6	1	*Theaceae*	*Camellia japonica*	**Japanese Camellia**	4.0	3.0	0.17	0.23	2.04	1.79	Mature	Fair	Average	Exotic	Evergreen	Co-dominant Stems	Medium (15-40 years)	**Low**		Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
7	1	*Cupressaceae*	*Cupressus macrocarpa cv.*	**Monterey Cypress**	10.5	10.0	0.70	0.76	8.40	2.95	Mature	Good	Excellent	Exotic	Conifer		Medium (15-40 years)	**High**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 125.	Minor incursion (7%) for building and stormwater and considered acceptable. NRZ already restricted by existing retaining wall to south. Minor pruning for scaffold clearances. Scaffold to be narrowed in this corner to minimise pruning.	Retain	Yes
8	1	*Cupressaceae*	*Cupressus sempervirens*	**Italian Cypress**	8.5	3.0	0.50	0.60	6.00	2.67	Mature	Good	Average	Exotic	Conifer		Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 124.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
9	1	*Cupressaceae*	*Platycladus orientalis*	**Chinese Arborvitae**	8.0	6.0	0.35	0.38	4.20	2.20	Mature	Good	Average	Exotic	Conifer		Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 123.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
10	1	*Ulmaceae*	*Ulmus glabra 'Lutescens'*	**Golden Elm**	13.5	17.0	0.87	0.91	10.44	3.18	Mature	Good	Average	Exotic	Deciduous	Co-dominant Stems, Decay-Minor, Epicormic Growth	Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 121. Suckering from base. Growing close to retaining wall. Roots likely to be deflectedand primarily to the south.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
11	1	*Myrtaceae*	*Corymbia maculata*	**Spotted Gum**	13.5	10.0	0.43	0.54	5.16	2.55	Mature	Good	Average	Native	Evergreen	Branch Tearouts	Medium (15-40 years)	**High**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 120.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
12	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	8.0	7.0	0.22	0.26	2.64	1.88	Mature	Fair	Average	Exotic	Semi-Deciduous		Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 119.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
13	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.0	9.0	0.34	0.43	4.08	2.32	Mature	Fair	Average	Exotic	Semi-Deciduous	Co-dominant Stems, Deadwood-Minor	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 118.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
14	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	8.0	6.0	0.16	0.29	2.00	1.97	Mature	Fair	Suppressed	Exotic	Semi-Deciduous	Co-dominant Stems, Epicormic Growth	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 117.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
15	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	8.0	4.0	0.10	0.12	2.00	1.36	Semi-mature	Fair	Poor	Exotic	Semi-Deciduous	Deadwood-Minor	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 116.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
16	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	8.0	5.0	0.16	0.22	2.00	1.75	Semi-mature	Fair	Average	Exotic	Semi-Deciduous	Very Asymmetric Form, Deadwood-Minor, Lean-Minor	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 115. Asymmetric to west.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
17	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.5	9.0	0.33	0.35	3.96	2.13	Mature	Fair	Average	Exotic	Semi-Deciduous	Co-dominant Stems, Inclusions, Deadwood-Minor	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 114.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
18	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.5	8.0	0.30	0.36	3.60	2.15	Mature	Fair	Average	Exotic	Semi-Deciduous	Deadwood-Minor, Root Impacts	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 113.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
19	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	3.5	3.0	0.08	0.11	2.00	1.31	Young	Fair	Poor	Exotic	Semi-Deciduous	Very Asymmetric Form, Lean-Minor	Medium (15-40 years)	**Nil / Remove**	Asymmetric to south west.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
20	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.5	6.0	0.15	0.19	2.00	1.65	Mature	Good	Average	Exotic	Semi-Deciduous		Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 111.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
21	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.0	5.0	0.15	0.20	2.00	1.68	Mature	Good	Average	Exotic	Semi-Deciduous	Epicormic Growth	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 110. Historically topped at 3.5m	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
22	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.5	5.0	0.16	0.22	2.00	1.75	Mature	Good	Poor	Exotic	Semi-Deciduous	Epicormic Growth	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 109. Historically topped at 4.0m	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
23	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.5	8.0	0.38	0.50	4.56	2.47	Mature	Good	Average	Exotic	Semi-Deciduous	Epicormic Growth, Co-dominant Stems, Deadwood-Minor, Root Impacts	Medium (15-40 years)	**Moderate**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 108.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
24	3	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	6.5	3.0	0.11	0.15	2.00	1.49	Young	Good	Average	Exotic	Semi-Deciduous		Medium (15-40 years)	**Nil / Remove**		Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
25	1	*Myrtaceae*	*Eucalyptus melliodora*	**Yellow Box**	18.5	16.0	0.83	0.98	9.96	3.28	Mature	Good	Average	Native	Evergreen	Deadwood-Minor	Medium (15-40 years)	**High**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 098.	Landscape pathway installation. Minimal root impact expected due to area being under pre-exsiting carparking area but incursion has still been calculated at 11% and and is considered acceptable, even if roots are disturbed. Root loss is unlikely given pre-existing conditions, levels raised above existing and minor nature of work. Surface impacts to be managed, Minimal impact expected.	Retain	Yes
26	1	*Proteaceae*	*Grevillea robusta*	**Silky Oak**	16.0	6.0	0.30	0.38	3.60	2.20	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	**Low**	Neighbouring property tree.	Nil impacts expected.	Retain	No
27	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	10.5	9.5	0.50	0.65	6.00	2.76	Mature	Fair	Average	Exotic	Semi-Deciduous	Co-dominant Stems	Medium (15-40 years)	**Moderate**	Neighbouring property tree.	Nil impacts expected.	Retain	No
28	1	*Proteaceae*	*Grevillea robusta*	**Silky Oak**	12.5	5.0	0.23	0.30	2.76	2.00	Mature	Poor	Average	Native	Evergreen		Medium (15-40 years)	**Low**	Neighbouring property tree.	Nil impacts expected.	Retain	No
29	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	11.0	8.5	0.41	0.44	4.92	2.34	Mature	Fair	Average	Exotic	Semi-Deciduous	Major Wounding	Medium (15-40 years)	**Low**	Neighbouring property tree. Stems have been historically ring-barked.	Nil impacts expected.	Retain	No
30	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	11.0	9.0	0.33	0.33	3.96	2.08	Mature	Fair	Average	Exotic	Semi-Deciduous	Major Wounding, Epicormic Growth	Medium (15-40 years)	**Low**	Neighbouring property tree. Stems have been historically ring-barked. Canopy substantially overhangs site boundary.	Nil impacts expected.	Retain	No
31	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	10.0	7.0	0.36	0.52	4.32	2.51	Mature	Fair	Average	Exotic	Semi-Deciduous	Co-dominant Stems, Major Wounding, Epicormic Growth	Medium (15-40 years)	**Low**	Neighbouring property tree. Stems have been historically ring-barked.	Nil impacts expected.	Retain	No
32	1	*Euphorbiaceae*	*Sapium sebiferum (syn. Triadica sebifera)*	**Chinese Tallow Tree**	8.5	8.5	0.25	0.35	3.00	2.13	Mature	Excellent	Average	Exotic	Deciduous	Epicormic Growth	Medium (15-40 years)	**Moderate**	Neighbouring property tree. Trunk growing hard up against fence. (Not as per survey).	Nil impacts expected.	Retain	No

