

arboricultural impact assessment report

AIA-01

Revision A, Issued for SSDA
29 January 2026



PROJECT

SENIORS LIVING DEVELOPMENT

19-23 Rosalind Street
Camberay, NSW, 2062

CLIENT / PRINCIPAL

PERIFA

Level 17, 111 Elizabeth Street
Sydney, NSW 2000



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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 entered into 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 CONSULTANT DECLARATION FORM

PROJECT DETAILS	
PROJECT NAME	
Application number	SSD-96505456
Address of subject land	19-23 Rosalind Street, Cammeray
Lot / DP	SP4657, SP5218 and SP16181
APPLICANT DETAILS	
Applicant name	Perifa Rosalind Development Pty Ltd
Applicant address	Level 7/111 Elizabeth Street, Sydney
REPORT DETAILS	
Name of report this declaration relates	Arboricultural Impact Assessment Report (AIA-01)
Report reference no.	Revision A – Issued For SSDA
Report date	29 January 2026
Company name (inc. ABN / ACN)	Arterra Design Pty Ltd - ABN: 40 069 552 610
Author name	Robert Smart
Author qualifications	<ul style="list-style-type: none">• Diploma of Horticulture (Arboriculture), Ryde TAFE, 2010 (AQF Level 5 Arborist)• B. Landscape Architecture (1st Class Hons) University of NSW, Sydney, 1990
Author address	602/51 Rawson Street Epping NSW 2121
DECLARATION BY CONSULTANT	
Name	Robert Smart
Registration no.	<ul style="list-style-type: none">• Registered Consulting Arborist - Arboriculture Australia (No. 1804)• Registered Landscape Architect (054)
Organisation registered with	<ul style="list-style-type: none">• Arboriculture Australia• Australian Institute of Landscape Architects (AILA)
Declaration	<p>The undersigned declares that Arboricultural Impact Assessment Report (AIA-01) :</p> <ul style="list-style-type: none">• has been prepared in accordance with the following policy, guidelines, or legislative requirements:<ul style="list-style-type: none">- AS.4970:2025 Protection of Trees on Development Sites- Industry specific SEARs, issued on 17 October 2025 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 (AIA-01) relates;• does not contain information that is false or misleading;• identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project;• identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments to which the Arboricultural Impact Assessment Report (AIA-01) relates;• contains a consolidated summary of the proposed or necessary mitigation measures
Signature	

ii EXECUTIVE SUMMARY

This Arboricultural Impact Assessment (AIA) report has been prepared by Arterra on behalf of Perifa Rosalind Development Pty Ltd (Perifa) to assess the potential environmental impacts that could arise from the construction of a seniors housing development (the development) at 19-23 Rosalind Street, Cammeray (the site). This report supports the assessment of the proposed development under Part 4 of the Environmental Planning and Assessment Act 1979.

Industry specific SEARs were issued on 17 October 2025 for the development. Development for the purposes of seniors housing with an Estimated Development Cost (EDC) of more than \$30 million and includes a residential care facility is state significant development under Schedule 1, Section 28 of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP). The proposed development has an EDC exceeding \$30 million and includes a residential care facility component. Accordingly, it is considered State Significant Development.

The purpose of this AIA report is to provide an assessment of the likely tree impacts and arboricultural advice regarding the development proposal for the site and outline appropriate tree protection specifications.

A detailed tree assessment and impact schedule was completed for all the existing trees close to the proposed works including some street trees along Rosalind Street that are potentially impacted by proposed stormwater connection 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 tree assessment identified **62** trees on, or immediately adjacent, the identified development site. Below is a summary of the tree population and the most significant tree related considerations that should be factored into the potential site planning for any proposed redevelopment. In summary there are:

- **2 High Retention Value** trees that are prominent street trees to the east of the site.
- **33 Moderate Retention Value** trees that are on, and adjacent to the site, of which,
 - **13** are within the site boundaries,
 - **20** are in adjacent sites or along the street.
- **27 Low and Nil Retention Value** trees that are on, and adjacent to the site, of which,
 - **20** are within the site boundaries,
 - **7** are in adjacent sites or along the street.

The following table outlines the tree retention values and their ultimate disposition.

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

Tree Retention Values	Total Trees	Trees Retained & Protected	Trees to be Removed
High	2	2	0
Moderate	33	25	8
Low	24	7	17
Nil /Should Remove	3	1	2
TOTAL	62	35	27

Of the **27** trees are to be removed, all within the site boundaries:

- **Nil** are rated as **High** retention value
- **8** are rated as **Moderate** retention value
- **17** are rated as **Low** retention value
- **2** are rated as **Nil** retention value

Of the **35** trees to be retained and protected:

- **29** have no, or extremely minimal, foreseeable impacts from the proposed works.
- **1** have a 'minor encroachment' (<10%) into their NRZs which are consider readily acceptable.
- **4** have a 'moderate encroachment' (11-16%) into their NRZs which is considered tolerable.
- **1** has a theoretical major encroachment' (>20%) into the NRZ. This is **T19** which is a neighbouring property *Celtis sinensis*. This is an invasive, exempt and undesirable species that in the author's opinion should not unreasonably constrain the development. It has been rated with a nil retention value. The boundary retaining wall has been stepped around the tree to at least maintain structural stability.
- **5 street trees** along Rosalind Street will require non-destructive digging techniques to be employed for the provision of a stormwater line extension from the site to the nearest stormwater connection. If

carefully employed, all major roots encountered should be successfully retained and protected and the stormwater line fed through the roots where necessary. If extensive roots are found that prevent the subsequent excavation and installation of the line then that portion of trench will be under bored. It is noted that the visible indications suggest that most major roots from these trees appear to be located within the grassed verge strip and footpath, rather than the road carriageway, where the stormwater line is proposed to be installed.

- **3 trees** neighbouring property trees will require moderate canopy pruning to facilitate construction access, scaffold and ultimate building clearances. The level of pruning is considered tolerable.

It is the author's opinion that the potential tree impacts can be managed with acceptable impacts to the trees if the proposed tree protection measures and protocols are strictly implemented and the ground level construction works conducted immediately around the trees is closely overseen by a suitably qualified Project Consulting Arborist.

The future building and proposed works are to be managed and tree impacts mitigated, including implementation of the following key items:-

- There is to be a meeting of the contractor and the Project Consulting Arborist on site prior to works to discuss the protection requirements, demolition equipment and methods and the site access.
- Installation of the required tree protection measures prior to any works occurring on site.
- Non-destructive digging is employed next to street trees for the installation of stormwater extension pipework and if extensive roots are encountered then that portion of the trench is to be under-bored.
- Site inductions and regular 'tool box talks' conducted by the Contractor reinforcing tree protection as the highest priority.
- It will be vital that the appointed Contractor ensures the required tree protection measures are implemented, then appropriately and rigorously maintained, and that sufficient care is exercised during the works around trees.

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



Robert Smart AAILA , ISA, AA, IACA

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

1.0 INTRODUCTION

1.1 Background

This Arboricultural Impact Assessment report has been prepared by Arterra on behalf of Perifa Rosalind Development Pty Ltd (Perifa) to assess the potential environmental impacts that could arise from the construction of a seniors housing development (the development) at 19-23 Rosalind Street, Cammeray (the site). This report supports the assessment of the proposed development under Part 4 of the Environmental Planning and Assessment Act 1979.

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The purpose of this AIA report is to provide an assessment of the likely tree impacts and arboricultural advice regarding the development proposal for the site and outline appropriate tree protection specifications.

A detailed tree assessment and impact schedule was completed for all the existing trees close to the proposed works including some street trees along Rosalind Street that are potentially impacted by proposed stormwater connection 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 proposed development includes the construction of a new seniors housing development and comprises the following works:

- Site preparation works including demolition of three (3) existing residential flat buildings and associated parking facilities as well as bulk excavation;
- Construction of two (2), five (5) and six (6) storey buildings, Building A and B respectively, comprising the following:
 - Building A:
 - Ground Level neighbourhood shop and multi-purpose communal space;
 - 7 x 2-bedroom ILUs; and
 - 11 x 3-bedroom ILUs.
 - Building B:
 - 11 x 2-bedroom ILUs;
 - 20 x 3-bedroom ILUs;
 - Two (2) residential care facility beds and residential care hub;
 - Internal communal facilities for use by all residents comprising a cinema, private dining room, gymnasium and pool.
- Communal open space and associated landscaping;
- Construction of two (2) basement levels to facilitate car parking accessible via Rosalind Street;
- Ground Level neighbourhood shop located in Building A;
- Extension and augmentation of utility infrastructure as required.

For a detailed project description refer to the Environmental Impact Statement prepared by Colliers Urban Planning.

1.2 The Site

The site is located at 19–23 Rosalind Street, Cammeray within the North Sydney Local Government Area (LGA). It comprises three (3) allotments legally described as SP4657, SP5218 and SP16181, and occupies a total area of approximately 4,100m². A site aerial showing each allotment is provided at Figure 1.1 and Figure 1.2. Each respective lot currently comprises a three (3) storey residential flat building with the two (2) of the rear buildings situated on battleaxe allotments connected to Rosalind Street.



Location and Context



Figure 1.1 – Site context – site outline shown in red. (Source: Arterra / Nearmap 2025)



Site Boundaries



Figure 1.2 – Site location – site outline shown in red. (Source: Nearmap/ Colliers Urban Planning)



Figure 1.3 –Existing site conditions illustrating the existing 3 storey 'walkup' units and undercroft parking. There are variety of scattered trees amongst the unit blocks, most of which are undesirable species or small and insignificant trees (Photo: Arterra 28/8/25)



Figure 1.4 –Existing site conditions illustrating the existing 3 storey 'walkup' units and undercroft parking. There are variety of scattered trees amongst the unit blocks, most of which are undesirable species or small and insignificant trees. (Photo: Arterra 28/8/25)

1.3 Sears Reporting

Table.1.1 – SEARs Requirements

Item	Description of Requirement	Section Reference (this report)
14. Trees and Landscaping	<p>If the proposal involves impacts to trees, provide and Arboricultural Impact Assessment that assesses the number, location, condition and significance of trees to be removed including:</p> <ul style="list-style-type: none"> 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. 	<p>Refer:</p> <ul style="list-style-type: none"> Section 2.4 Number of Trees Section 2.8 Existing Canopy Cover Appendix 4.2 – Detailed Schedule of Trees Appendix 4.1 – Existing Tree Plans
	<p>Provide a landscape plan, that:</p> <ul style="list-style-type: none"> 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. 	<p>Refer:</p> <p>Separate Landscape Plan / Report by others.</p>

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 the relevant landscape documentation for site wide landscape plan addressing landscape related matters.

1.4 The Proposed Development

The proposed development is a seniors living complex comprised of two new multilevel buildings with extensive lower ground and basement levels providing car parking, open air private courtyard and other back of house services. There is one consolidated access driveway off Rosalind St to the north-east corner of the site.



Figure 1.5 – Proposed Ground Floor Plan. (Source: Chrofi Architects – 12 Dec 2025)

1.5 Aims of this Report

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

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

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

The following limitations apply to this report's use:

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

1.6 Relevant Controls or Legislation

The site is zoned R4 High Density Residential under North Sydney Council LEP 2013. We understand the site is not heritage listed, nor in a heritage conservation area. The site does not appear to be constrained by any ecological, environmental or biodiversity mapping.

The trees on and around the site are protected under the North Sydney DCP 2025 – Part B, Section 3.1 Tree & Vegetation Management. This section of the DCP protects trees and vegetation and identifies those instances where a permit or development application is required to remove or prune trees.

The relevant objectives of the DCP are to:

1. Declare trees and vegetation for the purposes of Parts 2.3 of SEPP (Biodiversity and Conservation) 2021. Vegetation in Non-Rural Areas 2017.
2. Maintain the visual, social and environmental amenity of the area through the preservation of trees and other vegetation.
3. Maintain and increase the totality of trees and vegetation across the North Sydney area by embracing the principles of Forest Management, green (habitat) corridors and continuous cover arboriculture.
4. Ensure the planting of adequate numbers of appropriate trees in association with new development in the North Sydney area.
5. Promote the value of and the need for the protection of trees and vegetation to the community, developers and Council staff and encourage the reporting of tree vandalism.
6. Protect existing trees and vegetation during construction of development.

To prune or remove a tree, a Tree Management Permit or DA is typically required. The controls apply to trees and vegetation on all land within the LGA whether it is in public or private ownership.

The following are exempt species and do not require a permit or DA for pruning and or removal:

- trees or vegetation identified as a biosecurity risk (formerly known as noxious weeds) under the Biosecurity Act, 2015, except where that tree or vegetation is greater than 10m in height;
- trees or vegetation that are being maintained or removed by North Sydney Council staff (or their sub-contractors) on land under Council's ownership or care and control;
- The following tree and vegetation species:
 - African Olive Trees (*Olea africana*);
 - Bamboo (*Bambusa species*);
 - Box Elder (*Acer negundo*);
 - China Doll (*Radermachia sinica*);
 - Cocos Palms (*Syagrus romanzoffiana*);
 - European Nettle or Hackberry (*Celtis* sp) *
 - Indian Coral Tree (*Erythrina x sykesii*) *
 - Privet species (*Ligustrum* sp) *
 - Rubber Trees (*Ficus elastica*);
 - Tree of Heaven (*Ailanthus* sp);

- Umbrella Trees (*Schefflera* sp); or
 - Willow Trees (*Salix* spp).*
- * - except on land identified as a heritage item under cl.5.10 of NSLEP 2013

The following trees and vegetation are protected:

- Any tree or vegetation on public land, regardless of its size;
- Any tree or vegetation with a height >5m, or a crown width of 5m or more, or a trunk circumference of 500mm or more measured at ground level (existing); or
- Any tree that is identified as a biosecurity risk under the Biosecurity Act, 2015 and is greater than 10m in height;
- Any of the following species of trees or vegetation on land identified as a heritage item under cl.5.10 of NSLEP 2013 regardless of size:
 - Bangalow Palms (*Archontophoenix cunninghamiana*);
 - European Nettle or Hackberry (*Celtis* sp);
 - Indian Coral Tree (*Erythrina x sykesii*);
 - Kentia Palms (*Howea forsteriana*);
 - Privet species (*Ligustrum* sp);
 - Willow Trees (*Salix* spp).

In determining applications for tree removals, the Council will typically consider the following:

- the health or condition of the tree or trees, whether the tree is dead or dangerous, proximity to existing or proposed structures, interference with utility services, interference with the amenity of any person or property;
- necessity for action in order to construct improvements to the property the subject of the application to achieve reasonable development;
- effects in the nature of erosion, soil retention or diversion or increases to overland flow;
- the number of trees in the surrounding area and the effect on the amenity of that area;
- the number of healthy trees that a given parcel of land will support;
- whether the trees or vegetation in question provide habitat for fauna and/or canopy connectivity; and
- any potential impacts to heritage items and or heritage conservation areas.

1.7 Conduct and Author Qualifications

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

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

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

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

1.8 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:

Hill and Blume - Surveyors:

- Detail and Levels Survey – Dated 3 February 2023 with further updates provided 27/11/25.

Chrofi Architects - Architectural Drawings – (as issued for SSDA 12/12/25):

- DA_100 Basement 2 Proposed Plan
- DA_101 Lower Ground Proposed Plan
- DA_102 Ground Proposed Plan
- DA_103 Level1 Proposed Plan
- DA_104 Level2 Proposed Plan
- DA_105 Level3 Proposed Plan
- DA_106 Level4 Proposed Plan
- DA_107 Level5 Proposed Plan
- DA_200 Elevations
- DA_201 Elevations
- DA_202 Elevations

- DA_300-DA304 Sections

Innovis – Civil Engineers:

- Siteworks and Drainage Plan – C3001 and C3002 issued 12/12/25

McGregor Coxall - Landscape Architects:

- Landscape SSD Design Report– Rev A – dated 12/12/2025
- L_011 – Concept Plan Rev A – dated 12/12/2025

Based on the proposed architectural, landscape plans and services information currently reviewed we are currently satisfied that the proposed servicing for the development can be achieved and designed to avoid major trenching or disturbance to the existing trees that are proposed to be retained. We specifically note the stormwater extension in Rosalind Street and that this is to be installed non-destructively when passing the street trees. Refer Section 2.7. It is assumed that any existing services that are no longer required elsewhere will be capped off and left in situ, if they are located with TPZs and under trees that are to be retained.

1.10 Assessment Methodology

Data Collection

On the 28 August 2025, Rob Smart of Arterra carried out a visual inspection of the site. Arterra attended the site to undertake a detailed assessment of the trees within the site and likely to be impacted by the proposed development. The trees' health and condition were assessed via a visual inspection undertaken from the ground only. Requisite tree data (including DSH, DGL, height & canopy spread, condition & proximity to services) were recorded using an Apple iPad and FileMaker Pro database.

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

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

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

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

Desktop Review and Research

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

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

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

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

Retention Values

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

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

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

1.12 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 $12 \times$ (the tree trunk diameter (in metres) calculated at standard height (DSH)). DSH is taken at 1.4m above ground level.

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

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

Encroachments of between **10% to 20%** of the area are known as a **"moderate encroachment"**. This level of encroachment needs to be carefully assessed by the Project Consulting Arborist. It may be acceptable within the NRZ as long as it is outside of the Structural Root Zone (SRZ) and relevant factors are considered such as the location and distributions of roots, the trees health and tolerance to disturbance, existence or present or past

obstacles that may have affected root development, the nature of the disturbance and tree maintenance and care activities to be applied.

