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CREATIVEPLANNINGSOLUTIONS

ARBORICULTURAL IMPACT ASSESSMENT

Proposed Data Centre

269 Lane Cove Road, Macquarie Park NSW 2133

Project No: G156
Date: 9 October 2025
Revision: C

CREATIVE PLANNING SOLUTIONS PTY LIMITED
Level 3, 397 Riley Street, Surry Hills NSW 2010 | 1/6 Tilley Lane, Frenchs Forest NSW 2086
PO Box 1074 Broadway NSW 2007
+61 2 8039 7461 | info@cpsplanning.com.au | www.cpsplanning.com.au | ABN: 70 135 093 926

Document Control

Project No. G156

Prepared for NextDC

Prepared by James Hume-Grimm
Consulting Arborist
Dip. Arboriculture – AQF Level 5
IACA Accredited Member No. 083

Reviewed by Toby Piper
Principal Consulting Arborist
Dip. Arboriculture – AQF Level 5
Regd. Consulting Arborist No. 12352
B.LArch

Authorised by Greg Tesoriero
Director
Dip. Hort. (Arboriculture) – AQF Level 5
Regd. Consulting Arborist No. 3008
QTRA No. 6291
B.LArch (Hons)

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A	18 April 2024	For SSDA
B	4 March 2025	Updated Proposal
C	9 October 2025	Updated Proposal

Accreditations

Disclaimer

The Client acknowledges this Report, and any opinions, advice or recommendations expressed or given in it, are based on the information supplied by the Client and on the data, inspections, measurements and analysis carried out or obtained by CPS and referred to in the Report. No guarantee is implied with respect to future tree safety. The Client should rely on the Report and its contents, only to that extent.

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1 EXECUTIVE SUMMARY

This NEXTDC S5 Data Centre and Innovation Hub Arboricultural Impact Assessment (AIA) has been prepared by CPS on behalf of NEXTDC Limited to accompany a detailed State Significant Development Application (SSDA) for a data centre development at 269 Lane Cove Road, Macquarie Park. The legal description of the site is Lot 3 in Deposited Plan (DP) 1129811. This report has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued for the project (SSD-63168959).

This report provides an evaluation of the likely impact to two hundred and sixteen (216) existing trees located on and adjacent to the subject site as a result of the proposed development, inclusive of associated building footprints, bulk earthworks, roadways, hard paving areas, stormwater infrastructure and landscaping. A summary of those trees identified has been provided in ***Table 1*** below along with a description of their location, retention values and nominated retention/removal status under the proposal.

Table 1 *– Tree assessment summary*

Retain / Remove	**Identified Retention Values**				**Number of Trees**
	High	**Medium**	**Low**	**Priority for Removal**	
Remove	**25 trees** *(Trees 44, 58, 60, 61, 63, 81, 93, 94, 113, 125, 147, 150, 155, 156, 175, 181, 183, 188, 191, 192, 193, 203, 208, 209 & 211)*	**48 trees** *(Trees 47, 48, 51, 52, 53, 54, 56, 57, 62, 64, 65, 66, 76, 77, 78, 79, 80, 82, 84, 85, 86, 88, 89, 90, 91, 92, 95, 99, 105, 111, 114, 117, 118, 127, 144, 149, 153, 154, 157, 158, 159, 167, 184, 187, 189, 190, 195 & 206)*	**52 trees** *(Trees 43, 45, 46, 49, 50, 55, 59a, 59b, 59c, 67, 68, 69, 70, 71, 72, 73, 74, 75, 83, 87, 96, 97, 98, 100, 101, 102, 103, 104 a, 104 b, 104c, 110, 112, 126, 136, 143, 169, 176, 179, 180, 182, 185, 186, 194, 196, 197, 198, 199, 200, 201, 202, 204 & 207)*	**1 tree** *(Trees 205)*	**126 trees**
Retain & Protect	**10 trees** *(1, 34, 120, 128, 132, 135, 139, 151, 162 & 170)*	**39 trees** *(Trees 2, 3, 9, 12, 18, 19, 20, 21, 22, 23, 24, 26, 27, 28, 29, 31, 32, 33, 35, 36, 40, 41, 109, 119, 122, 124, 129, 130, 133, 140, 142, 145, 148, 152, 161, 166, 174, 210 & 212)*	**41 trees** *(Trees 4, 5, 6, 7, 8, 10, 11, 13, 14, 15, 16, 17, 25, 30, 37, 38, 39, 42, 106, 107, 108, 115, 116, 121, 123, 131, 134, 137, 138, 141, 146, 160, 163, 164, 165, 168, 171, 172, 173, 177 & 178)*	**-**	**90 trees**
				Total	**216 trees**

Based on the plans supplied, and should the proposed works proceed in their current form, it is recommended that one-hundred and twenty-six (126) trees be removed (**Trees 43-58, 59a, 59b, 59c, 60-103, 104a, 104b, 104c, 105, 110-114, 117, 118, 125-127, 136, 143, 144, 147, 149, 150, 153-159, 167, 169, 175, 176, 179-209** & **211**) and ninety (90) trees be retained and protected (**Trees 1-42, 106-109, 115, 116, 119-124, 128-135, 137-142, 145, 146, 148, 151, 152, 160-166, 168, 170-174, 177, 178, 210** & **212**)[1].

Specific recommendations as per ***Section 7*** will need to be adopted to ensure root sensitive construction techniques and methodology are employed which mitigate any potential negative impacts to retained trees.

[1] As compared to the original iteration of the development proposal outlined under Revision A of this AIA (dated 18 April 2024), it is acknowledged that design changes to Architectural, Civil Engineering and Landscape Plans have facilitated a net increase of twenty (20) trees to be retained.

2 INTRODUCTION

2.1 Background

This Arboricultural Impact Assessment (AIA) was commissioned by NextDC on the 27th of October 2023 to evaluate the potential impacts that proposed development works will have on existing trees located on and adjacent to the subject site at 269 Lane Cove Road, Macquarie Park (refer to ***Figure 1***).

This report represents Revision C of the original AIA prepared by CPS dated 18 April 2024 which has undergone a preliminary assessment with the Department of Planning, Housing and Infrastructure. As part of this process, the Department has issued a request for a Response to Submissions (RTS) to address a series of concerns that have been raised with the proposal during the public exhibition period. Subsequently, amended Architectural, Landscape and Civil Engineering plans have been prepared to address these concerns and provided to CPS to prepare a revised assessment of the arboricultural implications of the proposal.

Accordingly, the purpose of this report is to assess the potential impact of the proposed development on the subject trees, as well as provide recommendations for further amendments to the design or construction methodology where necessary to minimise any adverse impact. The report also provides recommended tree protection measures to ensure the long-term preservation of the trees to be retained where appropriate.

2.2 Objectives

This report has been prepared to assess the level of impact development works are likely to cause to existing trees and make a determination as to whether trees will be adversely affected. The report will aim to provide guidance as to those trees requiring removal, retention or protection in accordance with the provisions of *AS4970-2025 Protection of trees on development sites*. Where necessary, it will also provide recommendations for design modifications and any replacement planting. As such, the objectives of this report are as follows:

- Assess the current site and growing conditions of trees;
- Assess the current health, condition, lifespan & significance of the trees within the site;
- Identify relative retention values of trees within the site;
- Calculate anticipated encroachment levels resulting from proposed works;
- Determine the likely impact as a result of the calculated encroachments;
- Assess potential for retention and protection of trees where possible;
- Advise any design modifications necessary to retain important trees;
- Recommend tree and root sensitive design and construction methodologies to mitigate impacts to trees to be retained;
- Inform of any tree removal necessary due to unsustainable impacts;
- Provide guidance and recommendations for any replacement planting necessary.

No aerial inspection, root mapping or internal diagnostic testing has been carried out as part of this report. Additionally, no cation exchange capacity testing or plant tissue analysis has been undertaken.

2.3 Legislation & Regulating Documents

This Arboricultural Impact Assessment has considered the following regulatory documents:

- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *Ryde Local Environmental Plan 2014 (RLEP 2014)*
- *Ryde Development Control Plan 2014 (RDCP 2014)*
- *City of Ryde Tree Management Technical Manual 2012*
- *Greater Sydney Regional Strategic Weed Management Plan 2023-2027 (GSRSWMP)*

2.4 Documentation Received

The following documents were received and have been relied upon for this Assessment:

***Table 2** – Documentation received and reviewed as part of the Arboricultural Impact Assessment*

Document Description	Author	Revision No. / Date
Architectural Plans	HDR	CP03 / 26 August 2025
Landscape Plans	Arcadia	7 / 26 September 2025
Civil Engineering Plans	TTW	P / 3 October 2025
Site Survey	Aurecon	A / 24 November 2023

Note: care has been taken to obtain all information from reliable sources; however, the author makes no representations, guarantees or warranties as to the accuracy of information provided by others. No other information has been reviewed, should this become available impacts may be subject to change.

2.5 The Site

The site is known as 269 Lane Cove Road, Macquarie Park and is legally described as Lot 3 in DP1129811. The site is approximately 2.2ha in size and is located at the southern corner of the Land Cove Road and Waterloo Road intersection. Existing site improvements include two (2) functioning commercial buildings, carparking structures, hard paved curtilage areas and open garden and lawn areas (refer to ***Figure 1*** below).

The topography of the subject site is generally of a sloping grade with a fall of approximately 11 m as measured from south (RL68.00) to south (RL 57.00).

2.6 Proposed Development

The proposed development is subject to a State Significant Development Application (SSDA) which seeks consent for the following:

- Site preparation works including demolition and removal of existing structures, tree removal and bulk earthworks.
- Staged construction and operation of two connected data centre buildings (Building A and Building B) with a maximum height of 65 metres and a combined total gross floor area (GFA) of 47,285m^2 comprising 33,142m^2 of technical data hall floor space and 14,143m^2 of office, retail and innovation hub floor space.
  - Building A will be delivered in Stage 1 and will comprise the following:
    - Basement parking for 51 car spaces including two accessible spaces and 10 EV spaces
    - Seven storeys of technical data floor space accommodating seven data houses: 16,571m^2

- Utilities including diesel generators (3MWe), above-ground water tanks for industrial water (600kL each), above-ground diesel storage tanks (100kL each) and an aboveground water tank for fire water (400kL each).
- Business identification signage facing Waterloo Road and Land Cove Road.
- Integrated 'Building O' component within Building A, comprising:
  - Two retail tenancies at ground level: 326m^2
  - Lobby and innovation hub including auditorium and training rooms: 3,186m^2
  - NEXTDC and ancillary office floor space on upper levels: 10,631m^2

– Building B will be delivered in Stage 2 and will comprise the following:

- Seven storeys of technical data floor space accommodating seven data halls: 16,571m^2
- Utilities including diesel generators (3MWe), above-ground water tanks for industrial water (600kL each), above-ground diesel storage tanks (100kL each) and an aboveground water tank for fire water (400kL each).
- Business identification signage on the western and southern building facades.

- Landscaping across the site in accordance with the project staging, delivering a mix of native and endemic plant species, shrubs and grasses, including 139 additional trees within a total area of 4,959m^2 deep soil and a resultant tree canopy cover of 5,707m^2
- Staged delivery of public domain works including:
  – Stage 1: construction of Road 13 within the subject site and public plaza.
  – Stage 2: construction of Road 6 (half-width) within the subject site, including provision for a future pedestrian/cycle overbridge (to be delivered by others), and works along Lane Cove Road.
- Delivery of 90 megawatts of power with a 33kV switching station to be accommodated on site, as well as other site services, including stormwater infrastructure.

2.7 Limitations

Trees are living organisms whose health and condition can change rapidly. The conclusions and recommendations in this report are valid for one (1) year only from the date of the report, unless otherwise stated. Any changes to the site as it stands at present, for example building extensions, excavation works, importing of soils, extreme weather events etc. will invalidate this report. Any reproduction of this report must be in full colour using the report in its entirety.

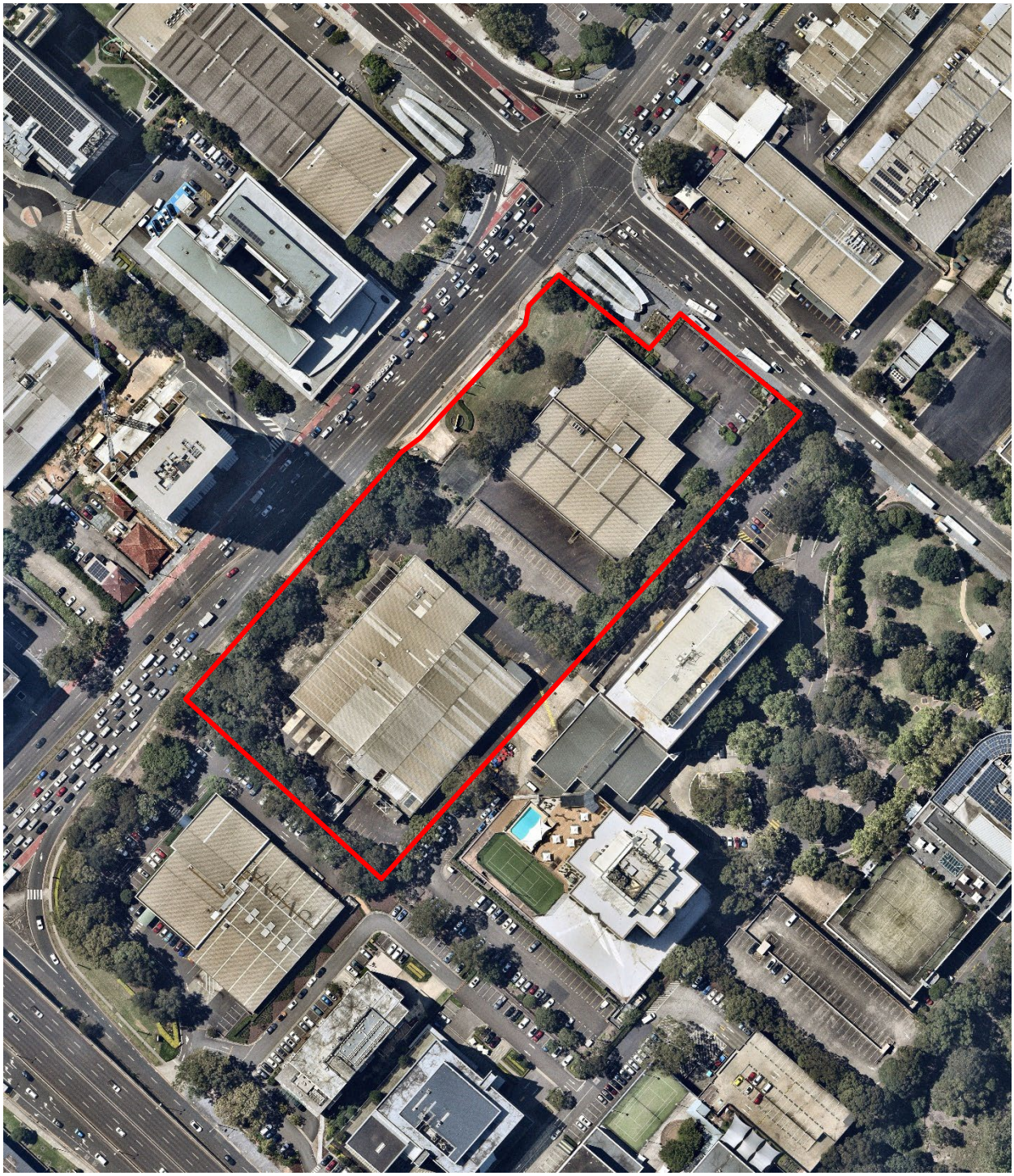

Figure 1 *- Aerial image indicating subject site (outlined red).*
Source: Nearmap – January 2025