Tree ID	Trees in Group	Family	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	Notional NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Age Class	Current Vigour	Current Form	Tree Origin	Tree Type	Noted Defects	ULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation	Tree Within Site
33	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	9.0	5.0	0.18	0.25	2.16	1.85	Mature	Fair	Average	Exotic	Semi-Deciduous	Co-dominant Stems, Epicormic Growth	Medium (15-40 years)	**Moderate**	Neighbouring property tree.	Nil impacts expected.	Retain	No
34	1	*Cupressaceae*	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	8.0	5.0	0.40	0.48	4.80	2.43	Mature	Good	Average	Exotic	Conifer		Medium (15-40 years)	**Low**	Neighbouring property tree.	Nil impacts expected.	Retain	No
35	1	*Cupressaceae*	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	9.0	5.0	0.25	0.39	3.00	2.23	Mature	Good	Average	Exotic	Conifer	Lean-Minor	Medium (15-40 years)	**Low**	Neighbouring property tree. Canopy overhanging site boundary.	Nil impacts expected.	Retain	No
36	1	*Phyllanthaceae*	*Glochidion ferdinandi*	**Cheese Tree**	8.0	8.0	0.25	0.25	3.00	1.85	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	**Moderate**	Neighbouring property tree. Canopy overhanging site boundary.	Nil impacts expected.	Retain	No
37	1	*Cupressaceae*	*Cupressocyparis x leylandii cv.*	**Leyland Cypress**	5.0	5.0	0.25	0.33	3.00	2.08	Mature	Fair	Poor	Exotic	Conifer		Medium (15-40 years)	**Low**	Neighbouring property tree.	Nil impacts expected.	Retain	No
38	1	*Oleaceae*	*Fraxinus griffithii*	**Griffith's Ash**	8.0	6.0	0.20	0.30	2.40	2.00	Mature	Good	Average	Exotic	Evergreen		Medium (15-40 years)	**Moderate**	Neighbouring property tree.	Nil impacts expected.	Retain	No
39	1	*Oleaceae*	*Fraxinus griffithii*	**Griffith's Ash**	9.0	7.0	0.20	0.30	2.40	2.00	Mature	Good	Average	Exotic	Evergreen	Co-dominant Stems	Medium (15-40 years)	**Moderate**	Neighbouring property tree.	Nil impacts expected.	Retain	No
40	1	*Salicaceae*	*Salix matsudana 'Tortuosa'*	**Tortured Willow**	10.0	8.0	0.40	0.50	4.80	2.47	Mature	Good	Average	Exotic	Deciduous	Co-dominant Stems	Medium (15-40 years)	**Moderate**	Neighbouring property tree.	Nil impacts expected.	Retain	No
41	1	*Bignoniaceae*	*Jacaranda mimosifolia*	**Jacaranda**	11.5	12.0	0.50	0.60	6.00	2.67	Mature	Fair	Average	Exotic	Semi-Deciduous	Lean-Minor	Medium (15-40 years)	**Moderate**	Neighbouring property tree. Trunk wounding for installation of fence.	Minor incursion (5%) for stormwater and landscape installation which is considered acceptable. All other areas around tree to be treated as TPZ and minor surface impacts to be managed from any landscaping.	Retain	No
42	6	*Myrtaceae*	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	4.0	3.0	0.10	0.20	2.00	1.68	Mature	Fair	Average	Native	Evergreen		Replaceable (Small/Young)	**Low**	Group of 6 understorey shrubs amongst larger trees. Historically tagged as part of wider hospital tree inventory - tag no on tree - 112.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
43	1	*Arecaceae*	*Washingtonia robusta*	**Washington Palm**	13.5	4.0	0.45	0.70	3.00	1.50	Mature	Good	Excellent	Exotic	Palm-SingleStem		Medium (15-40 years)	**High**	Neighbouring property tree. Historically tagged as part of wider hospital tree inventory - tag no on tree- 101.	Nil impacts expected.	Retain	No
44	1	*Ulmaceae*	*Ulmus x hollandica*	**Dutch Elm**	4.0	5.0	0.15	0.22	2.00	1.75	Semi-mature	Good	Poor	Exotic	Deciduous	Co-dominant Stems	Medium (15-40 years)	**Low**	Neighbouring property tree.	Nil impacts expected.	Retain	No
45	1	*Myrtaceae*	*Lophostemon confertus*	**Brush Box**	8.0	8.0	0.38	0.43	4.56	2.32	Mature	Good	Average	Native	Evergreen		Medium (15-40 years)	**Moderate**	Neighbouring property tree. Historically tagged as part of wider hospital tree inventory - tag no on tree - 107.	Nil impacts expected.	Retain	No
46	3	*Myrtaceae*	*Sannantha pluriflora (syn. Baeckea virgata)*	**Twiggy Heath Myrtle**	3.0	3.0	0.10	0.20	2.00	1.68	Mature	Good	Average	Native	Evergreen	Co-dominant Stems	Replaceable (Small/Young)	**Low**	Neighbouring property tree. Group of 3 understorey shrubs under large trees.	Nil impacts expected.	Retain	No
47	1	*Ulmaceae*	*Ulmus x hollandica*	**Dutch Elm**	8.0	6.0	0.26	0.40	3.12	2.25	Semi-mature	Good	Poor	Exotic	Deciduous	Co-dominant Stems, Epicormic Growth	Medium (15-40 years)	**Low**	Neighbouring property tree. Historically tagged as part of wider hospital tree inventory - tag no on tree - 106. Very multi-stemmed from base.	Nil impacts expected.	Retain	No
48	1	*Ulmaceae*	*Ulmus x hollandica*	**Dutch Elm**	5.0	4.0	0.12	0.20	2.00	1.68	Semi-mature	Fair	Poor	Exotic	Deciduous	Very Asymmetric Form	Medium (15-40 years)	**Low**	Neighbouring property tree. Very asymmetric to north-west.	Nil impacts expected.	Retain	No
49	1	*Ulmaceae*	*Ulmus x hollandica*	**Dutch Elm**	8.0	5.0	0.13	0.17	2.00	1.57	Semi-mature	Good	Average	Exotic	Deciduous		Replaceable (Small/Young)	**Low**	Neighbouring property tree. Historically tagged as part of wider hospital tree inventory - tag no on tree - 104.	Nil impacts expected.	Retain	No
50	1	*Myrtaceae*	*Lophostemon confertus*	**Brush Box**	8.5	5.0	0.29	0.40	3.48	2.25	Mature	Fair	Poor	Native	Evergreen	Co-dominant Stems, Deadwood-Minor	Medium (15-40 years)	**Low**	Neighbouring property tree. Historically tagged as part of wider hospital tree inventory - tag no on tree - 103.	Nil impacts expected.	Retain	No