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

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

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

2.0 BACKGROUND, OBSERVATIONS & ASSESSMENT

2.1 Site History and Existing Trees

Refer to the attached T-01 Tree Retention Value Plan for the locations of trees currently on, or immediately adjacent, the site. Review of historical aerial imagery shows that from 1930 onwards the site had already been developed with what appears to be detached housing. It appears most trees on and immediately surrounding the site date from the early 1970s and 1980s, after the sites redevelopment for the current apartments assumed undertaken in the late 1960s.



Figure 2.1 – Aerial image from 1951 shows the site had been partially developed with houses on the northern frontage to Rosalind Street and the rest of the site covered in numerous garden shrubs and small trees. (Source: Arterra / NSW Spatial Services)



Figure 2.2 – Aerial image of the site in 1971 shows the apartment blocks largely as they appear today. The oldest trees on the site are likely to date from very late 1960s or early 1970 when the apartment construction was completed. The large fig T03 may just be visible as a small

blur in the centre of the site, indicating this tree is not likely to be historically significant. An aerial image from 1961 showed the original house still present on the site with no tree present in the position of T03. (Source: Arterra / NSW Spatial Services)



Figure 2.3 – Aerial image of the site in 1978, trees within the site are now becoming more prominent as are the trees on the boundaries. (Source: Arterra / NSW Spatial Services)



Figure 2.4 – Aerial image of the site in 1986 shows further growth of the site trees. (Source: NSW Spatial Services)

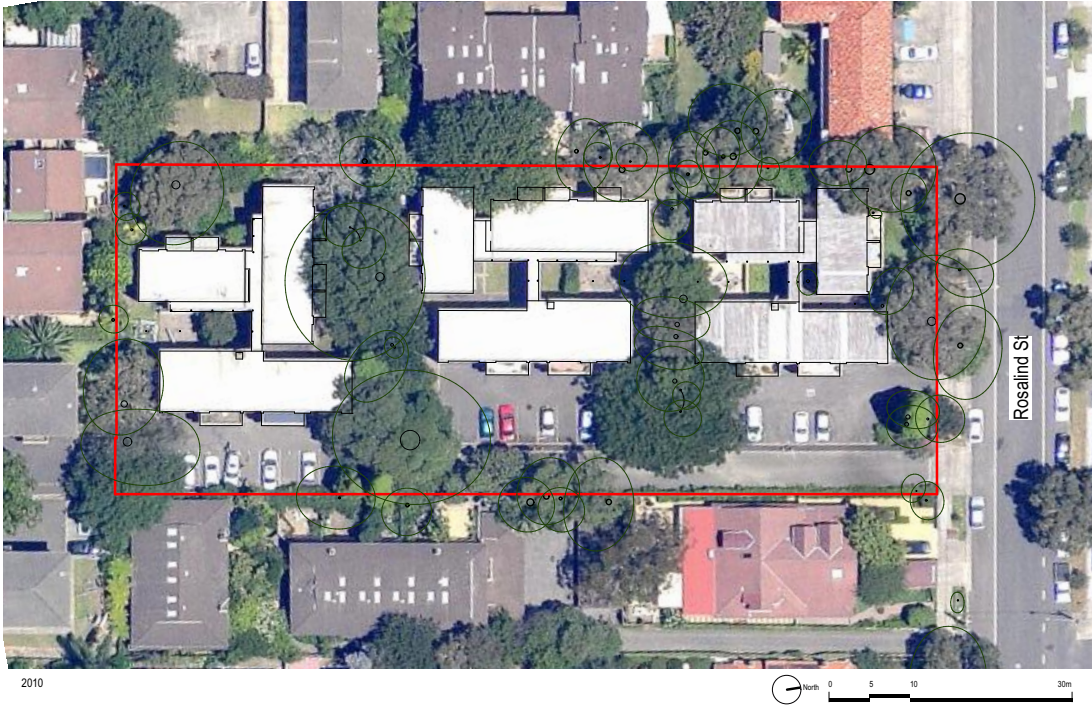


Figure 2.5 – Aerial image of the site in 2010 shows substantial trees within and adjacent the site many of which are undesirable species such as Celtis and Camphor Laurels. The Council street trees along the Rosaling Street frontage will require appropriate tree protection setbacks to ensure their adequate retention in good condition. (Source: Arterra / NearMap)



Figure 2.6 – Aerial image of the site in 2020 illustrating the site has remained substantially unchanged since 2010. (Source: Arterra / NearMap)



Figure 2.7– Aerial image of the site in 2025 illustrating the site as it stands today. (Source: Arterra / NearMap)

2.2 Climate and Microclimate

Cammeray is located close to the northern side of Sydney harbour and therefore shares the general climate of this region with moderate temperatures, good rainfall and minimal climatic and weather extremes. It is typically described as a temperate climate with hot to warm summers and cool winters, with relatively uniform rainfalls greater than 800mm / year. There is no distinct dry season.

Cammeray is located approximately 5km north of the Sydney CBD, and roughly 2km from the Harbour at Lavender Bay. It has an approximate average annual rainfall of 1100mm, fairly evenly spread across the year but with a slightly drier period during the late winter and early spring months. The highest rainfall period is usually June with an average of 124mm and the driest month being September with an average of less than 60mm.

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

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

2.3 Soils, Landform and Native Vegetation

Mapping indicates the site to be at the boundary between the upper lying Blacktown Soil Landscape Association and the lower lying Gyemea Soil Landscape Association. The Blacktown Association occurs extensively throughout much of western Sydney but also occurs as isolated portions in the higher plateau areas around the fringes of the Sydney Basin, including some higher areas surrounding Sydney Harbour. 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.

The soils considered more relevant to this site would have historically been more closely related to those of the Gyemea Soil Landscape Association which occurs extensively around the Sydney Harbour foreshores. These are usually dominated by sandy soils, and exposed rock benches from the underlying Hawkesbury Sandstones. The soils would have been loose and coarse sandy loams, often becoming lighter at depths, and strongly acidic. The soils would have typically been shallow, highly permeable with very low fertility.

Given the long history of development, the soils are most likely to be highly modified from any soils that would have occurred naturally and excavations may have gone down to underlying sandstone beneath the buildings.

A representative soil sample was taken within the central small lawn area in the vicinity of T03. The results from the sample taken were somewhat reflective of some components of the expected naturally occurring GyMEA soils but also very reflective of imported soils and disturbed anthropogenic soils. The auger was subject to refusal at a 500mm depth due to the presence of a sandstone-based rock.

The subsoil was slightly lighter in colour and likely from a very weathered sandstone-based site soil. From the topsoil sample it appeared to be imported topsoil. From the sample taken at a 200mm depth the soil structure was very weakly pedal with only a few fine sub angular blocky peds. The soil texture was a sandy clay loam with the colour being dark brown. The soil was pH moderately alkaline with a pH of 8.0-8.5. It is highly likely this soil has been imported as part of previous landscape embellishments. There was a relatively indistinct change from the A to B soil horizons at around 400mm depth. The subsoil from a depth of 450-500mm was sampled. The subsoil structure was moderately pedal with medium sub angular blocky peds. The soil texture was a sandy clay loam. Its colour was a mid to light brown. The soil pH was also neutral at pH7.5.

The natural vegetation that once characterised the GyMEA Soil Landscape Association has now been extensively cleared in the local area, but it would have been dry sclerophyll open forest. It would likely have been dominated by

- *Corymbia gummifera* (Red Bloodwood)
- *Corymbia eximia* (Yellow Bloodwood)
- *Eucalyptus haemastoma* (Scribbly Gum)
- *Banksia serrata* (Old Man Banksia)
- *Eucalyptus piperita* (Sydney Peppermint)
- *Angophora costata* (Smooth-barked Apple)

Given the proximity to the Blacktown Soil Landscape Association, some tall open forest species may also have occurred in areas where better or deeper soils occurred and potentially including the following representative species.

- *Eucalyptus pilularis* (Blackbutt)
- *Eucalyptus paniculata* (Grey Ironbark)
- *Syncarpia glomulifera* (Turpentine)
- *Eucalyptus globoidea* (White Stringybark)

None of the above species are represented in the existing tree population on, or surrounding, the site.



Figure 2.8 –Soil profile adjacent T03 to a depth of 550mm. (Photo: Arterra 28/08/25)

2.4 Identification and Assessment of Existing Trees

The tree assessment identified **62** trees on, or immediately adjacent, the identified development site. Below is a summary of the tree population and the most significant tree related considerations that should be factored into the potential site planning for any proposed redevelopment. In summary there are:

- **2 High Retention Value** trees that are prominent street trees to the east of the site.
- **33 Moderate Retention Value** trees that are on, and adjacent to the site, of which,
 - **13** are within the site boundaries,
 - **20** are in adjacent sites or along the street.
- **27 Low and Nil Retention Value** trees that are on, and adjacent to the site, of which,
 - **20** are within the site boundaries,
 - **7** are in adjacent sites or along the street.



Figure 2.9 –View east along Rosalind Street. The trees targeted for retention and protection are the public street trees along Rosalind St and other neighbouring property trees to the east and western sides of the property. (Photo: Arterra 28/8/25)

The tables following provides a summary of the existing and assessed tree population.

Table 2.1 – Existing Tree Retention Values

Tree Retention Values	Total Trees	% Total Population
High	2	3%
Moderate	33	53%
Low	24	39%
Nil /Should Remove	3	5%
TOTAL	62	(100%)

Table 2.2 – Species Distribution – Top 10 Species by Prevalence

Species Name	Common Name	Number of Trees	% Total Population
<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	16	25%
<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	7	4%
<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	4	7%
<i>Celtis sinensis</i>	Chinese Hackberry	3	5%
<i>Plumeria rubra</i>	Frangipani	3	5%
<i>Melaleuca bracteata</i>	Black Tea-Tree	2	4%
<i>Cupressus torulosa</i>	Bhutan Cypress	2	4%
<i>Casuarina cunninghamiana</i>	River She-Oak	2	4%
<i>Cinnamomum camphora</i>	Camphor Laurel	2	4%
<i>Eucalyptus robusta</i>	Swamp Mahogany	2	4%

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

2.5 Tree Biology and Tree Care Basics

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

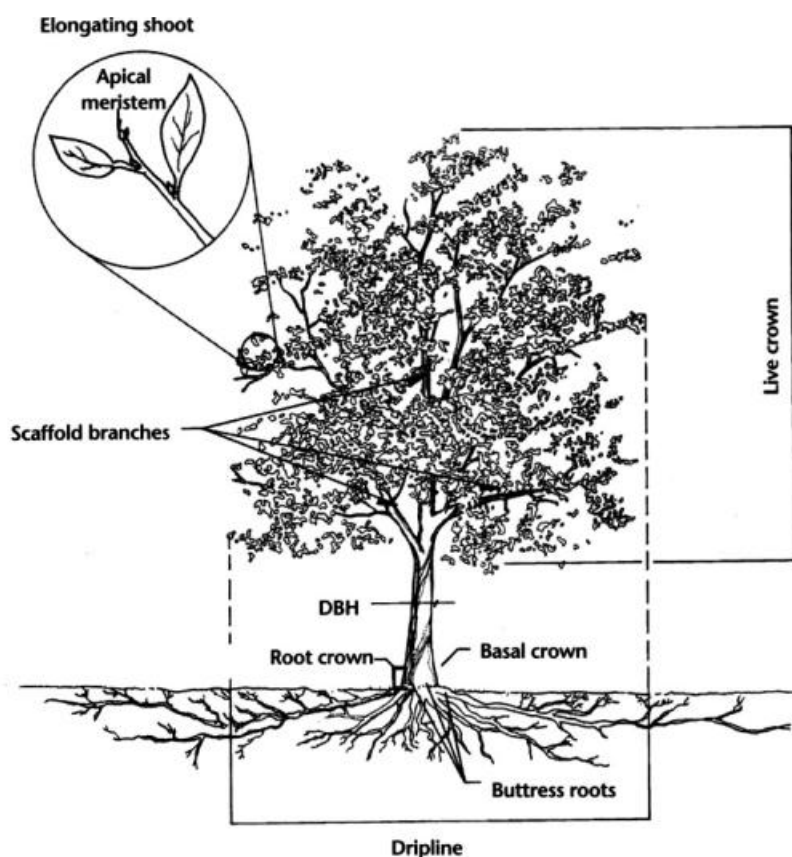


Figure 2.10 – Typical form and structure of a tree illustrating the typical form, location and extent of root growth (Source: Matheny and Clark, 1998)

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 [CO₂ + H₂O + light = sugar (C₆H₁₂O₆ [Glucose]) + O₂]

The process ultimately leads to the plant cells 'respiring' and producing energy for survival, a natural requirement for all living cells. Anything that affects a plant's photosynthesis and then cellular respiration will affect the overall plant health. The limiting factors of photosynthesis and respiration will typically be the availability of oxygen, water and nutrients that make up the important chemical molecules and reactions.

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

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

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

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

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

Tree Tolerance

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

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

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

2.6 The Proposed Works

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

- Use of large scale civil, piling and earthmoving equipment;
- Access to and from the site with large trucks and construction plant;
- Extensive 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:

- Many trees on the site will need to be removed due to the extensive basement excavations, site level changes and extensive site servicing requirements.
- 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 1.5m 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 Rosalind Street 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 and removed as part of the development. It is also to determine any incursions into the retained trees' root zones and canopies by the proposed development and evaluate the likely impacts of the proposed works on the trees. A detailed listing of the incursions and likely impacts of the proposed development on each tree is shown in Appendix 4.2 - Tree Impact Assessment Schedule and Appendix 4.1 - Tree Plans.

The following table outlines the tree retention values and their ultimate disposition.

Table 2.3: Ultimate Disposition - Trees to be Retained and Removed vs Retention value

Tree Retention Values	Total Trees	Trees Retained & Protected	Trees to be Removed
High	2	2	0
Moderate	33	24	8
Low	24	7	17
Nil /Should Remove	3	1	2
TOTAL	62	35	27

Of the **27** trees are to be removed, all within the site boundaries:

- **Nil** are rated as **High** retention value
- **8** are rated as **Moderate** retention value
- **17** are rated as **Low** retention value
- **2** are rated as **Nil** retention value

Of the **35** trees to be retained and protected:

- **29** have no, or extremely minimal, foreseeable impacts from the proposed works.
- **1** have a 'minor encroachment' (<10%) into their NRZs which are consider readily acceptable.
- **4** have a 'moderate encroachment' (11-16%) into their NRZs which is considered tolerable.
- **1** has a theoretical major encroachment' (>20%) into the NRZ. This is **T19** which is a neighbouring property *Celtis sinensis*. This is an invasive, exempt and undesirable species that in the author's opinion should not unreasonably constrain the development. It has been rated with a nil retention value. The boundary retaining wall has been stepped around the tree to at least maintain structural stability. (Refer to Figure 2.11)
- **5 street trees** along Rosalind Street will require non-destructive digging techniques to be employed for the provision of a stormwater line extension from the site to the nearest stormwater connection. If carefully employed, all major roots encountered should be successfully retained and protected and the stormwater line fed through the roots where necessary. If extensive roots are found that prevent the subsequent excavation and installation of the line then that portion of trench will be under bored. It is noted that the visible indications suggest that most major roots from these trees appear to be located within the grassed verge strip and footpath, rather than the road carriageway where the stormwater line is proposed to be installed.
- **3 trees** neighbouring property trees will require moderate canopy pruning to facilitate construction access, scaffold and ultimate building clearances. The level of pruning is considered tolerable.



Figure 2.11 –T19 viewed from within the site – the tree is in very poor condition having been severely pruned by the neighbour. The adjacent retaining wall will step around the SRZ to retain the tree’s structural stability. (Photo: Arterra 28/8/25)

Table 2.4 –TPZ Incursions Involving Potential Root Loss (as per AS4970-2025)

Tree ID	Species	NRZ % Incursion	Comment
T17	<i>Melaleuca quinquenervia</i>	18%	Theoretical moderate incursion but only minor impact is expected. Given the existing structures and the geology of the site, extensive roots are unlikely to have developed in this area under the existing buildings and therefore the actual root disturbance is likely to be far less than this notional percentage incursion would indicate and therefore is considered acceptable as area affected is within the footprint of the existing building, so considered acceptable.
T19	<i>Celtis sinensis</i>	35%	Theoretical major incursion into NRZ. This tree has a nil retention value but is a neighbouring property tree. It is in poor form and condition . It is an Invasive, exempt and undesirable species, that should not unduly constrain the development. The proposed retaining wall has been designed to step around SRZ to maintain structural stability of the tree.
T22	<i>Melaleuca quinquenervia</i>	10%	Only minor impacts expected and considered acceptable.
T24	<i>Melaleuca quinquenervia</i>	17%	Theoretical moderate incursion but only minor impact is expected. Given the existing structures and the geology of the site, extensive roots are unlikely to have developed in the area under the existing buildings and therefore the actual root disturbance is likely to be far less than this notional percentage incursion would indicate and therefore is considered acceptable as the area affected is within the footprint of the existing building, so considered acceptable.
T25	<i>Melaleuca quinquenervia</i>	18%	Theoretical moderate incursion but only minor impact is expected. Given the existing structures and the geology of the site, extensive roots are unlikely to have developed in this area under the existing buildings and therefore the actual root disturbance is likely to be far less than this notional percentage incursion would indicate and therefore is considered acceptable as the area affected is within the footprint of the existing building, so considered acceptable.
T26	<i>Melaleuca quinquenervia</i>	11%	Only minor impact expected and considered acceptable.