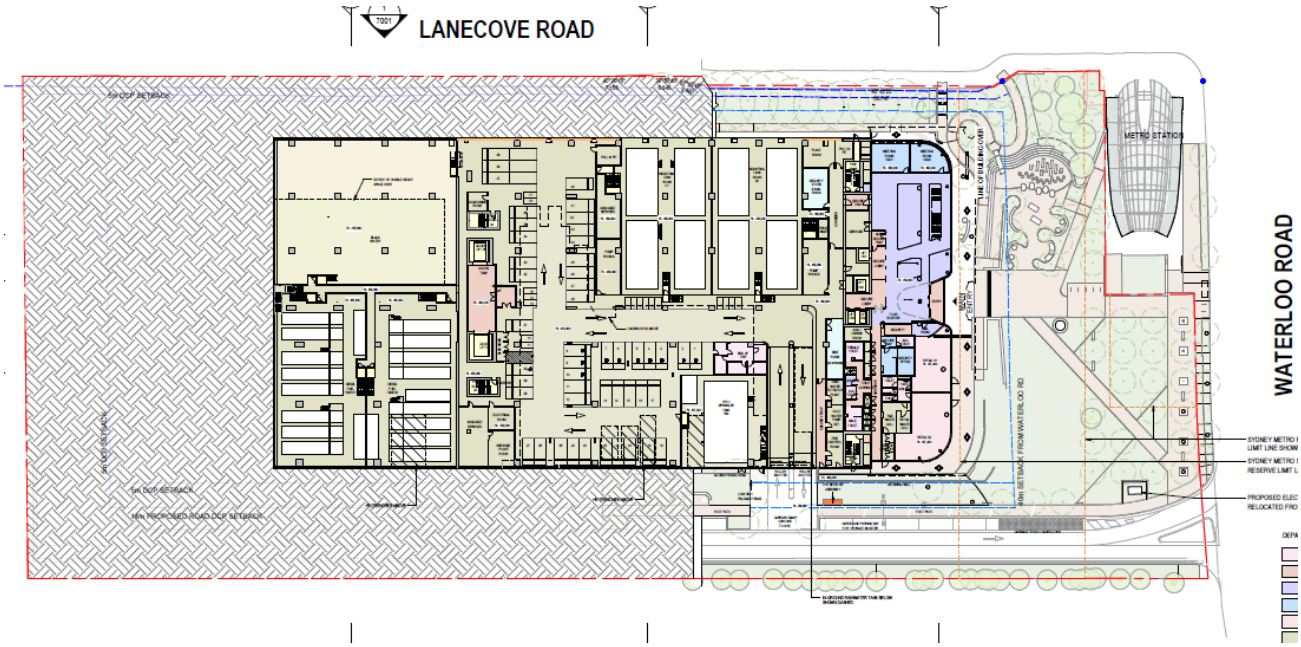

Figure 2 – *Proposed Ground Floor Plan. Source: HDR – August 2025*

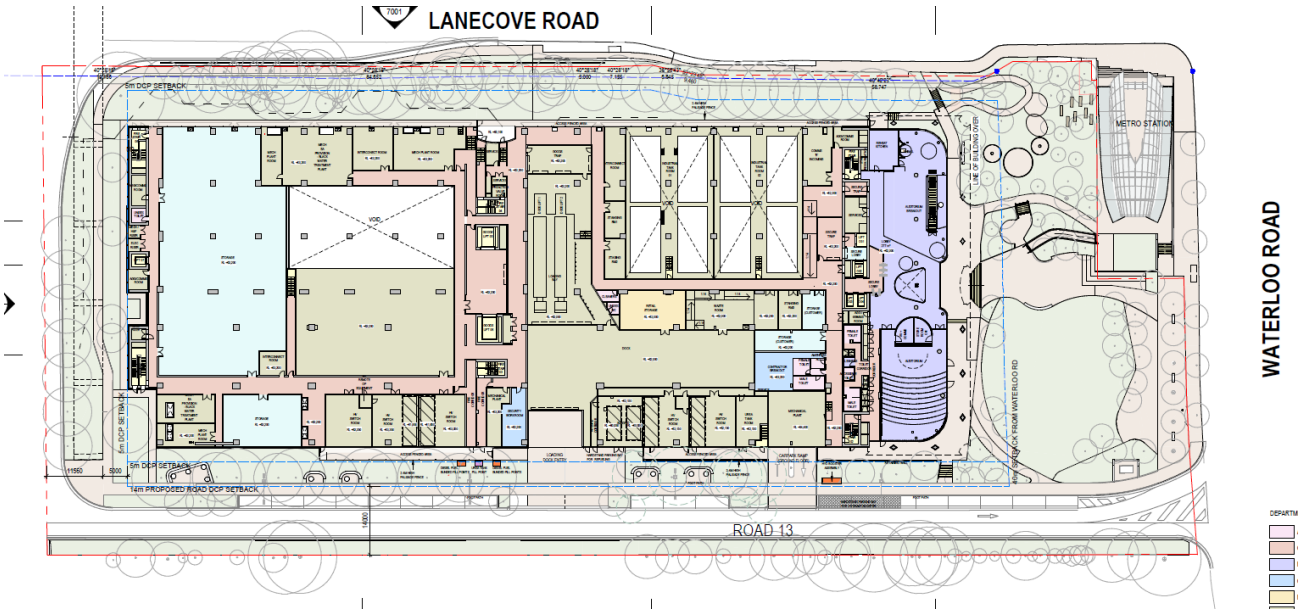

Figure 3 – *Proposed Level 01 Floor Plan. Source: HDR – August 2025*

3 METHODOLOGY

3.1 Methodology

3.1.1 Site Inspections

Site inspections were carried out by Elizabeth Hannon and Toby Piper (CPS AQF Level 5 Arborists) with the subject trees and the general growing environment evaluated on the 31st of October and 1st of November 2023 and 4th of April 2024. The weather at the time of each inspection was generally sunny with good visibility.

The subject trees were inspected visually from ground level with the following information recorded and provided in tabulated form at ***Appendix 1***:

- Tree Species (Botanical & Common Name);
- Approximate height;
- Approximate canopy spread;
- Trunk Diameter (measured at 1.4 metres from ground level);
- Trunk Diameter at base (above root crown);
- Age class;
- Health & vigour; using foliage size, colour, extension growth, presence of disease or pest infestation, canopy density, presence of deadwood, dieback and epicormic growth as indicators;
- Condition; using visible evidence of structural defects, instability, evidence of previous pruning and physical damage as indicators;
- Suitability of the tree to the site and its existing location;
- Safe Useful Life Expectancy (SULE).

3.1.2 Visual Tree Assessment (VTA)

The modified Level 1 limited Visual Tree Assessment (VTA) was undertaken for all trees during the site inspection. The VTA consists of a detailed inspection of the subject tree from ground level to the upper canopy. This method of tree evaluation is adapted from Matheny and Clark, 1994 and is recognised by The International Society of Arboriculture (ISA), Arboriculture Australia and The Institute Australian of Consulting Arborists (IACA). No aerial inspections or major root excavations were undertaken.

3.1.3 Safe Useful Life Expectancy (SULE)

The remaining Safe Useful Life Expectancy of a tree is an estimate of the sustainability of the tree in the landscape, calculated based on an estimate of the average age of the species in an urban area, less its estimated current age. The life expectancy of each tree has been further modified where necessary in consideration of its current health, vigour, condition and suitability to the site. The estimated SULE of each tree is shown in ***Appendix 1***.

The following ranges have been allocated to each tree:

- Long SULE: Trees that appear to be retainable with an acceptable level of risk for > 40 years.
- Medium SULE: Trees that appear to be retainable with an acceptable level of risk for 15 to 40 years.
- Short SULE: Trees that appear to be retainable with an acceptable level of risk for 5–15 years.
- Remove: Trees with a high level of risk that would need removing within the next 5 years.
- Small, Young or Regularly Pruned.

3.1.4 Landscape Significance

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. Several factors contribute towards the assessment of a tree's significance including but not limited to condition and vigour, form, visual prominence, heritage status, indigeneity, legislative protection, cultural sentiment and future growth potential.

For the purposes of this report the Australian Institute of Consulting Arborists (IACA) Significance of a Tree, Assessment Rating System (STARS)© has been utilised. The system uses a scale of High, Medium and Low significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined.

Appendix 3 provides a full outline of assessment criteria for each significance rating as per IACA STARS (2010).

3.1.5 Retention Value

Retention values have been determined for each tree on site to establish a hierarchy for tree retention. Retention values are based on estimated life spans and their associated landscape significance rating in accordance with the Tree Retention Value Priority Matrix. This matrix established the following retention values and can be found at ***Appendix 3*** with attributed retention values found within ***Appendix 1***:

- Priority for Retention **(High)**
- Consider for Retention **(Medium)**
- Consider for Removal **(Low)**
- Priority for Removal

3.1.6 AS4970-2025 Protection of Trees on Development Sites

The Australian Standard, *AS4970-2025 - 'Protection of trees on development sites'*, has been used as a guide to provide recommendations for the assessed trees. The Standard provides guidance on the principles for protecting trees on land subject to development as well as principles for determining viability of tree retention. Terminology and recommended methods are consistent with *AS4970-2025*.

3.1.7 Notional Root Zone

The assessed trees have been allocated a Notional Root Zone (NRZ). The Australian Standard, *AS4970-2025- 'Protection of trees on development sites'*, has been used as a guide in the allocation of NRZs for the assessed trees. The NRZ is calculated based on trunk (stem) diameter at standard height (DSH), measured at 1.4 metres above ground level. The radius of the NRZ is calculated by multiplying the trees DSH by 12. The method provides a NRZ that addresses health and growing requirements of a tree as well as the trees stability. NRZ distances are measured as a radius from the centre of the trunk at (or near) ground level. The maximum NRZ should be no more than 15m radius and the minimum NRZ should be no less than 2m radius.

An extract of the *AS4970-2025* for calculating NRZ has been provided at ***Appendix 4*** for reference.

3.1.8 Structural Root Zone

The assessed trees have been allocated a Structural Root Zone (SRZ). The Australian Standard, *AS4970-2025 - 'Protection of trees on development sites'*, has been used as a guide in the allocation of SRZs for the assessed trees. The SRZ is a radial area extending outwards from the centre of the trunk and is calculated as follows:

SRZ (Radius) = (D x 50)0.42 x 0.64

3.1.9 Tree Protection Zone

Using the NRZ as a starting point, a Tree Protection Zone (TPZ) is a specified area located both above and below ground that is required for the protection of trees during development works. The purpose of a TPZ is to protect of a tree's roots and crown throughout the development process via the installation of tree protection measures and appropriate site management.

4 OBSERVATIONS

4.1 General

The site area subject to this assessment was observed as highly disturbed with no understorey present. Species observed varied including exotic, Australian native and locally indigenous species. Health, vigour and condition was also highly varied across the trees forming part of the assessment. Root zones of assessed trees were generally observed as modified groundcover within deep soil areas.

4.2 Tree Preservation Order

Part 9.5 – Tree Preservation of the Ryde Development Control Plan 2014 applies to all land within the City of Ryde Local Government Area. The provisions included within the DCP generally protect any tree or vegetation that corresponds with the following criteria:

a. *trees as defined in Part 10 Dictionary of RDCP 2014 where the tree has a height of 5 metres or a stem circumference of 450mm at a height of 1.4 metres above ground level and*

b. *trees described as "major", "substantial" and "significant" in other Parts of RDCP 2014.*

4.3 The Trees

A total of two hundred and sixteen (216) trees were observed within and adjoining the subject site which have been surveyed as part of the assessment. All tree data recorded on site has been tabulated and is contained ***Appendix 1*** with relevant tree locations denoted on the attached Tree Location Plans held at ***Appendix 2.***

Of those trees assessed, one-hundred and fifty-five (155) fell within the boundaries of the subject site. This included **Trees 43-159, 163-191, 196-198, 203** & **206.**

The remaining sixty-one (61) trees were observed outside the site boundaries and within the neighbouring allotments to the east and south. This included **Trees 1-42, 160-162, 192-195, 199-202, 204, 205** & **207-212**.

5 DISCUSSION

5.1 Impact Assessment

The impact assessment is to calculate the incursions to the root zones and canopies as a result of the proposed demolition and construction works and evaluate the likely impact of the proposed works on the subject trees. A summary of the impacts anticipated are contained within the Tree Schedule at ***Appendix 1***. Additionally, plans demonstrating the level of incursion and conflict to NRZs and SRZs can be found at ***Appendix 2***. As part of the assessment the following criteria have been considered:

- Existing Relative Levels (R.L.);
- Proposed Relative Levels;
- Notional Root Zones (NRZ);
- Structural Root Zones (SRZ);
- Footprint of the proposed development (incl. stormwater and services) and temporary structures (scaffolding, hoardings etc.);
- Incursions to the NRZ & SRZ, including estimated cut & fill beyond the building footprint;
- Incursions to the tree canopy from the building envelope and temporary structures;
- Pruning necessary for building clearance;
- Remediation works for soil contaminants;
- Species tolerance to disturbance; and
- Assessment of the likely impact of the works on existing trees.

5.2 Trees Recommended for Removal

Should the proposed works proceed in their current form, it is recommended that one-hundred and twenty-six (126) trees be removed. This includes **Trees 43-58, 59a, 59b, 59c, 60-103, 104a, 104b, 104c, 105, 110-114, 117, 118, 125-127, 136, 143, 144, 147, 149, 150, 153-159, 167, 169, 175, 176, 179-209** & **211**. Removals have been recommended based upon; tree locations being in direct conflict with the proposed bulk earthworks, roadways, hard-paving areas, building footprints, retaining walls, and stormwater infrastructure works.

Table 3 below provides a summary of impacts to be sustained as part of the proposed works and subsequent reasoning for removal.

Refer to ***Appendix 2*** for a plan indicating the location of the tree that will require removal (dashed red).

***Table 3** – Trees recommended for removal*

Reason for Removal	**Trees Recommended for Removal**				
	High Retention Value	**Medium Retention Value**	**Low Retention Value**	**Priority for Removal**	**Total**
Full encroachment - within the footprint of the proposed bulk earthworks, building footprint, roadways & footpaths.	Twenty (20) trees: **Trees 44, 58, 60, 61, 63, 81, 93, 94, 113, 125, 147, 150, 155, 156, 175, 181, 183, 188, 191** & **203**	Forty-two (42) trees: **Trees 47, 48, 51, 52, 53, 54, 56, 57, 62, 64, 65, 66, 76, 77, 78, 79, 80, 82, 84, 85, 86, 88, 89, 90, 91, 92, 95, 99, 105, 111, 114, 149, 153, 154, 157, 158, 159, 167, 184, 187, 190** & **206**	Forty-two (42) trees: **Trees 43, 45, 46, 49, 50, 55, 59a, 59b, 59c, 67, 68, 69, 70, 71, 72, 73, 74, 75, 83, 87, 96, 97, 98, 100, 101, 102, 103, 104 a, 104 b, 104c, 110, 112, 169, 176, 179, 180, 182, 185, 186, 196, 197** & **198**	One (1) tree: **Tree 205**	**One-hundred and five (105) trees**
Major encroachment (NRZ 10-45% & SRZ (0-44%) as per *AS4970-2025* as a result of proposed bulk earthworks, building footprint, roadway footprints and stormwater infrastructure.	Five (5) trees: **Trees 192, 193, 208, 209** & **211**	Six (6) trees: **Trees 117, 118, 127, 144, 189** & **195**	Ten (10) trees: **Trees 126, 136, 143, 194, 199, 200, 201, 202, 204** & **207**	-	**Twenty-one (21) trees**
				Total	**One-hundred and twenty-six (126) trees**

5.3 Trees Recommended for Retention & Protection

Should the proposed works proceed in their current form, it is recommended that ninety (90) trees be retained and protected. This includes **Trees 1-42, 106-109, 115, 116, 119-124, 128-135, 137-142, 145, 146, 148, 151, 152, 160-166, 168, 170-174, 177, 178, 210** & **212.** Refer to ***Appendix 2*** for a plan indicating the location of trees that are to be retained and protected (shaded green).

Retention of each of these trees is contingent on implementation of the tree protection measures outlined within **Section 7** below.

Table 4 *– Trees recommended for retention & protection*

Works Within the Notional Root Zone (NRZ)	**Trees Recommended for Retention & Protection**				
	High Retention Value	**Medium Retention Value**	**Low Retention Value**	**Priority for Removal**	**Total**
Major, but potentially sustainable encroachment (NRZ 21-26%) & as per *AS4970-2025* as a result of the proposed bulk earthworks, roadways & retaining walls.	One (1) tree: **Tree 1**	One (1) tree: **Tree 2**	-	-	**Two (2) trees**
Moderate, sustainable encroachment (NRZ 11-17%) as per *AS4970-2025* as a result of the proposed bulk earthworks, hard-paving areas, roadways, retaining walls and stormwater infrastructure	-	Six (6) trees: **Trees 3, 20, 22, 28, 148** & **210**	One (1) tree: **Tree 5**	-	**Seven (7) trees**
Minor, sustainable encroachment (NRZ <1-9%) as per *AS4970-2025* as a result of the proposed bulk earthworks, hard-paving areas, roadways, retaining walls and stormwater infrastructure	Three (3) trees: **Trees 128, 135** & **151**	Nineteen (19) trees: **Trees 12, 18, 19, 21, 23, 24, 26, 27, 29, 31, 32, 33, 109, 119, 122, 140, 152, 161** & **174**	Eight (8) trees: **Trees 8, 17, 107, 134, 138, 163, 164** & **171**	-	**Thirty (30) trees**
Works proposed within the NRZ – negligible impact due to location of existing site structures (retaining wall) & root sensitive construction techniques (boardwalk)	Three (3) trees: **Trees 34, 139** & **170**	Eight (8) trees: **Trees 35, 36, 40, 41, 129, 130, 142** & **166**	Ten (10) trees: **Trees 37, 38, 39, 42, 131, 141, 146, 168, 177** & **178**	-	**Twenty-one (21) trees**

Works Within the Notional Root Zone (NRZ)	Trees Recommended for Retention & Protection				
	High Retention Value	Medium Retention Value	Low Retention Value	Priority for Removal	Total
No works proposed within the NRZ.	Three (3) trees: **Trees 120, 132** & **162**	Five (5) trees: **Trees 9, 124, 133, 145** & **212**	Twenty-two (22) trees: **Trees 4, 6, 7, 10, 11, 13, 14, 15, 16, 25, 30, 106, 108, 115, 116, 121, 123, 137, 160, 165, 172** & **173**	-	**Thirty (30) trees**
				Total	**Ninety (90) trees**

5.3.1 Major Impacts

As per *AS4970-2025 Protection of trees on development sites*, the proposed development works will result in 'Major' encroachment to the root zone of two (2) neighbouring trees (**Trees 1** & **2**) that have been nominated for retention. These encroachments come as a result of the proposed bulk earthworks and retaining walls associated with the construction on Road 13. With regard to the level of incursion set to be imposed upon the root zone of these trees (NRZ 21-26%), it is considered that these impacts are capable of being tolerated given the area of proposed works within the NRZ is currently occupied by an existing bitumen driveway and associated kerbs, gutters and drainage infrastructure. Along with the heavily compacted sub-grade of the driveway, each of these elements are considered likely to have significantly reduced the extent of root development within the subject site – to the extent that any excavation or construction works within this area would not have a substantial bearing on the future viability of these trees. Retention and future viability of these trees is highly contingent on the successful implementation of tree protection measures and management during construction as detailed within **Section 7** below.

