



canopy
consulting

Arboricultural Impact Assessment & Tree Protection Management Plan

Version 4

UNSW G25 Education Building
8 High Street,
Kensington NSW 2031

Inspection Date: 8 August 2024

PREPARED FOR:

University of New South Wales
High Street,
Kensington NSW 2052

Document Information

This document must be reproduced in colour

Project Name:	UNSW G25 Education Building
Reference #:	E-002135-24
Client:	University of New South Wales
Site:	8 High Street, Kensington NSW 2031
Prepared by:	Kane Hollstein Senior Consulting Arborist Dip. Arb., AQF Level 5 ISA TRAQ QTRA VALID IACA Accredited Member
Contact Details:	Canopy Consulting ☎ : 0432 633 402 ✉ : info@canopyconsulting.com.au 🏠 : Suite 183, Unit 5, 7 Eden Park Drive, Macquarie Park NSW 2113



Report Assumptions and Limitations

1. Information provided by the client or third party is assumed to be accurate.
2. All information has been sourced with care and verified to the best of the consultant's knowledge. Any opinions not duly researched are based on the consultant's experience and observations.
3. The consultant is not required to give testimony or attend court unless under a contractual agreement, subject to payment of additional fees.
4. Modifying or removing any key contextual elements will invalidate the report.
5. The report does not guarantee that future problems or deficiencies associated with the site or vegetation will not arise.
6. The report addresses the items outlined in the project brief or examined during site inspection and reflects the condition of these items at the time of inspection.
7. The inspection is limited to ground-based inspection of accessible areas and does not include dissection, excavation, or probing unless specified.
8. The report is an impartial assessment of the tree(s) and its condition based on available evidence and projected outcomes.
9. Note that the removal of trees, as assessed and recommended in this report, is subject to a separate Infrastructure Improvement works approval and is not subject to this consent

Copyright Statement

Copyright © 2024 Canopy Consulting. All rights reserved. This report is protected by Australian and international copyright laws and is intended for the sole use of the client. No part of this report may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner.

Document Status

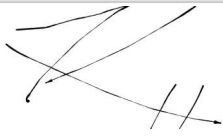
Status	Date	Revision type
Version 1	6 November 2024	
Version 2	14 November 2024	Revised detail of impact assessment based on feedback.
Version 3	28 November 2024	Amended standard terms and revised project location and impacts.
Version 4	12 February 2025	Revised and clarified impacts based on updated design
Version 3	25 February 2025	Revised and finalised impacts based on updated design

Review Register

Date	Reviewed By	Approved By
6 November 2024	MM	KH
14 November 2024	MM	KH
28 November 2024	MM	KH
20 February 2025	MM	KH
25 February 2025	MM	KH

Abbreviation	Meaning
AA	Aerial Assessment
AQF	Australian Qualification Framework
AS	Australian Standard
BAM	Biodiversity Assessment Method
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCSEPP	<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>
DBH	Diameter at Breast Height
DCP	Development Control Plan
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	<i>Commonwealth of Australia's Environmental Protection & Biodiversity Conservation Act 1999</i>
IACA	Institute of Australian Consulting Arboriculturists
ISA	International Society of Arboriculture
LEP	Local Environment Plans
NSW	New South Wales
PHC	Plant Health Care
RESI	IML RESI PD-400 electronic resistance drill
SEED	Sharing and Enabling Environmental Data
sp.	Species
STARS©	IACA Significance of a Tree, Assessment Rating System
TEC	Threatened Ecological Communities
TRAQ	Tree Risk Assessment Qualification
ULE	Useful Life Expectancy
VTA	Visual Tree Assessment

Consultant Declaration

PROJECT DETAILS	
PROJECT NAME	
Application number	SSD-74670005
Address of subject land	8 High Street, Kensington, NSW, 2033
Lot / DP	Lot 5 DP 1264171
APPLICANT DETAILS	
Applicant name	University of NSW
Applicant address	
REPORT DETAILS	
Name of report this declaration relates	Arboricultural Impact Assessment
Report reference no.	E-002135-24
Report date	28 November 2024
Company name (inc. ABN / ACN)	Canopy Consulting - 79635639100
Author name	Kane Hollstein
Author qualifications	Dip. Arb. AQF Level 5
Author address	Suite 183, Unit 5, 7 Eden Park Drive, Macquarie Park NSW 2113
DECLARATION BY CONSULTANT	
Name	Kane Hollstein
Registration no.	N/A
Organisation registered with	N/A
Declaration	The undersigned declares that Arboricultural Impact Assessment: · has been prepared in accordance with the following policy, guidelines, or legislative requirements: - AS4970-2009 · contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the Arboricultural Impact Assessment relates; · does not contain information that is false or misleading; · identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project; · identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments to which the [consultant report] relates; · contains a consolidated summary of the proposed or necessary mitigation measures
Signature	
Date	25 February 2025

Executive Summary

This report evaluates the potential arboricultural impacts of the proposed development at 8 High Street, Kensington NSW 2031. The assessment supports a State Significant Development Application (SSDA) for the construction of an 11-12 storey teaching and learning building. This project includes site preparation, construction of the building and associated infrastructure, landscaping, and public domain works. The project aims to improve learning spaces, support growth in the Randwick Health and Education Precinct, enhance public space, and promote inclusivity and sustainability.

The following report -

- Provides information on tree retention values, assesses project impacts, and offers recommendations for minimising negative impacts and preserving trees, where appropriate.
- Follows the guidelines in Standards Australia's *AS 4970-2009 Protection of trees on development sites* to provide tree protection recommendations and uses the IACA Significance of a Tree Assessment Rating System (STARS)© to assess tree significance and allocate retention values.
- Evaluates encroachments on Tree Protection Zones (TPZ) and Structural Root Zones (SRZ), with less than 10% TPZ encroachment considered minor, provided it is outside the SRZ, and greater than 10% or within the SRZ considered major.

Findings are summarised in Table 1.

Table 1: Impact Assessment Summary

		Tree ID and Retention Value			
Recommendation	Tag/Tree QTY (Tree QTY)	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Priority for Removal
Remove - project impacts	58 (65)	165, 189, 190, 196, 197, 200, 308 Tag QTY: (7) Tree QTY: (7)	146, 157, 164, 166, 168, 169, 186, 187, 195, 198, 199, 203, 204, 206, 208, 304, 305, 307, 309, 310, 311, 312, 313, 314, 315, 316, 1282 Tag QTY: (27) Tree QTY: (27)	144, 152, 154, 156, 167, 172, 173, 174, 175, 176, 177, 178, 188, 202, 205, 207, 209, 301, 302, 303, 306, 362, 363, 1390 Tag QTY: (24) Tree QTY: (31)	
Remove - irrespective	2 (2)				145, 317 Tag QTY: (2) Tree QTY: (2)

		Tree ID and Retention Value			
Recommendation	Tag/Tree QTY (Tree QTY)	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Priority for Removal
Retain - generic	15 (16)	140, 163, 210 Tag QTY: (3) Tree QTY: (3)	161, 1114 Tag QTY: (2) Tree QTY: (2)	139, 141, 143, 160, 162, 318, 364, 1116 Tag QTY: (8) Tree QTY: (8)	142, 361 Tag QTY: (2) Tree QTY: (3)
Retain - generic plus	0 (0)				
Total	75 (83)				

The assessment identified both minor and major encroachments within the TPZ of site trees. The details and recommendations are as follows:

Major Encroachments: A total of 65 trees, represented under 58 unique tree tags, out of a total of 83 trees (75 tags), are significantly impacted by major TPZ encroachments. These trees are recommended for removal as they fall within the development footprint, which includes areas designated for driveways, retaining walls, buildings, hard landscaping or other unsustainable cut-and-fill and construction activities. This group includes:

- Seven High Retention Value trees
- Twenty-seven Medium Retention Value trees
- Thirty-one Low Retention Value trees

Minor Encroachments: Trees 141 and 318 are Low Retention Value trees subject to minor TPZ encroachments. In both instances these impacts are not expected to adversely affect the trees. Hence, both can be retained with generic tree protection measures only which includes supervision of activities within the TPZ.

No Encroachments: Sixteen trees (under 15 tree tags) are not expected to be directly impacted by the proposed design and can be retained with generic tree protection measures, including tree protection fencing and/or trunk protection.

Priority for Removal: Two trees have been classified as a Priority for Removal Retention Value. Both trees have been recommended for removal, irrespective of the design. These trees are directly impacted by the project.

Hence, the development will result in the removal of 67 trees due to anticipated construction impacts and the retention of 16.

Table Of Contents

1. Background	10
1.1. Introduction	10
2. Site Analysis	11
2.1. Site Context	11
2.2. Site Description	12
2.3. Surrounding Development	13
2.4. SEARs Table	14
2.5. Reviewed Plans and Documents	15
2.6. Legislative Context	17
2.7. Local Planning & Tree Management Controls	18
2.8. Additional Legislative Protections	19
3. Scope	19
4. Method	20
4.1. Data Collection	20
4.2. Useful Life Expectancy	20
4.3. Retention Value	21
4.4. Tree Protection Zone and Structural Root Zone	21
5. Observations	22
5.1. Site Soils	22
5.2. Summary of Tree Observations	22
5.3. Tree Significance	24
5.4. Retention Value	25
6. Discussion	28
6.1. Tree Protection Zone	28
6.2. Structural Root Zone	28
6.3. Acceptable Encroachments into the Tree Protection Zone	28
6.4. Impact Assessment	29
6.5. Impact Mitigation Measures for Trees to be Retained	34
7. Conclusion	57
8. Mitigation Measures Summary	57
9. Recommendations	58
9.1. Project Arborist	58
9.2. Tree Retention and Removal	58
9.3. Offset Planting	59
9.4. Generic Tree Protection	60
9.6. Tree Pruning	61
9.7. Compliance Inspection and Reporting	61
9.8. Compliance and Certification Reporting – Hold Points	62
9.9. Tree Sensitive Construction Methods	63
10. Arboricultural Method Statement – Pre-Construction & Demolition	65

10.1. Site Establishment	65
10.2. Tree Protection Zone Fencing	65
10.3. Prohibited Activities within the TPZ	66
10.4. Tree Protection Signs	67
10.5. Sediment Control	67
10.6. Ground, Trunk and Branch Protection	67
10.7. Demolition of Existing Hard Stand Areas	68
10.8. Scaffolding	69
11. Arboricultural Method Statement – Construction Stage	70
11.1. Excavations Within Tree Protection Zones	70
11.2. Tree Damage	71
12. Arboricultural Method Statement – Post-construction	71
12.1. Defects Liability Period	71
12.2. Final Certification	71
13. References	72
14. Appendix A - IACA Significance of a Tree, Assessment Rating System (STARS) ©	73
15. Appendix B - Tree Assessment Schedule	76
16. Appendix C – Tree Protection Management Plan	77

1. Background

1.1. Introduction

This Arboricultural Impact Assessment has been prepared by Canopy Consulting on behalf of the University of New South Wales (UNSW) for the construction and operation of a teaching and learning facility (the Proposal) to be known as the UNSW G25 Education Building, on land at 8 High Street, Kensington (the Site). This report has been prepared to:

- Identify trees within the study area
- Assign retention values of all trees that may be affected within the site and those on adjoining properties
- Assess the impacts of the project
- Provide recommendations for alteration to design or construction methods where necessary to minimise negative impacts
- Make recommendations in accordance with Australian Standard 4970–2009: *Protection of Trees on Development Sites* to ensure the viable, long-term retention of trees to be retained where appropriate

This report accompanies a State Significant Development Application (SSD) that seeks approval for the construction and operation of a teaching and learning facility at the G25 site, within the Upper Campus of UNSW. Specifically, the SSDA seeks consent for the following:

- Site preparation works including demolition of the existing at-grade car park, tree removal, and excavation works.
- Construction of an eleven (11) storey (plus roof plant) teaching and learning building with approximately 20,200m² of gross floor area. The building will comprise the following:
 - Basement including plant/services, Bike Storage, End of Trip facilities and staff amenities, ancillary service areas such as Mail and Print rooms.
 - Ground level Food and Beverage space and informal education spaces
 - Teaching and Learning spaces and workspaces for UNSW Faculties for other levels
 - (The internal fit-out will be subject to separate approval)
 - Rooftop level including landscaped outdoor terrace, multifunction space, mechanical plant and services
- Associated landscaping, replacement trees and public domain embellishment works in and around the proposed building
- Extension and augmentation of infrastructure and services as required
- New lift core in the adjacent building, H25 Botany Street Carpark and associated access improvements.

The Proposal will seek to deliver improvements including:

- Providing new, purpose built learning and teaching spaces to support the University activities and strategic goals such as the development of the Randwick Health and Education Precinct
- Delivering an enhanced ground plane connection
- Providing flexible and adaptable teaching and learning spaces
- Creating a healthy, green, and welcoming place for students, staff and visitors
- Creating an experience that is an open, permeable, and connected public realm
- Creating pedestrian priority and inclusive shared public space

For a detailed project description, refer to the Environmental Impact Statement prepared by Ethos Urban.

2. Site Analysis

2.1. Site Context

The site is situated within the UNSW Kensington upper campus, within the Randwick Local Government Area (LGA). The site address is 8 High Street, Kensington, which applies to the whole of the UNSW Kensington campus.

The UNSW campus forms part of the wider Randwick Health and Education Precinct, which has been strategically identified to provide a world-class coalition of education, research, innovation and healthcare organisations and to attract growth, investment and employment opportunities. This Precinct has been identified in the Greater Sydney Region Plan – A Metropolis of Three Cities and the Eastern City District Plan, for its strategic importance as a specialised centre providing for health and education research, innovation, teaching and learning.

The UNSW campus is located approximately 6km southeast of the Sydney CBD, immediately adjacent to the east is the Randwick Hospitals Complex which also forms part of the Randwick Health and Education Precinct. The UNSW site is within 600m of the Randwick Shopping Centre to the east and adjacent to Royal Randwick Racecourse to the north (refer Figure 1 below).

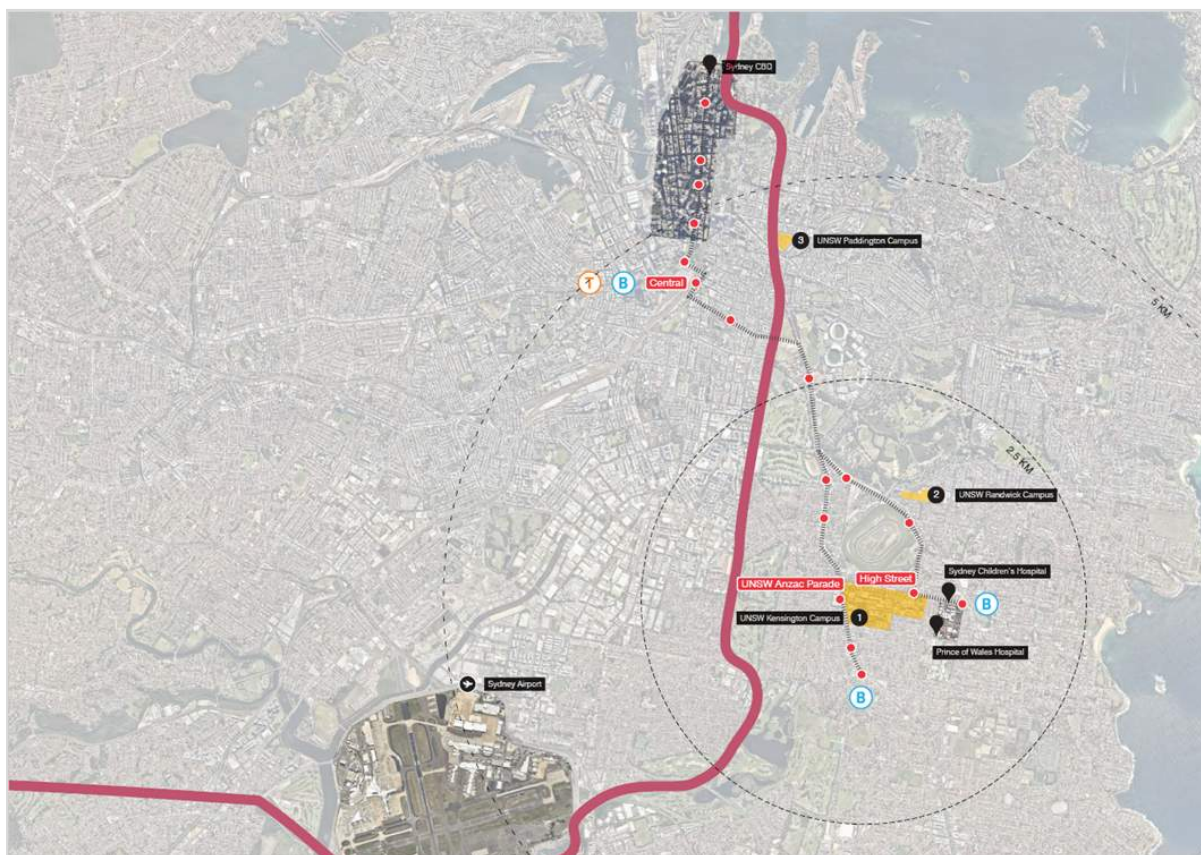


Figure 1: Site Context. Source: Ethos Urban, Google Maps

2.2. Site Description

The subject site known as the G25 site, is an existing on-grade carpark comprising of hardstand pavement with line-marked spaces, trees and landscaped areas. The site also includes the eastern portion of Library Walk and the loading dock area of the AGSM (Australian Graduate School of Management) Building (G27), with no other existing development on the site.