Table 2.5 – Proposed Tree Canopy Pruning Impacts

Tree ID	Species	% Pruning	Comment
T04	<i>Celtis sinensis</i>	15%	Exempt species tree. Neighbouring property tree. Self-sown, growing hard against base of adjoining retaining wall at a lower level. Roots will have been restricted by wall and geology. Canopy overhangs site boundary. Branches to the west to be pruned to facilitate above ground development, piling and access. Pruning extent not visible to public domain nor the adjoining owner. Pruning considered tolerable and given species of tree it should not restrict worthwhile development.
T08	<i>Melaleuca bracteata</i>	16%	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology. Canopy overhangs site boundary. Lower branches to west to be pruned to facilitate above ground development. Pruning extent not visible to public domain or adjoining owner. Suitable habit and foliage is maintained. Considered tolerable.
T09	<i>Eucalyptus robusta</i>	16%	Neighbouring tree. Growing hard against base of adjoining retaining wall at lower level. Roots will have been restricted by wall and geology. Canopy overhangs site boundary. Lower branches to west are to be pruned to facilitate above ground development. Upper canopy can overhang scaffold and new building as there is a set back at Level 4 of new building. Suitable habit and foliage is maintained. Considered tolerable.

Table 2.6 – Tree Canopy Pruning Details – T08

Tree ID Number	Branch Diameter at Cut	Cut orientation	Pruning Height Above Existing Ground Level
T08	30mm	Cut at major branch	3.20m
	60mm	Cut at inner upward lateral	3.60m



Figure 2.12 –Tree T08 – Melaleuca bracteata - anticipated pruning as marked up showing cut locations and extent of foliage removed. (Photo: Arterra 19/11/25)

Table 2.7 – Tree Canopy Pruning Detail – T09

Tree ID Number	Branch Diameter at Cut	Cut orientation	Pruning Height Above Existing Ground Level
T09	70mm	Cut at trunk	4.70m
	90mm	Cut at trunk	6.40m
	80mm	Cut at trunk	7.90m
	80mm	Cut at trunk	9.40m
	80mm	Cut at trunk	9.60m



Figure 2.13 – Tree T09 – Eucalyptus robusta - anticipated pruning as marked up showing cut locations and extent of foliage removed. (Photo: Arterra 19/11/25)



Figure 2.14 – Tree T09 – *Eucalyptus robusta* - anticipated pruning as marked up showing cut locations and extent of foliage removed. (Photo: Arterra 19/11/25)

2.8 Existing Canopy Cover

Canopy coverage has been calculated as a percentage (%) of the total site area (total site area 4,108m²). This has been calculated using the m² of 'projected' canopy onto the underlying ground surface and only within the site boundary. Overlapping canopy is not counted twice. Table 2.8 outlines the existing canopy cover for the site. Refer to accompanying, separate Landscape Plans and Report prepared by McGregor Coxall Landscape Architects for the proposed canopy coverage expected as part of the ultimate landscape and development outcomes.

Table 2.8 - Existing Canopy Cover

Tree Canopy Coverage	Canopy Coverage (m ²)	% of Total Site Area
Existing Canopy Coverage – current total	1,407 m ²	34%
Existing Canopy Coverage – to be retained	251 m ²	6%
Existing Canopy Coverage – to be removed	1,156 m ²	28%
Existing Site Area	4,108 m ²	

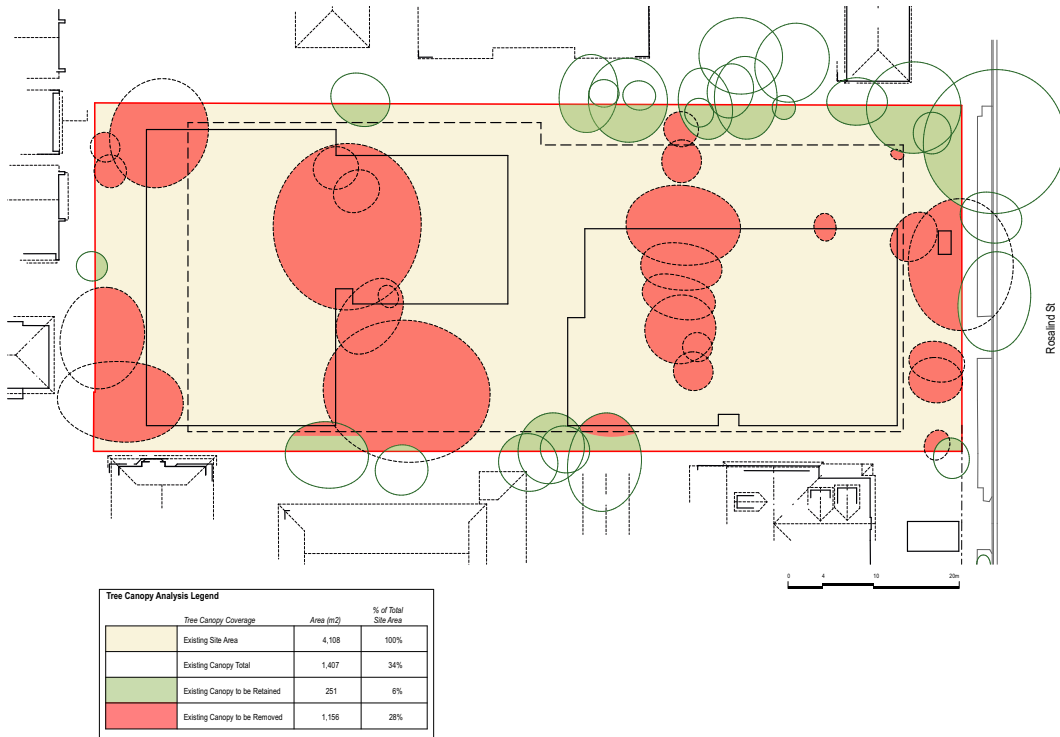


Figure 2.15 – Overall site plan showing the site and its existing urban canopy cover and relative percentages. (Source: Arterra)

3.0 TREE MANAGEMENT RECOMMENDATIONS

3.1 Potential Tree Related Impacts Needing to be Managed During Construction

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

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

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

3.2 Management of Construction Period Tree Impacts

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

- Appropriately fence all TPZs outside of the already noted incursions for the duration of all major site construction work. See Appendix 4.1 Tree Plans for locations and extent.
- 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.
- Undertake non-destructive digging techniques to install the new stormwater services along the Rosalind Street road carriage way to ensure street tree roots within verge are retained and protected during work. If successfully employed all major roots encountered should be successfully retained and protected and the stormwater line threaded under the roots where necessary. All excavations are to be overseen and monitored by Project Consulting Arborist for the 63m where passing the street trees. If extensive roots are found that prevent the subsequent excavation and installation of the pipework, then that portion of trench shall be under bored. It is noted that the visible observations of major tree roots from these street trees would indicate that the vast majority of tree roots from these trees appear to be located and favouring the grassed verge strip and footpath areas rather than the road carriageway. The carriageway is where the stormwater line is designed to be installed.
- Ground levels in the north-west corner of the site are to be maintained around the existing trees. No excavation or disturbance is to be undertaken other than has already been accounted for the incursion for basement and building construction. The basement wall to be formed via piling or other suitable shoring to prevent the need for any temporary battering into the adjacent TPZ. Importation and placement of suitable horticultural topsoils and mulching is permitted in this area to finalise landscaping and final levels behind the wall.
- The neighbouring property trees to the east are at a lower existing level and adjacent to a substantial existing retaining wall. No roots are expected to found within proposed development site due to this pre-existing wall and its footings. The overhead canopy is to be protected during all works and piling. Moderate pruning is proposed to be undertaken for proposed building clearances. The pruning is considered acceptable. The lower portion of existing walling is to be retained during demolition as suitable trunk protection and to continue to retain existing soil and levels around base of trees. Any new walling that is to be constructed on the western side of the existing wall, when near trees, and going below the adjoining sites levels must retain all roots and soil surrounding the existing trees. Suitable TPZ fencing is to be installed between the trees and the development site if, and when, the existing brick walling is demolished. Trunk protection must be installed prior to any demolition of the existing retaining wall.
- Carefully control and fence general access to and from the construction areas so that movement does not occur through any TPZs other than for the already identified building and basement construction incursions.
- Ensure all the new above and below ground services are excluded from running through any TPZs beyond any already noted incursions.
- Minimise the re-grading of the ground surface within the identified TPZs, beyond the noted building incursions, to meet and match proposed pathways and other building levels. No excavation below existing levels shall typically be required or allowed.

- Avoid digging into existing root zones for the installation of any proposed landscaping around the trees and the installation sizes of new plants to be 5L or less to ensure that excavations are less than 200mm in depth. It is recommended to build up soil levels for any new planting areas to a maximum of 200-300mm to enable the new planting to occur without disturbing existing tree roots.
- Do not allow storage or stockpiling of any materials or site sheds within established TPZs unless it can be demonstrated that this will not impact on the tree retention, and it is specifically approved in writing by the Project Consulting Arborist.

3.3 Canopy Pruning and Pruning Methodology

To be constructed, the proposal will potentially require canopy pruning to **3 trees** to provide building and construction clearances. Refer to Table 2.5, 2.6 and 2.7 and Appendix 4.1 for details. All pruning should be minimised where possible. Although the pruning required may be moderate, in the author's opinion, this is considered tolerable and the habit and suitable 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 & Construction Activity Sequencing

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

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

10. Contractor to remove the TPZ fencing and only then install final pathways and landscaping within the TPZs under the trees, but only after construction of the building exterior and all civil works are completed.

3.5 Demolition Work Near Trees or within TPZs

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

3.6 Tree Protection Fencing & Definition of TPZs

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

3.7 Ground Protection within TPZs

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

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

3.8 Trunk and Lower Branch Protection

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



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

3.9 Provision of Temporary Irrigation

A temporary irrigation system is not currently proposed for this 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 its operation can be easily visible and verified. It should be on a designated supply line, separate from other construction related water supplies to minimise its likelihood of being disconnected.

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

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

3.10 Final Landscaping within TPZs

Once final levels are set by the finished structural elements. The final trimming and landscaping shall be judiciously undertaken. The final pedestrian pavements shall be installed without undue excavation or compaction to the soil and all soft landscaping within the tree protection zone will be installed with care to avoid root disturbance via irrigation trenching, lighting installation and the planting of larger plants. The installation of 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.