51	1	*Myrtaceae*	*Lophostemon confertus*	**Brush Box**	8.0	5.0	0.23	0.28	2.76	1.94	Mature	Fair	Suppressed	Native	Evergreen		Medium (15-40 years)	**Low**	Neighbouring property tree. Historically tagged as part of wider hospital tree inventory - tag no on tree - 105.	Nil impacts expected.	Retain	No
52	1	*Myrtaceae*	*Eucalyptus microcorys*	**Tallowood**	3.5	3.5	0.30	0.30	3.60	2.00	Mature	Fair	Poor	Native	Evergreen	Epicormic Growth, Co-dominant Stems, Major Wounding, Decay-Minor	Medium (15-40 years)	**Nil / Remove**	Neighbouring property tree. Cut stump resprouting.	Nil impacts expected.	Retain	No
53	1	*Myrtaceae*	*Angophora costata*	**Smooth-barked Apple**	12.0	15.0	0.80	0.93	9.60	3.21	Mature	Excellent	Excellent	Native	Evergreen	Epicormic Growth	Long (>40 years)	**High**		Moderate incursion (11%) for building, stormwater and landscape installation which is considered acceptable. All other areas around tree to be treated as TPZ and minor surface impacts to be managed from any soft landscaping and raised deck construction.	Retain	Yes
54	1	*Myrtaceae*	*Callistemon viminalis cv.*	**Weeping Bottlebrush**	6.5	3.0	0.16	0.24	2.00	1.82	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	**Low**		Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
55	1	*Cupressaceae*	*Cupressus macrocarpa cv.*	**Monterey Cypress**	12.0	13.0	0.82	1.07	9.84	3.40	Mature	Good	Poor	Exotic	Conifer	Branch Tearouts, Decay-Minor, Deadwood-Minor, Cavity	Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 126. Several major branch tearouts and minor decay at wound sites and elsewhere within trunk.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
56	1	*Lythraceae*	*Lagerstroemia indica*	**Crepe Myrtle**	8.5	9.0	0.44	0.52	5.28	2.51	Mature	Fair	Average	Exotic	Deciduous		Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 129. Very multi-stemmed from base.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
57	1	*Lythraceae*	*Lagerstroemia indica*	**Crepe Myrtle**	7.0	6.5	0.24	0.42	2.88	2.30	Mature	Fair	Average	Exotic	Deciduous		Medium (15-40 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 130.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
58	1	*Oleaceae*	*Ligustrum lucidum*	**Broadleaf Privet**	10.0	12.0	0.48	0.61	5.76	2.69	Mature	Good	Average	Weed	Evergreen	Co-dominant Stems, Inclusions	Medium (15-40 years)	**Nil / Remove**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 131.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
59	5	*Oleaceae*	*Ligustrum lucidum*	**Broadleaf Privet**	5.0	4.0	0.15	0.20	2.00	1.68	Semi-mature	Fair	Poor	Weed	Evergreen		Medium (15-40 years)	**Nil / Remove**		Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
60	1	*Oleaceae*	*Ligustrum lucidum*	**Broadleaf Privet**	8.0	5.5	0.20	0.30	2.40	2.00	Mature	Fair	Average	Weed	Evergreen	Co-dominant Stems, Root Impacts	Medium (15-40 years)	**Nil / Remove**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 127.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
61	1	*Lythraceae*	*Lagerstroemia indica*	**Crepe Myrtle**	4.0	3.5	0.15	0.22	2.00	1.75	Mature	Fair	Poor	Exotic	Deciduous	Co-dominant Stems	Replaceable (Small/Young)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 128.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
62	1	*Sapindaceae*	*Acer negundo*	**Box Elder**	8.0	6.5	0.16	0.23	2.00	1.79	Mature	Fair	Poor	Exotic	Deciduous	Very Asymmetric Form, Lean-Minor	Medium (15-40 years)	**Nil / Remove**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 137. Growing from beneath existing house.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
63	5	*Lythraceae*	*Lagerstroemia indica*	**Crepe Myrtle**	9.0	7.0	0.22	0.22	2.64	1.75	Mature	Good	Poor	Exotic	Deciduous	Co-dominant Stems	Medium (15-40 years)	**Low**	Extremely multi-trunked tree from base. Treated as 5 individual tree trunks but all are intergrown and need to be essentially treated as one tree.	All areas around tree to be treated as TPZ and minor surface impacts to be managed from soft landscaping. No temporary battering or level changes to occur around tree. South car park access wall to be a vertical excavation.	Retain	Yes
64	1	*Malvaceae*	*Brachychiton populneus*	**Kurrajong**	9.5	10.0	0.48	0.51	5.76	2.49	Mature	Poor	Average	Native	Evergreen	Co-dominant Stems, Inclusions, Tip Dieback, Deadwood-Minor	Short (5-15 years)	**Low**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 134.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
65	1	*Meliaceae*	*Melia azedarach*	**White Cedar**	4.0	4.0	0.15	0.28	2.00	1.94	Semi-mature	Good	Poor	Native	Deciduous	Major Wounding, Epicormic Growth	Medium (15-40 years)	**Low**	Appears to be regrowth from cut stump. Unable to directly access due to fencing.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
66	3	*Oleaceae*	*Ligustrum lucidum*	**Broadleaf Privet**	8.0	6.0	0.25	0.40	3.00	2.25	Mature	Fair	Average	Weed	Evergreen		Medium (15-40 years)	**Nil / Remove**		Outside site and works	Retain	No
67	1	*Oleaceae*	*Ligustrum lucidum*	**Broadleaf Privet**	7.0	3.0	0.10	0.15	2.00	1.49	Semi-mature	Fair	Average	Weed	Evergreen		Medium (15-40 years)	**Nil / Remove**		Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes

Tree ID	Trees in Group	Family	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	Notional NRZ radius (m) 12xdbh (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Age Class	Current Vigour	Current Form	Tree Origin	Tree Type	Noted Defects	ULE Rating	Retention Value	General Comments and Notes	Incursion and Impact	Recommendation	Tree Within Site
68	15	*Oleaceae*	*Ligustrum lucidum*	**Broadleaf Privet**	9.0	8.0	0.15	0.20	2.00	1.68	Mature	Fair	Average	Weed	Evergreen		Medium (15-40 years)	**Nil / Remove**	Historically tagged as part of wider hospital tree inventory - tag no on tree - 138. Planted and grown as a hedge along footpath. All multi-stemmed from base and poor form. Undesirable species.	Within building and disturbance zone. Removed as part of demolition approvals.	Remove (refer Part 5)	Yes
69	1	*Rosaceae*	*Pyrus calleryana cv.*	**Callery Pear**	9.0	8.0	0.36	0.36	4.32	2.15	Mature	Good	Average	Exotic	Deciduous	Co-dominant Stems, Branch Tearouts, Epicormic Growth	Medium (15-40 years)	**Moderate**	Street tree.	Outside site and works	Retain	No
70	1	*Lythraceae*	*Lagerstroemia indica*	**Crepe Myrtle**	8.0	9.0	0.54	0.58	6.48	2.63	Mature	Good	Average	Exotic	Deciduous	Co-dominant Stems	Medium (15-40 years)	**Moderate**	Multi-trunked from base. Street tree.	Outside site and works	Retain	No