It is bounded to the north by the Samuels Building (F25) and Mathews Building (F23), to the west by the Solar Industrial Research Facility (SIRF) Building (G23), to the south by the multi-storey Botany Street Carpark Station (H25), and to the east by the Australian Graduate School of Management (AGSM) Building (G27) and the Gate 11 entrance to UNSW from Botany Street.

The broader UNSW Kensington Campus consists of five separate allotments. This site is situated within a single allotment legally described as Lot 5 DP 1264171. The UNSW Kensington campus is bounded by Anzac Parade (to the west), High Street (to the north), Botany Street (to the east), and Barker Street (to the south). It also includes developments to the west of Anzac Parade and north of Day Avenue, such as NIDA, the University Regiment, and the New College Post-Graduate Village. The campus currently has approximately 60,000 student enrolments.

Figure 2 provides an aerial image of the site and its location relative to the UNSW upper campus boundaries.

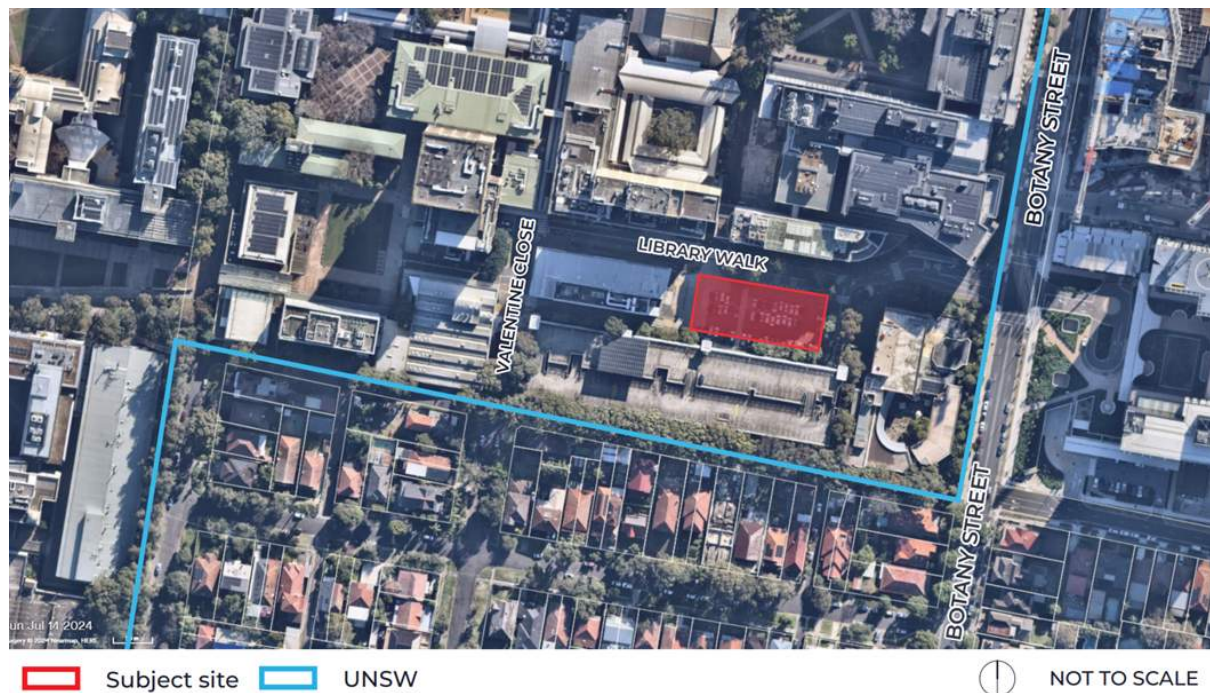


Figure 2: Site Aerial (approximate site area outlined in red). Source: Nearmap, Ethos Urban

2.3. Surrounding Development

The following development surrounds the site:

- North: To the north and directly adjacent to the site across from the Library Walk are the Samuels (F25) Building and Mathews (F23) Building, which comprise up to 16-storeys. Further north within the campus are additional education, administration and library buildings. The wider context includes the UNSW High Street Light Rail stop, as well as low to medium density residential development north of High Street.
- South: South of the site is the UNSW Botany Street Carpark Station (H25) (5 storeys), which is accessed internally within the UNSW campus. This location includes a pedestrian link from Oval Lane. The wider context includes low-medium density residential development south of Oval Lane.
- East: The site directly abuts the ASGM Building (G27) to the east (5 storeys), which fronts Botany Street. To the east and also fronting Botany Street is the Randwick Hospitals Complex including the Prince of Wales Hospital, the Sydney Children's Hospital, and the Royal Hospital for Women, as well as low-medium density residential development to the south-east.
- West: The site directly adjoins the Solar Industrial Research Facility (SIRF) (G23) to the west, which also sits within the confines of Library Walk and Valentine Close. The western context

of the subject site is primarily characterised by the wider UNSW campus (lower campus) as well as the Anzac Parade Light Rail stop.

2.4. SEARs Table

Table 1: SEARS Table

SEARS Table				
Item #	Item	Subsection	Requirement	Report Reference Point
7	Public Space	7.2	Demonstrate how the development: • ensures that public space is welcoming, attractive and accessible for all. • maximises permeability and connectivity. • maximises the amenity of public spaces in line with their intended use, such as through adequate facilities, solar access, shade and wind protection. • maximises street activation. • minimises potential vehicle, bicycle and pedestrian conflicts.	Section 6.5
8	Trees & Landscaping	8.1	Assess the number, location, condition and significance of trees to be removed and retained and note any existing canopy coverage to be retained on-site.	Section 5.2 - 5.4 Section 6
		8.2	Provide a detailed site-wide landscape plan, that: • details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage (as a percentage of the site area). • provides evidence that opportunities to retain significant trees have been explored and/or informs the plan. • demonstrates how the proposed development would: - contribute to long term landscape setting in respect of the site and streetscape. - mitigate the urban heat island effect and ensure appropriate comfort levels on-site - contribute to the objective of increased urban tree canopy cover. - maximise opportunities for green infrastructure, consistent with Greener Places and having regard to any bush fire risk.	Entire report contributes to informing the landscape plan. Section 6.5 details this specifically.
11	Biodiversity	11.1	Assess any biodiversity impacts associated with the development in accordance with the Biodiversity Conservation Act 2016 and the Biodiversity Assessment Method 2020, including the preparation of a Biodiversity	Entire report contributes to informing biodiversity assessment.

SEARS Table				
Item #	Item	Subsection	Requirement	Report Reference Point
			Development Assessment Report (BDAR), unless a waiver is granted, or the site is on biodiversity certified land	

2.5. Reviewed Plans and Documents

This report has relied on the following plans and documents:

Table 2: Reviewed Plans and Documents

Title	Author	Dwg. No.	Revision	Date
LANDSCAPE MASTERPLAN	ARCADIA	L-000 to L-700	B	17.02.25
DETAIL SURVEY	PROJECT SURVEYORS	5749-G25	N/A	21.08.2024
COVER SHEET	Architectus	DA0000	A.01	20.02.2025
CONTEXT AND LOCALITY PLAN	Architectus	DA0010	A.01	20.02.2025
SITE ANALYSIS	Architectus	DA0015	A.01	20.02.2025
SITE PLAN - PROPOSED	Architectus	DA0020	A.01	20.02.2025
SITE SURVEY	Architectus	DA0050	A.01	20.02.2025
AREA PLANS - GFA	Architectus	DA0202	A.01	20.02.2025
DEMOLITION PLAN	Architectus	DA0500	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LOWER GROUND	Architectus	DA1000	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - GROUND	Architectus	DA1001	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 1	Architectus	DA1002	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 2	Architectus	DA1003	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 3	Architectus	DA1004	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 4	Architectus	DA1005	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 5	Architectus	DA1006	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 6	Architectus	DA1007	A.01	20.02.2025

Title	Author	Dwg. No.	Revision	Date
GENERAL ARRANGEMENT PLAN - LEVEL 7	Architectus	DA1008	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 8	Architectus	DA1009	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 9	Architectus	DA1010	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - LEVEL 10	Architectus	DA1011	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - PLANT	Architectus	DA1012	A.01	20.02.2025
GENERAL ARRANGEMENT PLAN - ROOF	Architectus	DA1013	A.01	20.02.2025
ELEVATION - NORTH	Architectus	DA2001	A.01	20.02.2025
ELEVATION - EAST	Architectus	DA2002	A.01	20.02.2025
ELEVATION - SOUTH	Architectus	DA2003	A.01	20.02.2025
ELEVATION - WEST	Architectus	DA2004	A.01	20.02.2025
SECTION- EAST WEST 1	Architectus	DA2101	A.01	20.02.2025
SECTIONS- NORTH SOUTH 1+ 2	Architectus	DA2102	A.01	20.02.2025
SHADOW STUDIES	Architectus	DA9201	A.01	20.02.2025
EXTERNAL MATERIALS SCHEDULE	Architectus	DA9300	A.01	20.02.2025
EXTERNAL SIGNAGE	Architectus	DA9320	A.01	20.02.2025
UNSW G25 Landscape SSDA Repory	ARCADIA	24-1045	B	February 2025
COVER SHEET	ARCADIA	0	C	21.02.2025
LANDSCAPE MASTERPLAN	ARCADIA	101	C	21.02.2025
PLANTING SCHEDULE	ARCADIA	400	C	21.02.2025
SOFTWORKS PLAN GROUND FLOOR - SHEET 1	ARCADIA	401	C	21.02.2025
SOFTWORKS PLAN GROUND FLOOR - SHEET 2	ARCADIA	402	C	21.02.2025
SOFTWORKS PLAN GROUND FLOOR - SHEET 3	ARCADIA	403	C	21.02.2025
SOFTWORKS PLAN GROUND FLOOR - SHEET 4	ARCADIA	404	C	21.02.2025
SOFTWORKS PLAN ROOFTOP - SHEET 5	ARCADIA	405	C	21.02.2025

Title	Author	Dwg. No.	Revision	Date
SOFTWARES PLAN ROOFTOP - SHEET 6	ARCADIA	406	C	21.02.2025
LANDSCAPE DETAILS	ARCADIA	600	C	21.02.2025
LANDSCAPE SPECIFICATION	ARCADIA	700	C	21.02.2025
Civil Design Report	Arup	304141	4	21.02.2025

2.6. Legislative Context

The Commonwealth of Australia's Environmental Protection & Biodiversity Conservation Act 1999 (EPBC Act) manages nationally significant ecological communities and heritage items. The EPBC Act delegates to the NSW Biodiversity Conservation Act 2016 (BC Act) for state and local management of ecological and heritage matters. The BC Act, which repealed the NSW Threatened Species Conservation Act 1995, may require Species Impact Statement and Biodiversity Banking and Offset Scheme agreements determined by the Biodiversity Assessment Method (BAM)

In NSW, the Environmental Planning and Assessment Act 1979 (EP&A Act) regulates significant development and infrastructure through Environmental Planning Instruments (EPI), including State Environment Planning Policies (SEPP) for matters of state or regional significance and Local Environmental Plans (LEP) and Development Control Plans (DCP) for land usage guidance for local Councils.

2.7. Local Planning & Tree Management Controls

Table 3: Applicable Planning & Tree Management Controls

Local Environment Plan	Randwick Local Environmental Plan 2012 (RLEP)
Development Control Plan	Randwick Development Control Plan 2013 (RDCP)
Tree Management Controls	Prescribed trees within the Randwick City Council local government area (LGA) are protected under Part C5 of the RDCP made pursuant to Chapter 2 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021 (the BCSEPP). The RDCP generally protects all trees and vegetation that meet the following: ● any palm tree, cycad or tree fern of any size; ● any tree on 'public land' (as defined in the Local Government Act 1993) by any persons not authorised by Council; ● any hollow-bearing trees; or ● any other tree with: - a height equal to or exceeding 6 metres; - a canopy width equal to or exceeding 4 metres; ○ for a single trunk tree species, a trunk circumference equal to or exceeding one (1) metre at a height of one (1) metre above ground level; or ○ for a multi-trunk tree species, a combined trunk circumference (measured around the outer girth of the group of trunks) equal to or exceeding one (1) metre at a height of one (1) metre above ground level.
Exemptions	N/A

2.8. Additional Legislative Protections

The following government planning overlays have been reviewed (SEED - NSW Government, 2024). Table 4 indicates the presence of the items on site.

Table 4: Additional Legislative Protections

NSW OEH	Present on Site	Relevance
Threatened Ecological Communities (TEC) Greater Sydney	☐	Not present on site. No relevance.
State Heritage Register	☐	Not present on site. No relevance
Biodiversity Values	☐	Not present on site. No relevance
DCP/LEP		
Heritage	☐	Not present on site. No relevance
Terrestrial Biodiversity	☐	Not present on site. No relevance
Environmentally Sensitive Land	☐	Not present on site. No relevance

3. Scope

Assess the health and condition of trees on the site and neighbouring properties that may be affected by proposed works to determine tree retention values based on heritage, environmental and arboricultural principles.

Provide as an outcome of the assessment, the following:

- A description of the trees
- Observations made
- Tree retention values
- A discussion of the effects the location of the proposed works may have on the trees
- Recommendations required for remedial or other works to the trees, if and where appropriate
- A description of the works or measures required to ameliorate the impact upon the trees to be retained; by the proposed building works or future impacts the trees may have upon the new building works if and where appropriate;

or discuss the possible benefits of removal and replacement, if appropriate, for the medium to the long-term amenity of the site.

4. Method

4.1. Data Collection

This report has relied on an existing identification tag system, which was present at the time of the inspection. Where tags were absent, inspected trees have been physically identified with green numbered plastic tags affixed to the southern side of the trunk at approximately 2m above ground level. This includes trees 301 - 371.

To record the above-ground health and condition of each tree, a Visual Tree Assessment (VTA), adapted from (Lonsdale, 2013), was undertaken from ground level by AQF Level 5 consulting arborists Mark McHugh and Travis Lander on 8 & 9 August 2024.

This involved an inspection of

- Tree health and structural condition; both long and short term
- Site conditions
- Amenity value
- Heritage value
- Habitat value
- Environmental value

All diameter measurements were taken with a diameter tape or forestry callipers. All height and canopy spread values were estimated. Any offset measurements were measured with a tape measure.

Data was collected using GIS software linked to a Trimble Catalyst DA-2 GPS antenna with 1cm-2cm accuracy in optimal GPS conditions. Where trees were located on the survey plan, the locations were corrected using the following parameters:

- Locations were corrected to the dwg survey plan where present.
- Where absent from the survey, the GPS location was used. Using this method; locations may be +/- 1m due to tree canopies and GPS interference.

Proposed plans were georeferenced to the survey plan and impacts were assessed in GIS software. Some discrepancies may exist between surveyed boundaries and those provided by the NSW cadastre.

4.2. Useful Life Expectancy

Estimated remaining Useful Life Expectancy (ULE) has been derived using a modified version of the TreeAZ SULE method (Barrell, 2009). An explanation of attributes required to achieve each category can be found in Appendix A.

4.3. Retention Value

The trees' significance rating and retention value were determined using the IACA Significance of a Tree Assessment Rating System (STARS) © (IACA, 2010). The rating was based on the Tree Significance - Assessment Criteria and the Retention Value - Priority Matrix, which considers landscape significance and estimated Useful Life Expectancy. Detailed explanations of the attributes used can be found in Appendix A.

4.4. Tree Protection Zone and Structural Root Zone

The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) methods have been derived from the Australian Standard 4970–2009: *Protection of Trees on Development Sites* (Standards Australia Limited, 2009). The radius of the TPZ is calculated for each tree by multiplying its Diameter at Breast Height (DBH) by 12.

$$\text{TPZ radius} = \text{DBH} \times 12$$

In the event the crown spread of the tree extends beyond this offset; the TPZ may be adjusted to the outer extent of the crown spread.

The SRZ is the area around the base of a tree required for the tree's stability in the ground. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres.