5.3.2 Moderate Impacts

For incursions set to be imposed upon the NRZs of **Trees 3, 5, 20, 22, 28, 148** & **210** (11-17%), it is also expected that impacts can be tolerated given the moderate incursion levels and the fact that each tree is in good health and condition. Each tree will maintain access to extended areas of contiguous deep soil which is expected to suitably offset the proposed impact and allow for compensatory root establishment.

5.3.3 Impact Avoidance – Lane Cove Road, Raised Footpath

As part of impact avoidance measures for retained trees along the Lane Cove Road frontage, it is acknowledged that the retention of many of these trees has been facilitated by the proposed installation of a suspended Fibre-reinforced Plastic (FRP) boardwalk which is to traverse the root zones of **Trees 139, 141, 142, 146, 148, 151, 152, 166, 168, 170, 174, 177** & **178**. Remaining roadworks within the NRZ of these trees are generally located to the lower side of an existing retaining wall and are not expected to result in any significant impact.

5.4 Ancillary Construction Related Impacts

Vehicles, machinery and equipment requiring access to the site have potential to result in inadvertent impacts to those trees being retained including compaction of the root zone, soil disturbance, physical damage to roots, trunk damage etc. and as such will require management.

Furthermore, storage and stockpiling of material may result in similar impacts and will require management. In this regard, protection for those trees to be retained is to be carried out in accordance with ***Appendix 5***.

6 CONCLUSION

6.1 Proposed Development Impact

Based on the plans and information supplied, the proposal would result in the following impacts to existing trees:

Removal of one-hundred and twenty-six (126) trees, including:

- One-hundred and five (105) trees due to falling directly within the footprint of the proposed bulk earthworks, building footprint, roadways & footpaths, and;

- Twenty-one (21) trees due to 'Major' and unsustainable encroachment to their respective Notional Root Zones (10-45%) and Structural Root Zones (0-44%) as a result of the proposed bulk earthworks, building footprint, roadway footprints and stormwater infrastructure.

Retention and protection of ninety (90) trees, including:

- Two (2) trees which are be subject to 'Major' encroachment to their respective Notional Root Zones (21-26%) as a result of the proposed bulk earthworks and stormwater infrastructure. Impacts being considered potentially tolerable given the location of existing site structures, current tree health and condition as well as the availability of contiguous deep soil areas for compensatory root development;

- Seven (7) trees which are to be subjected to 'Moderate' and sustainable encroachment to their respective Notional Root Zones (11-17%);

- Thirty (30) trees which are to be subjected to 'Minor' and sustainable incursions to their respective Notional Root Zones (<1-9%);

- Twenty-one (21) trees which are to which are to have works occur within their Notional Root Zones, however are unlikely to be significantly impacted due to the location of existing site structures (retaining wall) and root sensitive construction techniques (boardwalk), and;

- Thirty (30) trees which are generally located away from the proposed construction works and are to have nil encroachment to their respective Notional Root Zones;

Specific recommendations as per ***Section 7*** will need to be adopted to ensure root sensitive construction techniques and methodology are employed which mitigate the potential negative impacts to trees nominated for retention.

7 RECOMMENDATIONS

7.1 Tree Removal

Remove **Trees 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59a, 59b, 59c, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104a, 104b, 104c, 105, 110, 111, 112, 113, 114, 117, 118, 125, 126, 127, 136, 143, 144, 147, 149, 150, 153, 154, 155, 156, 157, 158, 159, 167, 169, 175, 176, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209** & **211** (126 trees) to facilitate the proposed development works.

Development consent and relevant approvals must be obtained prior to the removal or pruning of any tree protected under Part 9.5 – *Tree Preservation* of the Ryde Development Control Plan 2014.

All tree removal work is to be carried out by an experienced Arborist with minimum AQF Level 3 qualifications in accordance with *AS4373-2007 - Pruning of Amenity Trees*, Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal Work (2016) and other applicable legislation.

7.2 Tree Retention & Protection

Retain and protect **Trees 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 106, 107, 108, 109, 115, 116, 119, 120, 121, 122, 123, 124, 128, 129, 130, 131, 132, 133, 134, 135, 137, 138, 139, 140, 141, 142, 145, 146, 148, 151, 152, 160, 161, 162, 163, 164, 165, 166, 168, 170, 171, 172, 173, 174, 177, 178, 210** & **212** (90 trees) in accordance with the Tree Location Plan & Tree Protection Specification held at ***Appendix 2 & 5***, *AS497-2025 Protection of trees on development sites* and the specific recommendations below:

7.2.1 Project Arborist Engagement

A Project Arborist experienced in tree protection on construction sites should be engaged prior to the commencement of any works on site. The Project Arborist shall monitor and report regularly to the Principal Certifying Authority (PCA) and the Applicant on the condition and protection of the retained trees during the works. The Project Arborist is to supervise and monitor any excavation, machine trenching or compacted fill placement within the TPZ of retained trees throughout construction.

7.2.2 Tree Protection and Management Plan

Following design development and prior to any construction works taking place on site, a dedicated Tree Protection and Management Plan is to be prepared by a suitably qualified AQF Level 5 Arborist. The purpose of this document is to provide a suitable framework for tree protection to ensure all trees nominated for retention are not adversely impacted by the proposed works.

8 REFERENCES

City of Ryde Council. Ryde Development Control Plan 2014 – Part 9.5 – *Tree Preservation*

Council of Standards Australia, 2025 AS 4970 – 2025 – Protection of Trees on Development Sites Standards Australia, Sydney.

Council of Standards Australia, 2007 AS 4373 – 2007 – Pruning of Amenity Trees Standards Australia, Sydney.

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APPENDIX 1: TREE ASSESSMENT DATA - 269 LANE COVE ROAD, MACQUARIE PARK

Tree No.	*Genus & species* Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
1	***Eucalyptus microcorys*** Tallowwood	20	15	750				850	9.00	3.09	M	Good	Good	Medium 15-40yrs	High	High	Major 26% NRZ incursion	Retain & Protect	Tree on Waterloo Road frontage. Deadwood over 30mm in diameter over the subject site. Inactive termites in lower trunk. Poor pruning.
2	***Eucalyptus microcorys*** Tallowwood	17	10	550				600	6.60	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Major 21% NRZ incursion	Retain & Protect	Deadwood less than 30mm in diameter . Suppressed. Co dominant stems. Damaging infrastructure.
3	***Eucalyptus microcorys*** Tallowwood	18	11	450				600	5.40	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Moderate 15% NRZ incursion	Retain & Protect	Tree is flush to the fence. Co dominant stems. Deadwood over 30mm in diameter over subject site.
4	***Allocasuarina littoralis*** Black She-Oak	15	3	200				200	2.40	1.68	SM	Fair	Good	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Suppressed tree with epicormics
5	***Eucalyptus microcorys*** Tallowwood	15	4	400				450	4.80	2.37	SM	Fair	Fair	Short 5-15yrs	Medium	Low	Moderate 11% NRZ incursion	Retain & Protect	Codominant stems. Included bark. Mechancial damage.
6	***Allocasuarina littoralis*** Black She-Oak	12	4	200				250	2.40	1.85	J	Good	Good	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Heavily suppressed. Location limits ULE.
7	***Allocasuarina littoralis*** Black She-Oak	12	4	100				100	2.00	1.50	J	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Asymmetrical crown due to suppression. Wound. Location limites ULE.
8	***Eucalyptus microcorys*** Tallowwood	10	3	300				300	3.60	2.00	SM	Good	Fair	Short 5-15yrs	Low	Low	Minor 2% NRZ incursion	Retain & Protect	Heavily suppressed. Co dominant stems.
9	***Allocasuarina littoralis*** Black She-Oak	15	3	200				200	2.40	1.68	SM	Good	Good	Medium 15-40yrs	Medium	Medium	No works proposed within NRZ	Retain & Protect	Deadwood less than 30mm in diameter .
10	***Allocasuarina littoralis*** Black She-Oak	12	3	150				200	2.00	1.68	SM	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Heavily suppressed tree, extending over subject site.
11	***Eucalyptus microcorys*** Tallowwood	10	2	200				200	2.40	1.68	SM	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Suppressed. Co dominant with inclusions.
12	***Eucalyptus saligna*** Sydney Blue Gum	18	10	300				300	3.60	2.00	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 2% NRZ incursion	Retain & Protect	Location limits ULE.
13	***Eucalyptus microcorys*** Tallowwood	10	3	200				200	2.40	1.68	SM	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Tree is growing through fence. Heavily suppressed.
14	***Eucalyptus microcorys*** Tallowwood	6	2	100				100	2.00	1.50	J	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Co dominant stems. Epicormics.
15	***Allocasuarina littoralis*** Black She-Oak	12	3	200				200	2.40	1.68	SM	Good	Good	Short 5-15yrs	Medium	Low	No works proposed within NRZ	Retain & Protect	Epicormics
16	***Eucalyptus microcorys*** Tallowwood	6	2	100				150	2.00	1.50	SM	Poor	Poor	Very Short <5yrs	Low	Low	No works proposed within NRZ	Retain & Protect	The tree is lifting in the ground and has been lopped. Removal should be considered by the tree owner.
17	***Eucalyptus microcorys*** Tallowwood	15	3	350				350	4.20	2.13	M	Good	Fair	Short 5-15yrs	Medium	Low	Minor 6% NRZ incursion	Retain & Protect	Co dominant stems. Deadwood greater than 30mm over subject site.
18	***Eucalyptus microcorys*** Tallowwood	18	12	400				400	4.80	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 9% NRZ incursion	Retain & Protect	Included co dominant stems
19	***Eucalyptus microcorys*** Tallowwood	15	12	350				450	4.20	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 6% NRZ incursion	Retain & Protect	Included co dominant stems
20	***Allocasuarina littoralis*** Black She-Oak	22	15	450				450	5.40	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Moderate 12% NRZ incursion	Retain & Protect	Location limits ULE.
21	***Eucalyptus microcorys*** Tallowwood	20	12	400				550	4.80	2.57	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 9% NRZ incursion	Retain & Protect	Location limits ULE.
22	***Eucalyptus saligna*** Sydney Blue Gum	22	14	450				550	5.40	2.57	M	Good	Good	Medium 15-40yrs	Medium	Medium	Moderate 11% NRZ incursion	Retain & Protect	Poor pruning. Epicormics. Wound to stem.

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
23	***Eucalyptus microcorys*** Tallowwood	15	7	300				300	3.60	2.00	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor <1% NRZ incursion	Retain & Protect	Included co dominant stems
24	***Eucalyptus microcorys*** Tallowwood	22	14	350				450	4.20	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 4% NRZ incursion	Retain & Protect	Good health and structurally sound tree from an on ground inspection.
25	***Eucalyptus microcorys*** Tallowwood	10	3	200				200	2.40	1.68	SM	Good	Poor	Very Short <5yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Tree has been topped.
26	***Eucalyptus microcorys*** Tallowwood	18	7	300				400	3.60	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor <1% NRZ incursion	Retain & Protect	Deadwood less than 30mm in diameter over subject site driveway.
27	***Eucalyptus microcorys*** Tallowwood	18	9	350				450	4.20	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 5% NRZ incursion	Retain & Protect	Deadwood less than 30mm in diameter over subject site driveway.
28	***Eucalyptus microcorys*** Tallowwood	20	10	450				550	5.40	2.57	M	Good	Good	Medium 15-40yrs	Medium	Medium	Moderate 14% NRZ incursion	Retain & Protect	Deadwood less than 30mm in diameter over subject site driveway.
29	***Eucalyptus microcorys*** Tallowwood	15	10	350				400	4.20	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 5% NRZ incursion	Retain & Protect	Included co dominant stems. Poor pruning
30	***Eucalyptus microcorys*** Tallowwood	7	3	200				300	2.40	2.00	J	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Suppressed. Epicormics.
31	***Eucalyptus microcorys*** Tallowwood	15	7	350				450	4.20	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 4% NRZ incursion	Retain & Protect	Co dominant stems. Deadwood less than 30mm over subject site.
32	***Eucalyptus microcorys*** Tallowwood	15	7	300				350	3.60	2.13	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 1% NRZ incursion	Retain & Protect	Crossing/rubbing branches. Deadwood less than 30mm in diameter
33	***Eucalyptus microcorys*** Tallowwood	18	9	400				500	4.80	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 9% NRZ incursion	Retain & Protect	Hangers. Included and co dominant stems
34	***Eucalyptus saligna*** Sydney Blue Gum	22	15	700				800	8.40	3.01	M	Good	Good	Medium 15-40yrs	High	High	Works within NRZ - no additional impact	Retain & Protect	Dominant tree in this location. Is providing a high level of
35	***Eucalyptus saligna*** Sydney Blue Gum	20	15	450				550	5.40	2.57	M	Good	Good	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Elevated above NGL at site.
36	***Eucalyptus microcorys*** Tallowwood	15	6	400				500	4.80	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	2.7 metres from Tree 35. Not surveyed.
37	***Eucalyptus microcorys*** Tallowwood	7	3	300				400	3.60	2.25	SM	Good	Good	Medium 15-40yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Deadwood less than 30mm in diameter.
38	***Angophora costata*** Sydney Red Gum	6	3	350				400	4.20	2.25	J	Fair	Good	Short 5-15yrs	Medium	Low	Works within NRZ - no additional impact	Retain & Protect	Approximately 7 metres from Tree 37. Not surveyed. Deadwood greater than 30mm over site. Location limits ULE.
39	***Eucalyptus saligna*** Sydney Blue Gum	10	2	250				300	3.00	2.00	J	Good	Good	Medium 15-40yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Deadwood less than 30mm in diameter.
40	***Eucalyptus microcorys*** Tallowwood	12	7	500				600	6.00	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Deadwood over 30mm in diameter over site.
41	***Eucalyptus microcorys*** Tallowwood	15	8	300				400	3.60	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Minor deadwood.
42	***Angophora costata*** Sydney Red Gum	5	3	200				300	2.40	2.00	J	Good	Good	Short 5-15yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Location limits ULE.
43	***Angophora costata*** Sydney Red Gum	20	15	350				400	4.20	2.25	SM	Good	Good	Short 5-15yrs	Medium	Low	Within proposed grading extents	Remove	Heavily suppressed canopy across adjoining property.
44	***Eucalyptus resinifera*** Red Mahogany	25	17	600	400	300		650	9.37	2.76	M	Good	Good	Long 40yrs +	High	High	Within proposed grading extents	Remove	Multi stemmed from base. Dominant tree.
45	***Schinus molle var. areira*** Pepper Tree	5	7	400				400	4.80	2.25	SM	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Heavily suppressed.