4.3 Tree Data Summary Sheets

ID # 01

Species: *Podocarpus elatus*

Common: Plum Pine

No.Grp:	1	Height (m):	8.0
DSH (m):	0.47	DGL (m):	0.63
NRZ (m):	5.64	SRZ (m):	2.73

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **Moderate**

ID # 02

Species: *Fraxinus pennsylvanica cv.*

Common: Green Ash

No.Grp:	1	Height (m):	10.0
DSH (m):	0.60	DGL (m):	0.70
NRZ (m):	7.2	SRZ (m):	2.85

Current Form: Average
Current Vigour: Excellent
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **Moderate**

ID # 03

Species: *Cordyline australis*

Common: Cabbage Tree

No.Grp:	1	Height (m):	7.0
DSH (m):	0.30	DGL (m):	0.35
NRZ (m):	3.6	SRZ (m):	2.13

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **Moderate**

ID # 04

Species: *Phoenix canariensis*

Common: Canary Island Date Palm

No.Grp:	1	Height (m):	6.0
DSH (m):	0.50	DGL (m):	0.60
NRZ (m):	4	SRZ (m):	1.30

Current Form: Average
Current Vigour: Good
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: **Low**

ID # 05

Species: *Podocarpus elatus*

Common: Plum Pine

No.Grp:	1	Height (m):	8.5
DSH (m):	0.46	DGL (m):	0.47
NRZ (m):	5.52	SRZ (m):	2.41

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **Moderate**

ID # 06

Species: *Camellia japonica*

Common: Japanese Camellia

No.Grp:	1	Height (m):	4.0
DSH (m):	0.17	DGL (m):	0.23
NRZ (m):	2.04	SRZ (m):	1.79

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **Low**

ID # 07

Species: *Cupressus macrocarpa cv.*

Common: Monterey Cypress

No.Grp:	1	Height (m):	10.5
DSH (m):	0.70	DGL (m):	0.76
NRZ (m):	8.4	SRZ (m):	2.95

Current Form: Excellent
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **High**

ID # 08

Species: *Cupressus sempervirens*

Common: Italian Cypress

No.Grp:	1	Height (m):	8.5
DSH (m):	0.50	DGL (m):	0.60
NRZ (m):	6	SRZ (m):	2.67

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: **Moderate**

ID # 09

Species: *Platycladus orientalis*

Common: Chinese Arborvitae

No.Grp: 1 Height (m): 8.0
DSH (m): 0.35 DGL (m): 0.38
NRZ (m): 4.2 SRZ (m): 2.2

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 10

Species: *Ulmus glabra 'Lutescens'*

Common: Golden Elm

No.Grp: 1 Height (m): 13.5
DSH (m): 0.87 DGL (m): 0.91
NRZ (m): 10.44 SRZ (m): 3.18

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 11

Species: *Corymbia maculata*

Common: Spotted Gum

No.Grp: 1 Height (m): 13.5
DSH (m): 0.43 DGL (m): 0.54
NRZ (m): 5.16 SRZ (m): 2.55

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: High

ID # 12

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 Height (m): 8.0
DSH (m): 0.22 DGL (m): 0.26
NRZ (m): 2.64 SRZ (m): 1.88