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

5. Observations

5.1. Site Soils

The following is a description of the soil profile in the landscape surrounding the site. However, it should be noted that site soils are expected to deviate from their natural state due to past urban development within the site.

The site is located on the Tuggerah Aeolian soil landscape which is described as ‘gently undulating to rolling coastal dunefields. Local relief to 20 m, slope gradients generally 1-10%, but occasionally up to 35%. North— south oriented dunes with convex narrow crests, moderately inclined slopes and broad gently inclined concave swales. Extensively cleared open-forest and eucalypt/apple woodland.’ (Department of Planning, Industry and Environment, 2020)

Soils of the Tuggerah Aeolian landscape are characterised by ‘deep (>200 cm) Podzols (Uc2.31, Uc2.32, Uc2.34) on dunes and Podzols/Humus Podzol intergrades (Uc2.23, Uc2.21, Uc2.3, Uc4.33) on swales.’ (Department of Planning, Industry and Environment, 2020)

Vegetation of this soil landscape is described as ‘Almost completely cleared dry sclerophyll eucalypt and apple woodland. Small patches remain, notably in Scarborough Park at Ramsgate. The original native vegetation probably formed dry sclerophyll tall open-woodland or forest. Dominant tree species are smooth-barked apple *Angophora costata*, Sydney peppermint *Eucalyptus piperita*, and old man banksia *Banksia aemula*. The shrubby sclerophyllous understorey contains many species including bracken *Pteridium esculentum*, Christmas bush *Ceratopetalum gummiferum*, woody pear *Xylomelum pyriforme*, and prickly moses *Acacia ulicifolia*.’ (Department of Planning, Industry and Environment, 2020)

5.2. Summary of Tree Observations

Complete tree attributes and observations can be found in Appendix B - Tree Assessment Schedule. A total of 85 trees were assessed under 77 tree numbers. Where trees were similar in size, species, and location and were of lower significance in the landscape, they were grouped together. This includes trees:

- **178** *Callistemon viminalis* [QTY- 3]
- **202** *Acmena smithii* [QTY- 6]
- **361** *Celtis sinensis* [QTY- 2]

No trees were observed to possess hollow bearing parts capable of supporting large fauna.

Photos and a subset of observations can be accessed using this [link](#).

Table 5 summarises the mix of species and origin.

Table 5: Tree Species and Origin Summary

<i>Total</i> <i>Botanical Name</i>	<i>Origin</i> Exotic	Indigenous	Native	Grand Total
<i>Acmena smithii</i>		2		2
<i>Agonis flexuosa</i>			4	4
<i>Banksia serrata</i>		2		2
<i>Brachychiton acerifolius</i>			1	1
<i>Caesalpinia ferrea</i>	4			4
<i>Callistemon viminalis</i>			2	2
<i>Casuarina glauca</i>		7		7
<i>Celtis sinensis</i>	1			1
<i>Corymbia maculata</i>		4	7	11
<i>Cupaniopsis anacardioides</i>			7	7
<i>Eucalyptus botryoides</i>		3		3
<i>Eucalyptus botryoides x saligna</i>		4		4
<i>Eucalyptus saligna</i>		5		5
<i>Lophostemon confertus</i>			13	13
<i>Macadamia tetraphylla</i>			1	1
<i>Pittosporum undulatum</i>		1		1
<i>Podocarpus elatus</i>			4	4
<i>Strelitzia nicolai</i>	2			2
<i>Tristaniaopsis laurina</i> 'Luscious'			1	1
Grand Total	7	28	40	75

Table 7 summarises the trees' legislated protection status under the RDCP. This assessment considers the size of the tree or exemption due to their species.

Table 7: DCP Protection Status

DCP Status	Tag/Tree QTY (Tree QTY)	Tree Numbers
Protected	54 (55)	139, 140, 141, 143, 144, 145, 146, 152, 154, 156, 157, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 173, 174, 176, 177, 186, 187, 188, 189, 190, 195, 196, 197, 198, 199, 200, 203, 204, 205, 206, 207, 208, 209, 210, 301, 306, 307, 308, 317, 361, 362, 363, 1114, 1116
Exempt	21 (28)	142, 172, 175, 178, 202, 302, 303, 304, 305, 309, 310, 311, 312, 313, 314, 315, 316, 318, 364, 1282, 1390
N/A	0 (0)	
Total	75 (83)	

5.3. Tree Significance

Determined using the Tree Significance - Assessment Criteria of the IACA Significance of a Tree, Assessment Rating System (STARS)© (IACA, 2010); a total of 38 trees were determined to possess a High Landscape Significance Rating due to them being:

- In good condition and good vigour;
- Having a form typical for the species;
- 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;
- 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;

Table 8: Landscape Significance Rating

Landscape Value	Tag/Tree QTY (Tree QTY)	Tree Numbers
1 (High)	10 (10)	140, 163, 165, 189, 190, 196, 197, 200, 210, 308
2 (Medium)	41 (41)	139, 141, 143, 144, 146, 152, 154, 156, 157, 161, 162, 164, 166, 167, 168, 169, 173, 174, 176, 177, 186, 187, 188, 195, 198, 199, 203, 204, 206, 207, 208, 209, 301, 302, 304, 305, 307, 362, 363, 1114, 1390
3 (Low)	23 (30)	142, 145, 160, 172, 175, 178, 202, 205, 303, 306, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 364, 1116, 1282
4 (Environmental Pest / Noxious Weed)	1 (2)	361
5 (Hazardous / Irreversible Decline)	0 (0)	
Total	75 (83)	

5.4. Retention Value

Determined using the Retention Value - Priority Matrix of the *IACA Significance of a Tree, Assessment Rating System (STARS)* © (IACA, 2010), which is a matrix assessment of landscape significance and estimated Useful Life Expectancy. Tree retention values are summarised in Table 9.

Table 9: Retention Value

Retention Value	Tag/Tree QTY (Tree QTY)	Tree Numbers
High - Priority for Retention	10 (10)	140, 163, 165, 189, 190, 196, 197, 200, 210, 308
Medium - Consider for Retention	29 (29)	146, 157, 161, 164, 166, 168, 169, 186, 187, 195, 198, 199, 203, 204, 206, 208, 304, 305, 307, 309, 310, 311, 312, 313, 314, 315, 316, 1114, 1282
Low - Consider for Removal	32 (39)	139, 141, 143, 144, 152, 154, 156, 160, 162, 167, 172, 173, 174, 175, 176, 177, 178, 188, 202, 205, 207, 209, 301, 302, 303, 306, 318, 362, 363, 364, 1116, 1390
Priority for Removal	4 (5)	142, 145, 317, 361
Total	75 (83)	

Table 10: Retention Value Descriptions

Retention Value	Description and Relevance
High - Priority for Retention	These trees are considered important for retention and should be retained and protected. Design modification or re-location of buildings should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4970-2009 <i>Protection of trees on development sites</i> . Tree-sensitive construction must be implemented, e.g. pier and beam, etc, if works are to proceed within the Tree Protection Zone.
Medium - Consider for Retention	These trees may be retained and protected. These are considered less critical; however, their retention should remain a priority, with removal only if adversely affecting the proposed building/works and all other alternatives have been exhausted.
Low - Consider for Removal	These trees are not important for retention, nor require special works or design modifications 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.

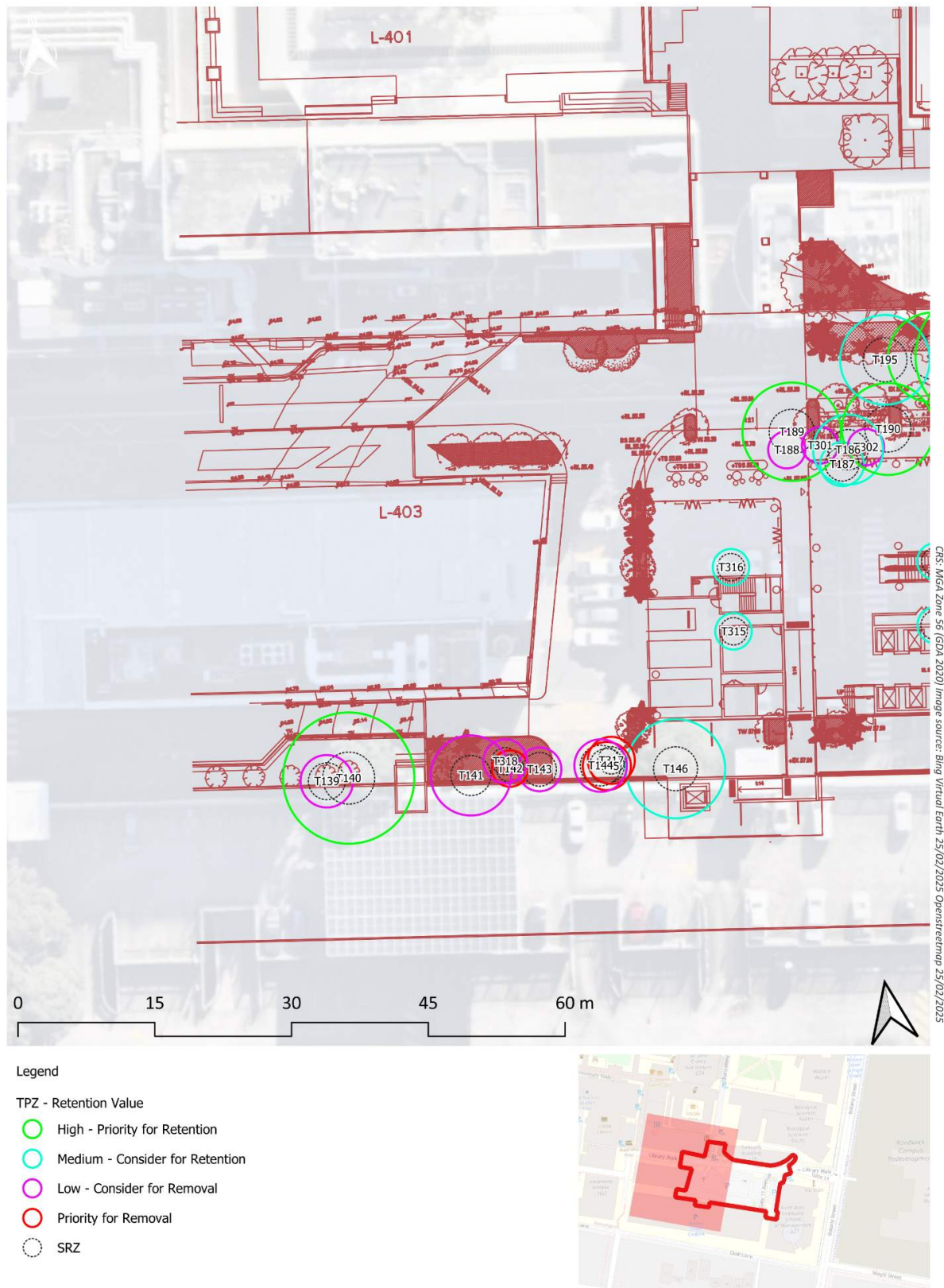


Figure 3.1: Map showing retention values, tree protection zones, structural root zones and overlaid plans.

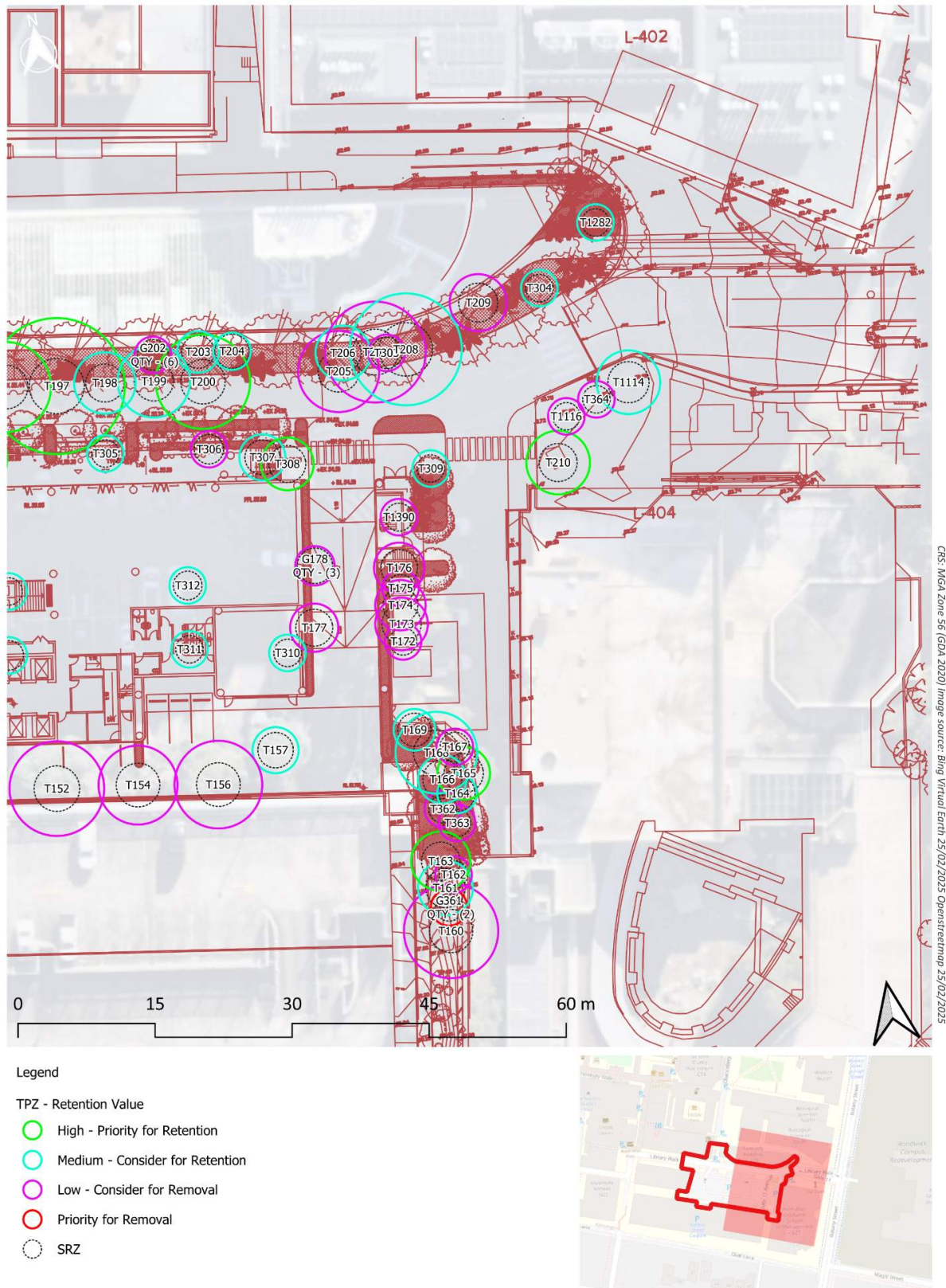


Figure 3.2: Map showing retention values, tree protection zones, structural root zones and overlaid plans.

6. Discussion

6.1. Tree Protection Zone

The TPZ is a radial distance measured from the centre of the trunk. Application of the TPZ is intended to ensure the protection of the root system and canopy from potential damage incurred from construction works and ensure the long-term health, stability and landscape viability of each tree to be retained.

Incursions into the TPZ may occur due to excavation, modification of existing ground levels, trenching or inverting the soil profile. Such works may damage part or all of the root system or affect soil structure and growing conditions required for long-term growth.

6.2. Structural Root Zone

The SRZ is the area required for mechanical support and anchorage of a tree. The woody root growth and soil cohesion in this area are required to hold a tree upright.

Incursions into the SRZ are not recommended as they are likely to result in loss or damage to woody roots which may significantly affect stability. However, fully elevated, pier and beam type construction or hand-dug services are possible within the SRZ.

6.3. Acceptable Encroachments into the Tree Protection Zone

An encroachment of less than 10% of the entire TPZ is considered minor provided it is outside the SRZ and the area lost is compensated for elsewhere and contiguous to the TPZ.

A major encroachment is considered to be greater than 10% of the entire TPZ area. Where unavoidable, exploratory excavation using non-destructive methods such as pneumatic, hydraulic or hand digging may be required to evaluate the extent of potential damage to the root system and determine whether the tree(s) will remain viable. The area lost to encroachment should be compensated for elsewhere and contiguous to the TPZ.

Additional encroachments within the TPZ are acceptable, provided the arborist can demonstrate the tree(s) will remain viable.