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
46	***Eucalyptus resinifera*** Red Mahogany	10	5	400				500	4.80	2.47	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Major root severance to north. Cavity at base.
47	***Eucalyptus resinifera*** Red Mahogany	15	8	400				550	4.80	2.57	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood less than 30mm in diameter. Co dominant stems from 4 metres. Wound
48	***Angophora costata*** Sydney Red Gum	25	18	750	300			850	9.69	3.09	M	Good	Fair	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Previous failures. Hollows. Dieback. Codominant basal stem.
49	***Angophora costata*** Sydney Red Gum	10	10	250	200	100		300	4.02	2.00	SM	Good	Fair	Short 5-15yrs	Medium	Low	Within proposed grading extents	Remove	Multi stemmed from base. Dieback.
50	***Eucalyptus sp.*** Eucalyptus	4	3	100	50	50		300	2.00	2.00	J	Good	Poor	Very Short <5yrs	Low	Low	Within proposed grading extents	Remove	Regrowth from stump. Epicormics
51	***Eucalyptus resinifera*** Red Mahogany	18	12	500				550	6.00	2.57	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Codominant stems. Dieback.
52	***Angophora costata*** Sydney Red Gum	15	12	250	200			400	3.84	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Location limits ULE.
53	***Eucalyptus resinifera*** Red Mahogany	25	15	550				600	6.60	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Minor dieback.
54	***Angophora costata*** Sydney Red Gum	18	12	400				400	4.80	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Location limits ULE.
55	***Eucalyptus microcorys*** Tallowwood	6	2	50				100	2.00	1.50	J	Fair	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Cavity at base. Suppressed. Co dominant leader has been previously removed.
56	***Eucalyptus microcorys*** Tallowwood	15	10	350				450	4.20	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Minor dieback.Epicormics
57	***Eucalyptus grandis*** Flooded Gum	15	6	400				400	4.80	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood less than 30 mm in diameter
58	***Eucalyptus grandis*** Flooded Gum	25	18	700				850	8.40	3.09	M	Good	Good	Long 40yrs +	High	High	Within proposed grading extents	Remove	Dominant tree near Lane Cove Road frontage. Deadwood over 30mm in diameter.
59a	***Callistemon viminalis*** Weeping Bottlebrush	5	2	200				200	2.40	1.68	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Co dominant leader lopped at base.
59b	***Callistemon viminalis*** Weeping Bottlebrush	5	2	200				200	2.40	1.68	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Small tree of fair structure.
59c	***Callistemon viminalis*** Weeping Bottlebrush	5	2	200				200	2.40	1.68	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Small tree of fair structure.
60	***Eucalyptus Microcorys*** Tallowwood	20	12	700				800	8.40	3.01	M	Good	Good	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	VTA restricted due to weed understorey. Healthy tree to Lane Cove Road frontage.
61	***Eucalyptus microcorys*** Tallowwood	20	15	800				750	9.60	2.93	M	Good	Good	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	Tree providing high level of amenity to the location.
62	***Eucalyptus nicholii*** Narrow-leaved Peppermint	12	10	650				750	7.80	2.93	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Pest and disease evident. Deadwood over 60mm in diameter. Short lived species in Sydney. Tree is to Lane Cove Road frontage.
63	***Eucalyptus globulus subsp. bicostata*** Southern Blue Gum	15	10	1000				1200	12.00	3.57	M	Good	Good	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	300 x 300mm fungal fruiting body to northern base. Tree is free of fungal dysfunction, therefore dieback and excessive thinning. Tree is providing amenity to the location. Further reporting and testing is recommended through PICUS/Resistograph. Good wound reaction growth to wound at base.
64	***Harpephyllum caffrum*** Kaffir Plum	8	6	400				550	4.80	2.57	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Tree growing in garden bed
65	***Eucalyptus microcorys*** Tallowwood	22	15	500				700	6.00	2.85	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Inactive Termites on base. Deadwood > 30mm and large pruning cuts for fence

Tree No.	*Genus & species* Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
66	***Eucalyptus microcorys*** Tallowwood	20	14	500				700	6.00	2.85	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Co-dominant stems Deadwood > 30 mm
67	***Melaleuca quinquenervia*** Broad-leaved Paperbark	4	2	900				100	10.80	1.50	J	Good	Good	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Growth stunted by building
68	***Melaleuca quinquenervia*** Broad-leaved Paperbark	15	3	200				250	2.40	1.85	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	<3m from building
69	***Melaleuca quinquenervia*** Broad-leaved Paperbark	15	5	200	200			400	3.39	2.25	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Supressed growth
70	***Melaleuca quinquenervia*** Broad-leaved Paperbark	15	5	200	150	200		400	3.84	2.25	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Supressed growth
71	***Melaleuca quinquenervia*** Broad-leaved Paperbark	15	4	200				250	2.40	1.85	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Supressed growth
72	***Melaleuca quinquenervia*** Broad-leaved Paperbark	10	2	150				200	2.00	1.68	M	Fair	Poor	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Lots of leaders resulting in poor structure
73	***Melaleuca quinquenervia*** Broad-leaved Paperbark	12	3	300				400	3.60	2.25	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	3m from building
74	***Melaleuca quinquenervia*** Broad-leaved Paperbark	15	3	350				450	4.20	2.37	M	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	3m from building- supressed
75	***Melaleuca quinquenervia*** Broad-leaved Paperbark	8	4	300				400	3.60	2.25	SM	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	3m from building. Crossing branches
76	***Eucalyptus microcorys*** Tallowwood	8	6	400				500	4.80	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Inactive termites cawker - DW > 30mm
77	***Allocasuarina littoralis*** Black She-Oak	15	7	350				500	4.20	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Co-dominant stems included bark supressed
78	***Allocasuarina littoralis*** Black She-Oak	17	8	350				450	4.20	2.37	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Damaging supressed infrastructure
79	***Allocasuarina littoralis*** Black She-Oak	16	8	400				400	4.80	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Co-dominant stems supressed
80	***Allocasuarina littoralis*** Black She-Oak	18	6	300				400	3.60	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Supressed
81	***Eucalyptus grandis*** Flooded Gum	18	12	550				700	6.60	2.85	M	Good	Good	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	Part of local indigenous species
82	***Allocasuarina littoralis*** Black She-Oak	15	3	250				300	3.00	2.00	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood > 30mm supressed
83	***Allocasuarina littoralis*** Black She-Oak	8	2	200				200	2.40	1.68	M	Good	Good	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Tree conflicting with adjoining tree 81
84	***Allocasuarina littoralis*** Black She-Oak	20	5	300				350	3.60	2.13	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood > 30mm co-dominant stress
85	***Allocasuarina littoralis*** Black She-Oak	18	6	200				300	2.40	2.00	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Supressed wounds
86	***Allocasuarina littoralis*** Black She-Oak	22	7	300				400	3.60	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood > 30mm
87	***Eucalyptus grandis*** Flooded Gum	8	2	200				200	2.40	1.68	J	Good	Good	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Poor specimen- heavily supressed
88	***Eucalyptus grandis*** Flooded Gum	15	10	300				500	3.60	2.47	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Excessive end weight over carpark

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
89	***Allocasuarina littoralis*** Black She-Oak	15	7	350				500	4.20	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Co-dominant stems Deadwood > 30mm
90	***Allocasuarina littoralis*** Black She-Oak	15	6	300				400	3.60	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	DW > 30mm
91	***Allocasuarina littoralis*** Black She-Oak	17	7	300				400	3.60	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Supressed
92	***Allocasuarina littoralis*** Black She-Oak	22	9	350				600	4.20	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Dominant tree in group of (4)
93	***Eucalyptus grandis*** Flooded Gum	22	15	800				1000	9.60	3.31	M	Good	Fair	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	Tree of indigenous species- 2 x Fruiting bodies 8 x 5 6 x 14cm, Tree is free of fungal dysfunction further reporting and testing reccomended through PICUS/Resistograph.
94	***Eucalyptus grandis*** Flooded Gum	22	15	600				800	7.20	3.01	M	Good	Good	Long 40yrs +	High	High	Within proposed grading extents	Remove	DW7 60mm DW hangers providing high amenity, shade and habitat. Trees of species endemic to area.
95	***Eucalyptus grandis*** Flooded Gum	10	6	350				400	4.20	2.25	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Heavily supressed
96	***Callistemon viminalis*** Weeping Bottlebrush	5	2	1000				350	12.00	2.13	J	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Supressed - Multi stemmed
97	***Agonis flexuosa*** Willow Myrtle	5	3	200				300	2.40	2.00	J	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Leaning cavity at base
98	***Callistemon viminalis*** Weeping Bottlebrush	4	2	50				100	2.00	1.50	SM	Good	Poor	Very Short <5yrs	Low	Low	Within proposed grading extents	Remove	Supressed
99	***Agonis flexuosa*** Willow Myrtle	6	3	500				550	6.00	2.57	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Crossing/ rubbing branches epicormites
100	***Callistemon viminalis*** Weeping Bottlebrush	4	2	100				100	2.00	1.50	J	Fair	Fair	Very Short <5yrs	Low	Low	Within proposed grading extents	Remove	Excessive thinning drieback
101	***Agonis flexuosa*** Willow Myrtle	4	2	150	100	100		250	2.47	1.85	J	Good	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Supressed - Multi stemmed
102	***Eriobotrya japonica*** Loquat	1	3	200				200	2.40	1.68	SM	Good	Good	Medium 15-40yrs	Low	Low	Within proposed grading extents	Remove	Undesirable Species
103	***Eucalyptus resinifera*** Red Mahogany	20	5	600				700	7.20	2.85	M	Good	Fair	Short 5-15yrs	Medium	Low	Within proposed grading extents	Remove	Failure of Southern leader stem wounds and decay
104 a	***Plumeria rubra var. acutifolia*** Frangipani	1	2	200				200	2.40	1.68	J	Good	Good	Very Short <5yrs	Low	Low	Within proposed grading extents	Remove	ULE limited due to location.
104 b	***Plumeria rubra var. acutifolia*** Frangipani	1	2	200				200	2.40	1.68	J	Good	Good	Very Short <5yrs	Low	Low	Within proposed grading extents	Remove	ULE limited due to location.
104c	***Plumeria rubra var. acutifolia*** Frangipani	1	2	200				200	2.40	1.68	J	Good	Good	Very Short <5yrs	Low	Low	Within proposed grading extents	Remove	ULE limited due to location.
105	***Corymbia maculata*** Spotted Gum	6	5	300				350	3.60	2.13	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood less than 30mm. Suppressed.
106	***Angophora costata*** Sydney Red Gum	4	3	200	100			200	2.68	1.68	J	Good	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Deadwood > 30mm - Poor specimen
107	***Syncarpia glomulifera*** Turpentine	5	3	300				400	3.60	2.25	SM	Good	Fair	Short 5-15yrs	Medium	Low	Minor 4% NRZ incursion	Retain & Protect	Co-dominant stems with inclusions
108	***Syncarpia glomulifera*** Turpentine	5	3	300				350	3.60	2.13	SM	Good	Fair	Short 5-15yrs	Medium	Low	No works proposed within NRZ	Retain & Protect	Co-dominant stems with inclusions
109	***Corymbia maculata*** Spotted Gum	7	4	300				350	3.60	2.13	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 7% NRZ incursion	Retain & Protect	Providing co-dominant stems

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
110	***Callistemon viminalis*** Weeping Bottlebrush	5	3	300				300	3.60	2.00	M	Good	Good	Short 5-15yrs	Medium	Low	Within proposed grading extents	Remove	Providing Amenity
111	***Eucalyptus resinifera*** Red Mahogany	15	9	450				500	5.40	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Deadwood 30mm with hangers
112	***Eucalyptus resinifera*** Red Mahogany	14	6	300				300	3.60	2.00	SM	Good	Good	Short 5-15yrs	Medium	Low	Within proposed grading extents	Remove	Location limits ULE next to fence wound
113	***Angophora costata*** Sydney Red Gum	15	9	800				850	9.60	3.09	M	Good	Good	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	Soil compaction
114	***Syncarpia glomulifera*** Turpentine	15	8	400	500			900	7.68	3.17	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Co-dominant stems
115	***Angophora costata*** Sydney Red Gum	5	3	200				250	2.40	1.85	J	Good	Good	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Surpressed and over footpath
116	***Angophora costata*** Sydney Red Gum	5	3	150				200	2.00	1.68	J	Good	Good	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Supressed and over footpath and ivy climber from base
117	***Syncarpia glomulifera*** Turpentine	10	6	400	300			450	6.00	2.37	M	Fair	Good	Medium 15-40yrs	Medium	Medium	Major 43% NRZ incursion + 25% SRZ incursion	Remove	Ivy climber from base
118	***Syncarpia glomulifera*** Turpentine	15	7	400				500	4.80	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Major 24% NRZ incursion	Remove	Ivy climber at base
119	***Angophora costata*** Sydney Red Gum	12	6	350				400	4.20	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 6% NRZ incursion	Retain & Protect	Deadwood > 30mm
120	***Eucalyptus resinifera*** Red Mahogany	16	8	350				400	4.20	2.25	M	Good	Good	Medium 15-40yrs	High	High	No works proposed within NRZ	Retain & Protect	To Lane Cove road frontage
121	***Eucalyptus resinifera*** Red Mahogany	12	3	200				200	2.40	1.68	M	Good	Good	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Heavily supressed
122	***Angophora costata*** Sydney Red Gum	22	12	400				500	4.80	2.47	M	Fair	Good	Medium 15-40yrs	Medium	Medium	Minor 9% NRZ incursion	Retain & Protect	Deadwood > 60mm
123	***Angophora costata*** Sydney Red Gum	5	2	150				200	2.00	1.68	J	Fair	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Supressed DW > 30mm
124	***Angophora costata*** Sydney Red Gum	17	6	350				400	4.20	2.25	M	Good	Fair	Medium 15-40yrs	Medium	Medium	No works proposed within NRZ	Retain & Protect	Supressed over footpath
125	***Eucalyptus resinifera*** Red Mahogany	18	12	600				600	7.20	2.67	M	Good	Good	Medium 15-40yrs	High	High	Within proposed grading extents	Remove	Ivy climber at base. Dominant tree
126	***Angophora costata*** Sydney Red Gum	12	10	250				300	3.00	2.00	SM	Fair	Good	Short 5-15yrs	Medium	Low	Major 35% NRZ incursion + 28% SRZ incursion	Remove	Deadwood < 30mm Ivy Climber
127	***Angophora costata*** Sydney Red Gum	18	12	550				650	6.60	2.76	M	Good	Good	Medium 15-40yrs	Medium	Medium	Major 31% NRZ incursion	Remove	Ivy climber from base through canopy. Previous failures
128	***Eucalyptus resinifera*** Red Mahogany	22	14	500				500	6.00	2.47	M	Good	Good	Medium 15-40yrs	High	High	Minor 3% NRZ incursion	Retain & Protect	Lane Cove Road frontage co dominant stems
129	***Eucalyptus resinifera*** Red Mahogany	10	6	300				300	3.60	2.00	SM	Good	Fair	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Wound heavily supressed
130	***Eucalyptus resinifera*** Red Mahogany	12	6	300				300	3.60	2.00	M	Good	Fair	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Wound. Heavily supressed
131	***Angophora costata*** Sydney Red Gum	9	6	250				300	3.00	2.00	M	Good	Fair	Short 5-15yrs	Medium	Low	Works within NRZ - no additional impact	Retain & Protect	Heavily suppressed
132	***Angophora costata*** Sydney Red Gum	20	15	500				500	6.00	2.47	M	Good	Good	Medium 15-40yrs	High	High	No works proposed within NRZ	Retain & Protect	Deadwood less than 30mm in diameter.

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
133	***Eucalyptus resinifera*** Red Mahogany	15	12	350				600	4.20	2.67	M	Good	Fair	Medium 15-40yrs	Medium	Medium	No works proposed within NRZ	Retain & Protect	Heavily suppressed
134	***Cinnamomum camphora*** Camphor Laurel	9	6	300				400	3.60	2.25	SM	Good	Fair	Short 5-15yrs	Low	Low	Minor 8% NRZ incursion	Retain & Protect	Undesirable Species. Suppressed.
135	***Eucalyptus resinifera*** Red Mahogany	12	7	400				500	4.80	2.47	M	Good	Good	Medium 15-40yrs	High	High	Minor 7% NRZ incursion	Retain & Protect	Dominant tree. Deadwood and hangers.
136	***Angophora costata*** Sydney Red Gum	10	3	250				350	3.00	2.13	M	Good	Fair	Short 5-15yrs	Low	Low	Major 20% NRZ incursion + 13% SRZ incursion	Remove	Heavily suppressed with cavity.
137	***Callistemon viminalis*** Weeping Bottlebrush	4	2	100	100			200	2.00	1.68	M	Fair	Fair	Short 5-15yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Co dominant stems and dieback.
138	***Angophora costata*** Sydney Red Gum	11	3	200				200	2.40	1.68	SM	Good	Fair	Short 5-15yrs	Medium	Low	Minor 5% NRZ incursion	Retain & Protect	Deadwood over than 30mm in diameter. Heavily suppressed.
139	***Angophora costata*** Sydney Red Gum	15	7	400				500	4.80	2.47	M	Good	Good	Long 40yrs +	High	High	Works within NRZ - no additional impact	Retain & Protect	Dominant tree to Lane Cove Road frontage.
140	***Eucalyptus microcorys*** Tallowwood	12	6	300				350	3.60	2.13	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 8% NRZ incursion	Retain & Protect	Deadwood less than 30mm in diameter.
141	***Callistemon viminalis*** Weeping Bottlebrush	4	2	200	100			300	2.68	2.00	SM	Fair	Fair	Short 5-15yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Actively separating union at base. Decay.
142	***Angophora costata*** Sydney Red Gum	10	3	250				300	3.00	2.00	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Crossing and rubbing branches. Deadwood less than 30mm in diameter.
143	***Callistemon viminalis*** Weeping Bottlebrush	3	2	100				100	2.00	1.50	SM	Good	Poor	Short 5-15yrs	Low	Low	Major 28% NRZ incursion + 22% SRZ incursion	Remove	Cavity at base. Co dominant stems
144	***Eucalyptus microcorys*** Tallowwood	15	8	400				400	4.80	2.25	M	Good	Good	Medium 15-40yrs	Medium	Medium	Major 22% NRZ incursion	Remove	Inactive termites in trunk. Deadwood over 30mm in diameter.
145	***Allocasuarina littoralis*** Black She-Oak	12	5	200				300	2.40	2.00	SM	Good	Good	Medium 15-40yrs	Medium	Medium	No works proposed within NRZ	Retain & Protect	Epicormics. Suppressed.
146	***Callistemon viminalis*** Weeping Bottlebrush	4	2	150	100			200	2.16	1.68	SM	Good	Fair	Short 5-15yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Co dominant stems.
147	***Angophora costata*** Sydney Red Gum	12	6	350	250			400	5.16	2.25	M	Good	Good	Long 40yrs +	High	High	Within footprint of pathway	Remove	Crossing and rubbing branches. Co dominant stems. Dominant tree to Lane Cove Road frontage.
148	***Angophora costata*** Sydney Red Gum	15	10	500				650	6.00	2.76	SM	Good	Fair	Medium 15-40yrs	Medium	Medium	Moderate 11% NRZ incursion	Retain & Protect	Loss of northern leader, decay and deadwood over 100mm
149	***Angophora costata*** Sydney Red Gum	7	5	250	200	200		400	4.53	2.25	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Within footprint of pathway	Remove	Heavily suppressed. Multi stemmed from 1 metre.
150	***Eucalyptus resinifera*** Red Mahogany	18	12	600	300			700	8.05	2.85	M	Good	Good	Medium 15-40yrs	High	High	Within footprint of pathway	Remove	Dominant tree at Lane Cove Road frontage
151	***Eucalyptus resinifera*** Red Mahogany	22	14	500				650	6.00	2.76	M	Good	Good	Long 40yrs +	High	High	Minor 4% NRZ incursion	Retain & Protect	Dominant tree to Lane Cove Road frontage.
152	***Eucalyptus resinifera*** Red Mahogany	18	15	450				500	5.40	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 1% NRZ incursion	Retain & Protect	Co dominant stems from 4 metres. Deadwood over 30mm.
153	***Angophora costata*** Sydney Red Gum	20	18	400				550	4.80	2.57	M	Good	Fair	Medium 15-40yrs	Medium	Medium	Within footprint of pathway	Remove	Heavily suppressed. Canker. Canopy over light pole.
154	***Angophora costata*** Sydney Red Gum	20	18	350	250			600	5.16	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Co dominant stems from base. Suppressed.
155	***Angophora costata*** Sydney Red Gum	22	18	550				750	6.60	2.93	M	Good	Good	Long 40yrs +	High	High	Within proposed grading extents	Remove	Dominant tree to Lane Cove Road.