3.11 Other Tree Protection Measures to be Implemented

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

Controlled Construction Access & Parking

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

Clearing and Removal of Trees to be Removed

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

Communication - Tool Box Meetings and Construction Inductions

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

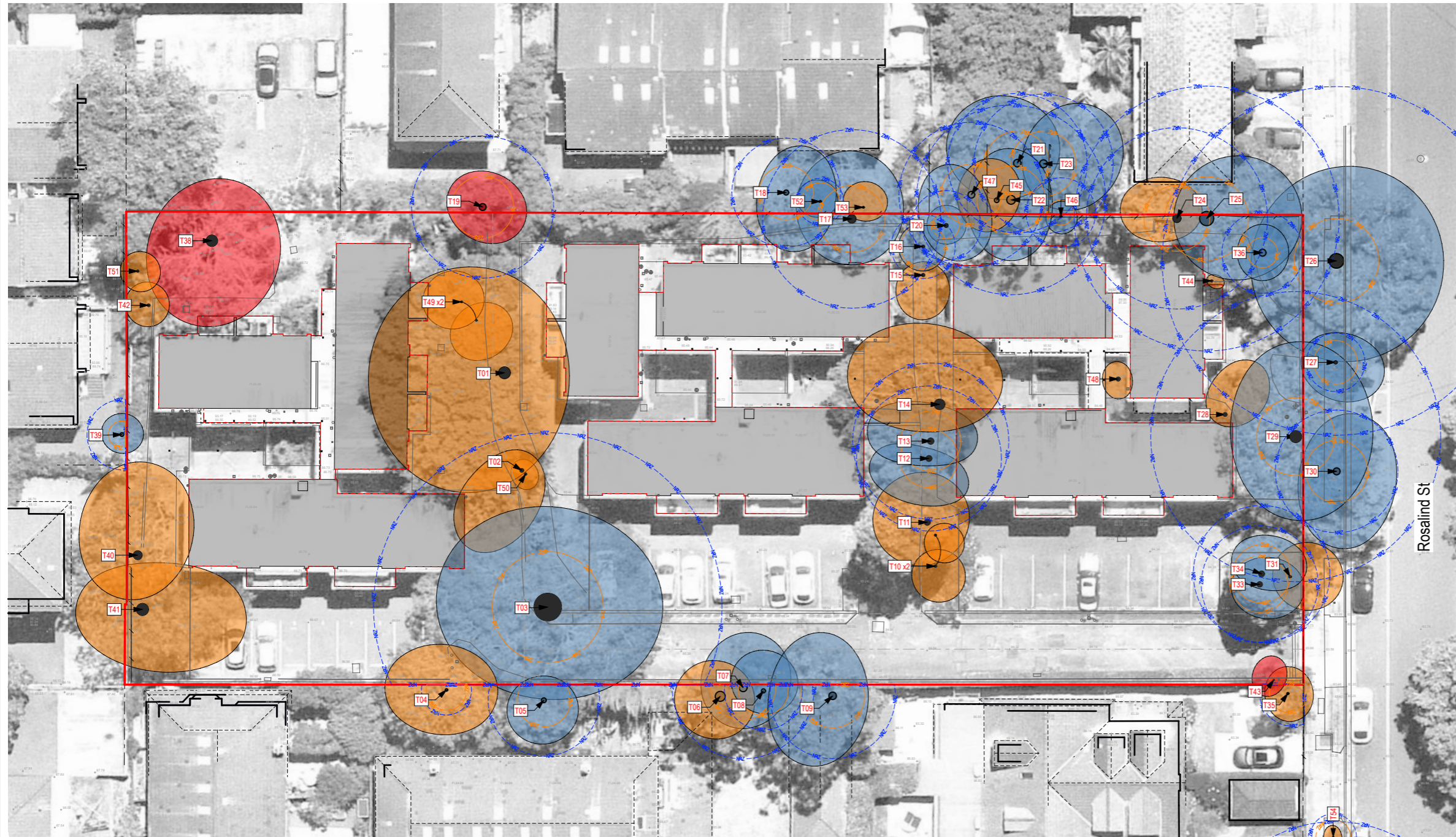
3.12 References

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- End of report -

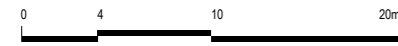
4.0 APPENDICES

4.1 Tree Plans



19-23 Rosalind St, Cammeray - Tree Assessment Schedule

Tree ID	Tree Group	Tree Species	Common Name	Trunk Diameter at base (dbh) (m)	Trunk Diameter at 1.3m (d1.3) (m)	Normal NRZ radius (m) (AS 4978)	Normal SRZ radius (m) (AS 4978)	Retention Value	Recommendation
1	1	<i>Celtis australis</i>	Chinese Hackberry	1.04	1.04	12.48	3.36	Low	Remove
2	1	<i>Jacaranda micrantha</i>	Jacaranda	0.30	0.34	3.60	2.10	Low	Remove
3	1	<i>Ficus adpressa</i>	Port Jackson Fig	1.44	2.40	15.00	4.78	Moderate	Remove
4	1	<i>Celtis australis</i>	Chinese Hackberry	0.18	0.22	2.16	1.75	Low	Retain
5	1	<i>Hibiscus rosa-sinensis</i>	Weeping Lilly Pilly	0.40	0.42	4.80	2.30	Moderate	Retain
6	1	<i>Phoenix canariensis</i>	Canary Island Date Palm	0.75	0.86	4.00	1.43	Low	Retain
7	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.51	0.68	6.12	2.81	Moderate	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea Tree	0.28	0.35	3.36	2.13	Moderate	Retain
9	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.45	0.65	5.40	2.76	Moderate	Retain
10	2	<i>Pimenta rubra</i>	Frangipani	0.23	0.23	2.76	1.79	Low	Remove
11	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.63	0.68	7.56	2.81	Low	Remove
12	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.52	0.52	6.24	2.51	Moderate	Remove
13	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.56	0.58	6.72	2.59	Moderate	Remove
14	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.50	0.50	10.80	3.21	Low	Remove
15	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.27	0.30	3.24	2.00	Low	Remove
16	1	<i>Brachyotum acutifolium</i>	Wawana Flame Tree	0.23	0.28	2.76	1.94	Moderate	Remove
17	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.64	0.71	7.68	2.87	Moderate	Retain
18	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.39	0.44	4.68	2.34	Moderate	Retain
19	1	<i>Celtis australis</i>	Chinese Hackberry	0.51	0.60	6.12	2.67	Nil / Remove	Retain
20	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.18	0.31	3.00	1.16	Moderate	Retain
21	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.65	6.00	2.76	Moderate	Retain
22	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.88	0.75	8.16	2.93	Moderate	Retain
23	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.68	6.00	2.81	Moderate	Retain
24	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.65	0.69	7.80	2.83	Low	Retain
25	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.95	1.22	11.40	3.60	Moderate	Retain
26	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	1.26	1.26	15.00	3.65	Moderate	Retain
27	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.21	0.26	2.52	1.88	Moderate	Retain
28	1	<i>Pimenta rubra</i>	Frangipani	0.30	0.35	3.60	2.13	Low	Remove
29	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	1.04	1.04	12.48	3.36	Moderate	Remove
30	1	<i>Trochopetalum laurum</i>	Water Gum	0.44	0.60	5.28	2.67	Moderate	Retain
31	1	<i>Acer palmatum</i>	Japanese Maple	0.22	0.25	2.64	1.85	Low	Remove
33	1	<i>Cupressus torulosa</i>	Shrub Cypress	0.42	0.48	5.04	2.43	Moderate	Remove
34	1	<i>Cupressus torulosa</i>	Shrub Cypress	0.49	0.52	5.88	2.51	Moderate	Remove
35	1	<i>Eleocharis reticulata</i>	Blueberry Ash	0.15	0.18	2.00	1.61	Low	Retain
36	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.24	0.60	3.00	1.30	Moderate	Retain
38	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.86	1.00	10.32	3.31	Nil / Remove	Remove
39	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.20	0.32	3.00	1.16	Moderate	Retain
40	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.70	0.78	8.40	2.98	Low	Remove
41	1	<i>Agave Renssela</i>	Willow Myrtle	1.06	1.06	12.72	3.99	Low	Remove
42	1	<i>Archontophoenix alexandriae</i>	Alexandra Palm	0.20	0.25	3.00	1.13	Low	Remove
43	1	<i>Melaleuca guineensis</i>	White Cedar	0.09	0.12	2.00	1.35	Low	Remove
44	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.12	0.22	2.50	1.11	Nil / Remove	Remove
45	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.28	0.40	3.36	2.25	Low	Retain
46	1	<i>Hovea floridana</i>	Kentia Palm	0.14	0.19	3.00	1.09	Moderate	Retain
47	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.52	0.58	6.24	2.63	Moderate	Retain
48	1	<i>Cyrtosperma cooperi</i>	Scaly Tree Fern	0.14	0.37	2.00	1.18	Moderate	Remove
49	2	<i>Xylocarpus aemulocarpus</i>	Shiny Xylocarpus	0.16	0.18	2.00	1.61	Low	Remove
50	1	<i>Schottela weberi</i>	Umbrella Tree	0.21	0.22	2.52	1.75	Low	Remove
51	1	<i>Styzygium axillare</i>	Brush Cherry	0.14	0.21	2.00	1.72	Low	Remove
52	1	<i>Hamamelis virginiana</i>	Native Frangipani	0.16	0.18	2.00	1.61	Moderate	Retain
53	1	<i>Melaleuca bracteata</i>	Black Tea Tree	0.12	0.15	2.00	1.49	Low	Retain
54	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Moderate	Retain
55	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	0.96	1.26	11.52	3.65	Moderate	Retain
56	1	<i>Melaleuca guineensis</i>	Broad Leaved Paperbark	1.07	1.24	12.84	3.62	High	Retain
57	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.33	0.42	3.96	2.30	Moderate	Retain
58	1	<i>Eucalyptus microcarya</i>	Tallowood	0.78	1.04	9.36	3.36	High	Retain
59	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Low	Retain
60	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.05	0.08	2.00	1.50	Moderate	Retain



Tree Retention Value Legend

- High Retention value (Green circle)
- Moderate Retention value (Blue circle)
- Low Retention value (Orange circle) (Note: no NRZ's shown for these trees)
- Nil Retention value (should remove) (Red circle) (Note: no NRZ's shown for these trees)

Notional Root Zone (NRZ) (Blue dashed circle)

Nominal Structural Root Zone (SRZ) (Orange dashed circle)

Extent of canopy as verified by site measure and aerial photos (Black outline)

Tree Identification Number (T43)

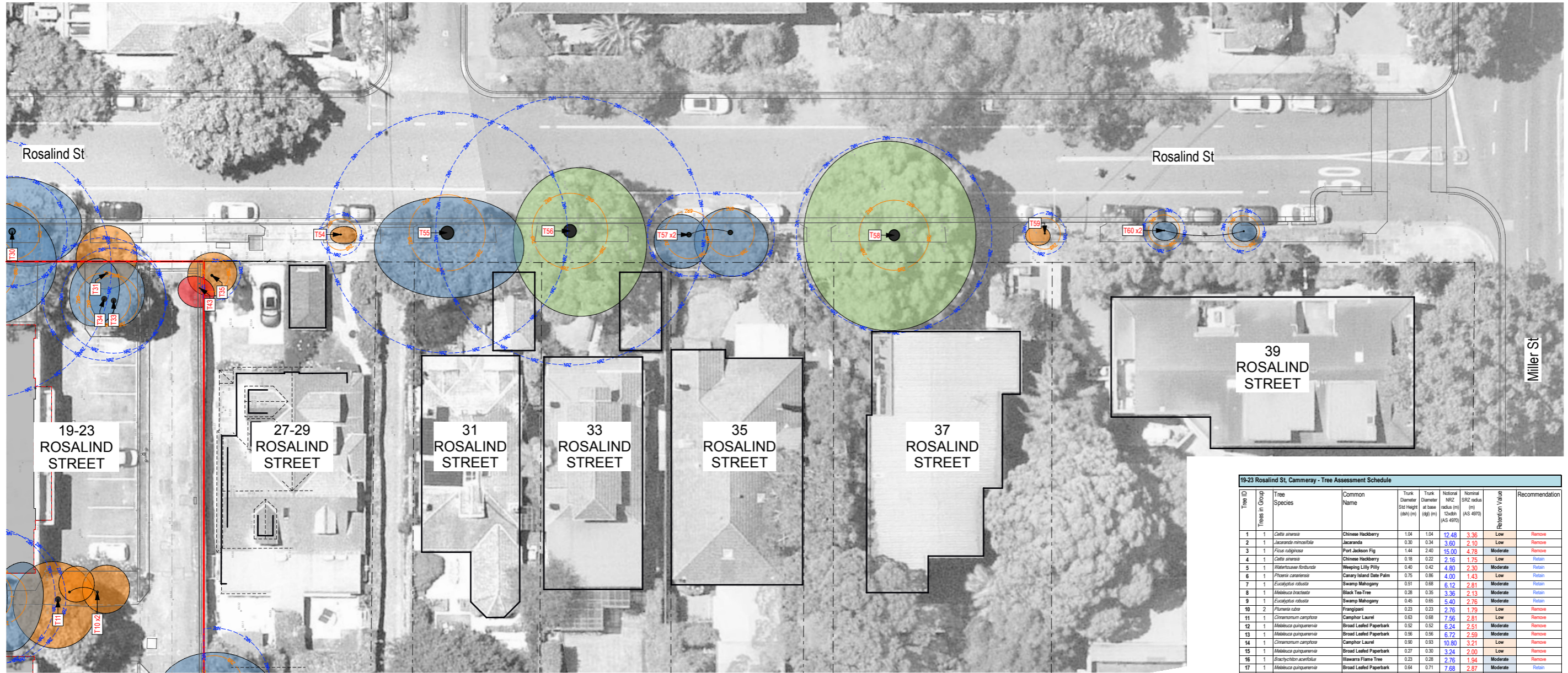
TREE RETENTION VALUE NOTES

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:

- "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.
- "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.
- "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.
- "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.

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.



19-23 Rosalind St, Cammeray - Tree Assessment Schedule

Tree ID	Tree Group	Tree Species	Common Name	Trunk Diameter at base (mm)	Trunk Height (m)	Nominal SRZ radius (m) (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	<i>Celtis sinensis</i>	Chinese Hackberry	1.04	1.04	12.48	3.36	Low	Remove
2	1	<i>Jacaranda micrantha</i>	Jacaranda	0.30	0.34	3.60	2.10	Low	Remove
3	1	<i>Ficus viciifolia</i>	Port Jackson Fig	1.44	2.40	15.00	4.78	Moderate	Remove
4	1	<i>Celtis sinensis</i>	Chinese Hackberry	0.16	0.22	2.16	1.75	Low	Retain
5	1	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	0.40	0.42	4.80	2.30	Moderate	Retain
6	1	<i>Phoenix canariensis</i>	Canary Island Date Palm	0.75	0.86	4.00	1.43	Low	Retain
7	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.51	0.68	6.12	2.81	Moderate	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea Tree	0.28	0.35	3.36	2.13	Moderate	Retain
9	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.45	0.65	5.40	2.75	Moderate	Retain
10	2	<i>Fluminea rubra</i>	Frangipani	0.23	0.23	2.76	1.79	Low	Remove
11	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.63	0.68	7.56	2.81	Low	Remove
12	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.52	0.52	6.24	2.51	Moderate	Remove
13	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.56	0.56	6.72	2.59	Moderate	Remove
14	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.90	0.93	10.80	3.21	Low	Remove
15	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.27	0.30	3.24	2.00	Low	Remove
16	1	<i>Brachybotrys acerifolia</i>	Hawera Flame Tree	0.23	0.28	2.76	1.94	Moderate	Remove
17	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.61	0.71	7.68	2.87	Moderate	Retain
18	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.30	0.44	4.68	2.34	Moderate	Retain
19	1	<i>Celtis sinensis</i>	Chinese Hackberry	0.51	0.60	6.12	2.67	Nil / Remove	Retain
20	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.18	0.31	3.00	1.16	Moderate	Retain
21	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.65	6.00	2.76	Moderate	Retain
22	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.68	0.75	8.16	2.93	Moderate	Retain
23	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.68	6.00	2.81	Moderate	Retain
24	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.65	0.69	7.80	2.83	Low	Retain
25	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.95	1.22	11.40	3.60	Moderate	Retain
26	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	1.26	1.26	15.00	3.65	Moderate	Retain
27	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.21	0.26	2.52	1.88	Moderate	Retain
28	1	<i>Fluminea rubra</i>	Frangipani	0.30	0.35	3.60	2.13	Low	Remove
29	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	1.04	1.04	12.48	3.36	Moderate	Remove
30	1	<i>Trotteria laevis</i>	Water Gum	0.44	0.60	5.28	2.67	Moderate	Retain
31	1	<i>Acer palmatum</i>	Japanese Maple	0.22	0.25	2.64	1.85	Low	Remove
33	1	<i>Cupressus torulosa</i>	Bhutan Cypress	0.42	0.48	5.04	2.43	Moderate	Remove
34	1	<i>Cupressus torulosa</i>	Bhutan Cypress	0.49	0.52	5.88	2.51	Moderate	Remove
35	1	<i>Eleocharis reticulata</i>	Blueberry Ash	0.15	0.18	2.00	1.61	Low	Retain
36	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.21	0.30	3.00	1.30	Moderate	Retain
38	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.85	1.00	10.32	3.31	Nil / Remove	Remove
39	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.20	0.32	3.00	1.16	Moderate	Retain
40	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.70	0.78	8.40	2.98	Low	Remove
41	1	<i>Agonis flexuosa</i>	Willow Myrtle	1.06	1.06	12.72	3.39	Low	Remove
42	1	<i>Archontophoenix alexandriae</i>	Alexandra Palm	0.20	0.26	3.00	1.13	Low	Remove
43	1	<i>Mitella anandach</i>	White Cedar	0.09	0.12	2.00	1.36	Nil / Remove	Remove
44	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.12	0.22	2.50	1.11	Low	Remove
45	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.28	0.40	3.36	2.25	Low	Retain
46	1	<i>Howea forsteriana</i>	Kentia Palm	0.14	0.18	3.00	1.09	Moderate	Retain
47	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.52	0.58	6.24	2.63	Moderate	Retain
48	1	<i>Cyathus coccineus</i>	Scaly Tree Fern	0.14	0.37	2.00	2.18	Moderate	Remove
49	2	<i>Xylocarpus acuminatus</i>	Shiny Xylocarp	0.16	0.18	2.00	1.61	Low	Remove
50	1	<i>Scaevola taccada</i>	Umbrella Tree	0.21	0.22	2.52	1.75	Low	Remove
51	1	<i>Syzygium australe</i>	Brush Cherry	0.14	0.21	2.00	1.72	Low	Remove
52	1	<i>Hymenocallis flava</i>	Native Frangipani	0.16	0.18	2.00	1.61	Moderate	Retain
53	1	<i>Melaleuca bracteata</i>	Black Tea Tree	0.12	0.15	2.00	1.49	Low	Retain
54	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Moderate	Retain
55	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.96	1.26	11.52	3.65	Moderate	Retain
56	1	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	1.07	1.24	12.84	3.62	High	Retain
57	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.33	0.42	3.96	2.30	Moderate	Retain
58	1	<i>Eucalyptus microcorys</i>	Tallowood	0.78	1.04	9.36	3.36	High	Retain
59	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Low	Retain
60	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	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.

Tree Retention Value Legend

- High Retention value (Green circle)
- Moderate Retention value (Blue circle)
- Low Retention value (Orange circle) (Note: no NRZs shown for these trees)
- Nil Retention value (should remove) (Red circle) (Note: no NRZs shown for these trees)

Notional Root Zone (NRZ) (Blue dashed circle)
 Nominal Structural Root Zone (SRZ) (Orange dashed circle)
 Extent of canopy as verified by site measure and aerial photos (Green solid circle)
 Tree Identification Number (T43)

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:

- “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.
- “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.
- “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.
- “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.

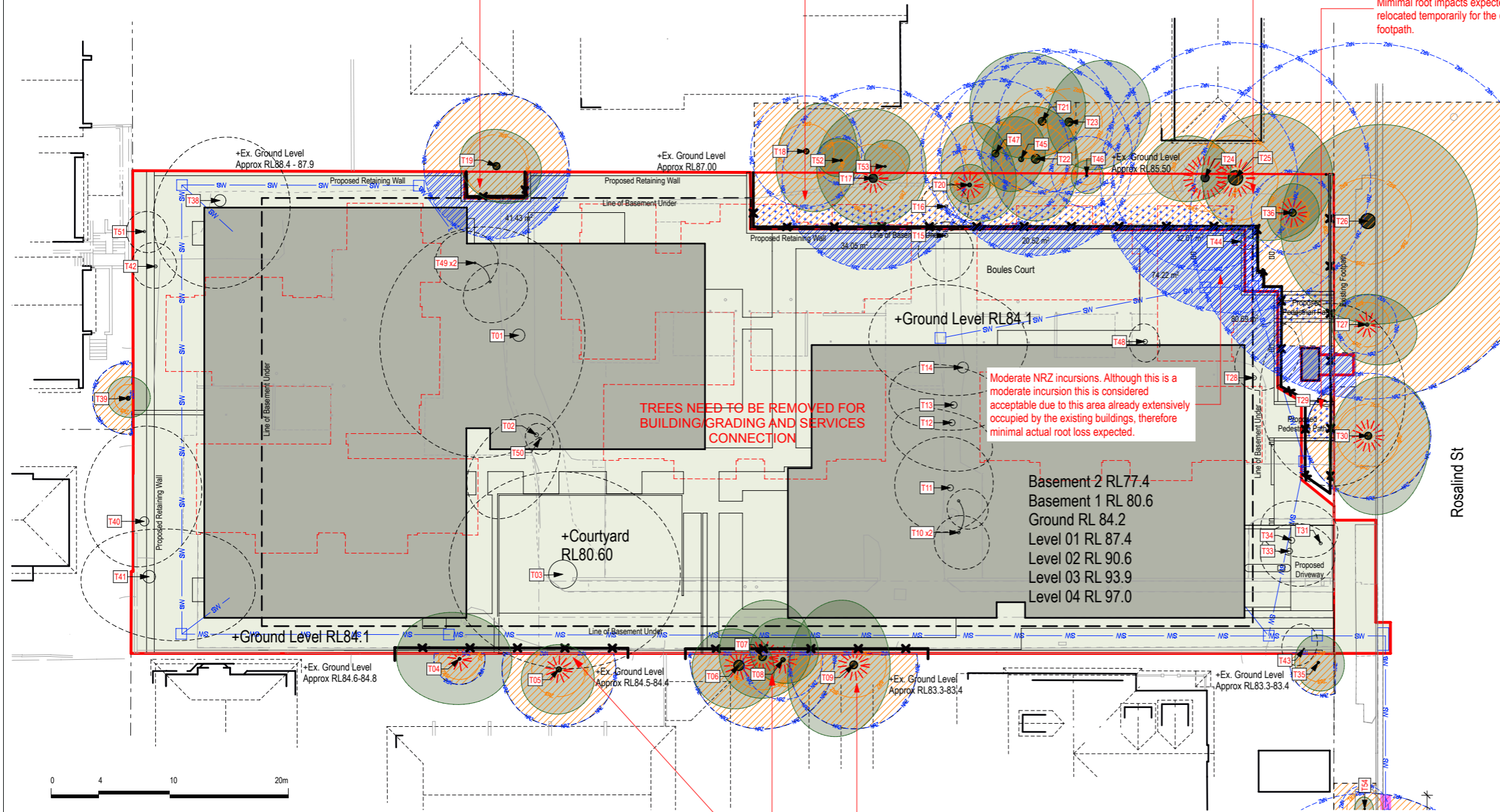
Consideration has also been given to the relationship of the trees to one another and their proximity to the likely development areas on the site. For example, trees that are part of a closely spaced group, or are likely to be significantly misshapen or unstable with the removal of surrounding trees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

Exempt species (*Celtis sinensis*) in poor form and condition on neighbouring property which should therefore not unreasonably restrict development. Tree has been recently heavily pruned by neighbouring owner. The tree is retained with major NRZ impacts, however a retaining wall is to be built around the SRZ to ensure tree remains at least theoretically stable.