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 13

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 Height (m): 9.0
DSH (m): 0.34 DGL (m): 0.43
NRZ (m): 4.08 SRZ (m): 2.32

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 14

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 Height (m): 8.0
DSH (m): 0.16 DGL (m): 0.29
NRZ (m): 2 SRZ (m): 1.97

Current Form: Suppressed
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 15

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 Height (m): 8.0
DSH (m): 0..10 DGL (m): 0.12
NRZ (m): 2 SRZ (m): 1.5

Current Form: Poor
Current Vigour: Fair
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 16

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 Height (m): 8.0
DSH (m): 0.16 DGL (m): 0.22
NRZ (m): 2 SRZ (m): 1.75

Current Form: Average
Current Vigour: Fair
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 17

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	9.5
DSH (m):	0.33	DGL (m):	0.35
NRZ (m):	3.96	SRZ (m):	2.13

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 18

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	9.5
DSH (m):	0.30	DGL (m):	0.36
NRZ (m):	3.6	SRZ (m):	2.15

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 19

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	3.5
DSH (m):	0.08	DGL (m):	0.11
NRZ (m):	2	SRZ (m):	1.5

Current Form: Poor
Current Vigour: Fair
Age Class: Young
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 20

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	9.5
DSH (m):	0.15	DGL (m):	0.19
NRZ (m):	2	SRZ (m):	1.65

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 21

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	9.0
DSH (m):	0.15	DGL (m):	0.20
NRZ (m):	2	SRZ (m):	1.68

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 22

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	9.5
DSH (m):	0.16	DGL (m):	0.22
NRZ (m):	2	SRZ (m):	1.75

Current Form: Poor
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 23

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	1	Height (m):	9.5
DSH (m):	0.38	DGL (m):	0.50
NRZ (m):	4.56	SRZ (m):	2.47

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 24

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp:	3	Height (m):	6.5
DSH (m):	0.11	DGL (m):	0.15
NRZ (m):	2	SRZ (m):	1.5

Current Form: Average
Current Vigour: Good
Age Class: Young
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 25

Species: *Eucalyptus melliodora*

Common: Yellow Box

No.Grp: 1 | Height (m): 18.5
DSH (m): 0.83 | DGL (m): 0.98
NRZ (m): 9.96 | SRZ (m): 3.28

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: High

ID # 26

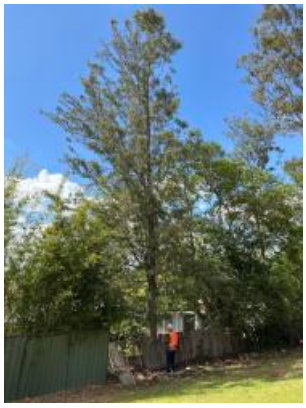
Species: *Grevillea robusta*

Common: Silky Oak

No.Grp: 1 | Height (m): 16.0
DSH (m): 0.30 | DGL (m): 0.38
NRZ (m): 3.6 | SRZ (m): 2.2

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low



ID # 27

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 | Height (m): 10.5
DSH (m): 0.50 | DGL (m): 0.65
NRZ (m): 6 | SRZ (m): 2.76

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 28

Species: *Grevillea robusta*

Common: Silky Oak

No.Grp: 1 | Height (m): 12.5
DSH (m): 0.23 | DGL (m): 0.30
NRZ (m): 2.76 | SRZ (m): 2

Current Form: Average
Current Vigour: Poor
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 29

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 | Height (m): 11.0
DSH (m): 0.41 | DGL (m): 0.44
NRZ (m): 4.92 | SRZ (m): 2.34

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 30

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 | Height (m): 11.0
DSH (m): 0.33 | DGL (m): 0.33
NRZ (m): 3.96 | SRZ (m): 2.08

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 31

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 | Height (m): 10.0
DSH (m): 0.36 | DGL (m): 0.52
NRZ (m): 4.32 | SRZ (m): 2.51

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 32

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

Common: Chinese Tallow Tree

No.Grp: 1 | Height (m): 8.5
DSH (m): 0.25 | DGL (m): 0.35
NRZ (m): 3 | SRZ (m): 2.13

Current Form: Average
Current Vigour: Excellent
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 33

Species: *Jacaranda mimosifolia*

Common: Jacaranda

No.Grp: 1 | Height (m): 9.0
DSH (m): 0.18 | DGL (m): 0.25
NRZ (m): 2.16 | SRZ (m): 1.85

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 34

Species: *Cupressocyparis x leylandii cv.*

Common: Leyland Cypress

No.Grp: 1 | Height (m): 8.0
DSH (m): 0.40 | DGL (m): 0.48
NRZ (m): 4.8 | SRZ (m): 2.43

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 35

Species: *Cupressocyparis x leylandii cv.*

Common: Leyland Cypress

No.Grp: 1 | Height (m): 9.0
DSH (m): 0.25 | DGL (m): 0.39
NRZ (m): 3 | SRZ (m): 2.23