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
156	***Eucalyptus resinifera*** Red Mahogany	17	9	550				650	6.60	2.76	M	Good	Good	Long 40yrs +	High	High	Within footprint of pathway	Remove	Asymmetrical canopy. Suppressed. Deadwood less than 30mm in diameter. Dominant tree to Lane Cove Road.
157	***Angophora costata*** Sydney Red Gum	15	12	400				500	4.80	2.47	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within footprint of roadway	Remove	Supressed
158	***Angophora costata*** Sydney Red Gum	16	14	400				600	4.80	2.67	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within footprint of roadway	Remove	Supressed
159	***Eucalyptus resinifera*** Red Mahogany	14	12	500	200	200		200	6.89	1.68	M	Good	Good	Medium 15-40yrs	Medium	Medium	Within footprint of roadway	Remove	Inactive termites. Treatment evident. Deadwood over 100 mm in diameter.
160	***Angophora floribunda*** Rough-barked Apple	8	3	200				200	2.40	1.68	J	Good	Good	Short 5-15yrs	Medium	Low	No works proposed within NRZ	Retain & Protect	Suppressed
161	***Angophora floribunda*** Rough-barked Apple	15	5	350				450	4.20	2.37	SM	Good	Good	Medium 15-40yrs	Medium	Medium	Minor 3% NRZ incursion	Retain & Protect	Co dominant stems
162	***Angophora floribunda*** Rough-barked Apple	18	12	500				600	6.00	2.67	M	Good	Good	Long 40yrs +	High	High	No works proposed within NRZ	Retain & Protect	Dominant tree within group
163	***Eucalyptus resinifera*** Red Mahogany	8	7	300				350	3.60	2.13	SM	Fair	Fair	Medium 15-40yrs	Low	Low	Minor 4% NRZ incursion	Retain & Protect	Suppressed
164	***Melaleuca bracteata*** Black Tea-Tree	6	4	150				200	2.00	1.68	SM	Average	Average	Medium 15-40yrs	Low	Low	Minor 4% NRZ incursion	Retain & Protect	Nil
165	***Eucalyptus microcorys*** Tallowwood	7	5	200				250	2.40	1.85	SM	Average	Fair	Medium 15-40yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Suppressed
166	***Casuarina glauca*** Swamp Oak	14	7	300				350	3.60	2.13	M	Average	Average	Medium 15-40yrs	Medium	Medium	Works within NRZ - no additional impact	Retain & Protect	Nil
167	***Eucalyptus resinifera*** Red Mahogany	9	8	400				450	4.80	2.37	M	Average	Fair	Medium 15-40yrs	Medium	Medium	Within footprint of pathway	Remove	Suppressed. Crown bias to east
168	***Eucalyptus resinifera*** Red Mahogany	16	6	350				500	4.20	2.47	OM	Poor	Fair	Short 5-15yrs	Medium	Low	Works within NRZ - no additional impact	Retain & Protect	Slender form. High level of epicormic growth
169	***Eucalyptus resinifera*** Red Mahogany	5	5	150				200	2.00	1.68	SM	Average	Fair	Medium 15-40yrs	Low	Low	Within footprint of pathway	Remove	Suppressed
170	***Eucalyptus resinifera*** Red Mahogany	17	11	450	300			650	6.49	2.76	M	Fair	Average	Medium 15-40yrs	High	High	Works within NRZ - no additional impact	Retain & Protect	Bifurcated from ground level. Western leader in severe decline
171	***Melaleuca linariifolia*** Flax-leaved Paperbark	5	4	200				250	2.40	1.85	SM	Average	Average	Medium 15-40yrs	Low	Low	Minor 4% NRZ incursion	Retain & Protect	Suppressed
172	***Jacaranda mimosifolia*** Jacaranda	7	3	100				150	2.00	1.50	SM	Average	Average	Medium 15-40yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Slender form
173	***Melaleuca bracteata*** Black Tea-Tree	8	4	150				200	2.00	1.68	SM	Good	Good	Medium 15-40yrs	Low	Low	No works proposed within NRZ	Retain & Protect	Crown bias to east
174	***Eucalyptus resinifera*** Red Mahogany	10	7	300	150			350	4.02	2.13	M	Average	Fair	Long 40yrs +	Low	Medium	Minor 3% NRZ incursion	Retain & Protect	Crown bias to east
175	***Eucalyptus resinifera*** Red Mahogany	17	9	450	300			550	6.49	2.57	M	Average	Fair	Long 40yrs +	Medium	High	Within footprint of pathway	Remove	Bifurcated from 0.5m. Wound at 7m - occluding
176	***Angophora costata*** Sydney Red Gum	7	5	250				300	3.00	2.00	SM	Fair	Fair	Medium 15-40yrs	Low	Low	Within footprint of pathway	Remove	Suppressed
177	***Eucalyptus microcorys*** Tallowwood	9	4	150	100	50		300	2.24	2.00	SM	Fair	Poor	Medium 15-40yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Coppiced growth from ground level
178	***Callistemon viminalis*** Weeping Bottlebrush	5	4	100	100			250	2.00	1.85	M	Fair	Fair	Short 5-15yrs	Low	Low	Works within NRZ - no additional impact	Retain & Protect	Reduced foliage density

Tree No.	Genus & species Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
179	***Eucalyptus resinifera*** Red Mahogany	12	7	250				300	3.00	2.00	M	Average	Fair	Medium 15-40yrs	Low	Low	Within proposed grading extents	Remove	Mod deadwood
180	***Eucalyptus resinifera*** Red Mahogany	8	4	200				250	2.40	1.85	SM	Average	Fair	Medium 15-40yrs	Low	Low	Within proposed grading extents	Remove	Suppressed
181	***Eucalyptus resinifera*** Red Mahogany	18	8	350				400	4.20	2.25	M	Average	Average	Long 40yrs +	Medium	High	Within proposed grading extents	Remove	Slender form
182	***Corymbia gummifera*** Red Bloodwood	7	4	200	100	50		300	2.75	2.00	SM	Average	Poor	Medium 15-40yrs	Low	Low	Within footprint of roadway	Remove	Coppiced growth from ground level
183	***Angophora costata*** Sydney Red Gum	15	10	400				500	4.80	2.47	M	Average	Average	Long 40yrs +	Medium	High	Within footprint of roadway	Remove	Co-dominant crown
184	***Eucalyptus resinifera*** Red Mahogany	14	7	400				450	4.80	2.37	M	Fair	Average	Medium 15-40yrs	Medium	Medium	Within footprint of roadway	Remove	Tip dieback
185	***Eucalyptus resinifera*** Red Mahogany	19	8	400				450	4.80	2.37	S	Poor	Poor	Very Short <5yrs	Medium	Low	Within footprint of roadway	Remove	Failed central leader. In severe decline
186	***Angophora costata*** Sydney Red Gum	8	5	200				250	2.40	1.85	SM	Average	Fair	Medium 15-40yrs	Low	Low	Within footprint of roadway	Remove	Past branch failures
187	***Eucalyptus resinifera*** Red Mahogany	13	8	500				550	6.00	2.57	M	Average	Poor	Medium 15-40yrs	Medium	Medium	Within footprint of roadway	Remove	Failed central leader. Multiple past branch failures
188	***Eucalyptus eugenioides*** Thin-leaved Stringybark	14	8	500				550	6.00	2.57	M	Average	Average	Long 40yrs +	Medium	High	Within footprint of roadway	Remove	Mod deadwood
189	***Eucalyptus microcorys*** Tallowwood	8	7	350				400	4.20	2.25	M	Good	Average	Long 40yrs +	Low	Medium	Major 44% NRZ incursion + 42% SRZ incursion	Remove	Nil
190	***Eucalyptus resinifera*** Red Mahogany	12	8	400				450	4.80	2.37	M	Fair	Average	Medium 15-40yrs	Medium	Medium	Within footprint of roadway	Remove	Reduced foliage density
191	***Eucalyptus resinifera*** Red Mahogany	20	10	550				600	6.60	2.67	M	Average	Good	Long 40yrs +	High	High	Within footprint of roadway	Remove	Minor deadwood
192	***Eucalyptus microcorys*** Tallowwood	12	8	450				500	5.40	2.47	M	Good	Average	Long 40yrs +	Medium	High	Major 30% NRZ incursion + 17% SRZ incursion	Remove	Crown bias to south
193	***Eucalyptus microcorys*** Tallowwood	15	10	500				600	6.00	2.67	M	Good	Average	Long 40yrs +	Medium	High	Major 45% NRZ incursion + 44% SRZ incursion	Remove	Past branch failures
194	***Eucalyptus microcorys*** Tallowwood	6	4	150				200	2.00	1.68	SM	Average	Fair	Medium 15-40yrs	Low	Low	Major 10% NRZ incursion + 10% SRZ incursion	Remove	Suppressed
195	***Angophora floribunda*** Rough-barked Apple	11	7	250	100	50	50	400	3.34	2.25	SM	Average	Average	Long 40yrs +	Low	Medium	Major 38% NRZ incursion + 37% SRZ incursion	Remove	Multi-stemmed from base
196	***Angophora costata*** Sydney Red Gum	5	4	150				200	2.00	1.68	SM	Fair	Fair	Short 5-15yrs	Low	Low	Within proposed grading extents	Remove	Poor development
197	***Angophora costata*** Sydney Red Gum	10	7	200	150			250	3.00	1.85	SM	Average	Fair	Medium 15-40yrs	Low	Low	Within proposed grading extents	Remove	Bifurcated from 0.3m
198	***Casuarina glauca*** Swamp Oak	14	4	250				300	3.00	2.00	SM	Fair	Average	Medium 15-40yrs	Low	Low	Within proposed grading extents	Remove	Slender form. Reduced foliage density
199	***Casuarina glauca*** Swamp Oak	13	4	250				300	3.00	2.00	SM	Average	Average	Medium 15-40yrs	Low	Low	Major 26% NRZ incursion + 15% SRZ incursion	Remove	Slender form
200	***Casuarina glauca*** Swamp Oak	12	2	200				250	2.40	1.85	SM	Average	Average	Medium 15-40yrs	Low	Low	Major 24% NRZ incursion + 11% SRZ incursion	Remove	Slender form
201	***Casuarina glauca*** Swamp Oak	13	3	200				250	2.40	1.85	SM	Average	Average	Medium 15-40yrs	Low	Low	Major 21% NRZ incursion + 10% SRZ incursion	Remove	Slender form

Tree No.	*Genus & species* Common Name	Height (m)	Crown Spread (m)	DSH #1 (mm)	DSH #2 (mm)	DSH #3 (mm)	DSH #4 (mm)	DGL (mm)	NRZ Radius (m)	SRZ Radius (m)	Age Class	Health / Vitality	Structure/ Condition	SULE Rating	Landscape Significance	Retention Value	Development Impact	Retain / Remove	Comments
202	***Casuarina glauca*** Swamp Oak	8	4	200				250	2.40	1.85	SM	Average	Average	Medium 15-40yrs	Low	Low	Major 23% NRZ incursion + 14% SRZ incursion	Remove	Slender form
203	***Eucalyptus pilularis*** Blackbutt	15	11	450				500	5.40	2.47	M	Average	Average	Long 40yrs +	Medium	High	Within proposed grading extents	Remove	Crown bias to north. Past branch failures
204	***Casuarina glauca*** Swamp Oak	8	4	200				250	2.40	1.85	SM	Good	Average	Medium 15-40yrs	Low	Low	Major 40% NRZ incursion + 38% SRZ incursion	Remove	Nil
205	***Dead tree*** -	14	3	250				300	-	-	-	-	-	Dead	Low	Priority for Removal	Within proposed grading extents	Remove	Dead tree
206	***Eucalyptus resinifera*** Red Mahogany	12	9	400				450	4.80	2.37	M	Good	Fair	Medium 15-40yrs	Medium	Medium	Within proposed grading extents	Remove	Suppressed. Bias to east
207	***Casuarina glauca*** Swamp Oak	13	5	200				250	2.40	1.85	SM	Average	Average	Medium 15-40yrs	Low	Low	Major 37% NRZ incursion + 36% SRZ incursion	Remove	Slender form
208	***Eucalyptus microcorys*** Tallowwood	14	11	400				500	4.80	2.47	M	Good	Good	Long 40yrs +	Medium	High	Major 21% NRZ incursion + 8% SRZ incursion	Remove	Co-dominant crown
209	***Eucalyptus resinifera*** Red Mahogany	20	15	650				700	7.80	2.85	M	Average	Average	Long 40yrs +	High	High	Major 23% NRZ incursion	Remove	Dominant
210	***Cinnamomum camphora*** Camphor Laurel	8	8	350	200	200	200	500	5.91	2.47	M	Good	Fair	Long 40yrs +	Low	Medium	Moderate17% NRZ incursion	Retain & Protect	Multi-stemmed from base
211	***Angophora costata*** Sydney Red Gum	17	12	500				600	6.00	2.67	M	Fair	Average	Medium 15-40yrs	High	High	Major 26% NRZ incursion	Remove	Growing within bitumen carpark. Reduced foliage density
212	***Casuarina glauca*** Swamp Oak	14	8	300				400	3.60	2.25	M	Good	Average	Medium 15-40yrs	Medium	Medium	No works proposed within NRZ	Retain & Protect	Nil

Tree Inspection Data Notes & Terminology

Tree No. (Tree Number)
The tree number associated to each tree located on or adjacent to the subject site.

Botanical Name and Common Name
The botanical and common name of each tree is identified and recorded. Occasionally the exact species name is unknown; sp. is recorded to indicate this.

Height, Crown Width and DSH
- The trees height and crown spread is recorded in metres (m);
- The tree DSH is recorded in millimetres (mm). DSH is an abbreviation of Diameter (of the trunk) measured at Standard Height (or 1.4m from the base of the trunk). If more than one trunk is present the DSH is calculated in accordance with AS4970-2025 Protection of Trees on Development Sites

Age Class
The age class of each tree is estimated as either:
J – Juvenile refers to a well established but young tree
SM – Semi Mature, a tree that has not grown to mature size
M – Mature, a tree that has reached mature size and will slowly increase in size over time
OM – Over Mature, a tree that has been mature for a long period and is beginning to display signs of decline, e.g. large dead branches
S – Senescent, an over mature tree that is now in decline

Health & Condition
The trees health and vigour is recorded as a measurement of:
Good - the tree does not appear to appear stressed with no excessive dieback, insect infestation, decay, deadwood or epicormic shoots
Average - the tree appears stressed and has some crown dieback, and /or a few epicormic shoots, and/or some deadwood in the crown and some new growth at branch tips. These trees may benefit from remediation of the growing environment to reduce stress and return it to good health
Fair - the tree may have areas of crown dieback, and/or epicormic shoots, and/or areas of decay, and/or reduced new growth at branch tips. These trees have been stressed for a short period of time, remediation of the growing environment may improve trees health
Poor - the tree may have large areas of crown dieback, and/or many epicormic shoots, and/or reduced new growth at branch tips. These trees have been stressed for a long period of time, remediation of the growing environment would not return the tree to good health.

SRZ (Structural Root Zone)
The SRZ is a radial area extending outwards from the centre of the trunk. This area contains the majority of the structural woody roots. This area is responsible primarily for stability. Root damage or root loss within this zone greatly increases the opportunity for decay fungi to ingress into the heartwood, causing internal decay in addition to destabilising the trees structural integrity. The SRZ is calculated as follows (This calculation is taken from the Australian Standard 4970 – 2025 Protection of Trees on Development Sites): (D x 50)0.42 x 0.64

NRZ (Notional Root Zone)
The NRZ is a radial area measured by multiplying the DSH by twelve (12) or a circular area the size of the trees drip line, whichever is greater. This area contains the majority of the structural and feeder roots responsible for stability, gaseous exchange and water and nutrient uptake. Excavation, back filling, compaction or other disturbance should not occur in this area. The NRZ is used to identify the minimum area required for the safe retention of a given tree. This calculation is derived from the Australian Standard 4970-2025 Protection of Trees in Development Sites. NRZ encroachment is potentially acceptable if no other option is available and is classified under AS4970-2025 as 'Minor' (≤10%), 'Moderate' (>10≤20%) or 'Major' (>20%). A major encroachment (in excess of 20%) is required to be clearly justified by the Project Arborist and compensated for elsewhere. Justification methodology may vary depending on site or individual tree's health, vigour and ability to withstand disturbance and may require root investigation.