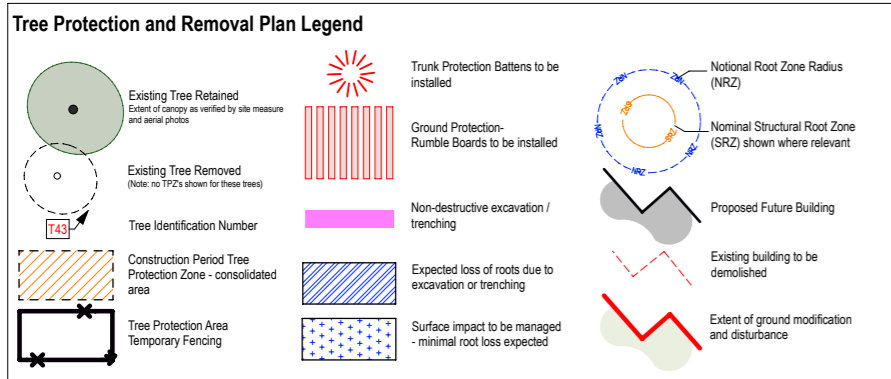
Minor landscape embellishments. No excavation to be undertaken below existing grades - surface impact to be managed. Minimal root loss expected.

Minor landscape embellishments. No excavation to be undertaken below existing grades - surface impact to be managed. Minimal root loss expected.

Surface impacts due to pedestrian path construction. Minimal root impacts expected. Tree fencing may be relocated temporarily for the construction of the footpath.

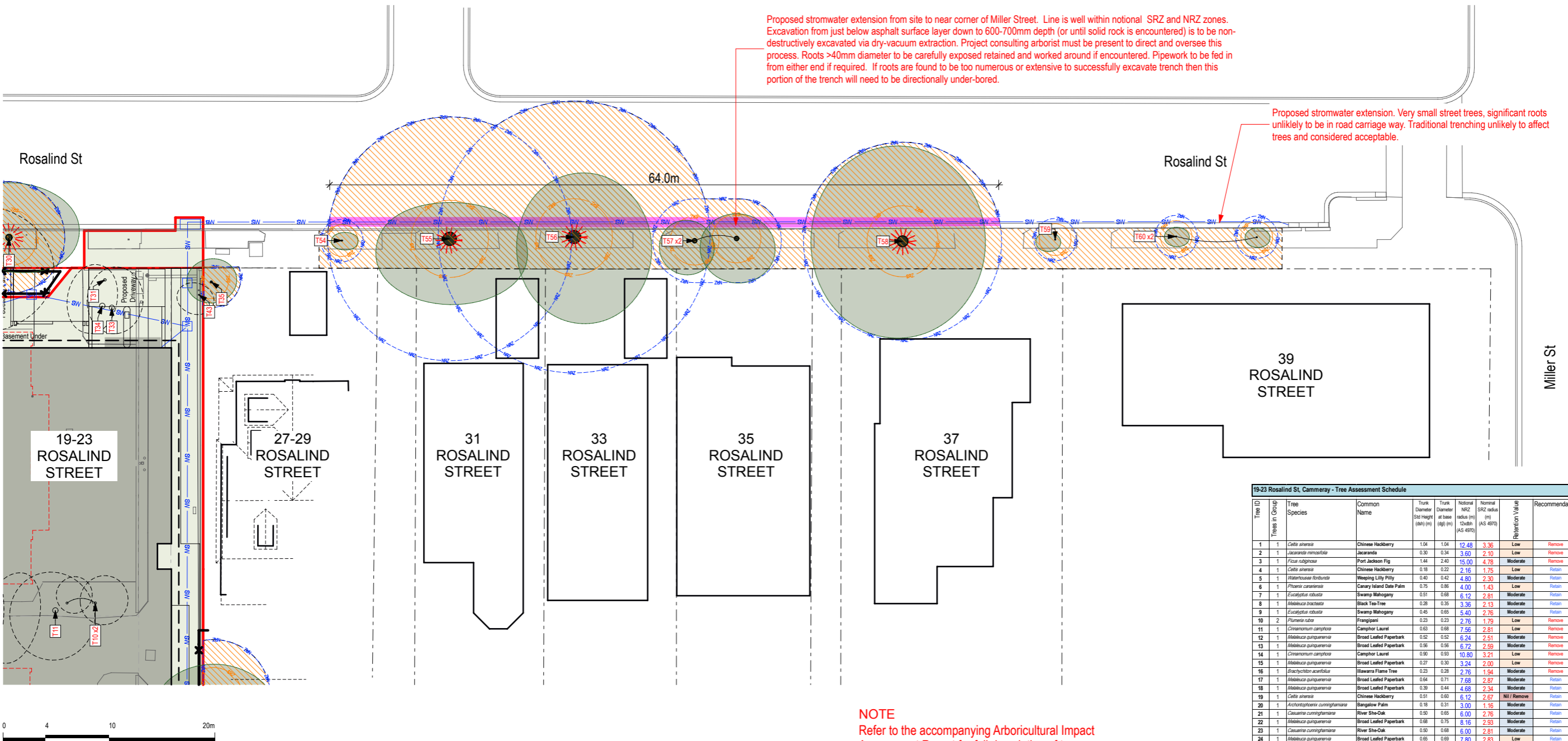


Tree ID	Tree Group	Species	Common Name	Trunk Diameter at base (dbh) (m)	Trunk Diameter at base (girth) (m)	Nominal NRZ radius (m) (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	1	<i>Celtis sinensis</i>	Chinese Hackberry	1.04	1.04	12.48	3.36	Low	Remove
2	1	<i>Jacaranda mimosoides</i>	Jacaranda	0.30	0.34	3.60	2.10	Low	Remove
3	1	<i>Ficus adpressa</i>	Port Jackson Fig	1.44	2.40	15.00	4.78	Moderate	Remove
4	1	<i>Celtis sinensis</i>	Chinese Hackberry	0.18	0.22	2.16	1.75	Low	Retain
5	1	<i>Hibiscus floribundus</i>	Weeping Lily Pilly	0.40	0.42	4.80	2.30	Moderate	Retain
6	1	<i>Phoenix carolinensis</i>	Canary Island Date Palm	0.75	0.86	4.00	1.43	Low	Retain
7	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.51	0.68	6.12	2.81	Moderate	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.28	0.35	3.36	2.13	Moderate	Retain
9	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.45	0.65	5.40	2.76	Moderate	Retain
10	2	<i>Plumera rubra</i>	Frangipani	0.23	0.23	2.76	1.79	Low	Remove
11	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.63	0.68	7.56	2.81	Low	Remove
12	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.52	0.52	6.24	2.51	Moderate	Remove
13	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.56	0.56	6.72	2.59	Moderate	Remove
14	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.50	0.50	10.80	3.21	Low	Remove
15	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.27	0.30	3.24	2.00	Low	Remove
16	1	<i>Brachyotum acutifolius</i>	Wauwara Flame Tree	0.23	0.28	2.76	1.94	Moderate	Remove
17	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.64	0.71	7.68	2.87	Moderate	Retain
18	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.39	0.44	4.68	2.34	Moderate	Retain
19	1	<i>Celtis sinensis</i>	Chinese Hackberry	0.51	0.60	6.12	2.67	Nil / Remove	Retain
20	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.18	0.31	3.00	1.16	Moderate	Retain
21	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.65	6.00	2.76	Moderate	Retain
22	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.88	0.75	8.16	2.93	Moderate	Retain
23	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.68	6.00	2.81	Moderate	Retain
24	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.65	0.69	7.80	2.83	Low	Retain
25	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.95	1.22	11.40	3.60	Moderate	Retain
26	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	1.26	1.26	15.00	3.65	Moderate	Retain
27	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.21	0.26	2.52	1.88	Moderate	Retain
28	1	<i>Plumera rubra</i>	Frangipani	0.30	0.35	3.60	2.13	Low	Remove
29	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	1.04	1.04	12.48	3.36	Moderate	Remove
30	1	<i>Tristania laurina</i>	Water Gum	0.44	0.60	5.28	2.67	Moderate	Retain
31	1	<i>Acer palmatum</i>	Japanese Maple	0.22	0.25	2.64	1.85	Low	Remove
33	1	<i>Cupressus torulosa</i>	Bluish Cypress	0.42	0.48	5.04	2.43	Moderate	Remove
34	1	<i>Cupressus torulosa</i>	Bluish Cypress	0.49	0.52	5.88	2.51	Moderate	Remove
35	1	<i>Elaeagnus reticulata</i>	Blueberry Ash	0.15	0.18	2.00	1.61	Low	Retain
36	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.24	0.40	3.00	1.30	Moderate	Retain
38	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.86	1.00	10.32	3.31	Nil / Remove	Remove
39	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.20	0.32	3.00	1.16	Moderate	Retain
40	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.70	0.78	8.40	2.98	Low	Remove
41	1	<i>Agave lutescens</i>	Willow Myrtle	1.06	1.06	12.72	3.39	Low	Remove
42	1	<i>Archontophoenix alexandriae</i>	Alexandra Palm	0.20	0.25	3.00	1.13	Low	Remove
43	1	<i>Melaleuca quinquenervia</i>	White Cedar	0.39	0.42	2.00	1.35	Nil / Remove	Remove
44	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.12	0.22	2.50	1.11	Low	Remove
45	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.28	0.40	3.36	2.25	Low	Retain
46	1	<i>Howea forsteriana</i>	Kentia Palm	0.14	0.19	3.00	1.09	Moderate	Retain
47	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.52	0.58	6.24	2.63	Moderate	Retain
48	1	<i>Cyrtanthus cooperi</i>	Scaly Tree Fern	0.14	0.37	2.00	1.18	Moderate	Remove
49	2	<i>Xylocarpus aemulocarpus</i>	Shiny Xylocarp	0.16	0.18	2.00	1.61	Low	Remove
50	1	<i>Schiffelia veitchii</i>	Umbrella Tree	0.21	0.22	2.52	1.75	Low	Remove
51	1	<i>Styphnum aculeatum</i>	Brush Cherry	0.14	0.21	2.00	1.72	Low	Remove
52	1	<i>Hamamelis virginiana</i>	Witch Fraxinoid	0.16	0.18	2.00	1.61	Moderate	Retain
53	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.12	0.15	2.00	1.49	Low	Retain
54	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Moderate	Retain
55	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.96	1.26	11.52	3.65	Moderate	Retain
56	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	1.07	1.24	12.84	3.62	High	Retain
57	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.33	0.42	3.96	2.30	Moderate	Retain
58	1	<i>Eucalyptus microcarya</i>	Tallowood	0.78	1.04	9.36	3.36	High	Retain
59	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Low	Retain
60	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.05	0.08	2.00	1.50	Moderate	Retain



Neighbouring property trees are at a lower level and adjacent to existing large retaining wall. No roots expected to be found within proposed development site. Protect overhead canopy during all works and piling. Moderate pruning to be undertaken for proposed building clearance. Pruning is considered acceptable. Lower portion of the existing walling to be retained during demolition as trunk protection and to retain existing soil and levels around base of trees. Any new walling is to be constructed on the western side of the existing walling when near trees and it is going below the adjoining sites levels. TPZ fencing to be installed as and when brick walling is demolished and is no longer separating trees from site.

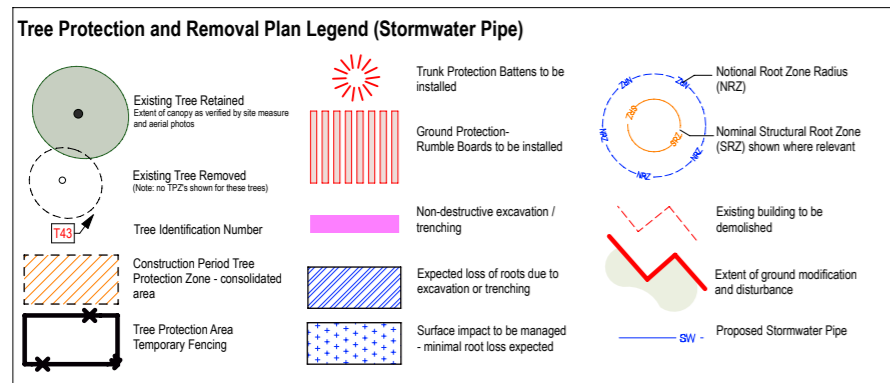
NOTE
Refer to the accompanying Arboricultural Impact Assessment Report for full description of trees, measurements and methods used to assess the trees, and proposed tree protection measures.



Proposed stormwater extension from site to near corner of Miller Street. Line is well within notional SRZ and NRZ zones. Excavation from just below asphalt surface layer down to 600-700mm depth (or until solid rock is encountered) is to be non-destructively excavated via dry-vacuum extraction. Project consulting arborist must be present to direct and oversee this process. Roots >40mm diameter to be carefully exposed retained and worked around if encountered. Pipework to be fed in from either end if required. If roots are found to be too numerous or extensive to successfully excavate trench then this portion of the trench will need to be directionally under-bored.

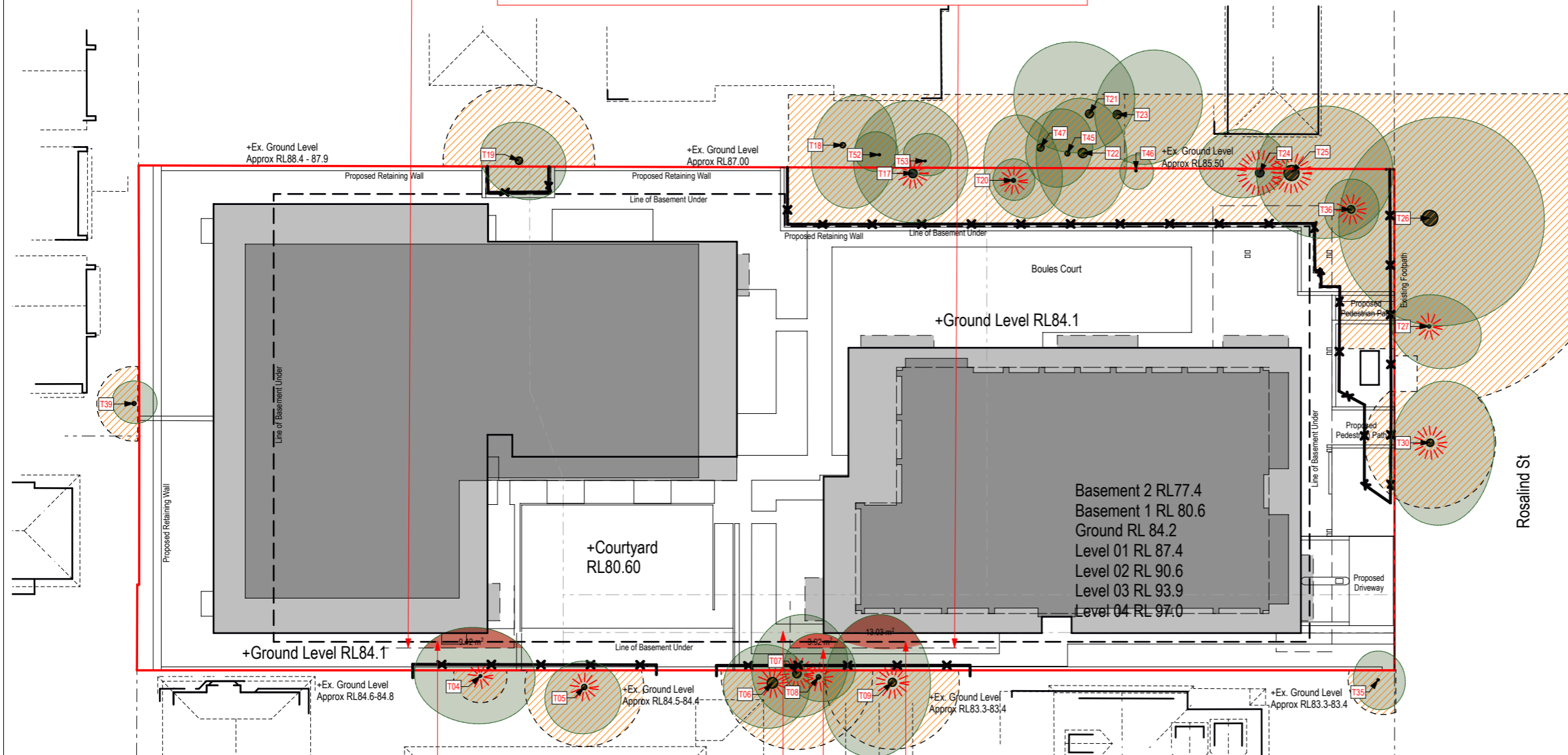
Proposed stormwater extension. Very small street trees, significant roots unlikely to be in road carriage way. Traditional trenching unlikely to affect trees and considered acceptable.

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.