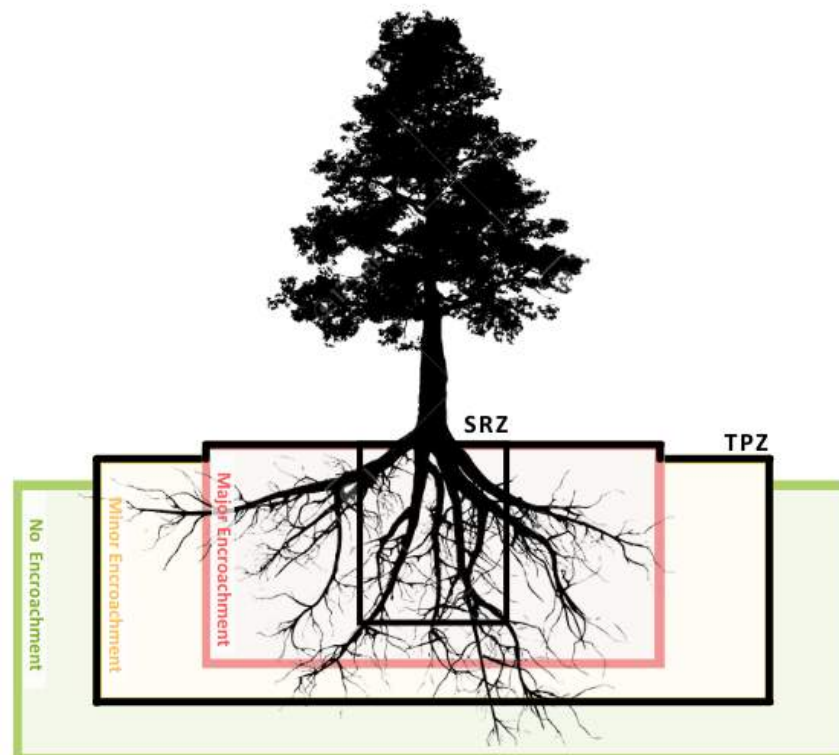


Figure 4: Indicative zones of TPZ and SRZ encroachment.

6.4. Impact Assessment

The following criteria have been considered to determine the impact on site trees that may occur due to the proposed development:

- Existing ground levels (R.L)
- Footprint of the proposed development, temporary structures, and laydown areas.
- Extent of the TPZ/SRZ
- Incursion into the TPZ, including any cut, fill, benching and shoring activities beyond the development footprint.
- Incursions to the tree canopy from the building or temporary structures (scaffolding)
- Existing site and soil conditions

The impacts of the proposed development are summarised in Table 11¹.

¹ No tree protection measures may be recommended as the tree(s) are outside the expected area of construction.

Generic tree protection measures include tree protection fencing, trunk and/or branch protection and restriction of activities within the TPZ.

Generic plus protection measures include generic tree protection measures plus supervision of works within the TPZ and may include, in combination:

- The use of root sensitive construction techniques
- Design revision
- Routing services outside the TPZ
- Root mapping

Major Encroachments

67 trees, represented under 60 unique tree tags, out of a total of 83 trees (75 tags), are significantly impacted by major TPZ encroachments. These trees are recommended for removal as they fall within the development footprint, which includes areas designated for driveways, retaining walls, buildings, hard landscaping or other unsustainable cut-and-fill and construction activities. This group includes:

- Seven High Retention Value trees
- Twenty-seven Medium Retention Value trees
- Thirty-one Low Retention Value trees

Minor Encroachments

Trees 141 and 318 are Low Retention Value trees subject to minor TPZ encroachments. In both instances these impacts are not expected to adversely affect the trees. Hence, both can be retained with generic tree protection measures only which includes supervision of activities within the TPZ.

Nil Encroachments

The remaining 16 trees under 15 tree tags are not expected to be directly affected by the development and can be retained within generic tree protection measures only

Priority for Removal Trees

Two trees have been classified with a *Priority for Removal* retention value and will be impacted by the proposed development and will require removal.

Potential Mitigation Measures

Trees within the footprint of the building are of Low and Medium retention value and are not viable based on the siting of the building. If these trees were retained, the project could not proceed.

Trees 189-190 and 305-308 are the proposed bar spill areas north of the G25 building. Again these trees are within the built form and cannot be viably retained given the nature and type of encroachment. In addition, the larger High retention value trees 189 and 190 will be subject to altered wind loading (funnelling) due to the new multi-storey building. Retention of these trees, if it were possible, is likely to cause an increased risk due to anticipated branch failure which renders them unsuitable in the landscape following completion of works as; a likelihood of branch failure will be increased, and target occupancy is expected to increase.

Trees along the northern side of Library Walk (195-209, 304 and 1282) will be subject to unsustainable cut across the entire TPZ to achieve design requirements. In addition, the larger, higher value trees (195-200) will also be subject to altered wind loading which is anticipated to increase the risk of branch failure in the event they could be feasibly retained. Further, these trees are growing within constrained soil environments with damage to footpath and road surfaces already occurring. These trees are tall growing Eucalypts, which in many cases have irregular form due to shading from the northern building. Opportunity exists in this area for a more considered planting approach with

connected soil vaults and part shade tolerant species which, if executed thoughtfully, can increase canopy cover by planting more suitable species, and prospects for sustained tree growth in the medium to long term.

Table 11: Impact Assessment Summary

		Tree ID and Retention Value			
Recommendation	Tag/Tree QTY (Tree QTY)	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Priority for Removal
Remove - project impacts	58 (65)	165, 189, 190, 196, 197, 200, 308 Tag QTY: (7) Tree QTY: (7)	146, 157, 164, 166, 168, 169, 186, 187, 195, 198, 199, 203, 204, 206, 208, 304, 305, 307, 309, 310, 311, 312, 313, 314, 315, 316, 1282 Tag QTY: (27) Tree QTY: (27)	144, 152, 154, 156, 167, 172, 173, 174, 175, 176, 177, 178, 188, 202, 205, 207, 209, 301, 302, 303, 306, 362, 363, 1390 Tag QTY: (24) Tree QTY: (31)	
Remove - irrespective	2 (2)				145, 317 Tag QTY: (2) Tree QTY: (2)
Retain - generic	15 (16)	140, 163, 210 Tag QTY: (3) Tree QTY: (3)	161, 1114 Tag QTY: (2) Tree QTY: (2)	139, 141, 143, 160, 162, 318, 364, 1116 Tag QTY: (8) Tree QTY: (8)	142, 361 Tag QTY: (2) Tree QTY: (3)
Retain - generic plus	0 (0)				
Total	75 (83)				

Justification for Proposed Tree Removal

All trees recommended for removal are located within the proposed development footprint, civil works, or hard and soft landscape elements which will result in them being significantly affected by excavation and construction activities, leading to unsustainable levels of root loss and in addition to crown conflicts. These impacts are currently not mitigable within the existing design constraints. The following analysis provides a detailed assessment of the impact, avoidance efforts, and considerations for landscape character and compensatory measures.

1. Design Consideration and Avoidance of High Retention Value Trees

An initial assessment reviewed alternative design layouts to determine if high-retention trees could be preserved. However, site constraints, including bulk earthworks, building alignment, access requirements, and infrastructure placement, limited opportunities to avoid these trees without significantly compromising the project's objectives. As a result, the trees identified within the development footprint inclusive of landscape design have been deemed necessary for removal. Nonetheless, to mitigate the loss of high-value trees, the proposal includes a comprehensive offset strategy involving significant compensatory planting to restore and potentially enhance the landscape's ecological and aesthetic value. While not a 1:1 ratio, the opportunity for expanded root environments will lead to better outcomes for the broader site with improved prospects for longevity.

2. Justification for Tree Removal Within the Building Footprint

Trees located directly within the proposed building footprint present unavoidable obstacles to the project's progression. Their retention would necessitate a fundamental redesign or reduction in scale, making the project unfeasible. Furthermore, some of these trees, particularly those within carpark areas, exhibit limited growth potential due to site constraints, such as inadequate soil conditions and restricted root zones. The trees' species are commonly found across the broader university grounds, ensuring that the removal within this project area does not constitute a unique loss of biodiversity or species.

3. Assessment of Trees Outside the Footprint but Within the DA Boundary

Trees positioned outside the immediate building footprint but within the DA boundary have been evaluated based on bulk earthworks, hard and soft landscape and anticipated level changes, excavation impact, and modifications to root zones. Where significant level changes are planned, the disturbance to root zones would be substantial enough to jeopardise tree health and stability, rendering retention impractical. For each affected tree, a detailed justification is provided in table 14, outlining specific constraints that preclude preservation.

4. Landscape Character and Compensatory Planting Strategy

The removal of these trees will alter the immediate landscape character by reducing canopy coverage and possibly creating temporary open space or 'gaps' within the established vegetation. To counterbalance these changes, a structured compensatory planting plan will be implemented, focusing on species diversity and strategic placement to enhance the

landscape character over time. These plantings will include advanced stock and native species, aiming to establish a resilient, ecologically valuable canopy that supports campus biodiversity and aligns with the university's broader landscape character.

5. Impact Summary and Offset Strategy

In summary, while the proposed design results in the unavoidable removal of certain high-retention value trees, the associated offset plan will provide long-term benefits that align with ecological sustainability and landscape enhancement goals. This approach aims to balance development needs with responsible arboricultural management, ensuring that the project's footprint is offset by a thoughtfully designed and implemented landscape restoration strategy.

The proposed development will therefore see the removal of 65 trees (58 tags) due to design impacts, two trees for arboricultural management and the retention of 16 trees (15 tags).

6.5. Impact Mitigation Measures for Trees to be Retained

To ensure retained trees remain viable post-construction, all TPZ encroachments should be offset and mitigated with appropriate measures as detailed in the Tree Protection Management Plan. These measures, outlined below, must be adjusted according to the level of TPZ encroachment to minimize impact effectively.

AS 4970-2009 provides guidelines for TPZ encroachment and prescribes specific mitigation techniques, summarised in Table 12, to ensure the trees' long-term viability. **These measures are mandatory only for trees designated for retention.**

Table 12: Mitigation Measures

Encroachment Type	Mitigation Measures
Nil	Where indirect or inadvertent encroachments may occur due to haul routes or machinery movement, tree protection should be installed.
Minor	- The area lost to encroachment must be offset elsewhere and contiguous to the TPZ. - Detailed root investigations should not be required. - Tree protection must be installed and maintained.
Major	- The Project Arborist must demonstrate the tree(s) will remain viable. - Root investigations using non-destructive methods may be required to clarify or confirm the impacts on trees to be retained. - The area lost to encroachment must be offset elsewhere and contiguous to the TPZ. - All works and excavations within the TPZ must be supervised by the Project Arborist. - Tree protection must be installed and maintained for the duration of the project. - Additional measures such as mulching or temporary irrigation may be required.

Table 13: Impact Assessment Schedule

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
Encroachment Type: Major						
144	Low - Consider for Removal	TPZ encroachment for building and hard landscape (23.12%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
145	Priority for Removal	TPZ encroachment for building and hard landscape (19.37%) which enters the SRZ	Major	Tree should be considered for removal irrespective of development due to its current condition and/or weed status.	Remove - irrespective	
146	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (28.35%) which enters the SRZ	Major	Tree is within the envelope for landscape and lift upgrade works. Tree will not tolerate root disturbance to this extent due to its already reduced health, even with encroachment mitigation measures.	Remove - project impacts	
152	Low - Consider for Removal	TPZ encroachment for building and hard landscape (70.64%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints	Remove - project impacts	

Arboricultural Impact Assessment

UNSW G25 Education Building
8 High Street, Kensington NSW 2031



Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.		
154	Low - Consider for Removal	TPZ encroachment for building and hard landscape (77.07%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
156	Low - Consider for Removal	TPZ encroachment for building and hard landscape (72.73%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
157	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
164	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
165	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				ecological and aesthetic values in line with project goals.		
166	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (99.31%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
167	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
168	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints	Remove - project impacts	

Arboricultural Impact Assessment

UNSW G25 Education Building
8 High Street, Kensington NSW 2031



Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.		
169	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
172	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
173	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
174	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
175	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				ecological and aesthetic values in line with project goals.		
176	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
177	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
178	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints	Remove - project impacts	

Arboricultural Impact Assessment

UNSW G25 Education Building
8 High Street, Kensington NSW 2031



Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.		
186	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
187	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
188	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
189	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
190	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				ecological and aesthetic values in line with project goals.		
195	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (99.4%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	
196	High - Priority for Retention	TPZ encroachment for building and hard landscape (98.97%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	
197	High - Priority for Retention	TPZ encroachment for building and hard landscape (87.21%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	
198	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	
199	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the	Remove - project impacts	

Arboricultural Impact Assessment

UNSW G25 Education Building
8 High Street, Kensington NSW 2031



Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				project. Retention of this tree is not viable.		
200	High - Priority for Retention	TPZ encroachment for building and hard landscape (98.71%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	
202	Low - Consider for Removal	TPZ encroachment for building and hard landscape (95.33%) which enters the SRZ	Major	Tree is within proposed new landscape elements including seating, paths and soft landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
203	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (88.22%) which enters the SRZ	Major	Tree is within proposed new landscape elements including seating, paths and soft landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
204	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (92.78%) which enters the SRZ	Major	Tree is within proposed new landscape elements including seating, paths and soft landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
205	Low - Consider for Removal	TPZ encroachment for building and hard landscape (99.51%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				longevity. Tree not viable for retention.		
206	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (92.97%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
207	Low - Consider for Removal	TPZ encroachment for building and hard landscape (80.27%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
208	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (81.87%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
209	Low - Consider for Removal	TPZ encroachment for building and hard landscape (79.12%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
301	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				ecological and aesthetic values in line with project goals.		
302	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
303	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
304	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	
305	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.		
306	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
307	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	
308	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
309	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
310	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
311	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				ecological and aesthetic values in line with project goals.		
312	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
313	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
314	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
				necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.		
315	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
316	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
317	Priority for Removal	TPZ encroachment for building and hard landscape (32.37%) which enters the SRZ	Major	Tree should be considered for removal irrespective of development due to its current condition and/or weed status.	Remove - irrespective	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
362	Low - Consider for Removal	TPZ encroachment for building and hard landscape (86.1%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
363	Low - Consider for Removal	TPZ encroachment for building and hard landscape (79.6%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
1282	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts	

Tree no.	Retention Value	Encroachment into TPZ/SRZ	Encroachment Type	Likely Impact	Recommendation	Specific Recommendation
1390	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts	
Encroachment Type: Minor						
141	Low - Consider for Removal	TPZ encroachment for building and hard landscape (3.62%)	Minor	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic	
318	Low - Consider for Removal	TPZ encroachment for building and hard landscape (1.04%)	Minor	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic	

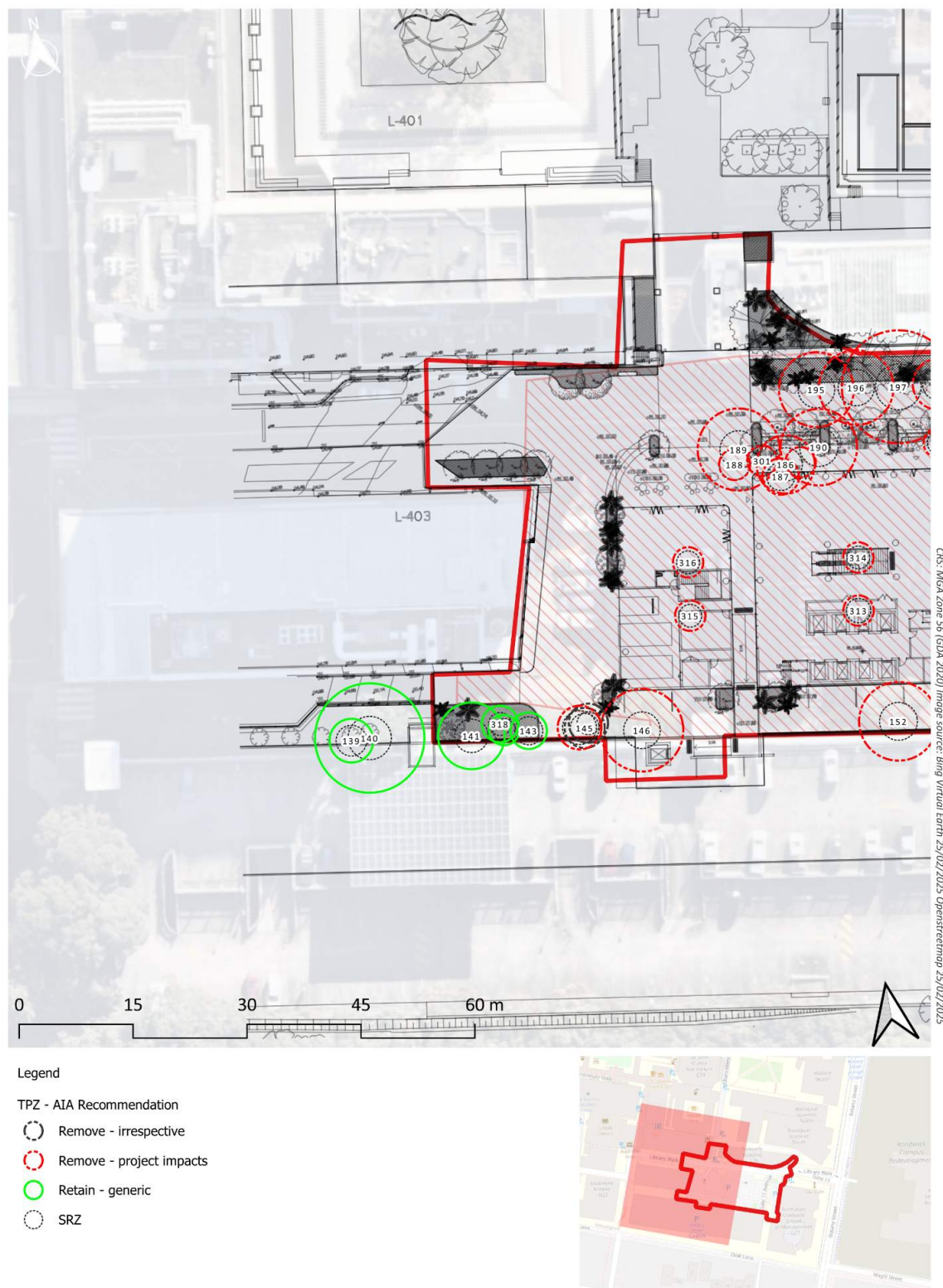


Figure 5.1: Impact Assessment

Note that the removal of trees, as assessed and recommended in this report, is subject to a separate Infrastructure Improvement works approval and is not subject to this consent.