Landscape Significance
The landscape significance of a tree or group of trees is determined using a combination of health/vigour/condition, amenity, heritage and ecological values in accordance with IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA 2010)©.
1. High Significance in Landscape
2. Medium Significance in Landscape
3. Low Significance in Landscape

Retention Value (RV)
Determined by [1] tree free of visual defects and viable for retention, [2] viable for retention with minor faults which may reduce SULE, [3] trees which should not restrict development applications containing faults that are likely to become problematic in the short term, [4] trees to be considered for removal due to average condition.
High Retention - These trees are considered important for retention and should be retained and protected. Design modification or re-location of building/s should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970 Protection of trees on development sites. Tree sensitive construction measures must be implemented e.g. pier and beam etc. if works are to proceed within the Tree Protection Zone
Medium Retention - These trees may be retained and protected. These are considered less critical; however their retention should remain priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered and exhausted.
Low Retention - These trees are not considered important for retention, nor require special works or design modification to be implemented for their retention.
Priority for Removal - These trees are considered hazardous, or in irreversible decline, or weeds and should be removed irrespective of development.

S.U.L.E. Categories
Safe Useful Life Expectancy (after *Barrell* 1996, modified by the author). A trees S.U.L.E. category is the life expectancy of the tree modified first by its age, health, condition, safety and location. S.U.L.E. assessments may be modified as dictated by changes in trees health and environment
Long - Appear retainable at the time of assessment for over 40 years with an acceptable degree of risk assuming reasonable maintenance.
Medium - Appear to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk assuming reasonable maintenance.
Short - Trees appear to be retainable at the time of assessment for 5 to15 years with an acceptable degree of risk assuming reasonable maintenance.
Very Short - Removal - Trees which should be scheduled for removal within the very short term or as specified within this report.
Small, Young or Regularly Pruned – Trees under 5m in height that can be easily moved or replaced, includes screen plantings or hedge lines.

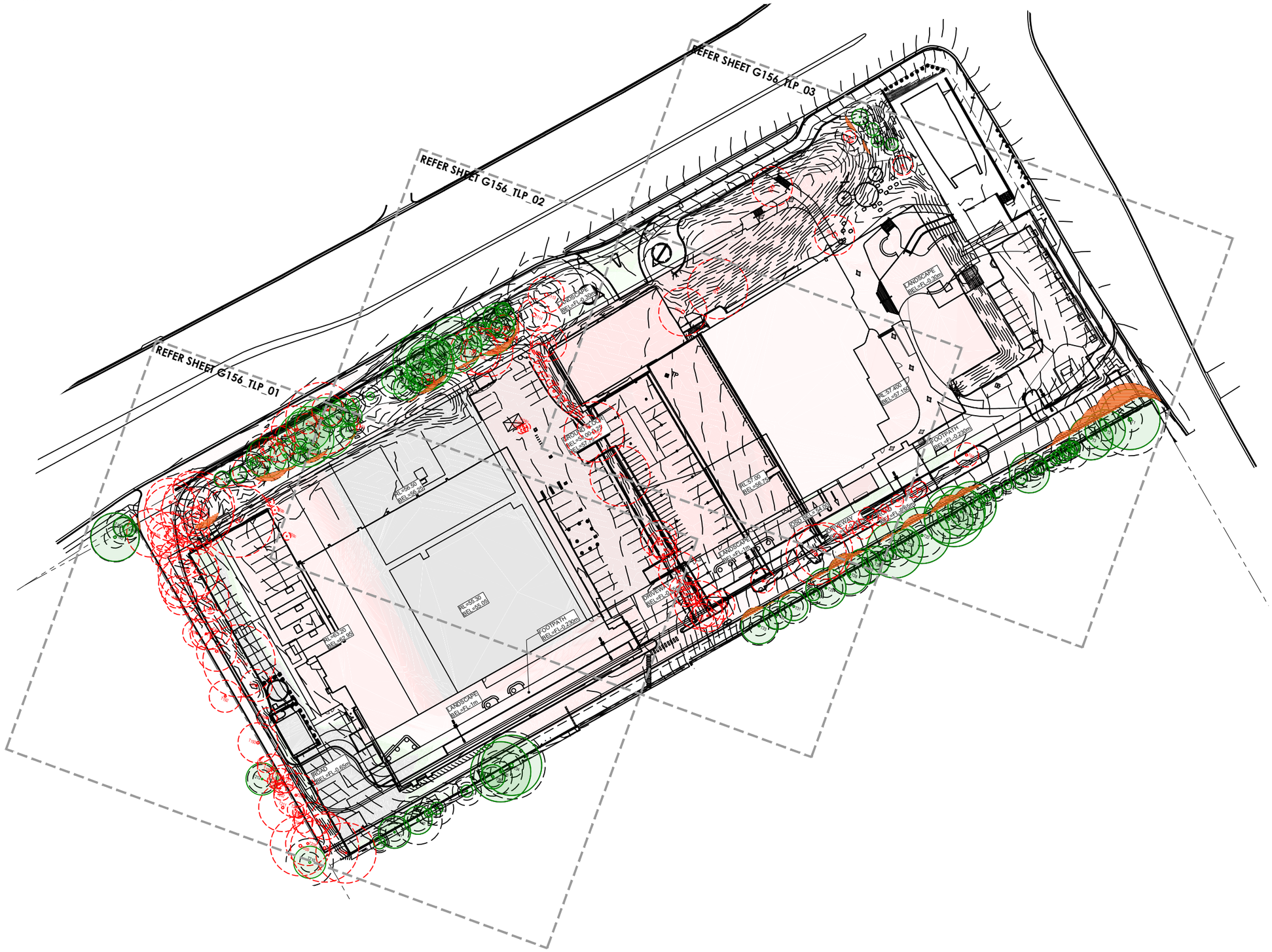
Development Impact
Brief outline of the impact of the proposed development works or ancillary construction related activities likely to impact the tree.

Retain/Remove
The proposed removal or retention recommendation in light of the proposed development related impacts.

NOTES: This report acknowledges the current Australian Standard 'Protection of Trees on Development Sites' AS 4970 – 2025 with reference to the Notional Root Zone (NRZ): being a combination of the root and crown area requiring protection. The NRZ takes into consideration the Structural Root Zone (SRZ): The area required for tree stability. The standard states where a greater than 20% encroachment occur,s the arborist is to take into consideration the schedule of determining impacts as set within AS4970 s. 3.3.2
Encroachments are referred to within this report as major or minor encroachments (AS4970 s. 3.3.2 & 3.3.3). To retain specific trees and ensure their viability, development must take into consideration protection of the NRZ radius.

APPENDIX 2 - TREE LOCATION PLAN

NOTE: MUST BE READ IN CONJUNCTION WITH ARBORICULTURAL IMPACT ASSESSMENT



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SURRY HILLS NSW 2010
PO BOX 1074 BROADWAY NSW 2007
TEL: + (61) 2 8039 7461
INFO@CPSPLANNING.COM.AU
CPSPLANNING.COM.AU

DIMENSIONS :
All dimensions are in millimetres unless otherwise noted. Do not scale from this drawing.

Verify all dimensions on site prior to construction.

CIVIL, STRUCTURAL, HYDRAULIC, ELECTRICAL AND SPECIALIST WATER FEATURE WORKS :
Refer to specialist and consultant's drawings for all information contained within these documents relating to and nominated as specialist and consultant work. Specialist and consultant drawing information contained in the landscape documents are indicative only and not for construction or certification purposes.

T1 EXISTING TREE: TO BE RETAINED

EXISTING TREE: TO BE REMOVED

NOTIONAL ROOT ZONE (NRZ)
STRUCTURAL ROOT ZONE (SRZ)

NRZ INCURSION ZONE

Issue	Code	Issue Description	By	Chk	Date
C	-	AMENDED PROPOSAL	TP	GT	08.10.25
B	-	AMENDED PROPOSAL	TP	GT	28.02.25
A	-	FOR SSDA	NZ	GT	10.04.24

PRE - Preliminary CA - Council Approval T - Tender CON - Construction

PROJECT

PROPOSED DEVELOPMENT

269 LANE COVE ROAD, MACQUARIE PARK

DRAWING TITLE

COVER SHEET

CLIENT

NEXTDC

Drawn : NZ
Designed : NZ
Project No. : G156

N

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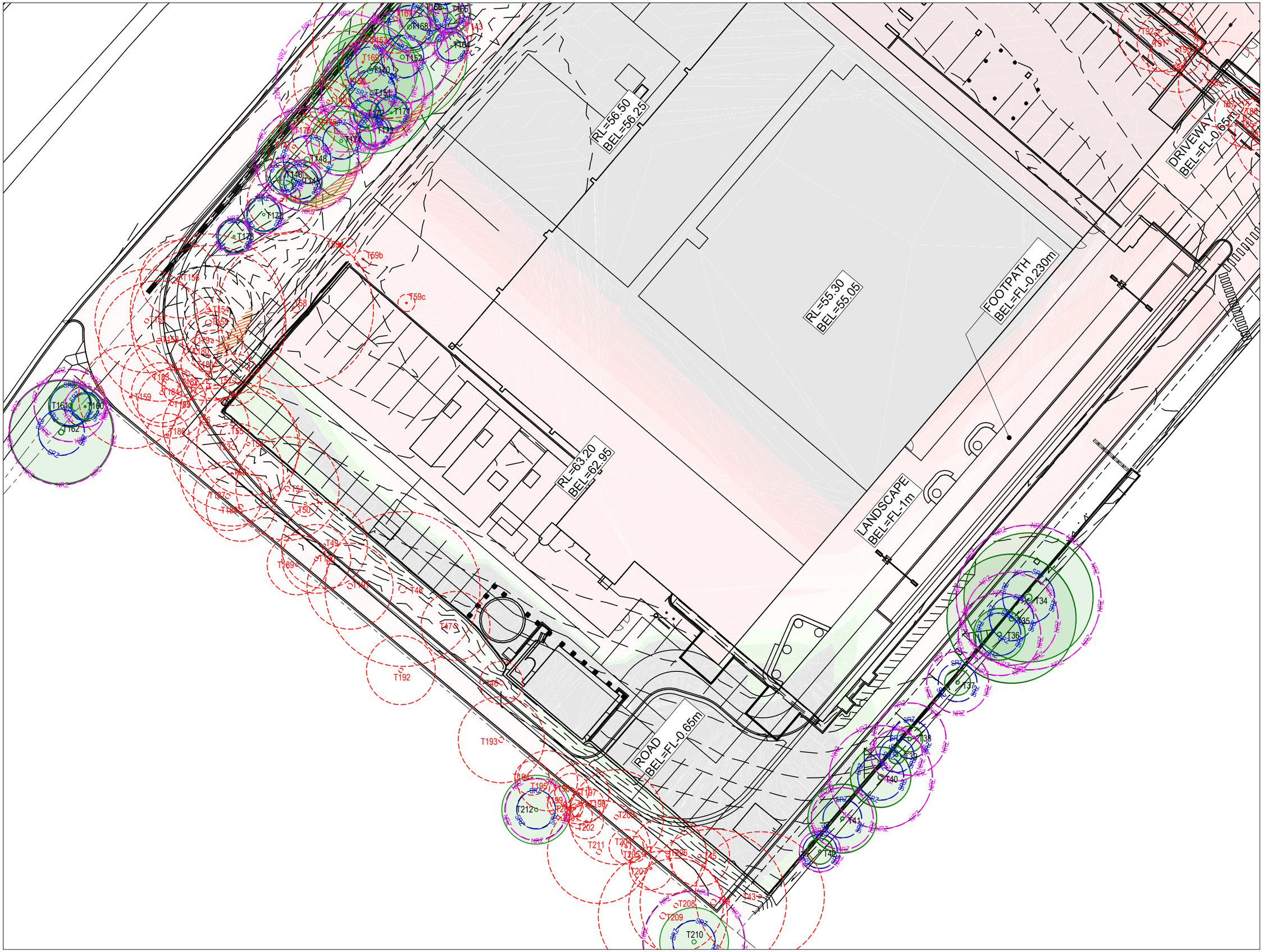
SHEET NUMBER G156_TLP_00

REVISION C



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B	-	AMENDED PROPOSAL	TP	GT	28.02.25
A	-	FOR SSDA	NZ	GT	10.04.24

PRE - Preliminary CA - Council Approval T - Tender CON - Construction

PROJECT

PROPOSED DEVELOPMENT

269 LANE COVE ROAD, MACQUARIE PARK

DRAWING TITLE

TREE LOCATION PLAN
01 of 03

CLIENT

NEXTDC

Drawn : NZ
Designed : NZ
Project No. : G156

N

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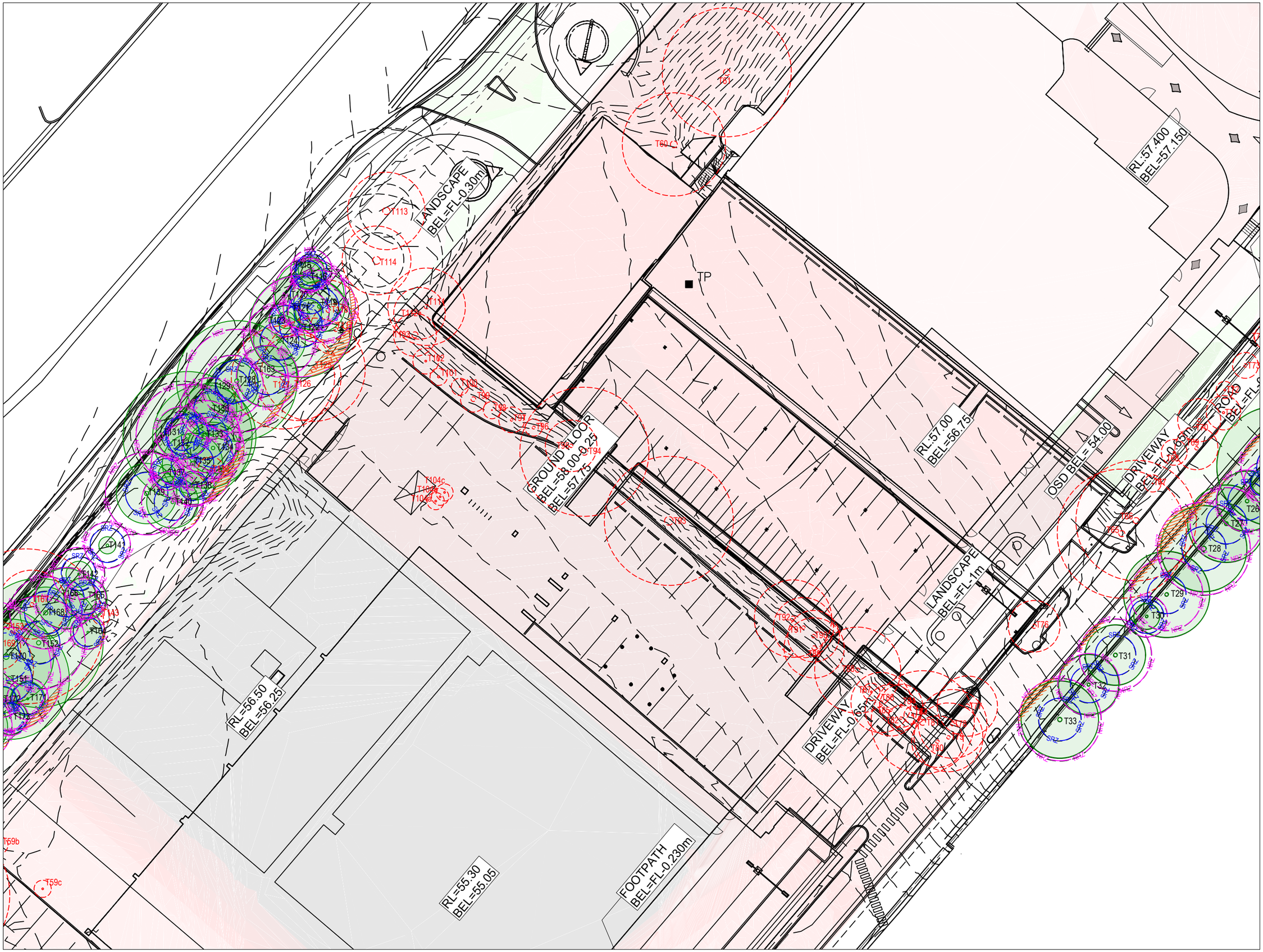
1:400 @ A3

SHEET NUMBER
G156_TLP_01

REVISION
C



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B	-	AMENDED PROPOSAL	TP	GT	28.02.25
A	-	FOR SSDA	NZ	GT	10.04.24