Tree ID	Tree Species	Common Name	Trunk Diameter at base (mm)	Trunk DBH Height (m)	Notional NRZ radius (m) (AS 4970)	Nominal SRZ radius (m) (AS 4970)	Retention Value	Recommendation
1	<i>Celtis sinensis</i>	Chinese Hackberry	1.04	1.04	12.48	3.36	Low	Remove
2	<i>Jacaranda mimosaefolia</i>	Jacaranda	0.30	0.34	3.60	2.10	Low	Remove
3	<i>Ficus religiosa</i>	Port Jackson Fig	1.44	2.40	15.00	4.78	Moderate	Remove
4	<i>Celtis sinensis</i>	Chinese Hackberry	0.16	0.22	2.16	1.75	Low	Retain
5	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	0.40	0.42	4.80	2.30	Moderate	Retain
6	<i>Phoenix canariensis</i>	Canary Island Date Palm	0.75	0.86	4.00	1.43	Low	Retain
7	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.51	0.68	6.12	2.81	Moderate	Retain
8	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.28	0.35	3.36	2.13	Moderate	Retain
9	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.45	0.65	5.40	2.75	Moderate	Retain
10	<i>Fluminea rubra</i>	Frangipani	0.23	0.23	2.76	1.79	Low	Remove
11	<i>Cinnamomum camphora</i>	Camphor Laurel	0.63	0.68	7.56	2.81	Low	Remove
12	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.52	0.52	6.24	2.51	Moderate	Remove
13	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.56	0.56	6.72	2.59	Moderate	Remove
14	<i>Cinnamomum camphora</i>	Camphor Laurel	0.90	0.93	10.80	3.21	Low	Remove
15	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.27	0.30	3.24	2.00	Low	Remove
16	<i>Brachybotrys asarifolia</i>	Hawera Flax Tree	0.23	0.28	2.76	1.94	Moderate	Remove
17	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.64	0.71	7.68	2.87	Moderate	Retain
18	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.30	0.44	4.68	2.34	Moderate	Retain
19	<i>Celtis sinensis</i>	Chinese Hackberry	0.51	0.60	6.12	2.67	Nil / Remove	Retain
20	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.18	0.31	3.00	1.16	Moderate	Retain
21	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.65	6.00	2.76	Moderate	Retain
22	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.68	0.75	8.16	2.93	Moderate	Retain
23	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.68	6.00	2.81	Moderate	Retain
24	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.65	0.69	7.80	2.83	Low	Retain
25	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.95	1.22	11.40	3.60	Moderate	Retain
26	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	1.26	1.26	15.00	3.65	Moderate	Retain
27	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.21	0.26	2.52	1.88	Moderate	Retain
28	<i>Fluminea rubra</i>	Frangipani	0.30	0.35	3.60	2.13	Low	Remove
29	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	1.04	1.04	12.48	3.36	Moderate	Remove
30	<i>Tetrastix laevis</i>	Water Gum	0.44	0.60	5.28	2.67	Moderate	Retain
31	<i>Acer palmatum</i>	Japanese Maple	0.22	0.25	2.64	1.85	Low	Remove
33	<i>Cupressus torulosa</i>	Bhutan Cypress	0.42	0.48	5.04	2.43	Moderate	Remove
34	<i>Cupressus torulosa</i>	Bhutan Cypress	0.49	0.52	5.88	2.51	Moderate	Remove
35	<i>Eleocharis reticulata</i>	Blueberry Ash	0.15	0.18	2.00	1.61	Low	Retain
36	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.21	0.60	3.50	1.30	Moderate	Retain
38	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.66	1.00	10.32	3.31	Nil / Remove	Remove
39	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.20	0.32	3.00	1.16	Moderate	Retain
40	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.70	0.78	8.40	2.98	Low	Remove
41	<i>Agonis flexuosa</i>	Willow Myrtle	1.06	1.06	12.72	3.39	Low	Remove
42	<i>Archontophoenix alexandriae</i>	Alexandra Palm	0.20	0.26	3.00	1.13	Low	Remove
43	<i>Melia azadirach</i>	White Cedar	0.09	0.12	2.00	1.36	Nil / Remove	Remove
44	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.12	0.22	2.50	1.11	Low	Remove
45	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.28	0.40	3.36	2.25	Low	Retain
46	<i>Howea forsteriana</i>	Kentia Palm	0.11	0.18	3.00	1.09	Moderate	Retain
47	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.52	0.58	6.24	2.63	Moderate	Retain
48	<i>Cyathea cooperi</i>	Scaly Tree Fern	0.14	0.37	2.00	2.18	Moderate	Remove
49	<i>Xylocarpus aemulorum</i>	Shiny Xylocarp	0.16	0.18	2.00	1.61	Low	Remove
50	<i>Schefflera velutina</i>	Umbrella Tree	0.21	0.22	2.52	1.75	Low	Remove
51	<i>Syzygium australe</i>	Brush Cherry	0.14	0.21	2.00	1.72	Low	Remove
52	<i>Hymenocallis laevis</i>	Native Frangipani	0.16	0.18	2.00	1.61	Moderate	Retain
53	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.12	0.15	2.00	1.49	Low	Retain
54	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Moderate	Retain
55	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	0.56	1.26	11.52	3.65	Moderate	Retain
56	<i>Melaleuca quinquangena</i>	Broad Leaved Paperbark	1.07	1.24	12.84	3.62	High	Retain
57	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.33	0.42	3.96	2.30	Moderate	Retain
58	<i>Eucalyptus microcorys</i>	Tallowood	0.78	1.04	9.36	3.36	High	Retain
59	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Low	Retain
60	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.05	0.08	2.00	1.50	Moderate	Retain

SPECIAL NOTE : This portion of the new building is to have a special scaffold provision with a maximum width of 1.2m created outside the building facade to limit pruning impact. Builder is to cater for this and allow for necessary additional scaffold access and egress requirements to be undertaken outside of the tree canopy being protected to allow this narrow provision.



Tree ID	Tree Group	Species	Common Name	Trunk Diameter at base (dbh) (m)	Trunk Diameter at 1.3m (m)	Natural SRZ radius (m) (AS 4373)	Proposed SRZ radius (m) (AS 4373)	Retention Value	Recommendation
1	1	<i>Calli ananass</i>	Chinese Hackberry	1.04	1.04	12.48	3.36	Low	Remove
2	1	<i>Jacaranda microcarpa</i>	Jacaranda	0.30	0.34	3.60	2.10	Low	Remove
3	1	<i>Ficus adnigrata</i>	Port Jackson Fig	1.44	2.40	15.00	4.78	Moderate	Remove
4	1	<i>Calli ananass</i>	Chinese Hackberry	0.18	0.22	2.16	1.75	Low	Retain
5	1	<i>Wisteria floribunda</i>	Weeping Lily Pilly	0.40	0.42	4.80	2.30	Moderate	Retain
6	1	<i>Phoenix carolinensis</i>	Canary Island Date Palm	0.75	0.86	4.00	1.43	Low	Retain
7	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.51	0.68	6.12	2.81	Moderate	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.28	0.35	3.36	2.13	Moderate	Retain
9	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	0.45	0.65	5.40	2.76	Moderate	Retain
10	2	<i>Plumiera rubra</i>	Frangipani	0.23	0.23	2.76	1.79	Low	Remove
11	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.63	0.68	7.56	2.81	Low	Remove
12	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.52	0.52	6.24	2.51	Moderate	Remove
13	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.56	0.58	6.72	2.59	Moderate	Remove
14	1	<i>Cinnamomum camphora</i>	Camphor Laurel	0.80	0.90	10.80	3.21	Low	Remove
15	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.27	0.30	3.24	2.00	Low	Remove
16	1	<i>Brachyotum acutifolium</i>	Warrara Flame Tree	0.23	0.28	2.76	1.94	Moderate	Remove
17	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.64	0.71	7.68	2.87	Moderate	Retain
18	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.39	0.44	4.68	2.34	Moderate	Retain
19	1	<i>Calli ananass</i>	Chinese Hackberry	0.51	0.60	6.12	2.67	Nil / Remove	Retain
20	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.18	0.31	3.00	1.16	Moderate	Retain
21	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.65	6.00	2.76	Moderate	Retain
22	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.88	0.75	8.16	2.93	Moderate	Retain
23	1	<i>Casuarina cunninghamiana</i>	River She-Oak	0.50	0.68	6.00	2.81	Moderate	Retain
24	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.65	0.69	7.80	2.83	Low	Retain
25	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.95	1.22	11.40	3.60	Moderate	Retain
26	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	1.26	1.26	15.00	3.65	Moderate	Retain
27	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.21	0.26	2.52	1.88	Moderate	Retain
28	1	<i>Plumiera rubra</i>	Frangipani	0.30	0.35	3.60	2.13	Low	Remove
29	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	1.04	1.04	12.48	3.36	Moderate	Remove
30	1	<i>Tristania laurina</i>	Water Gum	0.44	0.60	5.28	2.67	Moderate	Retain
31	1	<i>Acer palmatum</i>	Japanese Maple	0.22	0.25	2.64	1.85	Low	Remove
33	1	<i>Cupressus torulosa</i>	Bluish Cypress	0.42	0.48	5.04	2.43	Moderate	Remove
34	1	<i>Cupressus torulosa</i>	Bluish Cypress	0.49	0.52	5.88	2.51	Moderate	Remove
35	1	<i>Elaeagnus reticulata</i>	Blueberry Ash	0.15	0.18	2.00	1.61	Low	Retain
36	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.24	0.60	3.00	1.30	Moderate	Retain
38	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.86	1.00	10.32	3.31	Nil / Remove	Remove
39	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.20	0.32	3.00	1.16	Moderate	Retain
40	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.70	0.78	8.40	2.98	Low	Remove
41	1	<i>Agave flexosa</i>	Willow Myrtle	1.06	1.06	12.72	3.39	Low	Remove
42	1	<i>Archontophoenix alexandriae</i>	Alexandra Palm	0.20	0.25	3.00	1.13	Low	Remove
43	1	<i>Melaleuca quinquenervia</i>	White Cedar	0.29	0.32	2.00	1.35	Nil / Remove	Remove
44	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	0.12	0.22	2.50	1.11	Low	Remove
45	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.28	0.40	3.36	2.25	Low	Retain
46	1	<i>Howea forsteriana</i>	Kentia Palm	0.14	0.19	3.00	1.09	Moderate	Retain
47	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.52	0.58	6.24	2.63	Moderate	Retain
48	1	<i>Cyathus cooperi</i>	Scaly Tree Fern	0.14	0.37	2.00	2.18	Moderate	Remove
49	2	<i>Xylocarpus aemulosum</i>	Shiny Xylocarp	0.16	0.18	2.00	1.61	Low	Remove
50	1	<i>Schiffelia veitchii</i>	Umbrella Tree	0.21	0.22	2.52	1.75	Low	Remove
51	1	<i>Styzygium axillare</i>	Brush Cherry	0.14	0.21	2.00	1.72	Low	Remove
52	1	<i>Hamamelisplum laevis</i>	Native Frangipani	0.16	0.18	2.00	1.61	Moderate	Retain
53	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	0.12	0.15	2.00	1.49	Low	Retain
54	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Moderate	Retain
55	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	0.96	1.26	11.52	3.65	Moderate	Retain
56	1	<i>Melaleuca quinquenervia</i>	Broad Leaved Paperbark	1.07	1.24	12.84	3.62	High	Retain
57	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.33	0.42	3.96	2.30	Moderate	Retain
58	1	<i>Eucalyptus microcarya</i>	Tallowood	0.78	1.04	9.36	3.36	High	Retain
59	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.06	0.08	2.00	1.50	Low	Retain
60	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	0.05	0.08	2.00	1.50	Moderate	Retain

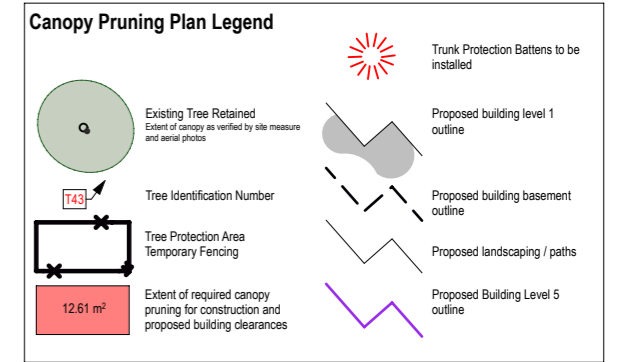
T04 moderate pruning of the neighbouring tree is required for the building construction scaffold, piling rig and final building clearance. This tree is an exempt, undesirable and invasive species that has likely self sown at foot of neighbouring retaining wall. Pruning extent of approximately 16% of canopy area is therefore still considered tolerable given the species and it is considered that this tree should not preclude or overly restrict the development.

T07 is a neighbouring tree overhanging boundary. The canopy of this tree measures as being above the Level 3 RL of 93.8 to 93.3 therefore the canopy does not need to be pruned back as the building above Level 3 is set back.

T09 is a neighbouring tree overhanging boundary. Pruning of outer lying branches is required for building construction scaffold and final building clearance. Pruning is considered tolerable (approximately 16% of theoretical canopy) due to majority of foliage being held and maintained on eastern side of tree. Refer to report for further information.

T08 is a neighbouring tree overhanging boundary. Pruning of the outer lying branches is required for building construction scaffold and final building clearance. Pruning is considered tolerable (approximately 16% of theoretical canopy) due to majority of foliage being maintained on eastern side of tree. Refer to report for further information.

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



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.

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 be done near existing trees as the runoff is very harmful to tree roots.

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

2. Controlled Construction Access

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

3. Tree Protection Fencing & Signage

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

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

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

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

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

4. Trunk and Lower Branch Protection

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

5. Works within the TPZ's

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

6. Ground Protection

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

7. Provision of Temporary Irrigation

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 TPZ's of the trees nominated to maintain adequate water to the retained trees and help maintain their healthy condition. This shall be a surface mounted 'residential-style' soaker hose and/or similar surface sprinkler systems. It is to be surface visible and spray delivered so that is operation can be easily visible and verified. It should be on a designated supply line, separate from other construction related water supplies to minimise its likelihood of being disconnected.

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

8. Structural Demolition Within TPZ's

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

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

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

9. Excavations or Trenching within TPZ's

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

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

10. Soft Landscaping Installation

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

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

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

11. Canopy Pruning

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

12. Root Pruning

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

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

13. Accidental Tree Damage

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

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

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

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



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



Example image of acceptable trunk protection battens



Example image of acceptable ground protection rumble boards



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REVISION	DESCRIPTION	CHKD	DATE
A	For Development Application	RWS	12/12/25