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 36

Species: *Glochidion ferdinandi*

Common: Cheese Tree

No.Grp: 1 | Height (m): 8.0
DSH (m): 0.25 | DGL (m): 0.25
NRZ (m): 3 | SRZ (m): 1.85

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 37

Species: *Cupressocyparis x leylandii cv.*

Common: Leyland Cypress

No.Grp: 1 | Height (m): 5.0
DSH (m): 0.25 | DGL (m): 0.33
NRZ (m): 3 | SRZ (m): 2.08

Current Form: Poor
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 38

Species: *Fraxinus griffithii*

Common: Griffith's Ash

No.Grp: 1 | Height (m): 8.0
DSH (m): 0.20 | DGL (m): 0.30
NRZ (m): 2.4 | SRZ (m): 2

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 39

Species: *Fraxinus griffithii*

Common: Griffith's Ash

No.Grp: 1 | Height (m): 9.0
DSH (m): 0.20 | DGL (m): 0.30
NRZ (m): 2.4 | SRZ (m): 2

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 40

Species: *Salix matsudana 'Tortuosa'*

Common: Tortured Willow

No.Grp: 1 | Height (m): 10.0
DSH (m): 0.40 | DGL (m): 0.50
NRZ (m): 4.8 | SRZ (m): 2.47

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 41

Species: *Jacaranda mimosifolia*
Common: Jacaranda

No.Grp:	1	Height (m):	11.50
DSH (m):	0.50	DGL (m):	0.60
NRZ (m):	6	SRZ (m):	2.67

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 42

Species: *Sannantha pluriflora (syn. Baeckea virgata)*
Common: Twiggy Heath Myrtle

No.Grp:	6	Height (m):	4.0
DSH (m):	0.10	DGL (m):	0.20
NRZ (m):	2	SRZ (m):	1.68

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Replaceable

Retention Value: Low

ID # 43

Species: *Washingtonia robusta*
Common: Washington Palm

No.Grp:	1	Height (m):	13.5
DSH (m):	0.45	DGL (m):	0.70
NRZ (m):	3.0	SRZ (m):	1.50

Current Form: Excellent
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: High

ID # 44

Species: *Ulmus x hollandica*
Common: Dutch Elm

No.Grp:	1	Height (m):	4.0
DSH (m):	0.15	DGL (m):	0.22
NRZ (m):	2	SRZ (m):	1.75

Current Form: Poor
Current Vigour: Good
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 45

Species: *Lophostemon confertus*
Common: Brush Box

No.Grp:	1	Height (m):	8.0
DSH (m):	0.38	DGL (m):	0.43
NRZ (m):	4.56	SRZ (m):	2.32

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 46

Species: *Sannantha pluriflora (syn. Baeckea virgata)*
Common: Twiggy Heath Myrtle

No.Grp:	3	Height (m):	3.0
DSH (m):	0.10	DGL (m):	0.20
NRZ (m):	2	SRZ (m):	1.68

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Replaceable

Retention Value: Low

ID # 47

Species: *Ulmus x hollandica*
Common: Dutch Elm

No.Grp:	1	Height (m):	8.0
DSH (m):	0.26	DGL (m):	0.40
NRZ (m):	3.12	SRZ (m):	2.25

Current Form: Poor
Current Vigour: Good
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 48

Species: *Ulmus x hollandica*
Common: Dutch Elm

No.Grp:	1	Height (m):	5.0
DSH (m):	0.12	DGL (m):	0.20
NRZ (m):	2	SRZ (m):	1.68

Current Form: Poor
Current Vigour: Fair
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 49

Species: *Ulmus x hollandica*

Common: Dutch Elm

No.Grp: 1 Height (m): 8.0
DSH (m): 0.13 DGL (m): 0.17
NRZ (m): 2 SRZ (m): 1.57

Current Form: Average
Current Vigour: Good
Age Class: Semi-mature
ULE: Replaceable

Retention Value: Low

ID # 50

Species: *Lophostemon confertus*

Common: Brush Box

No.Grp: 1 Height (m): 8.5
DSH (m): 0.29 DGL (m): 0.40
NRZ (m): 3.48 SRZ (m): 2.25

Current Form: Poor
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 51

Species: *Lophostemon confertus*

Common: Brush Box

No.Grp: 1 Height (m): 8.0
DSH (m): 0.23 DGL (m): 0.28
NRZ (m): 2.76 SRZ (m): 1.94

Current Form: Suppressed
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 52

Species: *Eucalyptus microcorys*

Common: Tallowood

No.Grp: 1 Height (m): 3.5
DSH (m): 0.30 DGL (m): 0.30
NRZ (m): 3.6 SRZ (m): 2

Current Form: Poor
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 53

Species: *Angophora costata*

Common: Smooth-barked Apple

No.Grp: 1 Height (m): 12.0
DSH (m): 0.80 DGL (m): 0.93
NRZ (m): 9.6 SRZ (m): 3.21