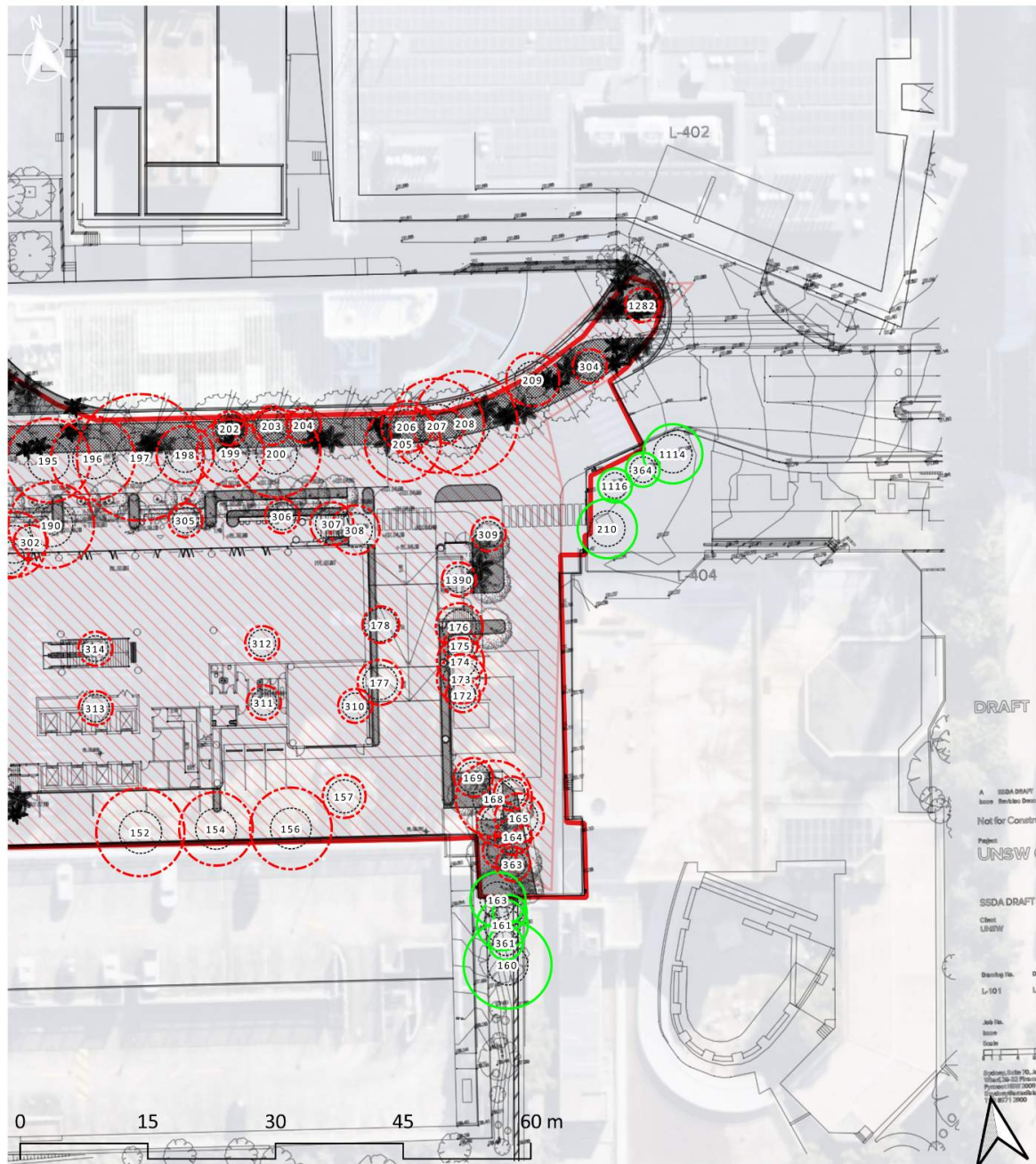


Figure 5.2: Impact Assessment

Note that the removal of trees, as assessed and recommended in this report, is subject to a separate Infrastructure Improvement works approval and is not subject to this consent.

7. Conclusion

The proposed development of the UNSW G25 Education Building involves significant modifications to the landscape that necessitate a thorough consideration of arboricultural impacts. This Arboricultural Impact Assessment has comprehensively evaluated the condition, significance, and potential impacts on all trees affected by the development.

The assessment has determined that the removal of 67 trees is required due to significant encroachments into TPZs and the construction footprint. While some trees are of high or medium retention value, their preservation is not feasible without compromising the integrity of the development. However, 16 trees will be retained and safeguarded using best-practice tree protection measures, aligned with Australian Standard AS 4970-2009.

To mitigate the impact of tree loss, a compensatory planting strategy will be implemented per the approved landscape plan. This plan will enhance the long-term ecological value of the site through the re-establishment of native species, advanced planting stock, and improved soil environments to ensure sustained canopy growth. These actions align with the broader landscape and ecological goals of the UNSW and support the Randwick Health and Education Precinct's aim to create a resilient, green, and welcoming campus environment.

8. Mitigation Measures Summary

The following consolidated summary provides an overview of all mitigation measures identified throughout the report, organized by project stage.

Table 14: Summary of Mitigation Measures

Project Stage Design (D) Construction (C) Operation (O)	Mitigation Measures	Relevant Section of Report
C/O	Trees recommended for retention are to be retained and protected in accordance with <i>AS4970-2009</i>	Sections 9-12.
D/C/O	Trees approved for removal are to be offset with more suitable and thoughtfully planned tree species and planting locations	Section 9.3

9. Recommendations

9.1. Project Arborist

An official “Project Arborist” must be commissioned to oversee the tree protection, and any works within the TPZs and complete regular monitoring compliance certification.

The project arborist must have a minimum of five (5) years of industry experience in arboriculture, horticulture with relevant demonstrated experience in tree management on construction sites, and Diploma level qualifications in arboriculture – AQF Level 5.

9.2. Tree Retention and Removal

The recommendations of this report do not constitute consent to remove trees subject to this report.

Table 15 summarises tree removal and retention and is shown in Appendix C - Tree Protection Management Plan. A total of 65 trees grouped under 58 tags require removal to facilitate the proposed development.

Table 15: Tree Retention and Removal

Recommendation	Tag/Tree QTY (Tree QTY)	Tree Numbers
Remove - project impacts	58 (65)	144, 146, 152, 154, 156, 157, 164, 165, 166, 167, 168, 169, 172, 173, 174, 175, 176, 177, 178, 186, 187, 188, 189, 190, 195, 196, 197, 198, 199, 200, 202, 203, 204, 205, 206, 207, 208, 209, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 362, 363, 1282, 1390
Remove - irrespective	2 (2)	145, 317
Retain - generic	15 (16)	139, 140, 141, 142, 143, 160, 161, 162, 163, 210, 318, 361, 364, 1114, 1116
Retain - generic plus	0 (0)	
Total	75 (83)	

Sixteen trees numbered 139, 140, 141, 142, 143, 160, 161, 162, 163, 210, 318, 361, 364, 1114 and 1116 are to be protected with generic tree protection measures including tree protection fencing and restriction of activities within the TPZ.

Trees marked for removal are to be physically marked with paint prior to site establishment as per the approved TPMP. Before removal, the Project Arborist must confirm that all marked trees correspond with those shown in Appendix B - Tree Assessment Schedule and Appendix C – Tree Protection Management Plan.

Tree removal is to be carried out prior to the erection of protection fencing. Under no circumstances are trees marked for retention within protection areas to be damaged. Vehicles and heavy machinery used by contractors are also to be kept clear of these protection areas.

Stumps to be removed from within protection areas are to be removed in a manner that avoids damaging or disturbing roots of trees to be retained. This may include stump grinding or careful 'picking' of the stumps with machinery. Both methods are to be approved by the Project Arborist.

9.3. Offset Planting

Any tree approved to be removed from a site should be replaced with a tree of like habit and indigenous to the LGA where possible, planted as near as practicable to the location of the removed tree, grown to maturity and replaced if the planting fails to survive and thrive.

Suggested species for replacement include:

- *Angophora costata* subsp. *costata* (Sydney Red Gum)
- *Banksia integrifolia* (Coast Banksia)
- *Banksia serrata* (Old Man Banksia)
- *Corymbia gummifera* (Red Bloodwood)
- *Eucalyptus botryoides* (Southern Mahogany)

Suggested species for replacement along Library Walk include:

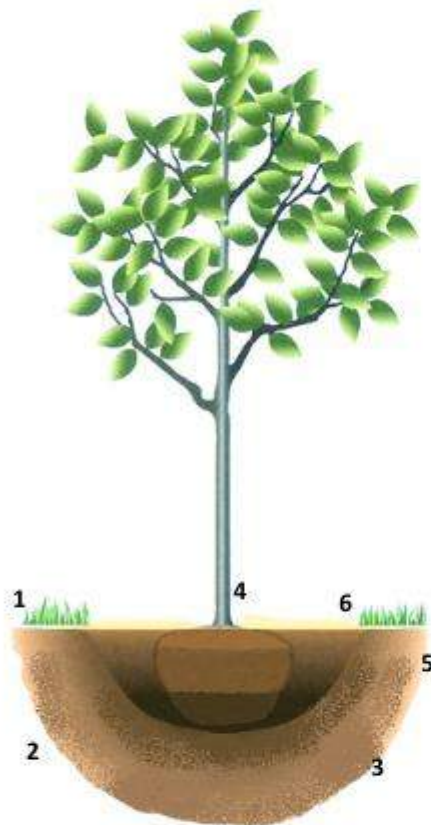
- *Waterhousia floribunda* (Weeping Lilly Pilly)
- *Flindersia australis* (Crow's Ash)
- *Brachychiton discolor* (Lacebark)
- *Alloxylon flammeum* (Tree Waratah)
- *Cupaniopsis anacardioides* (Tuckeroo)
- *Syzygium paniculatum* (Magenta Brush Cherry)

Trees should be sourced from a reputable nursery with stock grown to NATSPEC and Australian Standard AS 2303:2018 *Tree Stock for Landscape Use* criteria (Standards Australia Limited., 2018).

Trees should be a minimum of 100L pot size at the time of planting.

The trees should be planted and mulched with suitably composted, natural, hardwood mulch as per Figure 6.

Six things you should know when planting a tree.



- 1. Dial Before You Dig**
Several days before planting, call the Dial Before You Dig (DBYG) hotline on 1100 or apply via their website to have any underground services identified
- 2. Handle with Care**
Always lift tree by the root ball. Keep roots moist until planting.
- 3. Digging a Proper Hole**
Dig 2 to 5 times wider than the diameter of the root ball with sloping sides to allow for proper root growth.
- 4. Planting Depth**
The trunk flare should sit slightly above ground level and the top most roots should be buried 25 to 55 mm.
- 5. Filling the Hole**
Backfill with native soil unless it's all clay. Tamp in soil gently to fill large air spaces.
- 6. Mulch**
Allow 25 to 50 mm clearance between the trunk and the mulch. Mulch should be 75 to 100 mm deep.

Source: Arbor Day Foundation

Figure 6: Recommended tree planting process. (Arbor Day Foundation, 2019)

9.4. Generic Tree Protection

Generic tree protection measures are recommended to restrict construction activities within the TPZ which may adversely affect the health and condition of a tree to be retained. In order of precedence, the following is required for trees to be retained. Tree protection measures are to be installed and maintained as shown in Appendix C - Tree Protection Management Plan.

1. Install TPZ fencing and signage as per Appendix C - Tree Protection Management Plan. Where impractical and subject to project arborist approval;
2. Install trunk and ground protection where machine access is required.

Notes:

- All activities within the fenced TPZ are to be supervised by the project arborist.

- TPZ fencing is not to be moved.

9.6. Tree Pruning

It is anticipated that additional minor pruning may be required at the direction of the project arborist due to unforeseen project requirements. This additional, unforeseen pruning should be factored into any environmental approval documents that rely on this report. In situations where trees have not been recommended for pruning, the impact on the trees is to be assessed by the Project Arborist and recommendations made to permit pruning or instruct machinery to work around to viably maintain the tree.

Trees are to be pruned in accordance with AS 4373-2007: *Pruning of Amenity Trees* (Standards Association of Australia, 2007) .

Trees are to be dismantled and/or removed in such a manner as to avoid damage to adjacent or understory vegetation and structures.

All pruning works should be completed by a minimum AQF Level 3 Arborist or under direct supervision thereof.

9.7. Compliance Inspection and Reporting

Compliance inspections are recommended to be completed on a **monthly** basis through the construction stage.

Following each inspection, the project arborist shall prepare a document detailing the condition of the trees. These documents should certify whether the works have been completed in compliance with the approved consent conditions relating to tree protection. These reports should contain photographic evidence where necessary.

Inspections are to be conducted by the project arborist at several key points during the construction in order to ensure that protection measures are being adhered to during the construction stages and decline in tree health or additional remediation measures can be identified.

Any works within Tree Protection Zones are to be monitored and supervised by the Project Arborist.

9.8. Compliance and Certification Reporting – Hold Points

The following project milestones are recommended to be carried out by the project arborist. These inspections are summarised below and expanded upon in the following sections.

Table 16: Compliance and Certification Table

Construction Stage	Task	Responsibility	Certification	Timing of Inspection
Pre-construction	Indicate clearly (with spray paint or tape on trunks) trees approved for removal only	Principal Contractor	Project Arborist	Prior to site establishment
	Install tree protection measures			
	Induct construction staff into Tree Protection Management Plan			
During Construction	Supervise all excavation works proposed within the TPZ of trees to be retained			As required prior to the works proceeding adjacent to trees to be retained
	Inspection of trees by Project Arborist			Monthly during construction period
Post-construction	Final Inspection of trees by Project Arborist			Following practical completion of works

9.9. Tree Sensitive Construction Methods

Exploratory Root Investigation

Where trees are intended to be retained, and potential works areas may enter the TPZ or SRZ, determining root location and, therefore the impact on the trees is an important process.

Exploratory root excavation should be undertaken in a manner that causes the least amount of damage to root material in the process. This may include the use of air excavation (air-spade) or hydro or dry-vac excavation. Root investigations should be undertaken at pre-agreed locations that will most effectively guide the design.

Findings of the root investigation should be compiled into a report which identifies significant roots that should be retained and less significant roots that may be appropriate for severance. The size and volume of roots which may be cut must be assessed by an arborist and consider tree physiology, existing site and soil conditions and species traits and tolerance of root pruning.

Fill within Tree Protection Zones

Where unavoidable, fill placed within TPZ of trees to be retained shall be well-drained material equivalent or finer in texture than the existing site topsoil material and should comply with AS 4419:2018 *Soils for Landscaping and Garden Use* (Standards Australia Limited., 2018).

The fill can be lightly consolidated but not to engineering standards. If fill is to be placed by machinery, this must be done from outside the TPZ or from existing hard stand areas. Alternatively, ground, trunk and branch protection may be used to facilitate machine access.

Pavements within Tree Protection Zones

Any pavements or footpaths within TPZ of trees to be retained should be installed at or above the existing grade to minimise the need for excavation to avoid damage or severance of primary woody roots. The pavement sub-base shall be a coarse, gap-graded material with no fines in order to allow some aeration and moisture infiltration to the root zone. The use of permeable pavements, bonded aggregate or cellular confinement systems should be investigated as alternative construction methods.