PROJECT & CLIENT

19-23 Rosalind Street, Cammeray

PERIFA

DRAWING NUMBER

Tree Protection Specifications

Project No :25.16
Designed :RWS
Drawn :RWS/DD
North Scale :N/A

DRAWING NUMBER

T-06

REVISION

A

Plotted at : 1:55 pm 12/12/2025

4.2 Tree Impact Assessment Schedule

19-23 Rosalind St, Cammeray - Tree Assessment Schedule

Tree ID	Trees in Group	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	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
33	1	<i>Cupressus torulosa</i>	Bhutan Cypress	9.5	5.0	0.42	0.48	5.04	2.43	Mature	Good	Average	Exotic	Conifer		Medium (15-40 years)	Moderate	Part of pair growing in very close proximity to each other. Will need to be treated as one tree. Good condition and forms when viewed together.	Within footprint of proposed building or major disturbance	Remove
34	1	<i>Cupressus torulosa</i>	Bhutan Cypress	9.5	5.0	0.49	0.52	5.88	2.51	Mature	Fair	Average	Exotic	Conifer		Medium (15-40 years)	Moderate	Part of pair growing in very close proximity to each other. Will need to be treated as one tree. Good condition and forms when viewed together.	Within footprint of proposed building or major disturbance	Remove
1	1	<i>Celtis sinensis</i>	Chinese Hackberry	17.0	12.0	1.04	1.04	12.48	3.36	Mature	Fair	Average	Invasive	Deciduous	Very Asymmetric Form	Medium (15-40 years)	Low	Asymmetric to south.	Within footprint of proposed building or major disturbance	Remove
4	1	<i>Celtis sinensis</i>	Chinese Hackberry	12.0	9.0	0.18	0.22	2.16	1.75	Mature	Fair	Average	Invasive	Deciduous		Medium (15-40 years)	Low	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.	Minimal impact expected apart from moderate pruning to western side overhanging boundary. Undesirable weed species, and considered tolerable.	Retain
10	2	<i>Plumeria rubra</i>	Frangipani	4.0	5.0	0.23	0.23	2.76	1.79	Mature	Fair	Average	Exotic	Deciduous		Replaceable (Small/Young)	Low	Group of two small and relatively insignificant trees.	Within footprint of proposed building or major disturbance	Remove
19	1	<i>Celtis sinensis</i>	Chinese Hackberry	9.0	8.0	0.51	0.60	6.12	2.67	Mature	Poor	Poor	Invasive	Deciduous		Remove (<5 years)	Nil / Remove	Neighbouring property tree. Tree has been topped and pruned back. Assumed to be not on site so retain.	Retained with a major (35%) incursion. Neighbouring property tree in poor form and condition. It is an invasive, exempt and undesirable species (<i>Celtis sinensis</i>). It is not considered reasonable for this tree to overly constrain development. Nil retention value, proposed retaining wall has been stepped around SRZ to maintain theoretical stability.	Retain
28	1	<i>Plumeria rubra</i>	Frangipani	8.5	7.0	0.30	0.35	3.60	2.13	Mature	Fair	Average	Exotic	Deciduous	Very Asymmetric Form, Lean-Major	Medium (15-40 years)	Low	Lower trunk lean and butt sweep. Asymmetric to north-west.	Within footprint of proposed building or major disturbance	Remove
31	1	<i>Acer palmatum</i>	Japanese Maple	7.0	6.0	0.22	0.25	2.64	1.85	Mature	Fair	Poor	Exotic	Deciduous	Very Asymmetric Form	Medium (15-40 years)	Low	Very asymmetric to north.	Within footprint of proposed building or major disturbance	Remove
43	1	<i>Melia azedarach</i>	White Cedar	7.0	5.0	0.09	0.12	2.00	1.36	Semi-mature	Fair	Poor	Native	Deciduous		Remove (<5 years)	Nil / Remove	Self sown specimen growing hard up against fence and wall near existing utility meter. Unsustainable location. Should remove.	Very poor tree. Within footprint of proposed building or major disturbance	Remove
3	1	<i>Ficus rubiginosa</i>	Port Jackson Fig	14.0	16.0	1.44	2.40	15.00	4.78	Mature	Fair	Average	Native	Evergreen	Co-dominant Stems, Deadwood-Minor, Epicormic Growth	Medium (15-40 years)	Moderate	Sparse canopy. Roots visible and likely to be spreading out under adjoining asphalt and structures. Evidenced via cracking of asphalt pavement.	Within footprint of proposed building or major disturbance	Remove
5	1	<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	10.0	7.0	0.40	0.42	4.80	2.30	Mature	Good	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.	Minimal impact expected.	Retain
7	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	12.0	8.0	0.51	0.68	6.12	2.81	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.	Minimal impact expected.	Retain
8	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	7.0	6.0	0.28	0.35	3.36	2.13	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.	Minimal impact expected. Moderate canopy pruning of approximately 16% considered tolerable.	Retain
9	1	<i>Eucalyptus robusta</i>	Swamp Mahogany	13.5	10.0	0.45	0.65	5.40	2.76	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology. Canopy overhangs site boundary. Lower branches to west may need to be pruned to facilitate above ground development.	Minimal impact expected. Moderate pruning of lower western branches for building clearances of approximately 16% and considered tolerable.	Retain
11	1	<i>Cinnamomum camphora</i>	Camphor Laurel	16.5	8.0	0.63	0.68	7.56	2.81	Mature	Fair	Average	Invasive	Evergreen		Medium (15-40 years)	Low	Undesirable species.	Within footprint of proposed building or major disturbance	Remove
12	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	14.0	8.0	0.52	0.52	6.24	2.51	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Part of closely spaced pair along narrow garden with level change from south to north.	Within footprint of proposed building or major disturbance	Remove
13	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	13.0	8.0	0.56	0.56	6.72	2.59	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Part of closely spaced pair along narrow garden with level change from south to north.	Within footprint of proposed building or major disturbance	Remove
14	1	<i>Cinnamomum camphora</i>	Camphor Laurel	13.0	10.0	0.90	0.93	10.80	3.21	Mature	Good	Average	Invasive	Evergreen	Very Asymmetric Form	Medium (15-40 years)	Low	Ivy covered trunk. Asymmetric to south. Undesirable species.	Within footprint of proposed building or major disturbance	Remove
15	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	11.0	6.0	0.27	0.30	3.24	2.00	Mature	Fair	Average	Native	Evergreen	Poor Taper	Medium (15-40 years)	Low	Poor form and minimal foliage. Growing in heavily shaded gap between buildings.	Within footprint of proposed building or major disturbance	Remove
17	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	15.0	9.0	0.64	0.71	7.68	2.87	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate		Moderate impact, but area affected is already located within an area already occupied by the existing building so considered acceptable as it is likely roots will have been naturally restricted and limited in this area. (Theoretical incursion 18% but real impact considered to be much less).	Retain
18	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	14.0	7.0	0.39	0.44	4.68	2.34	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring property tree.	Minimal impact expected.	Retain
21	1	<i>Casuarina cunninghamiana</i>	River She-Oak	18.0	10.0	0.50	0.65	6.00	2.76	Mature	Fair	Average	Native	Evergreen	Very Asymmetric Form	Long (>40 years)	Moderate	Neighbouring property tree. Part of pair growing in close proximity. Asymmetric to south.	Minimal impact expected.	Retain
22	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	15.5	9.0	0.68	0.75	8.16	2.93	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring property tree.	Minor incursion of 15% due to basement excavation to east.	Retain
23	1	<i>Casuarina cunninghamiana</i>	River She-Oak	18.0	9.0	0.50	0.68	6.00	2.81	Mature	Fair	Average	Native	Evergreen	Very Asymmetric Form	Long (>40 years)	Moderate	Neighbouring property tree. Part of pair growing in close proximity. Asymmetric to north.	Minimal impact expected.	Retain
24	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	15.0	9.0	0.65	0.69	7.80	2.83	Mature	Fair	Average	Native	Evergreen	Very Asymmetric Form, Co-dominant Stems	Medium (15-40 years)	Low	Asymmetric to south.	Moderate impact, but area affected is already located within an area already occupied by the existing building so considered acceptable as it is likely roots will have been naturally restricted and limited in this area. (Theoretical incursion 17% but real impact considered to be much less).	Retain
25	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	15.5	11.0	0.95	1.22	11.40	3.60	Mature	Good	Average	Native	Evergreen		Long (>40 years)	Moderate	Prominent tree from street.	Moderate impact, but area affected is already located within an area already occupied by the existing building so considered acceptable as it is likely roots will have been naturally restricted and limited in this area. (Theoretical incursion 18% but real impact considered to be much less).	Retain
26	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	10.5	13.0	1.26	1.26	15.00	3.65	Mature	Good	Average	Native	Evergreen		Long (>40 years)	Moderate	Prominent and large street tree.	Moderate impact, but area affected is already located within an area already occupied by the existing building so considered acceptable as it is likely roots will have been naturally restricted and limited in this area. (Theoretical incursion 18% but real impact considered to be much less).	Retain
27	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	7.5	7.0	0.21	0.26	2.52	1.88	Mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Street tree.	Minimal impact expected.	Retain
29	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	13.5	13.0	1.04	1.04	12.48	3.36	Mature	Good	Average	Native	Evergreen	Co-dominant Stems, Root Impacts	Medium (15-40 years)	Moderate	Prominent tree along street frontage.	Within footprint of proposed building or major disturbance	Remove
30	1	<i>Tristanopsis laurina</i>	Water Gum	9.5	9.0	0.44	0.60	5.28	2.67	Mature	Fair	Average	Native	Evergreen	Epicormic Growth	Medium (15-40 years)	Moderate	Street tree.	Minimal impact expected if electrical installation is restricted to immediately in front of proposed electrical kiosk.	Retain
35	1	<i>Elaeocarpus reticulatus</i>	Blueberry Ash	7.0	5.0	0.15	0.18	2.00	1.61	Mature	Poor	Average	Native	Evergreen		Short (5-15 years)	Low	Neighbouring tree in relatively poor condition. Wall footing and fence likely to have restricted root development to west.	Minimal impact expected.	Retain
38	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	16.5	11.0	0.86	1.00	10.32	3.31	Mature	Moribund	Average	Native	Evergreen	Deadwood-Major	Medium (15-40 years)	Nil / Remove	Very poor condition. Minimal foliage.	Very poor tree. Within footprint of proposed building or major disturbance	Remove
40	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	13.0	10.0	0.70	0.78	8.40	2.98	Mature	Fair	Average	Native	Evergreen	Deadwood-Minor	Medium (15-40 years)	Low	Sparse canopy.	Within footprint of proposed building or major disturbance	Remove
41	1	<i>Agonis flexuosa</i>	Willow Myrtle	12.0	12.0	1.06	1.06	12.72	3.39	Mature	Fair	Average	Native	Evergreen	Deadwood-Minor, Decay-Minor, Co-dominant Stems	Medium (15-40 years)	Low	Basal decay evident from soundings. Generally poor condition with sparse foliage.	Within footprint of proposed building or major disturbance	Remove
45	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	11.0	7.0	0.28	0.40	3.36	2.25	Mature	Poor	Average	Native	Evergreen		Medium (15-40 years)	Low	Neighbouring property tree.	Minimal impact expected.	Retain

Tree ID	Trees in Group	Tree Species	Common Name	Height (m)	Spread Average (m)	Trunk Diameter Standard Height (dsh) (m)	Trunk Diameter at base (dgl) (m)	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
47	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	14.0	10.0	0.52	0.58	6.24	2.63	Mature	Fair	Average	Native	Evergreen		Long (>40 years)	Moderate	Neighbouring property tree.	Very minor impact, area affected is already located within an area already occupied by the existing building so considered acceptable. (Incursion <10%)	Retain
49	2	<i>Xylosma senticosum</i>	Shiny Xylosma	7.0	5.0	0.16	0.18	2.00	1.61	Mature	Good	Average	Exotic	Evergreen		Replaceable (Small/Young)	Low	Group of two small trees in good condition.	Within footprint of proposed building or major disturbance	Remove
50	1	<i>Schefflera veitchii</i>	Umbrella Tree	5.0	3.0	0.21	0.22	2.52	1.75	Semi-mature	Fair	Average	Invasive	Evergreen		Medium (15-40 years)	Low		Within footprint of proposed building or major disturbance	Remove
51	1	<i>Syzygium australe</i>	Brush Cherry	7.5	5.0	0.14	0.21	2.00	1.72	Semi-mature	Good	Average	Native	Evergreen		Replaceable (Small/Young)	Low	Small tree screening adjoining development.	Within footprint of proposed building or major disturbance	Remove
52	1	<i>Hymenosporum flavum</i>	Native Frangipani	9.0	4.0	0.16	0.18	2.00	1.61	Mature	Good	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Neighbouring property tree. Approx 1.5m off boundary fence.	Minimal impact expected.	Retain
53	1	<i>Melaleuca bracteata</i>	Black Tea-Tree	8.0	6.0	0.12	0.15	2.00	1.49	Mature	Poor	Average	Native	Evergreen		Short (5-15 years)	Low	Neighbouring property tree. Approx 1.0m off boundary fence.	Minimal impact expected.	Retain
54	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	2.5	2.0	0.06	0.08	2.00	1.50	Semi-mature	Good	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Prominent and large street tree.	Minimal impact expected.	Retain
55	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	11.0	13.0	0.96	1.26	11.52	3.65	Mature	Good	Average	Native	Evergreen	Root Impacts Co-dominant Stems	Long (>40 years)	Moderate	Prominent and large street tree.	Theoretical incursion due to proposed stormwater installation in street. Impact assumed to be minimal due to most roots likely being in the grassed verge	Retain
56	1	<i>Melaleuca quinquenervia</i>	Broad Leafed Paperbark	11.5	12.0	1.07	1.24	12.84	3.62	Mature	Good	Average	Native	Evergreen	Root Impacts Co-dominant Stems Deadwood-Minor	Long (>40 years)	High	Prominent and large street tree.	Theoretical incursion due to proposed stormwater installation in street. Impact assumed to be minimal due to most roots likely being in the grassed verge area. Non-destructive digging used in first 700mm depth of trench, or until rock is encountered. Any encountered roots worked around.	Retain
57	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	6.0	6.0	0.33	0.42	3.96	2.30	Mature	Good	Average	Native	Evergreen	Co-dominant Stems	Medium (15-40 years)	Moderate	Group of 2 street trees	Theoretical incursion due to proposed stormwater installation in street. Impact assumed to be minimal due to most roots likely being in the grassed verge area	Retain
58	1	<i>Eucalyptus microcoys</i>	Tallowood	12.5	17.0	0.78	1.04	9.36	3.36	Mature	Good	Average	Native	Evergreen	Deadwood-Minor Root Impacts	Long (>40 years)	High	Prominent and large street tree.	Theoretical incursion due to proposed stormwater installation in street. Impact assumed to be minimal due to most roots likely being in the grassed verge area. Non-destructive digging used in first 700mm depth of trench, or until rock is encountered. Any encountered roots worked around.	Retain
59	1	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	2.5	2.0	0.06	0.08	2.00	1.50	Semi-mature	Fair	Average	Native	Evergreen		Medium (15-40 years)	Low	Street tree.	Minimal impact expected.	Retain
60	2	<i>Callistemon viminalis cv.</i>	Weeping Bottlebrush	2.5	2.0	0.05	0.08	2.00	1.50	Semi-mature	Good	Average	Native	Evergreen		Medium (15-40 years)	Moderate	Group of two street trees	Minimal impact expected.	Retain
6	1	<i>Phoenix canariensis</i>	Canary Island Date Palm	6.0	6.0	0.75	0.86	4.00	1.43	Mature	Good	Average	Invasive	Palm-SingleStem		Medium (15-40 years)	Low	Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.	Minimal impact expected.	Retain
20	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	5.0	4.0	0.18	0.31	3.00	1.16	Semi-mature	Good	Average	Native	Palm-SingleStem		Long (>40 years)	Moderate		Within footprint of proposed building or major disturbance	Retain
36	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	8.0	5.0	0.24	0.60	3.50	1.30	Mature	Good	Average	Native	Palm-SingleStem		Long (>40 years)	Moderate	Growing in slightly raised bed.	Minimal impact expected.	Retain
39	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	14.0	4.0	0.20	0.32	3.00	1.16	Mature	Fair	Average	Native	Palm-SingleStem		Medium (15-40 years)	Moderate	Neighbouring property tree. Retaining wall will have restricted roots towards site.	Minimal impact expected.	Retain
42	1	<i>Archontophoenix alexandrae</i>	Alexandra Palm	6.0	4.0	0.20	0.26	3.00	1.13	Mature	Fair	Average	Native	Palm-SingleStem		Replaceable (Small/Young)	Low	Trunk defect from rubbing or adjoining tree branch at 2.2m	Within footprint of proposed building or major disturbance	Remove
44	1	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	5.0	3.0	0.12	0.22	2.50	1.11	Semi-mature	Fair	Average	Native	Palm-SingleStem		Replaceable (Small/Young)	Low		Within footprint of proposed building or major disturbance	Remove
46	1	<i>Howea forsteriana</i>	Kentia Palm	4.5	4.0	0.14	0.18	3.00	1.09	Mature	Fair	Average	Exotic	Palm-SingleStem		Long (>40 years)	Moderate	Neighbouring property tree, growing hard up against fence line. Growing on edge of level change. Relatively easy to retain and protect. Survey indicates tree on the site and fence is not on boundary.	Minimal impact expected.	Retain
2	1	<i>Jacaranda mimosifolia</i>	Jacaranda	11.5	9.0	0.30	0.34	3.60	2.10	Mature	Fair	Poor	Exotic	Semi-Deciduous	Very Asymmetric Form, Lean-Major, Pest/Disease	Medium (15-40 years)	Low	Very asymmetric to south east. Borer attack to lower trunk on south side.	Within footprint of proposed building or major disturbance	Remove
16	1	<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	9.5	6.0	0.23	0.28	2.76	1.94	Mature	Excellent	Excellent	Native	Semi-Deciduous		Long (>40 years)	Moderate	Edge of level change. Growing in heavily shaded gap between buildings.	Within footprint of proposed building or major disturbance	Remove
48	1	<i>Cyathea cooperi</i>	Scaly Tree Fern	4.0	4.0	0.14	0.37	2.00	2.18	Mature	Good	Average	Native	Tree Fern		Medium (15-40 years)	Moderate	Growing in very enclosed internal courtyard.	Within footprint of proposed building or major disturbance	Remove

4.3 Tree Data Summary Sheets

ID # 01
 Species: *Celtis sinensis*
 Common: Chinese Hackberry
 No. in Grp: 1 Height: 17.0
 Within site: Yes No
 DSH: 1.04 DGL: 1.04
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments
 Asymmetric to south.



ID # 04
 Species: *Celtis sinensis*
 Common: Chinese Hackberry
 No. in Grp: 1 Height: 12.0
 Within site: Yes No
 DSH: 0.18 DGL: 0.22
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments
 Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.



ID # 02
 Species: *Jacaranda mimosifolia*
 Common: Jacaranda
 No. in Grp: 1 Height: 11.50
 Within site: Yes No
 DSH: 0.30 DGL: 0.34
 Current Form: Poor
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments
 Very asymmetric to south east. Borer attack to lower trunk on south side.



ID # 05
 Species: *Waterhousea floribunda*
 Common: Weeping Lilly Pilly
 No. in Grp: 1 Height: 10.0
 Within site: Yes No
 DSH: 0.40 DGL: 0.42
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Moderate
Comments
 Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.



ID # 03
 Species: *Ficus rubiginosa*
 Common: Port Jackson Fig
 No. in Grp: 1 Height: 14.0
 Within site: Yes No
 DSH: 1.44 DGL: 2.4
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Moderate
Comments
 Sparse canopy. Roots visible and likely to be spreading out under adjoining asphalt and structures. Evidenced via cracking of asphalt pavement.



ID # 06
 Species: *Phoenix canariensis*
 Common: Canary Island Date Palm
 No. in Grp: 1 Height: 6.0
 Within site: Yes No
 DSH: 0.75 DGL: 0.86
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments
 Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.



ID # 07
Species: *Eucalyptus robusta*
Common: Swamp Mahogany
No. in Grp: 1 Height: 12.0
Within site: Yes No
DSH: 0.51 DGL: 0.68
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate

Comments

Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.

ID # 10
Species: *Plumeria rubra*
Common: Frangipani
No. in Grp: 2 Height: 4.0
Within site: Yes No
DSH: 0.23 DGL: 0.23
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Replaceable



Retention Val: Low

Comments

Group of two small and relatively insignificant trees.

ID # 08
Species: *Melaleuca bracteata*
Common: Black Tea-Tree
No. in Grp: 1 Height: 7.0
Within site: Yes No
DSH: 0..28 DGL: 0..35
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate

Comments

Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology.
1x30mm
1x60mm to inner upward lateral.