PRE - Preliminary CA - Council Approval T - Tender CON - Construction

PROJECT

PROPOSED DEVELOPMENT

269 LANE COVE ROAD, MACQUARIE PARK

DRAWING TITLE

TREE LOCATION PLAN
02 of 03

CLIENT

NEXTDC

Drawn : NZ
Designed : NZ
Project No. : G156

N

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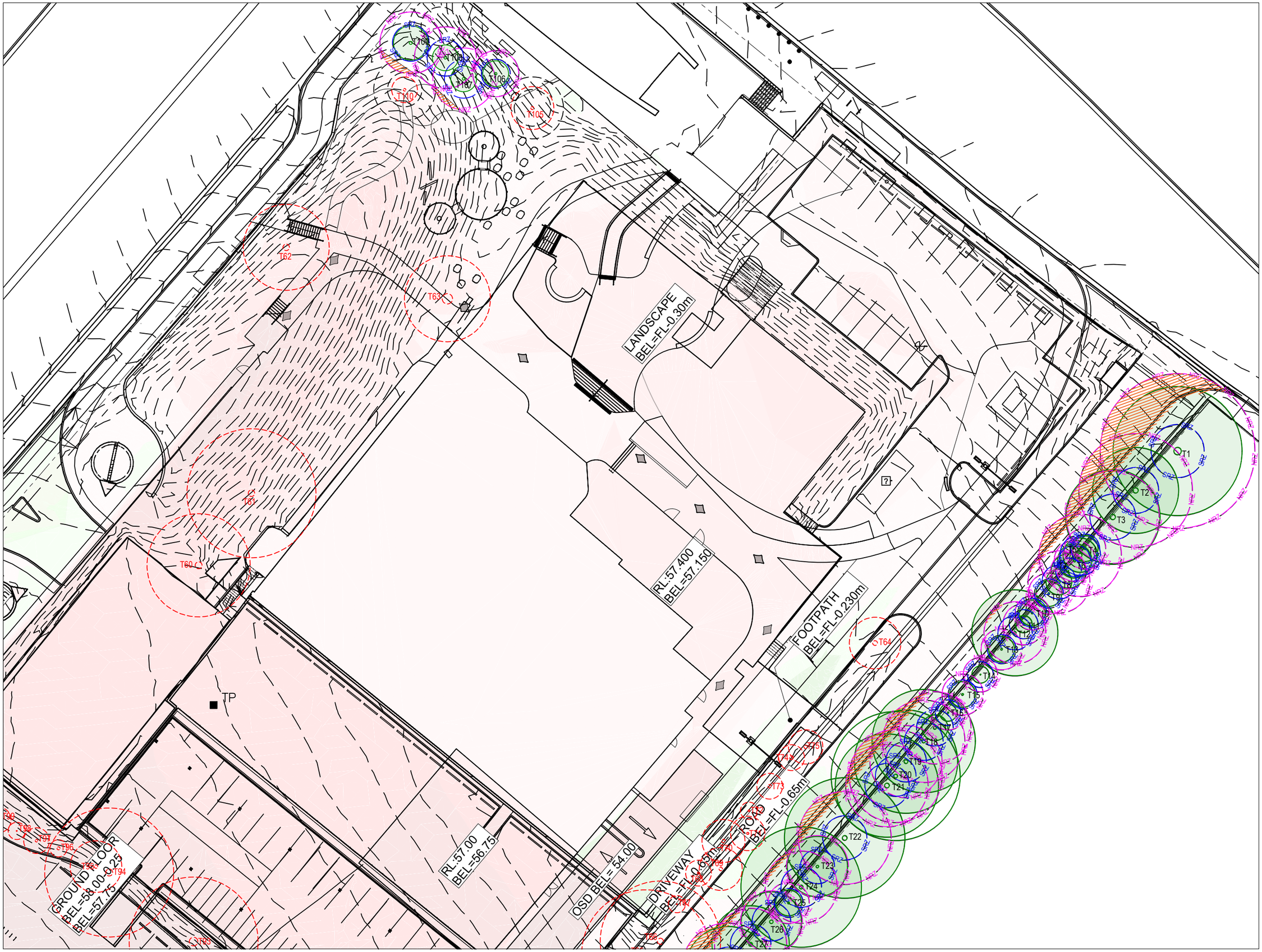
1:400 @ A3

SHEET NUMBER
G156_TLP_01

REVISION
C



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PROPOSED DEVELOPMENT

269 LANE COVE ROAD, MACQUARIE PARK

DRAWING TITLE

TREE LOCATION PLAN
03 of 03

CLIENT

NEXTDC

Drawn : NZ
Designed : NZ
Project No. : G156

N

0 1 2 3 4 5 10 metres

1:400 @ A3

SHEET NUMBER
G156_TLP_01

REVISION
C

APPENDIX 3

IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA 2010)©

In the development of this document IACA acknowledges the contribution and original concept of the Footprint Green Tree Significance & Retention Value Matrix, developed by Footprint Green Pty Ltd in June 2001.

The landscape significance of a tree is an essential criterion to establish the importance that a particular tree may have on a site. However, rating the significance of a tree becomes subjective and difficult to ascertain in a consistent and repetitive fashion due to assessor bias. It is therefore necessary to have a rating system utilising structured qualitative criteria to assist in determining the retention value for a tree. To assist this process all definitions for terms used in the *Tree Significance - Assessment Criteria* and *Tree Retention Value - Priority Matrix*, are taken from the IACA Dictionary for Managing Trees in Urban Environments 2009.

This rating system will assist in the planning processes for proposed works, above and below ground where trees are to be retained on or adjacent a development site. The system uses a scale of *High*, *Medium* and *Low* significance in the landscape. Once the landscape significance of an individual tree has been defined, the retention value can be determined. An example of its use in an Arboricultural report is shown as Appendix A.

Tree Significance - Assessment Criteria

1. High Significance in landscape

- The tree is in good condition and good vigour;
- The tree has a form typical for the species;
- The tree is a remnant or is a planted locally indigenous specimen and/or is rare or uncommon in the local area or of botanical interest or of substantial age;
- The tree is listed as a Heritage Item, Threatened Species or part of an Endangered ecological community or listed on Councils significant Tree Register;
- The tree is visually prominent and visible from a considerable distance when viewed from most directions within the landscape due to its size and scale and makes a positive contribution to the local amenity;
- The tree supports social and cultural sentiments or spiritual associations, reflected by the broader population or community group or has commemorative values;
- The tree's growth is unrestricted by above and below ground influences, supporting its ability to reach dimensions typical for the taxa *in situ* - tree is appropriate to the site conditions.

2. Medium Significance in landscape

- The tree is in fair-good condition and good or low vigour;
- The tree has form typical or atypical of the species;
- The tree is a planted locally indigenous or a common species with its taxa commonly planted in the local area
- The tree is visible from surrounding properties, although not visually prominent as partially obstructed by other vegetation or buildings when viewed from the street,
- The tree provides a fair contribution to the visual character and amenity of the local area,
- The tree's growth is moderately restricted by above or below ground influences, reducing its ability to reach dimensions typical for the taxa *in situ*.

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vigour;
- The tree has form atypical of the species;
- The tree is not visible or is partly visible from surrounding properties as obstructed by other vegetation or buildings,
- The tree provides a minor contribution or has a negative impact on the visual character and amenity of the local area,
- The tree is a young specimen which may or may not have reached dimension to be protected by local Tree Preservation orders or similar protection mechanisms and can easily be replaced with a suitable specimen,
- The tree's growth is severely restricted by above or below ground influences, unlikely to reach dimensions typical for the taxa *in situ* - tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.

Environmental Pest / Noxious Weed Species

- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- The tree is a declared noxious weed by legislation.

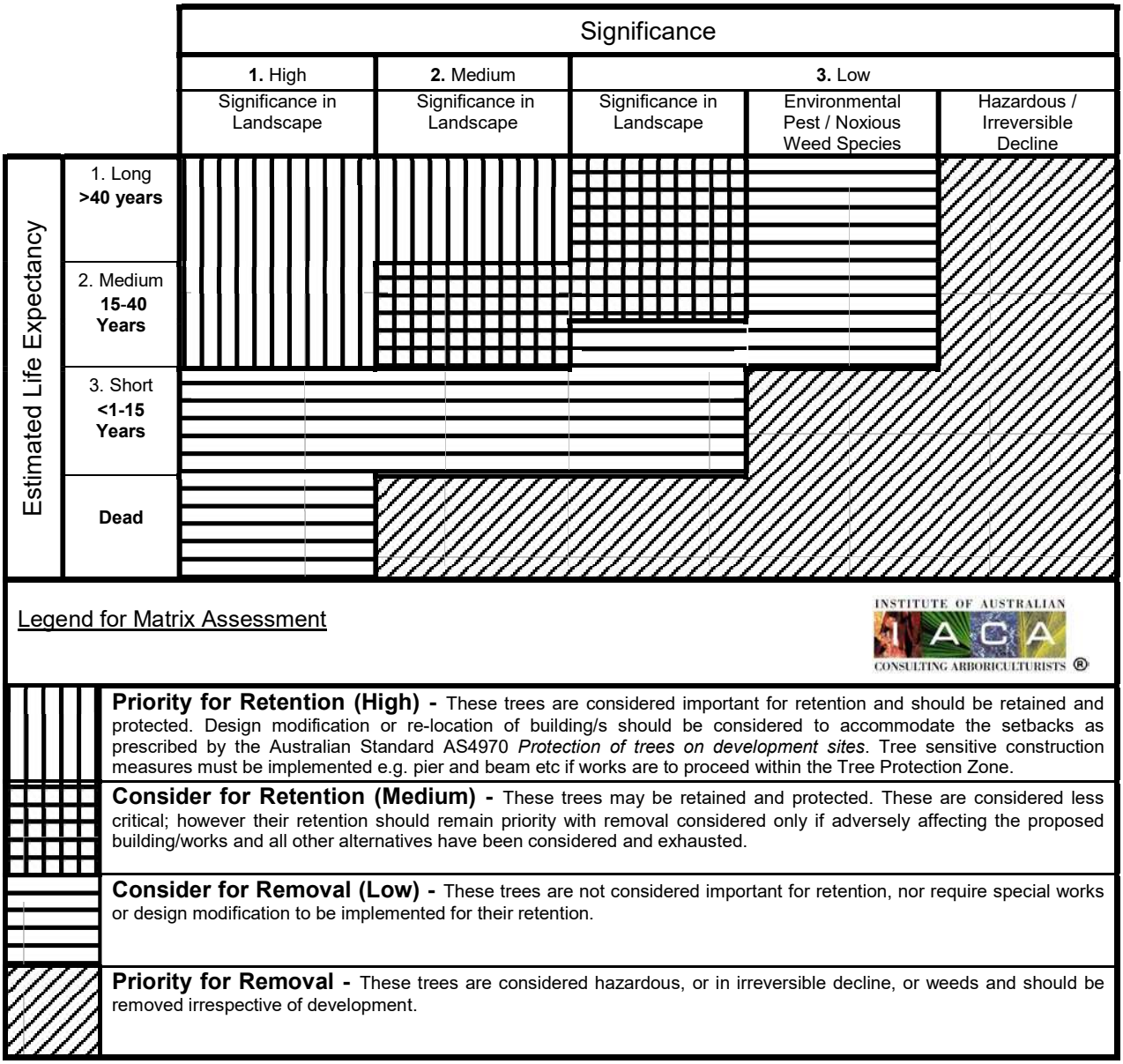
Hazardous/Irreversible Decline

- The tree is structurally unsound and/or unstable and is considered potentially dangerous,
- The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short term.

The tree is to have a minimum of three (3) criteria in a category to be classified in that group.

Note: The assessment criteria are for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.

Table 1.0 Tree Retention Value - Priority Matrix.



USE OF THIS DOCUMENT AND REFERENCING

The IACA Significance of a Tree, Assessment Rating System (STARS) is free to use, but only in its entirety and must be cited as follows:

IACA, 2010, *IACA Significance of a Tree, Assessment Rating System (STARS)*, Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

REFERENCES

Australia ICOMOS Inc. 1999, *The Burra Charter – The Australian ICOMOS Charter for Places of Cultural Significance*, International Council of Monuments and Sites, www.icomos.org/australia

Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

Footprint Green Pty Ltd 2001, *Footprint Green Tree Significance & Retention Value Matrix*, Avalon, NSW Australia, www.footprintgreen.com.au

The following example shows the IACA **Significance** of a **Tree, Assessment Rating System** (STARS) used in an Arboricultural report.

Tree Significance

Determined by using the Tree Significance - Assessment Criteria of the *IACA Significance of a Tree, Assessment Rating System* (STARS)© (IACA, 2010), Appendix B.

Trees 14, 16, 17/3, 19 and 20/4 are of high significance with the remaining majority of medium significance and a few of low significance. Tree 14 is significant as a prominent specimen and a food source for indigenous avian fauna. Tree 16 as a non-locally indigenous planting is of good from and prominent *in situ*; Tree 17/3 as a stand of 6 street trees along the Davey Street frontage screening views to and from the site and contiguous with trees in Victoria Park extending the aesthetic influence of the urban canopy to the site. Similarly for Trees 20/4 as street trees in Long Road and Tree 19 as an extant exotic planting as a senescent component of the original landscaping. The trees of low significance are recent plantings as fruit trees – Avocados, and 1 Cootamundra Wattle as a non-locally indigenous tree in irreversible decline and potentially structurally unsound.

Significance Scale

1 – High
2 – Medium
3 – Low

Significance Scale	1	2	3
Tree No. / Stand No.	14, 16, 17/3, 19, 20/4	1/1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12/2, 15, 18, 21/5	3, 13, 22

Tree Retention Value

Determined by using the Retention Value - Priority Matrix of the *IACA Significance of a Tree, Assessment Rating System* (STARS)© (IACA, 2010), Appendix B.

Retention Value

High – Priority for Retention
Medium – Consider for Retention
Low – Consider for Removal
Remove - Priority for Removal

Retention Value	High Priority for Retention	Medium Consider for Retention	Low Consider for Removal	Remove Priority for Removal
Tree No. / Stand No.	1/1, 5, 17/3*, 19	2, 4, 6, 7, 8, 9, 10, 11, 14, 15, 16, 18, 20/4*, 21/5	3, 12/2, 13,	22

* Trees located within the neighbouring property and should be retained and protected.

APPENDIX 4 - EXTRACT FROM AS4970-2025: PROTECTION OF TREES ON DEVELOPMENT SITES

Section 3 Determining protection zones

3.1 Tree Protection Zone (TPZ)

Establishing and maintaining a TPZ is the most important part of protecting trees during the onsite stages of work (e.g. site establishment, demolition, construction). The TPZ is the zone determined by the project arborist using the process set out below. It shall be shown on the TPP to be isolated or managed so that the tree remains viable.

The NRZ is the starting point for determining the TPZ, along with the considerations in Clause 3.3.2. Alternatively, the TPZ may be specified by the consent authority.

3.2 Calculating the Notional Root Zone (NRZ)

The radius of the NRZ is calculated for each tree by multiplying its diameter at standard height (DSH) by 12.

Radius of the NRZ = DSH × 12

where

DSH = trunk diameter measured at 1.4 m above ground

The radius of the NRZ is measured from the centre of the stem.

The NRZ for palms, cycads, tree ferns and the like, is not calculated but shall not be less than 2 m.

Any NRZ radius shall not be less than 2 m nor greater than 15 m. Clause 3.3 details the methods to produce the TPZ based on the NRZ.

3.4 Structural Root Zone (SRZ)

The SRZ is a notional area required for tree stability. A larger area is required to maintain a viable tree.

The SRZ shall be calculated when major encroachment (greater than 20 %) into an NRZ is proposed. SRZ locations and dimensions may be included on arboriculture documentation.

Many factors affect the size of the SRZ (e.g. tree height, crown area, soil type, soil moisture). Natural or built structures, such as rocks and footings, can also influence the SRZ. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula or Figure 2. Root investigation can provide more information on the extent of these roots.

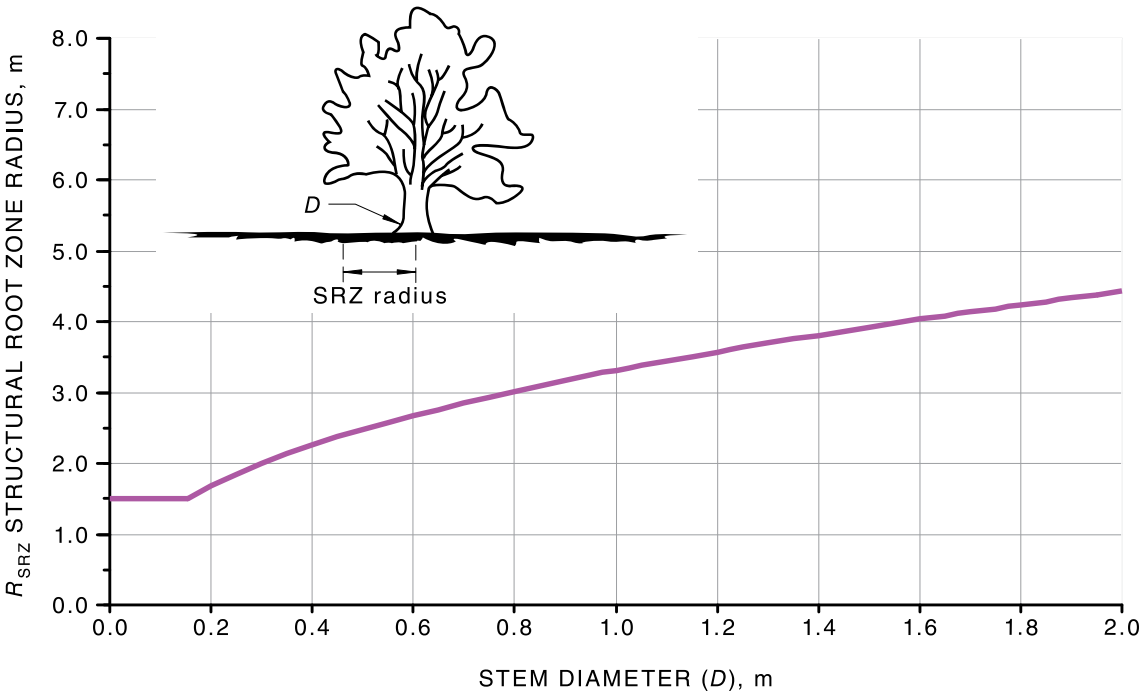
$$\text{SRZ radius} = (D \times 50)^{0.42} \times 0.64$$

where

D = trunk diameter, in m, measured above the root buttress flare.