Landscaping Works within Tree Protection Zones

The landscape plan is to be checked for compliance with the TPMP. Staged removal of tree protection methods may be required to facilitate landscaping works.

Any landscaping works within the TPZ of trees to be retained are to be under the direct supervision of the Project Arborist. These may include but are not limited to; retaining walls, irrigation and lighting systems, topdressing, planting and paving.

Any landscaping works requiring excavation for drainage or the like is to be undertaken using non-destructive methods previously described.

Trenching for Installation of Underground Services

All underground services should be routed outside the TPZ of trees to be retained. Where unavoidable, services may be installed via alternative methods which may include tree sensitive excavation or Horizontal Directional Drilling (HDD). Where HDD is used, entry and exit pits are to be located outside the TPZ of trees to be retained.

Where excavation or trenching is required to facilitate the installation of underground services within the TPZs of any site trees arborist supervision is required. Works should be undertaken using techniques that are sensitive to tree roots to avoid unnecessary damage. Such techniques include

- Excavation by hand
- Excavation using a high-pressure water jet and vacuum truck
- Excavation using an Air Spade with a vacuum truck.

Machine excavation is prohibited within the TPZs of retained trees unless undertaken at the direct consent from the project arborist and/or the responsible authority.

Where a situation occurs that a significant root (root greater than >50 mm diameter) requires pruning or removal, the root is to be severed with a sharp saw implement by or under the instruction of the Project Arborist.

10. Arboricultural Method Statement – Pre-Construction & Demolition

10.1. Site Establishment

The Project Arborist is to be provided a copy of the Construction Management Plan (CMP) to check for compliance with the TPMP. The CMP should ensure that site sheds, haul roads, laydown areas and sediment control are located outside the TPZ of trees to be retained.

At the completion of site establishment, the Project Arborist is to certify that tree protection measures comply with the TPMP.

10.2. Tree Protection Zone Fencing

Protective fencing is to be installed as per Appendix C – Tree Protection Management Plan. Fencing is to comply with Australian Standard AS 4687-2007 Temporary fencing and hoardings (Standards Australia, 2007).

Once erected, protective fencing must not be removed or altered without approval from the project arborist. The TPZ fencing should be secured to restrict access.

TPZ fencing is to be a minimum of 1.8m high and mesh or wire between posts must be highly visible. Fence posts and supports should have a diameter greater than 20mm and should ideally be freestanding, otherwise be located clear of the roots.

Tree protection fencing must remain intact throughout all proposed construction works and must only be dismantled after their conclusion. The temporary dismantling of tree protection fencing must only be done with the authorisation of the Project Arborist and/or the responsible authority.

An example of tree protection fencing is shown in Figure 7.

Any works to be undertaken within the Tree Protection Zone fencing are to be monitored and certified by the project arborist.

Legend:

1. Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
2. Alternative plywood or wooden paling fence panels. The fencing material also prevents building materials or soil entering the TPZ.
3. Mulch installation across the surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
4. Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

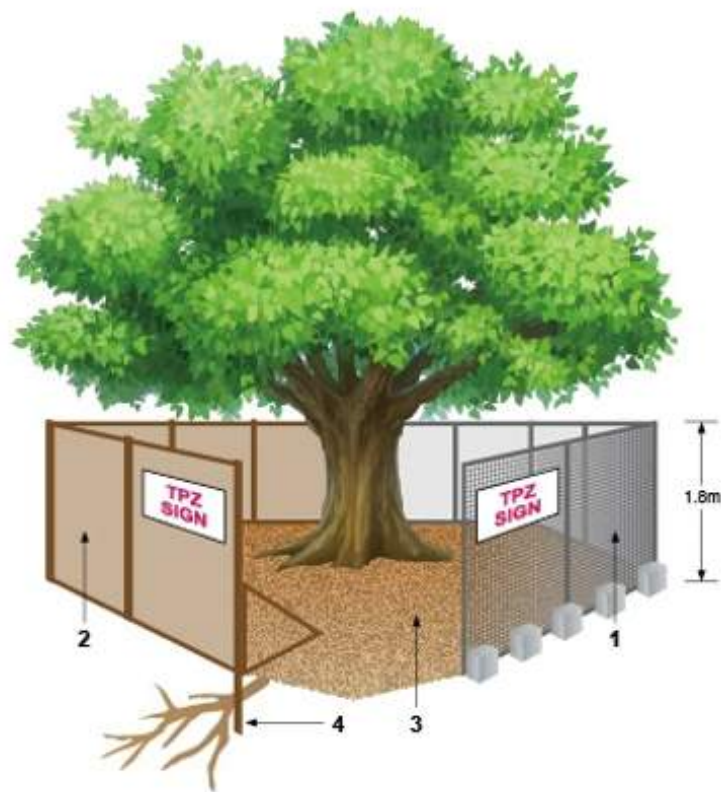


Figure 7: Recommended tree protection fencing measures. (Standards Australia, 2009)

10.3. Prohibited Activities within the TPZ

Activities generally excluded from the TPZ included but are not limited to-

- a) Machine excavation including trenching;
- b) Excavation for silt fencing;
- c) cultivation;
- d) storage;
- e) preparation of chemicals, including preparation of cement products;
- f) parking of vehicles and plant;
- g) refuelling;
- h) dumping of waste;
- i) wash down and cleaning of equipment;
- j) placement of fill;
- k) lighting of fires;
- l) soil level changes;
- m) temporary or permanent installation of utilities and signs, and
- n) physical damage to the tree.

10.4. Tree Protection Signs

Signs identifying the TPZ are to be installed on the tree protection fencing in 10m intervals. An example is shown below in Figure 8.



Figure 8: Example of tree protection signage. (Standards Australia, 2009)

10.5. Sediment Control

Sediment control within tree protection zones is to be installed to avoid below ground excavation as this may damage roots. Coir logs installed above grade that are pinned to avoid roots are an acceptable method.

10.6. Ground, Trunk and Branch Protection

If temporary access for machinery is required within the TPZ of trees to be retained, ground protection measures will be required. The purpose of ground protection is to prevent root damage and soil compaction. Measures may include a permeable membrane such as geotextile fabric beneath a 100mm thick layer of mulch or crushed rock below rumble boards, or steel plates or track mats as per Figure 9.

Tree trunk/s and/or major branches located within close proximity to works must be wrapped with protective hessian or similar acceptable material to prevent tree injury. Major branches would typically be considered to be of a diameter greater than 100mm diameter.

Timber battens (50 mm x 100 mm x 2000mm or similar) must be placed around tree trunks with battens spaced at 100 mm intervals and fixed against the trunk using metal or durable plastic strapping with connections appropriately finished or covered to protect pedestrians from snagging injury. The hessian and timber battens must not be fixed to the tree. Tree trunk and major branch protection are to remain in place for the duration of works and must be removed at the completion of the project .

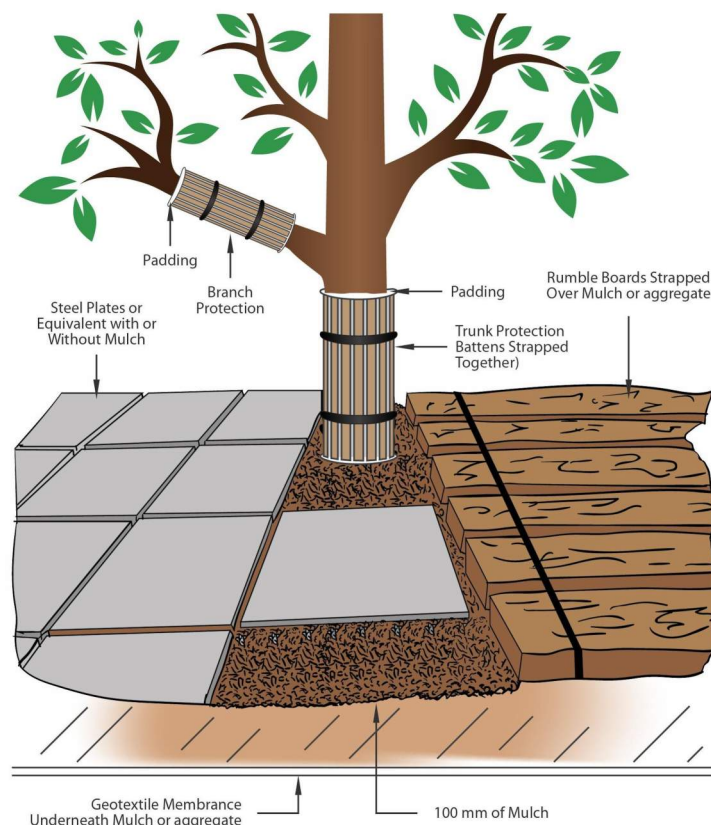


Figure 9: Details of trunk, branch and ground protection. (Standards Australia, 2009)

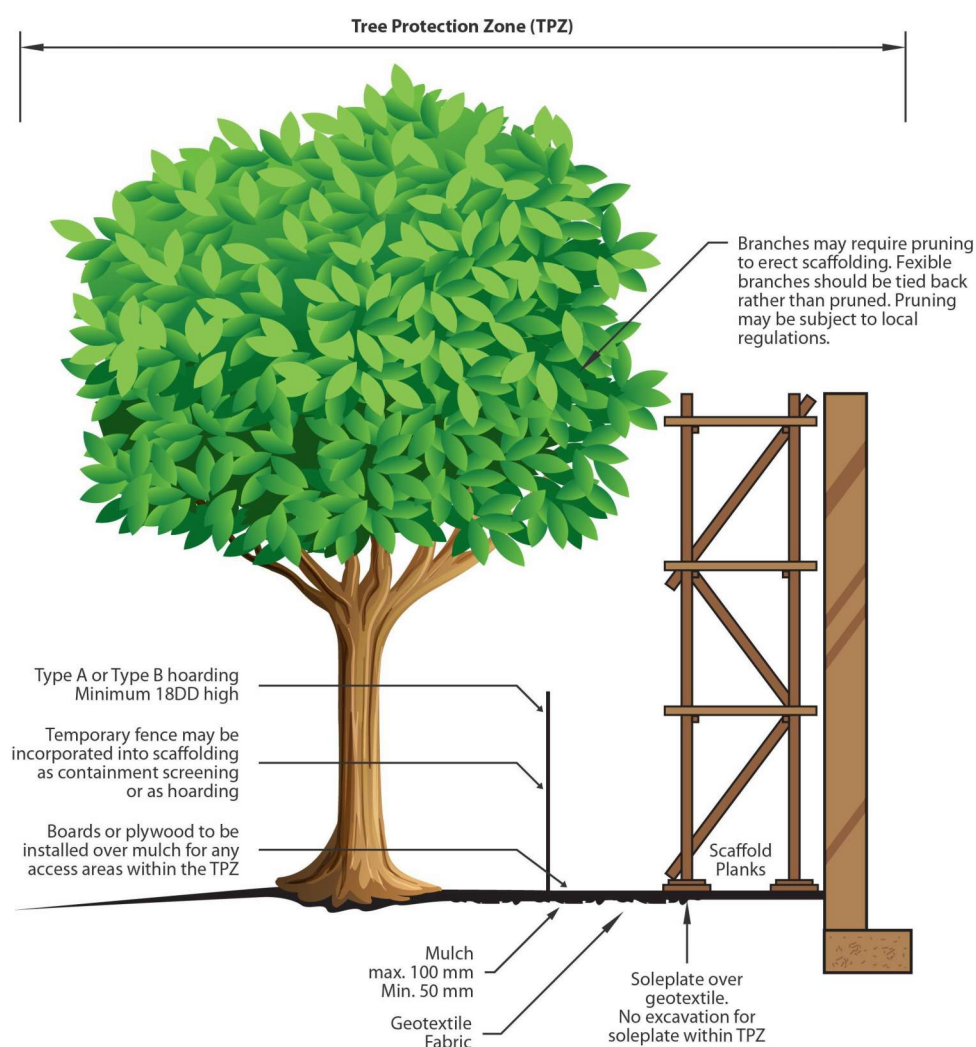
10.7. Demolition of Existing Hard Stand Areas

Demolition of existing hard stand areas within the TPZ of trees to be retained may be undertaken using machinery but must be under the supervision of the Project Arborist. Demolition of the ground surfaces must be undertaken from existing hard stand areas or ground protection and should commence at the outer extent of the existing surface material and move away from trees to be retained.

10.8. Scaffolding

Where scaffolding is required it should be erected outside the TPZ. Where it is essential for scaffolding to be erected within the TPZ, branch removal should be minimised. This can be achieved by designing scaffolding to avoid branches or tying back branches. Where pruning is unavoidable it must be specified by the project arborist in accordance with AS 4373-2007 Pruning of Amenity Trees. NOTE: Pruning works will require approval by determining authority.

The ground below the scaffolding should be protected by boarding (e.g. scaffold board or plywood sheeting) as shown in Figure 10. Where access is required, a boardwalk or other surface material should be installed to minimise soil compaction. Boarding should be placed over a layer of mulch and impervious sheeting to prevent soil contamination. The boarding should be left in place until the scaffolding is removed.



NOTE: Excavation required for the insertion of support posts for tree protection fencing should not involve the severance of any greater than 20 mm in diameter. Without the prior approval of the project arborist.

Figure 10: Details of scaffold installation. (Standards Australia, 2009)

11. Arboricultural Method Statement – Construction Stage

11.1. Excavations Within Tree Protection Zones

The Project Arborist is to monitor the impacts of demolition, bulk earthworks, and installation of temporary infrastructure including building, sediment control and drainage works.

Where the extent of encroachment is less than 10% of the TPZ, including any excavations for benching and shoring, excavation may be undertaken using conventional construction methods. 10% of the TPZ is equivalent to one-third of the TPZ radius on one side as shown in Figure 11.

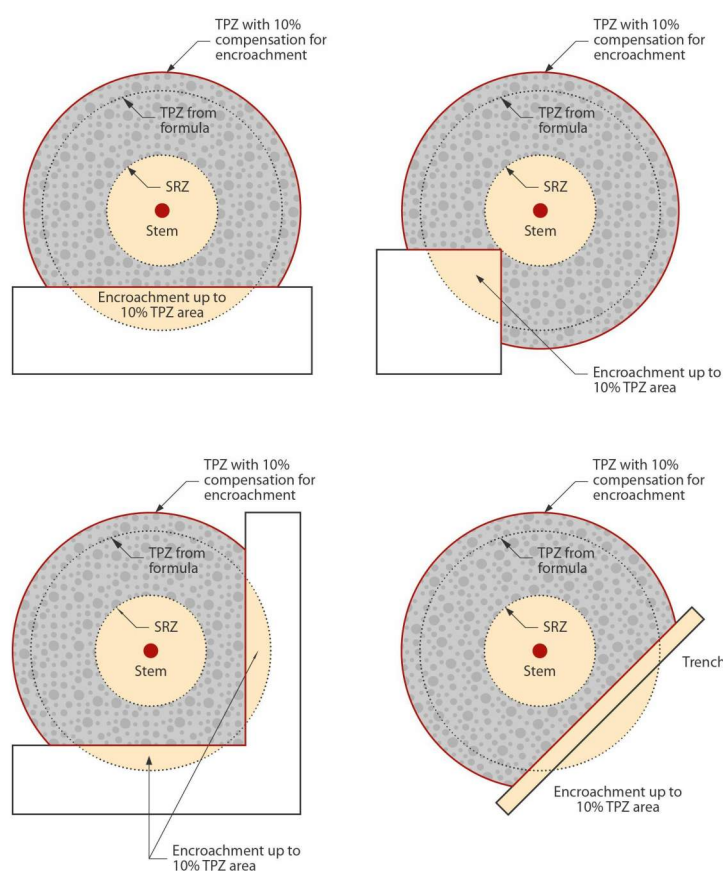


Figure 11: Example of permissible encroachment into the TPZ. (Standards Australia, 2009)

Where the encroachment is to be greater than 10% of the TPZ and prior to any mechanical excavations for building foundations, shoring, retaining wall or pavement subgrade within the TPZ of trees to be retained; exploratory excavation using non-destructive methodology shall be undertaken at the perimeter of the structure, excavation required for shoring, retaining wall or pavement subgrade within the TPZ.

Such techniques include:

- Excavation by hand
- Excavation using a high-pressure water jet and vacuum truck
- Excavation using an Air Spade with a vacuum truck.

The non-destructive excavation shall be undertaken at the outer limits of the structure to the depth of the foundation or excavation, or to a maximum of 800mm below existing surface levels. All care must be taken to prevent the damage or severance of roots greater than 50mm in diameter. Any roots encountered that are less than 50mm in diameter may be cleanly severed with a sharp pruning implement at the interface of the excavation nearest the tree. The exposed root zone is to be kept moist by way of geotextile or hessian placed along the open interface of the excavation nearest the tree.