ID # 11
Species: *Cinnamomum camphora*
Common: Camphor Laurel
No. in Grp: 1 Height: 16.5
Within site: Yes No
DSH: 0.63 DGL: 0.68
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Low

Comments

Undesirable species.

ID # 09
Species: *Eucalyptus robusta*
Common: Swamp Mahogany
No. in Grp: 1 Height: 13.50
Within site: Yes No
DSH: 0.45 DGL: 0.65
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate

Comments

Neighbouring tree. Growing hard against base of retaining wall at lower level. Roots will have been restricted by wall and geology. Canopy overhangs site boundary. Lower branches to west may need to be pruned to facilitate above ground development.

ID # 12
Species: *Melaleuca quinquenervia*
Common: Broad Leafed Paperbark
No. in Grp: 1 Height: 14.0
Within site: Yes No
DSH: 0.52 DGL: 0.52
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate

Comments

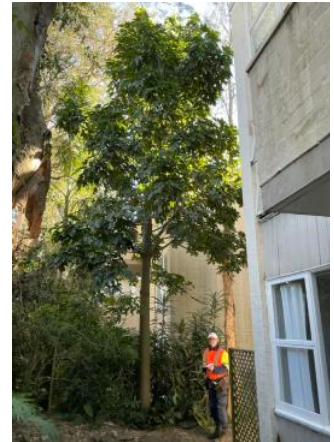
Part of closely spaced pair along narrow garden with level change from south to north.

ID # 13
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 13.0
 Within site: Yes No
 DSH: 0.56 DGL: 0.56
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)



Retention Val: Moderate
Comments
 Part of closely spaced pair along narrow garden with level change from south to north.

ID # 16
 Species: *Brachychiton acerifolius*
 Common: Illawarra Flame Tree
 No. in Grp: 1 Height: 9.5
 Within site: Yes No
 DSH: 0.23 DGL: 0.28
 Current Form: Excellent
 Current Vigour: Excellent
 Age Class: Mature
 ULE: Long (>40 years)



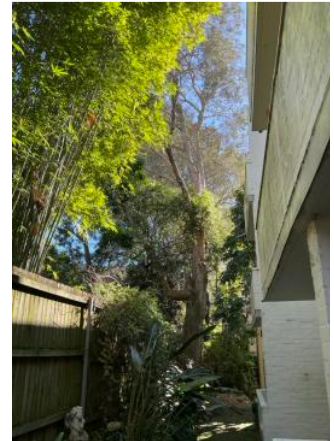
Retention Val: Moderate
Comments
 Edge of level change. Growing in heavily shaded gap between buildings.

ID # 14
 Species: *Cinnamomum camphora*
 Common: Camphor Laurel
 No. in Grp: 1 Height: 13.0
 Within site: Yes No
 DSH: 0.90 DGL: 0.93
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Medium (15-40 years)



Retention Val: Low
Comments
 Ivy covered trunk. Asymmetric to south. Undesirable species.

ID # 17
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 15.0
 Within site: Yes No
 DSH: 0.64 DGL: 0.71
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)



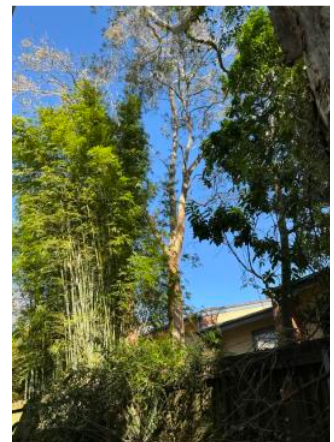
Retention Val: Moderate
Comments

ID # 15
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 11.0
 Within site: Yes No
 DSH: 0.27 DGL: 0.30
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)



Retention Val: Low
Comments
 Poor form and minimal foliage. Growing in heavily shaded gap between buildings.

ID # 18
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 14.0
 Within site: Yes No
 DSH: 0.39 DGL: 0.44
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)



Retention Val: Moderate
Comments
 Neighbouring property tree.

ID # 19
 Species: *Celtis sinensis*
 Common: Chinese Hackberry
 No. in Grp: 1 Height: 9.0
 Within site: Yes No
 DSH: 0.51 DGL: 0.60
 Current Form: Poor
 Current Vigour: Poor
 Age Class: Mature
 ULE: Remove (<5 years)



Retention Val: Nil / Remove

Comments

Neighbouring property tree. Tree has been topped and pruned back. Assumed to be not on site so retain.

ID # 22
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 15.50
 Within site: Yes No
 DSH: 0.68 DGL: 0.75
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)

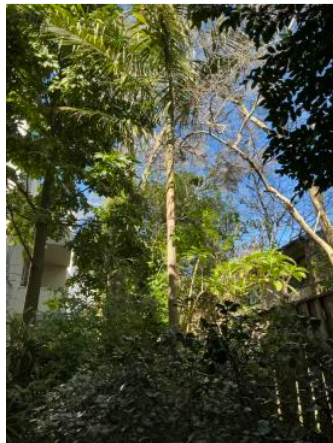


Retention Val: Moderate

Comments

Neighbouring property tree.

ID # 20
 Species: *Archontophoenix cunninghamiana*
 Common: Bangalow Palm
 No. in Grp: 1 Height: 5.0
 Within site: Yes No
 DSH: 0.18 DGL: 0.31
 Current Form: Average
 Current Vigour: Good
 Age Class: Semi-mature
 ULE: Long (>40 years)



Retention Val: Moderate

Comments

ID # 23
 Species: *Casuarina cunninghamiana*
 Common: River She-Oak
 No. in Grp: 1 Height: 18.0
 Within site: Yes No
 DSH: 0.50 DGL: 0.68
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Long (>40 years)



Retention Val: Moderate

Comments

Neighbouring property tree. Part of pair growing in close proximity. Asymmetric to north.

ID # 21
 Species: *Casuarina cunninghamiana*
 Common: River She-Oak
 No. in Grp: 1 Height: 18.0
 Within site: Yes No
 DSH: 0.50 DGL: 0.65
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Long (>40 years)



Retention Val: Moderate

Comments

Neighbouring property tree. Part of pair growing in close proximity. Asymmetric to south.

ID # 24
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 15.0
 Within site: Yes No
 DSH: 0.65 DGL: 0.69
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)



Retention Val: Low

Comments

Asymmetric to south.

ID # 25
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 15.5
 Within site: Yes No
 DSH: 0.95 DGL: 1.22
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Long (>40 years)
Retention Val: Moderate
Comments
 Prominent tree from street.



ID # 28
 Species: *Plumeria rubra*
 Common: Frangipani
 No. in Grp: 1 Height: 8.5
 Within site: Yes No
 DSH: 0.30 DGL: 0.35
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments
 Lower trunk lean and butt sweep. Asymmetric to north-west.



ID # 26
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 10.5
 Within site: Yes No
 DSH: 1.26 DGL: 1.26
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Long (>40 years)
Retention Val: Moderate
Comments
 Prominent and large street tree.



ID # 29
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 13.5
 Within site: Yes No
 DSH: 1.04 DGL: 1.04
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Moderate
Comments
 Prominent tree along street frontage.



ID # 27
 Species: *Callistemon viminalis* cv.
 Common: Weeping Bottlebrush
 No. in Grp: 1 Height: 7.5
 Within site: Yes No
 DSH: 0.21 DGL: 0.26
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Moderate
Comments
 Street tree.



ID # 30
 Species: *Tristaniopsis laurina*
 Common: Water Gum
 No. in Grp: 1 Height: 9.5
 Within site: Yes No
 DSH: 0.44 DGL: 0.60
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Moderate
Comments
 Street tree.

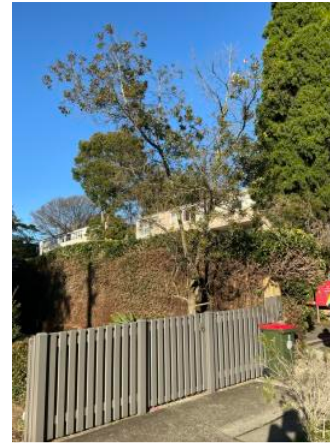


ID # 31
Species: *Acer palmatum*
Common: Japanese Maple
No. in Grp: 1 Height: 7.0
Within site: Yes No
DSH: 0.22 DGL: 0.25
Current Form: Poor
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Low
Comments
Very asymmetric to north.

ID # 35
Species: *Elaeocarpus reticulatus*
Common: Blueberry Ash
No. in Grp: 1 Height: 7.0
Within site: Yes No
DSH: 0.15 DGL: 0.18
Current Form: Average
Current Vigour: Poor
Age Class: Mature
ULE: Short (5-15 years)



Retention Val: Low
Comments
Neighbouring tree in relatively poor condition. Wall footing and fence likely to have restricted root development to west.

ID # 33
Species: *Cupressus torulosa*
Common: Bhutan Cypress
No. in Grp: 1 Height: 9.5
Within site: Yes No
DSH: 0.42 DGL: 0.48
Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate
Comments
Part of pair growing in very close proximity to each other. Will need to be treated as one tree. Good condition and forms when viewed together.

ID # 36
Species: *Archontophoenix cunninghamiana*
Common: Bangalow Palm
No. in Grp: 1 Height: 8.0
Within site: Yes No
DSH: 0.24 DGL: 0.60
Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Long (>40 years)



Retention Val: Moderate
Comments
Growing in slightly raised bed.

ID # 34
Species: *Cupressus torulosa*
Common: Bhutan Cypress
No. in Grp: 1 Height: 9.5
Within site: Yes No
DSH: 0.49 DGL: 0.52
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate
Comments
Part of pair growing in very close proximity to each other. Will need to be treated as one tree. Good condition and forms when viewed together.

ID # 38
Species: *Melaleuca quinquenervia*
Common: Broad Leafed Paperbark
No. in Grp: 1 Height: 16.5
Within site: Yes No
DSH: 0.86 DGL: 1.00
Current Form: Average
Current Vigour: Moribund
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Nil / Remove
Comments
Very poor condition. Minimal foliage.

ID # 39
Species: *Archontophoenix cunninghamiana*
Common: Bangalow Palm
No. in Grp: 1 Height: 14.0
Within site: Yes No
DSH: 0.20 DGL: 0.32
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate
Comments
Neighbouring property tree. Retaining wall will have restricted roots towards site.

ID # 42
Species: *Archontophoenix alexandrae*
Common: Alexandra Palm
No. in Grp: 1 Height: 6.0
Within site: Yes No
DSH: 0.20 DGL: 0.26
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Replaceable



Retention Val: Low
Comments
Trunk defect from rubbing or adjoining tree branch at 2.2m

ID # 40
Species: *Melaleuca quinquenervia*
Common: Broad Leafed Paperbark
No. in Grp: 1 Height: 13.0
Within site: Yes No
DSH: 0.70 DGL: 0.78
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Low
Comments
Sparse canopy.

ID # 43
Species: *Melia azedarach*
Common: White Cedar
No. in Grp: 1 Height: 7.0
Within site: Yes No
DSH: 0.09 DGL: 0.12
Current Form: Poor
Current Vigour: Fair
Age Class: Semi-mature
ULE: Remove (<5 years)



Retention Val: Nil / Remove
Comments
Self sown specimen growing hard up against fence and wall near existing utility meter. Unsustainable location. Should remove.

ID # 41
Species: *Agonis flexuosa*
Common: Willow Myrtle
No. in Grp: 1 Height: 12.0
Within site: Yes No
DSH: 1.06 DGL: 1.06
Current Form: Average
Current Vigour: Fair
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Low
Comments
Basal decay evident from soundings. Generally poor condition with sparse foliage.

ID # 44
Species: *Archontophoenix cunninghamiana*
Common: Bangalow Palm
No. in Grp: 1 Height: 5.0
Within site: Yes No
DSH: 0.12 DGL: 0.22
Current Form: Average
Current Vigour: Fair
Age Class: Semi-mature
ULE: Replaceable



Retention Val: Low
Comments

ID # 45
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 11.0
 Within site: Yes No
 DSH: 0.28 DGL: 0.40
 Current Form: Average
 Current Vigour: Poor
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments
 Neighbouring property tree.



ID # 48
 Species: *Cyathea cooperi*
 Common: Scaly Tree Fern
 No. in Grp: 1 Height: 4.0
 Within site: Yes No
 DSH: 0.14 DGL: 0.37
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Medium (15-40 years)
Retention Val: Moderate
Comments
 Growing in very enclosed internal courtyard.



ID # 46
 Species: *Howea forsteriana*
 Common: Kentia Palm
 No. in Grp: 1 Height: 4.5
 Within site: Yes No
 DSH: 0.14 DGL: 0.18
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Long (>40 years)
Retention Val: Moderate
Comments
 Neighbouring property tree, growing hard up against fence line. Growing on edge of level change. Relatively easy to retain and protect. Survey indicates tree on the site and fence is not on boundary.



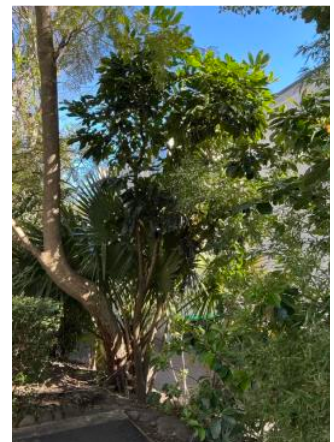
ID # 49
 Species: *Xylosma senticosum*
 Common: Shiny Xylosma
 No. in Grp: 2 Height: 7.0
 Within site: Yes No
 DSH: 0.16 DGL: 0.18
 Current Form: Average
 Current Vigour: Good
 Age Class: Mature
 ULE: Replaceable
Retention Val: Low
Comments
 Group of two small trees in good condition.



ID # 47
 Species: *Melaleuca quinquenervia*
 Common: Broad Leafed Paperbark
 No. in Grp: 1 Height: 14.0
 Within site: Yes No
 DSH: 0.52 DGL: 0.58
 Current Form: Average
 Current Vigour: Fair
 Age Class: Mature
 ULE: Long (>40 years)
Retention Val: Moderate
Comments
 Neighbouring property tree.



ID # 50
 Species: *Schefflera veitchii*
 Common: Umbrella Tree
 No. in Grp: 1 Height: 5.0
 Within site: Yes No
 DSH: 0.21 DGL: 0.22
 Current Form: Average
 Current Vigour: Fair
 Age Class: Semi-mature
 ULE: Medium (15-40 years)
Retention Val: Low
Comments



ID # 51
Species: *Syzygium australe*
Common: Brush Cherry
No. in Grp: 1 Height: 7.5
Within site: Yes No
DSH: 0.14 DGL: 0.21
Current Form: Average
Current Vigour: Good
Age Class: Semi-mature
ULE: Replaceable



Retention Val: Low
Comments
Small tree screening adjoining development.

ID # 54
Species: *Callistemon viminalis* cv.
Common: Weeping Bottlebrush
No. in Grp: 1 Height: 2.5
Within site: Yes No
DSH: 0.06 DGL: 0.08
Current Form: Average
Current Vigour: Good
Age Class: Semi-mature
ULE: Long (>40 years)



Retention Val: Moderate
Comments
Prominent and large street tree.

ID # 52
Species: *Hymenosporum flavum*
Common: Native Frangipani
No. in Grp: 1 Height: 9.0
Within site: Yes No
DSH: 0.16 DGL: 0.18
Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Medium (15-40 years)



Retention Val: Moderate
Comments
Neighbouring property tree. Approx 1.5m off boundary fence.

ID # 55
Species: *Melaleuca quinquenervia*
Common: Broad Leafed Paperbark
No. in Grp: 1 Height: 11.0
Within site: Yes No
DSH: 0.96 DGL: 1.26
Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Long (>40 years)



Retention Val: Moderate
Comments
Prominent and large street tree.

ID # 53
Species: *Melaleuca bracteata*
Common: Black Tea-Tree
No. in Grp: 1 Height: 8.0
Within site: Yes No
DSH: 0.12 DGL: 0.15
Current Form: Average
Current Vigour: Poor
Age Class: Mature
ULE: Short (5-15 years)



Retention Val: Low
Comments
Neighbouring property tree. Approx 1.0m off boundary fence.

ID # 56
Species: *Melaleuca quinquenervia*
Common: Broad Leafed Paperbark
No. in Grp: 1 Height: 11.5
Within site: Yes No
DSH: 1.07 DGL: 1.24
Current Form: Average
Current Vigour: Good
Age Class: Mature
ULE: Long (>40 years)



Retention Val: High
Comments
Prominent and large street tree.

ID # 57

Species: *Callistemon viminalis* cv.

Common: Weeping Bottlebrush

No. in Grp: 2 Height: 6.0
Within site: Yes No
DSH: 0.33 DGL: 0.42

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

Retention Val: Moderate

Comments
Group of 2 street trees



ID # 60

Species: *Callistemon viminalis* cv.

Common: Weeping Bottlebrush

No. in Grp: 2 Height: 2.5
Within site: Yes No
DSH: 0.05 DGL: 0.08

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

Retention Val: Moderate

Comments
Group of two street trees



ID # 58

Species: *Eucalyptus microcorys*

Common: Tallowood

No. in Grp: 1 Height: 12.5
Within site: Yes No
DSH: 0.78 DGL: 1.04

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

Retention Val: High

Comments
Prominent and large street tree.



ID # 59

Species: *Callistemon viminalis* cv.

Common: Weeping Bottlebrush

No. in Grp: 1 Height: 2.5
Within site: Yes No
DSH: 0.06 DGL: 0.08

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

Retention Val: Low

Comments
Street tree.