Current Form: Excellent
Current Vigour: Excellent
Age Class: Mature
ULE: Long (>40 years)

Retention Value: High

ID # 54

Species: *Callistemon viminalis cv.*

Common: Weeping Bottlebrush

No.Grp: 1 Height (m): 6.5
DSH (m): 0.16 DGL (m): 0.24
NRZ (m): 2 SRZ (m): 1.82

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 55

Species: *Cupressus macrocarpa cv.*

Common: Monterey Cypress

No.Grp: 1 Height (m): 12.0
DSH (m): 0.82 DGL (m): 1.07
NRZ (m): 9.84 SRZ (m): 3.4

Current Form: Poor
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 56

Species: *Lagerstroemia indica*

Common: Crepe Myrtle

No.Grp: 1 Height (m): 8.5
DSH (m): 0.44 DGL (m): 0.52
NRZ (m): 5.28 SRZ (m): 2.51

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 57

Species: *Lagerstroemia indica*

Common: Crepe Myrtle

No.Grp: 1 | Height (m): 7.0
DSH (m): 0.24 | DGL (m): 0.42
NRZ (m): 2.88 | SRZ (m): 2.3

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 58

Species: *Ligustrum lucidum*

Common: Broadleaf Privet

No.Grp: 1 | Height (m): 10.0
DSH (m): 0.48 | DGL (m): 0.61
NRZ (m): 5.76 | SRZ (m): 2.69

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 59

Species: *Ligustrum lucidum*

Common: Broadleaf Privet

No.Grp: 5 | Height (m): 5.0
DSH (m): 0.15 | DGL (m): 0.20
NRZ (m): 2 | SRZ (m): 1.68

Current Form: Poor
Current Vigour: Fair
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 60

Species: *Ligustrum lucidum*

Common: Broadleaf Privet

No.Grp: 1 | Height (m): 8.0
DSH (m): 0.20 | DGL (m): 0.30
NRZ (m): 2.4 | SRZ (m): 2

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 61

Species: *Lagerstroemia indica*

Common: Crepe Myrtle

No.Grp: 1 | Height (m): 4.0
DSH (m): 0.15 | DGL (m): 0.22
NRZ (m): 2 | SRZ (m): 1.75

Current Form: Poor
Current Vigour: Fair
Age Class: Mature
ULE: Replaceable

Retention Value: Low

ID # 62

Species: *Acer negundo*

Common: Box Elder

No.Grp: 1 | Height (m): 8.0
DSH (m): 0.16 | DGL (m): 0.23
NRZ (m): 2 | SRZ (m): 1.79

Current Form: Poor
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 63

Species: *Lagerstroemia indica*

Common: Crepe Myrtle

No.Grp: 5 | Height (m): 9.0
DSH (m): 0.22 | DGL (m): 0.22
NRZ (m): 2.64 | SRZ (m): 1.75

Current Form: Poor
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 64

Species: *Brachychiton populneus*

Common: Kurrajong

No.Grp: 1 | Height (m): 9.5
DSH (m): 0.48 | DGL (m): 0.51
NRZ (m): 5.76 | SRZ (m): 2.49

Current Form: Average
Current Vigour: Poor
Age Class: Mature
ULE: Short (5-15 years)

Retention Value: Low

ID # 65

Species: *Melia azedarach*

Common: White Cedar

No.Grp:	1	Height (m):	4.0
DSH (m):	0.15	DGL (m):	0.28
NRZ (m):	2	SRZ (m):	1.94

Current Form: Poor
Current Vigour: Good
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Low

ID # 66

Species: *Ligustrum lucidum*

Common: Broadleaf Privet

No.Grp:	3	Height (m):	8.0
DSH (m):	0.25	DGL (m):	0.40
NRZ (m):	3	SRZ (m):	2.25

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 67

Species: *Ligustrum lucidum*

Common: Broadleaf Privet

No.Grp:	1	Height (m):	7.0
DSH (m):	0.10	DGL (m):	0.15
NRZ (m):	2	SRZ (m):	1.5

Current Form: Average
Current Vigour: Fair
Age Class: Semi-mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 68

Species: *Ligustrum lucidum*

Common: Broadleaf Privet

No.Grp:	15	Height (m):	9.0
DSH (m):	0.15	DGL (m):	0.20
NRZ (m):	2	SRZ (m):	1.68

Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Nil / Remove

ID # 69

Species: *Pyrus calleryana cv.*

Common: Callery Pear

No.Grp:	1	Height (m):	9.0
DSH (m):	0.36	DGL (m):	0.36
NRZ (m):	4.32	SRZ (m):	2.15

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate

ID # 70

Species: *Lagerstroemia indica*

Common: Crepe Myrtle

No.Grp:	1	Height (m):	8.0
DSH (m):	0.54	DGL (m):	0.58
NRZ (m):	6.48	SRZ (m):	2.63

Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)

Retention Value: Moderate