Where the tree is multi-stemmed, the project arborist should determine if they will measure around all stems or work out the cross-sectional area, as noted in Figure A.1, and provide their reasons for the method selected. The SRZ calculation does not apply to palms, cycads, tree ferns and the like.

NOTE The SRZ for trees with trunk diameters less than 0.15 m is 1.5 m, as shown in Figure 2.



The curve can be expressed by the following formula:
$R_{SRZ} = (D \times 50)^{0.42} \times 0.64$

Figure 2 — Structural Root Zone (SRZ) calculation

APPENDIX 5 – GENERAL TREE PROTECTION SPECIFICATION

1.0 Project Arborist

A Project Arborist with AQF Level 5 qualifications may be appointed prior to works commencing to ensure trees to be retained are appropriately monitored and protected throughout the proposed works. The Project Arborist shall review all tree protection measures, ensure compliance with requirements set out by the Principal Certifying Authority and provide compliance reports as per the schedule of works and responsibilities below.

Table 5 - *Schedule of Works and Responsibilities*

HOLD POINT	TASK	RESPONSIBILITY	CERTIFICATION	TIMING OF INSPECTION
1	Review & certification of all tree protection measures	Principal Contractor	Project Arborist (AQF5)	Prior to demolition or site establishment
2	Supervise all excavation works proposed within the TPZ	Principal Contractor	Project Arborist (AQF5)	As required prior to works proceeding within TPZ
3	Inspection of trees by Project Arborist	Principal Contractor	Project Arborist (AQF5)	Quarterly during construction
4	Final Inspection of trees by Project Arborist	Principal Contractor	Project Arborist (AQF5)	Following removal of tree protection measures prior to Occupation Certificate

2.0 Compliance

Compliance Documentation shall be prepared by the Project Arborist following each site inspection. The Compliance Documentation shall include documentary evidence of compliance with the tree protection measures and methods as outlined within this Specification. Upon the completion of the works, a final assessment of the trees shall be undertaken by the Project Arborist and future management strategies recommended.

3.0 Tree Removal

The trees to be removed shall be removed prior to the establishment of the tree protection measures. Tree removal works shall be undertaken in accordance with the *Workcover Code of Practice for the Amenity Tree Industry (1998)*. All tree removal work is to be carried out by an experienced Arborist with minimum AQF Level 3 qualifications in accordance with AS4373-2007 - Pruning of Amenity Trees, Safe Work Australia Guide for Managing Risks of Tree Trimming and Removal Work (2016) and other applicable legislation. Care should be taken to avoid damaging trees to be retained.

4.0 Tree Protection Zone

The Tree Protection Zone (TPZ) is a specified area above and below ground set aside for the protection of a tree. The TPZ should be protected to ensure development activities do not have an adverse effect on the viability and stability of trees to be retained. Activities restricted within the TPZ include:

- Soil cutting or filling, including excavation and trenching
- Soil compaction and modification
- Storage of materials and waste
- Parking of vehicles and plant
- Temporary or permanent installation of sheds, utilities and signs
- Cement or chemical preparation
- Refuelling
- Any other action leading to damage of the tree

5.0 Tree Protection Fencing

TPZ fencing shall be located at the perimeter of the TPZ. Where TPZ areas overlap, TPZ fencing may be combined to form a single larger TPZ area. The exact location of the fencing shall be confirmed through consultation between the Head Contractor/Project Manager and the Project Arborist prior to the commencement of works.

Fencing may be setback to allow for demolition/construction access only where appropriate ground protection is installed and approved by the Project Arborist.

Tree Protection Fencing shall consist of galvanised steel temporary fencing panels supported by concrete feet with panels coupled together. Care should be taken to avoid damaging the tree during the installation of the Tree Protection Fencing. Refer to Typical Tree Protection Details (***Appendix** 6*).

6.0 Scaffolding

Scaffolding shall be erected outside of the TPZ. If scaffolding is deemed essential within the TPZ, the ground shall be protected, and branch removal minimised. Ground below scaffolding shall be protected by boarding placed over a layer of mulch to prevent soil compaction. Scaffolding shall be designed to avoid branches or branches tied back. Refer to Typical Tree Protection Details (***Appendix** 6*).

7.0 Ground Protection

Where deemed necessary by the Project Arborist, temporary ground protection, such as ground mats or steel road plates placed over a mulch layer with geotextile fabric underneath, shall be utilised to prevent damage to tree roots during construction. Refer to Typical Tree Protection Details (***Appendix** 6*).

8.0 Trunk Protection

Trunk protection shall be installed by wrapping padding around the trunk and first order branches to a minimum height of 2m. Timber battens (90 x 45mm) spaced at 150mm centres shall be strapped together and placed over the padding. Timber battens must not be fixed to the trees. Refer to Typical Tree Protection Details (***Appendix** 6*).

9.0 Works within the Tree Protection Zones

The Principal Certifying Authority may approve works within Tree Protection Zones. The Project Arborist shall ensure compliance with the prescribed requirements as set out by the Principal Certifying Authority to ensure trees nominated for retention are adequately retained and protected throughout the works.

10.0 Structure & Pavement Demolition

Demolition of existing structures/pavement within the TPZ shall be supervised by the Project Arborist. Machinery is to be excluded from the TPZ unless operating from the existing slabs, pavements or areas of ground protection.

Pavement is to be shattered with a hand-operated pneumatic/electric breaker prior to removal taking place and carefully lifted to minimise damage to the underlying soil profile and tree roots. The underlying soil profile and existing sub-base materials shall remain in-situ.

When removing slab sections within TPZ, machinery shall work backwards out of the TPZ to ensure machinery remains on un- demolished sections of slab at all times. Machinery should not contact the tree's roots, trunk, branches and crown.

Exposed roots shall be irrigated by hand and covered with a 75-100mm layer of mulch as soon as possible after being exposed. The mulch must remain in place until new surfaces are put into place.

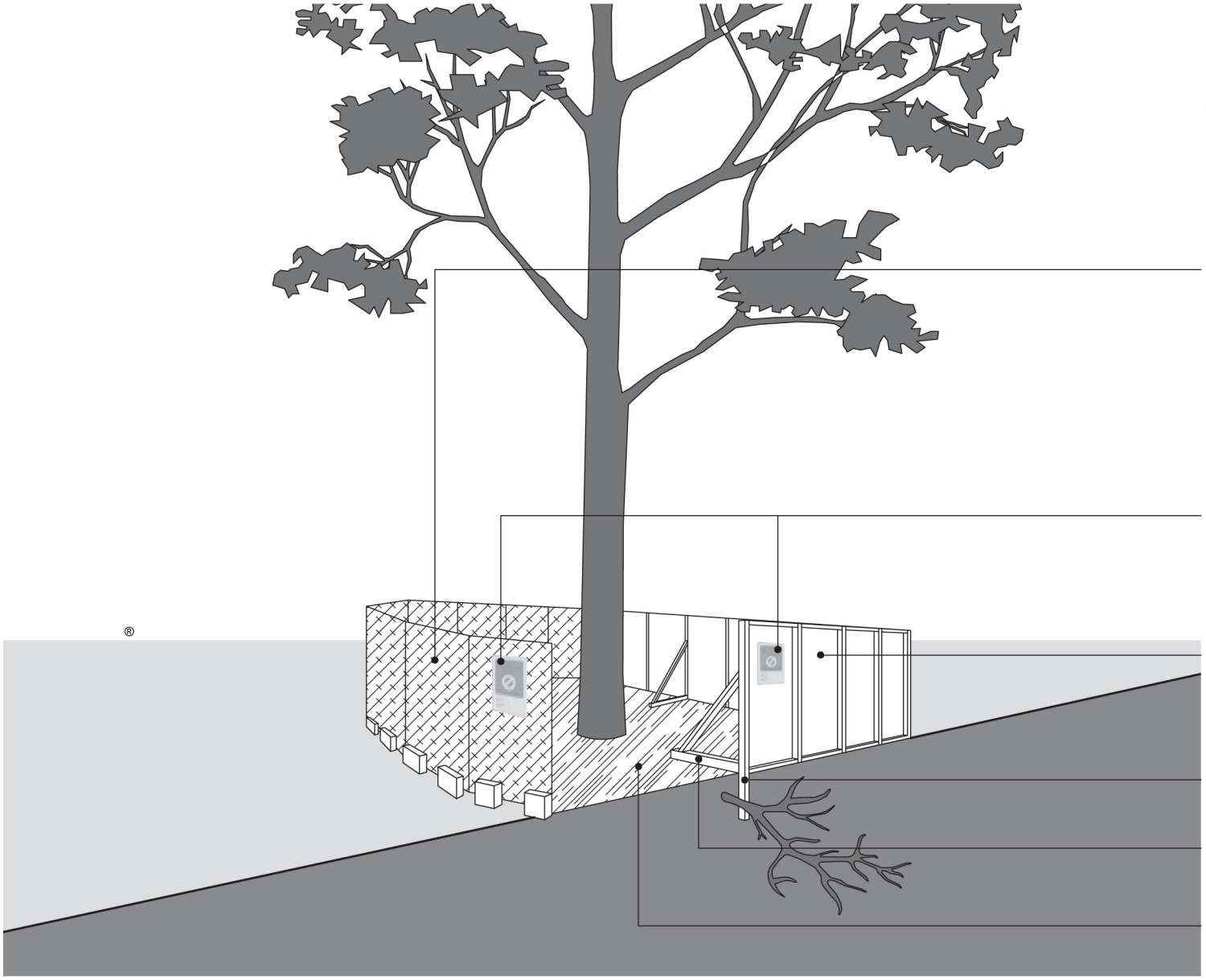
11.0 Underground Services

The installation of underground services shall be located outside of the TPZ. Where this is not possible, they shall be installed using in a root-sensitive manner utilising manual hand excavation methods or employ a pneumatic excavation device to ensure roots are maintained and undamaged under supervision of the Project Arborist. Services are to be threaded in between and/or under to preserve existing roots.

13.0 Excavations, Root Protection & Root Pruning

Excavation required within the TPZ shall be undertaken using non-motorised hand tools or a pneumatic excavation device under supervision of the Project Arborist. Excavation must be undertaken in a root sensitive manner to ensure roots are maintained and un-damaged. Should significant roots be identified (>25mmØ) during construction, works are to cease and direction sought from the Project Arborist with regards to root pruning, modification of construction methodology or design alteration.

APPENDIX 6 - TYPICAL TREE PROTECTION DETAILS



Note:
No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.

Option 1 - Fencing
1.8m high chain wire mesh panels with shade cloth attached (if required), held in place with concrete feet.

Tree Protection Zone (TPZ) sign

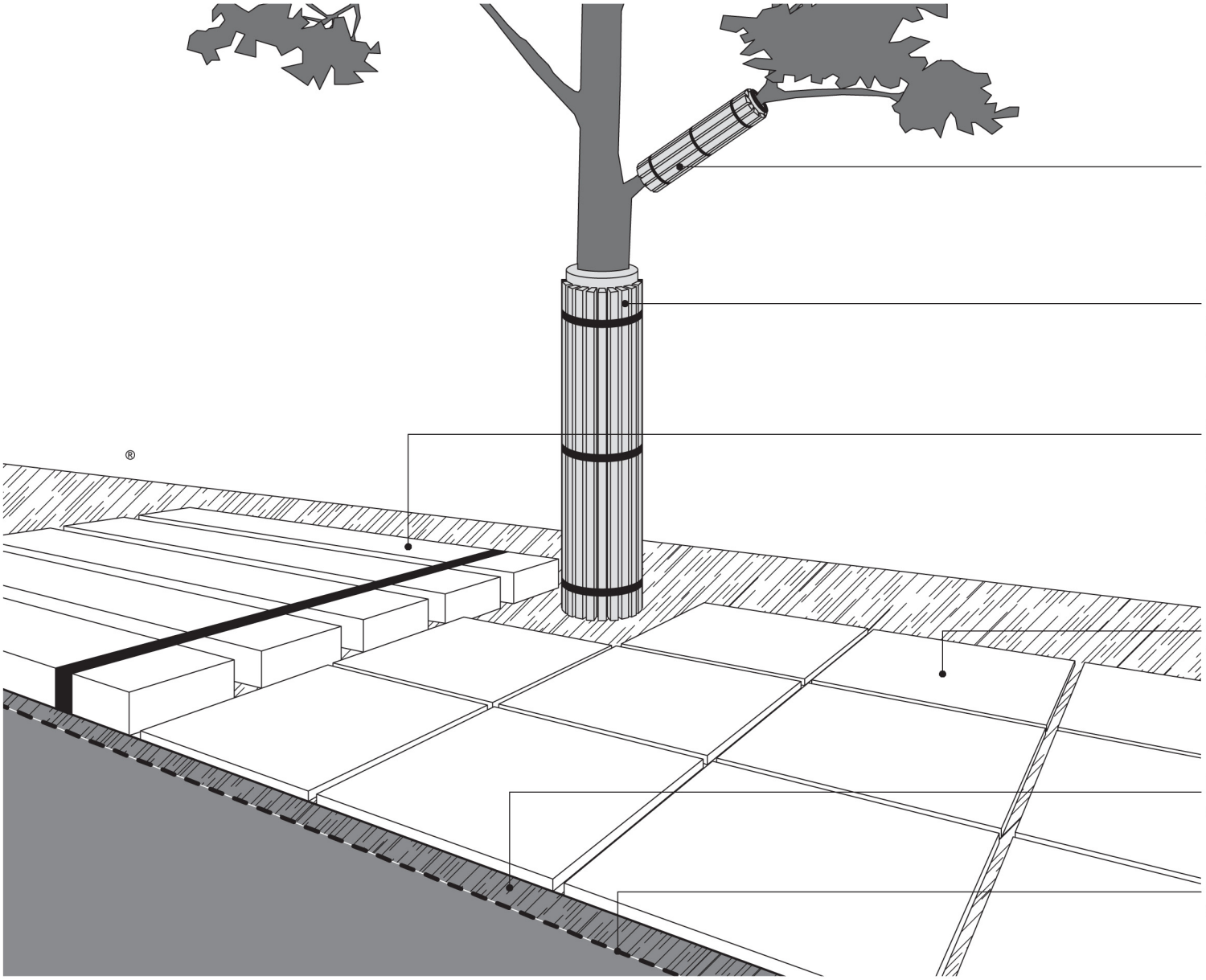
Option 2 - Fencing
Plywood or wooden panel paling fence. This type of fencing material also prevents building materials or soil entering the TPZ.

Installation of supports should avoid damaging roots.

Bracing is permissible within the TPZ.

Maximum 100mm and minimum 50mm depth mulch or aggregate layer installed across surface of TPZ.

01 Tree Protection Fencing



Branch Protection - use boards and padding to prevent damage to bark on branch. Boards are to be strapped, not screwed or nailed to the branch.

Trunk Protection - use boards and padding to prevent damage to bark (minimum 2m). Boards are to be strapped, not screwed or nailed to the trunk.

Ground Protection - use device strapped over mulch or aggregate layer. Ground protection device should be of a suitable thickness to prevent soil compaction and root damage.

Steel plates (or approved equivalent) with or without mulch or aggregate layer below.

Maximum 100mm and minimum 50mm depth mulch or aggregate layer.

Geotextile fabric underneath mulch or aggregate layer.

02

Examples of Branch, Trunk and Ground Protection

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Branches may require pruning to erect scaffolding. Pruning may be subject to local regulations. Flexible branches should be tied back in preference to pruning.

Minimum 1.8m high hoarding. Temporary fencing may be incorporated into scaffolding as either containment screening or as hoarding.

Note:
If excavation is required for installation of support post for fencing, the Project Arborist should assess any pruning of roots greater than 20mm diameter.

Scaffold planks

Boards or plywood to be installed over mulch or aggregate layer for any areas requiring access within the TPZ.

Soleplate over geotextile. No excavation for soleplate within TPZ.

Maximum 100mm and minimum 50mm depth mulch or aggregate layer within TPZ.

Geotextile fabric

03

Indicative Scaffolding within a Tree Protection Zone (TPZ)