Where roots greater than 50mm in diameter are encountered during exploratory excavation, advice from the Project Arborist shall be sought.

11.2. Tree Damage

Care is to be taken when operating cranes, piling rigs or similar near trees to avoid damage to tree canopies. Under no circumstances are branches to be torn off by construction equipment.

12. Arboricultural Method Statement – Post-construction

12.1. Defects Liability Period

Completion of outstanding building or landscaping works following the construction period must not injure trees.

12.2. Final Certification

The final inspection by the Project arborist should detail the health and condition of the trees and their growing environment and provide recommendations for any necessary remedial actions. These actions may include pruning in accordance with AS4373-2007 *Pruning of amenity trees* and/or soil remediation to repair the growing environment.

On project completion, the project arborist shall certify in writing to the Certifying Authority that the conditions of consent relating to tree protection, tree removal, pruning and planting of new trees have been complied with or, if the conditions have been contravened, detail the extent and nature of the departure from the conditions and their impacts on trees.

13. References

- Arbor Day Foundation. (2019). *How to Plant Containerized Trees*. Arbor Day Foundation. Retrieved 2024, from <https://www.arborday.org/trees/planting/containerized.cfm>
- Barrell, J. (2009). *Tree AZ - SULE: Its use and status into the New Millennium*. Barrell Tree Consultancy.
- IACA. (2010). *Significance of a Tree Rating System (STARS), s.l.:*. Institute of Australian Consulting Arborists.
- Lonsdale, D. (2013). *Principles of Tree Hazard Assessment and Management* (The Stationery Office, Ed.). Arboricultural Association.
- NSW Office of Environment and Heritage. (2024). *Soil Landscapes of Central and Eastern NSW - SEED*. SEED. Retrieved January 8, 2024, from <https://datasets.seed.nsw.gov.au/dataset/published-soil-landscapes-of-central-and-eastern-nsw37d37>
- NSW Rural Fire Service. (2024). *10/50 vegetation clearing*. Retrieved January 8, 2024, from <https://www.rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing/tool>
- SEED - NSW Government. (2024). *Geocortex Viewer for HTML5*. Retrieved 2024, from https://geo.seed.nsw.gov.au/Public_Viewer/index.html?viewer=Public_Viewer&locale=en-AU
- Standards Association of Australia. (2007). *Pruning of Amenity Trees*. Standards Australia.
- Standards Australia Limited. (2009). *Protection of Trees on Development Sites*. Standards Australia.
- Standards Australia Limited. (2018). *Tree Stock for Landscape Use*. Standards Australia Limited.Committee EV-018, Arboriculture.

14. Appendix A - IACA Significance of a Tree, Assessment Rating System (STARS) ©

Tree Landscape Significance - Assessment Criteria

1. High Significance in landscape	2. Medium Significance in landscape	3. Low 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 <i>in situ</i> - tree is appropriate to the site conditions.	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 <i>in situ</i>. Notes The tree is to have a minimum of three (3) criteria in a category to be classified in that group. The assessment criteria are for individual trees only, however, can be applied to a monocultural stand in its entirety e.g. hedge.	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 <i>in situ</i> - 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.

Estimated Life Expectancy

1. Long	2. Medium	3. Short	4. Remove
Trees that appear to be retainable with an acceptable level of risk for more than 40 years. Structurally sound trees located in positions that can accommodate future growth. Storm damaged or defective trees that could be made suitable for retention in the long term by remedial tree surgery. Trees of special significance for historical, commemorative, or rarity reasons that would warrant extraordinary efforts to secure their long-term retention.	Trees that appear to be retainable with an acceptable level of risk for 15-40 years. Trees that may only live between 15 and 40 more years. Trees that may live for more than 40 years but would be removed to allow the safe development of more suitable individuals. Trees that may live for more than 40 years but would be removed during the course of normal management for safety or nuisance reasons. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.	Trees that appear to be retainable with an acceptable level of risk for 5-15 years. Trees that may only live between 5 and 15 more years. Trees that may live for more than 15 years but would be removed to allow the safe development of more suitable individuals. Trees that may live for more than 15 years but would be removed during the course of normal management for safety or nuisance reasons. Storm damaged or defective trees that require substantial remedial work to make safe and are only suitable for retention in the short term.	Trees with a high level of risk that would need removing within the next 5 years. Dead trees. Trees that should be removed within the next 5 years. Dying or suppressed or declining trees through disease or inhospitable conditions. Dangerous trees through instability or recent loss of adjacent trees. Dangerous trees through structural defects, including cavities, decay, included bark, wounds, or poor form. Damaged trees that are considered unsafe to retain. Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting. Trees that will become dangerous after removal of trees for other reasons.

Tree Retention Value – Priority Matrix

		Landscape Significance Rating				
		1 (High)	2 (Medium)	3 (Low)	4 (Environmental Pest / Noxious Weed)	5 (Hazardous / Irreversible Decline)
Estimated Life Expectancy	Long (>40)	High - Priority for Retention	High - Priority for Retention	Medium - Consider for Retention	Low - Consider for Removal	Priority for Removal
	Medium (15-40)	High - Priority for Retention	Medium - Consider for Retention	Medium - Consider for Retention Low - Consider for Removal	Low - Consider for Removal	Priority for Removal
	Short (5-15)	Low - Consider for Removal	Low - Consider for Removal	Low - Consider for Removal	Priority for Removal	Priority for Removal
	Dead Or Hazardous (0-5)	Low - Consider for Removal	Priority for Removal	Priority for Removal	Priority for Removal	Priority for Removal

Legend for Matrix Assessment

High - Priority for Retention	These trees are considered important for retention and should be retained and protected. Design modification or re-location of buildings should be considered to accommodate the setbacks as prescribed by the Australian Standard AS4979 <i>Protection of trees on development sites</i> . Tree-sensitive construction must be implemented, e.g. pier and beam, etc if works are to proceed within the Tree Protection Zone
Medium - Consider for Retention	These trees may be retained and protected. These are considered less critical; however, their retention should remain a priority with removal considered only if adversely affecting the proposed building/works and all other alternatives have been considered exhausted.
Low - Consider for Removal	These trees are not 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.

15. Appendix B - Tree Assessment Schedule

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
139	<i>Lophostemon confertus</i>	Brushbox	1	24	31	2.9	26.1	2.0	9	5	Fair	Good	Mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment, Deadwood minor (<3cm diameter), Limited soil volume, Suppressed		Protected	Native	2 (Medium)	Low - Consider for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing
140	<i>Eucalyptus botryoides x saligna</i>	Hybrid Sydney Blue Gum	1	60	70	7.2	162.9	2.8	24	12	Good	Good	Mature	Medium (15-40)	Asymmetrical crown, Constrained growing environment, Deadwood minor (<3cm diameter), Limited soil volume		Protected	Indigenous	1 (High)	High - Priority for Retention	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing
141	<i>Lophostemon confertus</i>	Brushbox	1	36.62	38	4.4	60.7	2.2	8	6	Fair	Fair	Mature	Short (5-15)	Asymmetrical crown, Co-dominant stems, Included bark		Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (3.62%)	N	3.62	Minor	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
142	<i>Lophostemon confertus</i>	Brushbox	1	8	15	2.0	12.6	1.5	4	2	Fair	Poor	Semi-mature	Dead Or Hazardous/Re move (0-5)	Asymmetrical crown, Suppressed, Wound(s)		Exempt	Native	3 (Low)	Priority for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
143	<i>Lophostemon confertus</i>	Brushbox	1	20	25	2.4	18.1	1.8	9	3	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown		Protected	Native	2 (Medium)	Low - Consider for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
144	<i>Pittosporum undulatum</i>	Sweet Pittosporum	1	24	39	2.9	26.1	2.2	11	5	Fair	Fair	Mature	Short (5-15)	Asymmetrical crown, Crossing/rubbing branches, Wound(s)		Protected	Indigenous	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (23.12%) which enters the SRZ	Y	23.12	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
145	<i>Lophostemon confertus</i>	Brushbox	1	22	27	2.6	21.9	1.9	6	2	Fair	Poor	Semi-mature	Dead Or Hazardous/Re move (0-5)	Asymmetrical crown, Deadwood minor (<3cm diameter), Decay, Suppressed, Wound(s)		Protected	Native	3 (Low)	Priority for Removal	TPZ encroachment for building and hard landscape (19.37%) which enters the SRZ	Y	19.37	Major	Tree should be considered for removal irrespective of development due to its current condition and/or weed status.	Remove - irrespective		
146	<i>Lophostemon confertus</i>	Brushbox	1	45.35	47	5.4	93.0	2.4	9	5	Fair	Fair	Mature	Medium (15-40)	Asymmetrical crown, Constrained growing environment, Deadwood moderate (3-10cm diameter), Over-extended branch(es)		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (28.35%) which enters the SRZ	Y	100	Major	Tree is within the envelope for landscape and lift upgrade works. Tree will not tolerate root disturbance to this extent due to its already reduced health, even with encroachment mitigation measures.	Remove - project impacts		
152	<i>Lophostemon confertus</i>	Brushbox	1	43.14	51	5.2	84.2	2.5	9	6	Fair	Fair	Mature	Short (5-15)	Asymmetrical crown, Co-dominant stems, Constrained growing environment, Wound(s)		Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (70.64%) which enters the SRZ	Y	70.64	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
154	<i>Lophostemon confertus</i>	Brushbox	1	36	46	4.3	58.6	2.4	9	6	Poor	Fair	Mature	Short (5-15)	Asymmetrical crown, Constrained growing environment		Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (77.07%) which enters the SRZ	Y	77.07	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
156	<i>Lophostemon confertus</i>	Brushbox	1	40	46	4.8	72.4	2.4	7	8	Fair	Fair	Mature	Short (5-15)	Asymmetrical crown, Constrained growing environment, Deadwood moderate (3-10cm diameter), Over-extended branch(es)		Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (72.73%) which enters the SRZ	Y	72.73	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
157	<i>Lophostemon confertus</i>	Brushbox	1	21	28	2.5	20.0	1.9	9	5	Fair	Good	Semi-mature	Medium (15-40)	Wound(s)		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
160	<i>Agonis flexuosa</i>	Willow Myrtle	1	43	45	5.2	83.6	2.4	6	4	Fair	Poor	Mature	Short (5-15)	Asymmetrical crown, Cavity, Crack or split, Deadwood moderate (3-10cm diameter), Decay, Wound(s)	Wounding with decay on the northern side of the trunk.	Protected	Native	3 (Low)	Low - Consider for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
161	<i>Casuarina glauca</i>	Swamp Sheoak	1	25	36	3.0	28.3	2.2	12	4	Good	Good	Semi-mature	Medium (15-40)	Asymmetrical crown, Co-dominant stems		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
162	<i>Corymbia maculata</i>	Spotted Gum	1	12	16	2.0	12.6	1.5	8	3	Fair	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Resin/kino/sap flow, Suppressed		Protected	Native	2 (Medium)	Low - Consider for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
163	<i>Casuarina glauca</i>	Swamp Sheoak	1	27	34	3.2	33.0	2.1	14	5	Good	Good	Semi-mature	Medium (15-40)	Deadwood minor (<3cm diameter)		Protected	Indigenous	1 (High)	High - Priority for Retention	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
164	<i>Casuarina glauca</i>	Swamp Sheoak	1	18	29	2.2	14.7	2.0	12	3	Fair	Good	Semi-mature	Medium (15-40)	Asymmetrical crown, Co-dominant stems, Deadwood moderate (3-10cm diameter)		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
165	<i>Casuarina glauca</i>	Swamp Sheoak	1	24	36	2.9	26.1	2.2	12	3	Good	Good	Semi-mature	Medium (15-40)	Deadwood moderate (3-10cm diameter)		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
166	<i>Casuarina glauca</i>	Swamp Sheoak	1	22	35	2.6	21.9	2.1	9	4	Good	Fair	Semi-mature	Medium (15-40)	Asymmetrical crown, Co-dominant stems, Deadwood moderate (3-10cm diameter), Included bark		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (99.31%) which enters the SRZ	Y	99.31	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
167	Corymbia maculata	Spotted Gum	1	13	18	2.0	12.6	1.6	10	2	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Suppressed		Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
168	Casuarina glauca	Swamp Sheoak	1	37.22	51	4.5	62.7	2.5	12	6	Good	Fair	Semi-mature	Medium (15-40)	Asymmetrical crown, Included bark		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
169	Corymbia maculata	Spotted Gum	1	19	24	2.3	16.3	1.8	10	3	Good	Good	Semi-mature	Medium (15-40)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
172	Corymbia maculata	Spotted Gum	1	9	13	2.0	12.6	1.5	5	3	Fair	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment, Suppressed	Located in a thin gardenbed with >1m high retaining wall to the east. This position is unlikely to support the genetic growth potential of this tree.	Exempt	Indigenous	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
173	Corymbia maculata	Spotted Gum	1	24	36	2.9	26.1	2.2	11	5	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment, Deadwood moderate (3-10cm diameter), Lifting pavement	Located in a thin gardenbed with >1m high retaining wall to the east. This position is unlikely to support the genetic growth potential of this tree.	Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
174	Corymbia maculata	Spotted Gum	1	23	27	2.8	23.9	1.9	10	6	Fair	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Co-dominant stems, Constrained growing environment, Included bark, Lifting pavement	Located in a thin gardenbed with >1m high retaining wall to the east. This position is unlikely to support the genetic growth potential of this tree.	Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
175	Corymbia maculata	Spotted Gum	1	10	13	2.0	12.6	1.5	4	3	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment, Deadwood minor (<3cm diameter), Dieback, Epicormic shoots, Suppressed	Located in a thin gardenbed with >1m high retaining wall to the east. This position is unlikely to support the genetic growth potential of this tree.	Exempt	Indigenous	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
176	<i>Corymbia maculata</i>	Spotted Gum	1	23	30	2.8	23.9	2.0	11	5	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment, Deadwood minor (<3cm diameter), Lifting pavement	Located in a thin gardenbed with >1m high retaining wall to the east. This position is unlikely to support the genetic growth potential of this tree.	Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
177	<i>Lophostemon confertus</i>	Brushbox	1	22	31	2.6	21.9	2.0	6	3	Good	Fair	Semi-mature	Short (5-15)	Inappropriate location, Poor pruning	Topped at 2m. Located in a thin gardenbed.	Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
178	<i>Callistemon viminalis</i>	Weeping Bottlebrush	3	17.92	28	2.2	14.5	1.9	4	3	Good	Poor	Mature	Short (5-15)	Co-dominant stems, Deadwood minor (<3cm diameter), Epicormic shoots, Inappropriate location, Included bark, Poor pruning	Additional tree either side forming a hedge. Topped at 1.5m. Located in a thin gardenbed.	Exempt	Native	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
186	<i>Lophostemon confertus</i>	Brushbox	1	32	38	3.8	46.3	2.2	10	4	Fair	Good	Semi-mature	Medium (15-40)	Asymmetrical crown, Deadwood moderate (3-10cm diameter), Suppressed		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
187	<i>Macadamia tetraphylla</i>	Queensland Nut, Rough-shelled Bush Nut	1	20	25	2.4	18.1	1.8	7	4	Fair	Poor	Semi-mature	Medium (15-40)	Asymmetrical crown, Cavity, Co-dominant stems, Included bark, Wound(s)		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
188	<i>Banksia serrata</i>	Saw-tooth Banksia	1	17.03	30	2.0	13.1	2.0	5	4	Good	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Suppressed		Protected	Indigenous	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
189	<i>Eucalyptus saligna</i>	Sydney Blue Gum	1	45	50	5.4	91.6	2.5	21	8	Good	Good	Semi-mature	Long (>40)	Damaging kerb edge, Deadwood moderate (3-10cm diameter)		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
190	<i>Eucalyptus saligna</i>	Sydney Blue Gum	1	42	53	5.0	79.8	2.5	22	5	Good	Good	Semi-mature	Medium (15-40)	Deadwood moderate (3-10cm diameter)		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
195	<i>Eucalyptus botryoides</i>	Mahogany Gum	1	41	47	4.9	76.0	2.4	15	8	Good	Fair	Semi-mature	Medium (15-40)	Asymmetrical crown, Epicormic shoots, Lifting pavement, Suppressed		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (99.4%) which enters the SRZ	Y	99.4	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
196	<i>Eucalyptus botryoides</i>	Mahogany Gum	1	41	46	4.9	76.0	2.4	17	8	Good	Good	Semi-mature	Long (>40)	Deadwood moderate (3-10cm diameter), Epicormic shoots, Lifting pavement		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (98.97%) which enters the SRZ	Y	98.97	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
197	<i>Eucalyptus botryoides x saligna</i>	Hybrid Sydney Blue Gum	1	62	80	7.4	173.9	3.0	26	8	Good	Good	Semi-mature	Medium (15-40)	Deadwood moderate (3-10cm diameter), Lifting pavement, Wound(s)		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (87.21%) which enters the SRZ	Y	87.21	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
198	<i>Eucalyptus botryoides</i>	Mahogany Gum	1	28	33	3.4	35.5	2.1	15	6	Good	Good	Semi-mature	Medium (15-40)	Epicormic shoots, Lifting pavement		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
199	<i>Eucalyptus botryoides x saligna</i>	Hybrid Sydney Blue Gum	1	33	36	4.0	49.3	2.2	14	7	Good	Fair	Semi-mature	Medium (15-40)	Asymmetrical crown, Deadwood minor (<3cm diameter), Lifting pavement, Wound(s)		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
200	<i>Eucalyptus botryoides x saligna</i>	Hybrid Sydney Blue Gum	1	43	48	5.2	83.6	2.4	17	10	Good	Fair	Semi-mature	Medium (15-40)	Epicormic shoots, Lifting pavement, Wound(s)		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (98.71%) which enters the SRZ	Y	98.71	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
202	<i>Acmena smithii</i>	Common Lilly Pilly	6	7	20	2.0	12.6	1.7	3	2	Poor	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Co-dominant stems, Deadwood moderate (3-10cm diameter), Dieback	5 additional trees to the west	Exempt	Indigenous	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (95.33%) which enters the SRZ	Y	95.33	Major	Tree is within proposed new landscape elements including seating, paths and soft landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
203	<i>Podocarpus elatus</i>	Illawarra Plum	1	19	23	2.3	16.3	1.8	7	4	Good	Good	Semi-mature	Medium (15-40)	Asymmetrical crown, Included bark		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (88.22%) which enters the SRZ	Y	88.22	Major	Tree is within proposed new landscape elements including seating, paths and soft landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
204	<i>Podocarpus elatus</i>	Illawarra Plum	1	17	26	2.0	13.1	1.9	6	4	Good	Good	Semi-mature	Medium (15-40)	Asymmetrical crown		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (92.78%) which enters the SRZ	Y	92.78	Major	Tree is within proposed new landscape elements including seating, paths and soft landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
205	<i>Agonis flexuosa</i>	Willow Myrtle	1	37	40	4.4	61.9	2.3	6	3	Fair	Poor	Mature	Short (5-15)	Asymmetrical crown, Deadwood moderate (3-10cm diameter), Decay, Dieback, Fungal fruiting body(s), Wound(s)	Fruiting bodies on the tension side of the trunk at 1.5m	Protected	Native	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (99.51%) which enters the SRZ	Y	99.51	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
206	<i>Podocarpus elatus</i>	Illawarra Plum	1	25	30	3.0	28.3	2.0	11	3	Good	Good	Semi-mature	Medium (15-40)	Asymmetrical crown		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (92.97%) which enters the SRZ	Y	92.97	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
207	<i>Agonis flexuosa</i>	Willow Myrtle	1	46.04	52	5.5	95.9	2.5	7	6	Fair	Fair	Mature	Short (5-15)	Asymmetrical crown, Cavity, Deadwood moderate (3-10cm diameter), Decay, Wound(s)	Basal cavity	Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (80.27%) which enters the SRZ	Y	80.27	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		

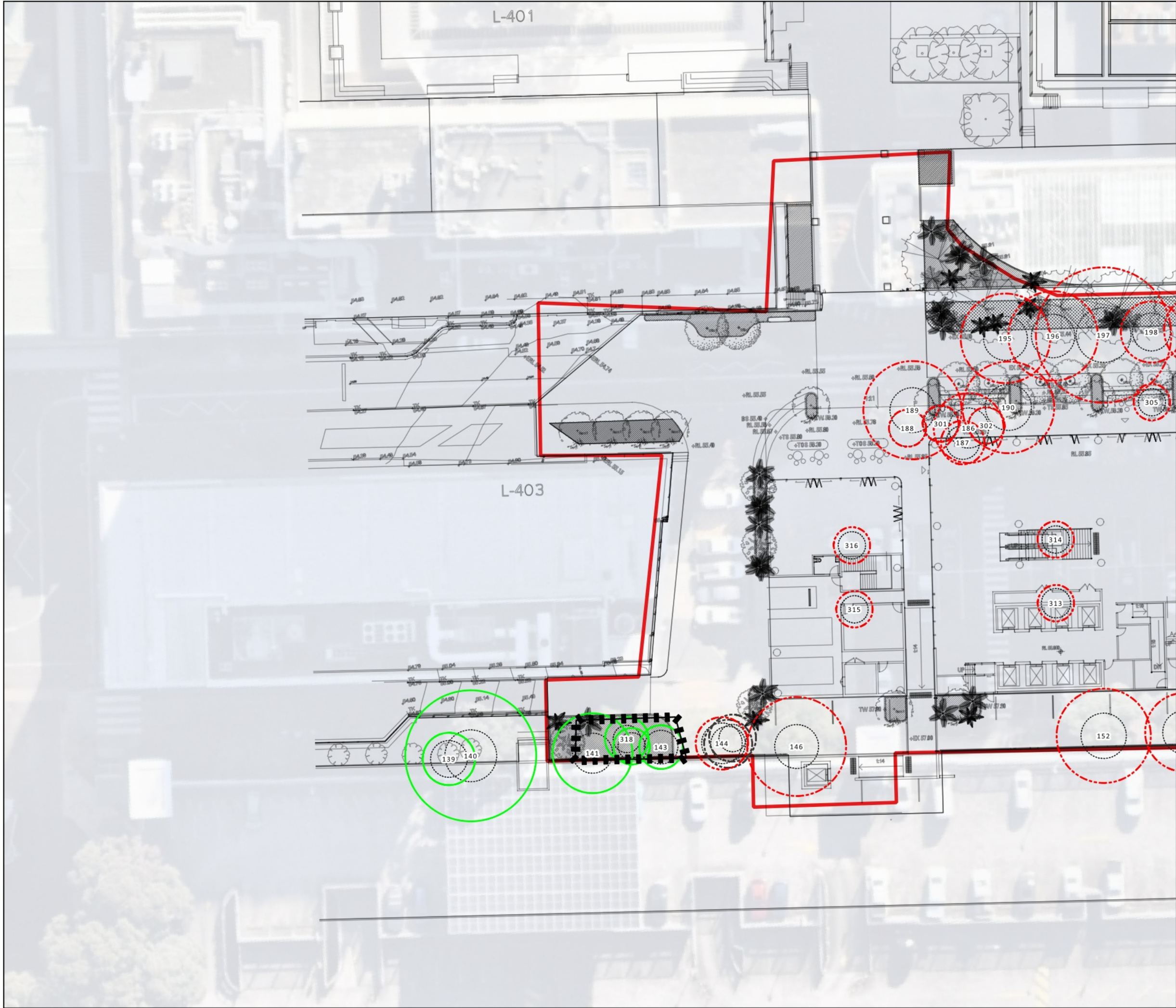
Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
208	<i>Agonis flexuosa</i>	Willow Myrtle	1	51	74	6.1	117.7	2.9	8	7	Fair	Fair	Mature	Medium (15-40)	Asymmetrical crown, Deadwood moderate (3-10cm diameter)		Protected	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (81.87%) which enters the SRZ	Y	81.87	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
209	<i>Podocarpus elatus</i>	Illawarra Plum	1	26	35	3.1	30.6	2.1	9	5	Good	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Girdling roots	Large girdling roots. Close proximity to the adjacent structure.	Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (79.12%) which enters the SRZ	Y	79.12	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
210	<i>Brachychiton acerifolius</i>	Illawarra Flame Tree	1	29	33	3.5	38.0	2.1	10	3	Good	Good	Semi-mature	Medium (15-40)	Constrained growing environment, Deadwood minor (<3cm diameter)		Protected	Native	1 (High)	High - Priority for Retention	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		Not required
301	<i>Banksia serrata</i>	Saw-tooth Banksia	1	15	27	2.0	12.6	1.9	7	2	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Deadwood minor (<3cm diameter), Suppressed		Protected	Indigenous	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
302	<i>Callistemon viminalis</i>	Weeping Bottlebrush	1	15	29	2.0	12.6	2.0	5	3	Fair	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Co-dominant stems, Suppressed	Codominant from ground level	Exempt	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
303	<i>Acmena smithii</i>	Common Lilly Pilly	1	13.45	21	2.0	12.6	1.7	4	2	Poor	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Co-dominant stems, Deadwood moderate (3-10cm diameter), Dieback, Suppressed		Exempt	Indigenous	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
304	<i>Tristaniaopsis laurina</i> 'Luscious'	Water Gum	1	3	7	2.0	12.6	1.5	3	2	Good	Good	Juvenile	Medium (15-40)			Exempt	Native	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		
305	<i>Corymbia maculata</i>	Spotted Gum	1	5	8	2.0	12.6	1.5	4	2	Good	Good	Juvenile	Medium (15-40)	Deadwood minor (<3cm diameter)		Exempt	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
306	<i>Eucalyptus saligna</i>	Sydney Blue Gum	1	15	18	2.0	12.6	1.6	6	4	Good	Poor	Semi-mature	Short (5-15)	Asymmetrical crown, Crossing/rubbing branches, Deadwood minor (<3cm diameter), Weak attachments	Poor establishment. No apical dominance.	Protected	Indigenous	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
307	<i>Eucalyptus saligna</i>	Sydney Blue Gum	1	21	27	2.5	20.0	1.9	13	4	Good	Good	Semi-mature	Medium (15-40)	Asymmetrical crown, Deadwood moderate (3-10cm diameter)		Protected	Indigenous	2 (Medium)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
308	<i>Eucalyptus saligna</i>	Sydney Blue Gum	1	24	31	2.9	26.1	2.0	13	4	Good	Good	Semi-mature	Medium (15-40)	Deadwood minor (<3cm diameter)		Protected	Indigenous	1 (High)	High - Priority for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree is within bulk earthworks and hard and soft landscape areas. The tree will be subject to unsustainable cut activities required to facilitate the project. Retention of this tree is not viable.	Remove - project impacts		
309	<i>Lophostemon confertus</i>	Brushbox	1	4	8	2.0	12.6	1.5	3	2	Fair	Good	Juvenile	Medium (15-40)			Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
310	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	10	12	2.0	12.6	1.5	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
311	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	12	14	2.0	12.6	1.5	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
312	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	13	17	2.0	12.6	1.6	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
313	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	10	18	2.0	12.6	1.6	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
314	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	9	14	2.0	12.6	1.5	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
315	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	8	12	2.0	12.6	1.5	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
316	<i>Cupaniopsis anacardioides</i>	Tuckeroo	1	8	10	2.0	12.6	1.5	3	2	Good	Fair	Juvenile	Medium (15-40)	Co-dominant stems, Constrained growing environment, Included bark		Exempt	Native	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
317	<i>Strelitzia nicolai</i>	Giant Bird of Paradise	1	21.54	0	2.6	21.0		6	3	Good	Good	Semi-mature	Dead Or Hazardous/Re move (0-5)	Asymmetrical crown	Located within close proximity to critical infrastructure.	Protected	Exotic	3 (Low)	Priority for Removal	TPZ encroachment for building and hard landscape (32.37%) which enters the SRZ	Y	32.37	Major	Tree should be considered for removal irrespective of development due to its current condition and/or weed status.	Remove - irrespective		
318	<i>Strelitzia nicolai</i>	Giant Bird of Paradise	1	20	0	2.4	18.1		4	1	Good	Good	Semi-mature	Short (5-15)	Asymmetrical crown		Exempt	Exotic	3 (Low)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (1.04%)	N	1.04	Minor	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
361	<i>Celtis sinensis</i>	Chinese Hackberry	2	6.32	11	2.0	12.6	1.5	6	3	Fair	Fair	Juvenile	Short (5-15)	Asymmetrical crown, Crossing/rubbing branches, Environmental/Declared Weed, Suppressed	Additional tree to the west	Protected	Exotic	4 (Environmental Pest / Noxious Weed)	Priority for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		TPZ Fencing and supervision of construction activities within the TPZ
362	<i>Casuarina glauca</i>	Swamp Sheoak	1	10	16	2.0	12.6	1.5	7	2	Poor	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Deadwood moderate (3-10cm diameter), Suppressed		Protected	Indigenous	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (86.1%) which enters the SRZ	Y	86.1	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
363	<i>Corymbia maculata</i>	Spotted Gum	1	11	15	2.0	12.6	1.5	7	2	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Deadwood minor (<3cm diameter), Suppressed		Protected	Native	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (79.6%) which enters the SRZ	Y	79.6	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		
364	<i>Caesalpinia ferrea</i>	Leopard Tree	1	2	3	2.0	12.6	1.5	2	2	Poor	Good	Juvenile	Short (5-15)	Asymmetrical crown, Constrained growing environment, Dieback		Exempt	Exotic	3 (Low)	Low - Consider for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		Not required
1114	<i>Caesalpinia ferrea</i>	Leopard Tree	1	29	40	3.5	38.0	2.3	12	6	Fair	Good	Mature	Medium (15-40)	Co-dominant stems, Constrained growing environment, Lifting pavement		Protected	Exotic	2 (Medium)	Medium - Consider for Retention	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		Not required
1116	<i>Caesalpinia ferrea</i>	Leopard Tree	1	9	13	2.0	12.6	1.5	5	4	Poor	Fair	Semi-mature	Short (5-15)	Asymmetrical crown, Co-dominant stems, Constrained growing environment		Protected	Exotic	3 (Low)	Low - Consider for Removal	No direct encroachment	N	0	Nil	No significant impact expected provided tree protection measures are installed and maintained during construction.	Retain - generic		Not required
1282	<i>Caesalpinia ferrea</i>	Leopard Tree	1	4.24	7	2.0	12.6	1.5	3	2	Fair	Good	Juvenile	Medium (15-40)	Asymmetrical crown, Co-dominant stems		Exempt	Exotic	3 (Low)	Medium - Consider for Retention	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	Tree is within proposed new landscape elements including soft and hard landscaping. This will require earthworks which will affect structural integrity and longevity. Tree not viable for retention.	Remove - project impacts		

Tree no.	Botanical Name	Common Name	Trees in group	DBH Total (cm)	DRB (cm)	Radial TPZ (m)	TPZ area (m2)	Radial SRZ (m)	Tree Height (m)	Canopy (m)	Vigour	Structural Condition	Age Class	ULE (Yrs.)	Observations	Comments	DCP Status	Origin	STARS Significance Rating	Retention Value	Encroachment into TPZ/SRZ	Within SRZ	Encroachment %	Encroachment Type	Likely Impact	Impact Assessment Recommendation	Impact Mitigation Measures (Generic Plus)	Tree Protection Measures
1390	Corymbia maculata	Spotted Gum	1	11	16	2.0	12.6	1.5	4	3	Fair	Good	Semi-mature	Short (5-15)	Asymmetrical crown, Asymmetrical root plate, Constrained growing environment, Deadwood minor (<3cm diameter), Epicormic shoots	Located in a thin gardenbed with >1m high retaining wall to the east. This position is unlikely to support the genetic growth potential of this tree.	Exempt	Indigenous	2 (Medium)	Low - Consider for Removal	TPZ encroachment for building and hard landscape (100.0%) which enters the SRZ	Y	100	Major	The tree falls within the development footprint or is subject to unsustainable excavation impacts, making retention unfeasible. In addition, grade changes are anticipated which have not yet been reviewed. Efforts to avoid the tree were considered, but site constraints necessitate removal. Offset planting will restore landscape character, enhancing ecological and aesthetic values in line with project goals.	Remove - project impacts		

16. Appendix C – Tree Protection Management Plan



REV	DESCRIPTION	DATE
A	DRAFT - NOT FOR CONSTRUCTION	06/11/2024
B	DRAFT - NOT FOR CONSTRUCTION	14/11/2024
C	DRAFT - NOT FOR CONSTRUCTION	28/11/2024
D	DRAFT - NOT FOR CONSTRUCTION	25/02/2025

NOTES:

© Canopy Consulting, 2023. All rights reserved. Intellectual property rights, including copyright, in the entire document and its parts, are held by Canopy Consulting. Reproduction, distribution, or use of any portion is strictly prohibited without prior written consent from Canopy Consulting or under prior contractual agreement.

- LEGEND
- TPZ - Recommendation
- Remove - irrespective
 - Remove - project impacts
 - Retain - generic
 - SRZ
- Tree Protection Measures
- TPZ Fencing

DRAWN: KH 5 0 5 10 m
DWG NO: TPMP.01
SCALE: 1:400 @A3

PROJECT:

G25 EDUCATION BUILDING

DWG:

TREE PROTECTION MANAGEMENT PLAN

CLIENT: UNSW
SITE: 8 HIGH STREET, KENSINGTON NSW 2031

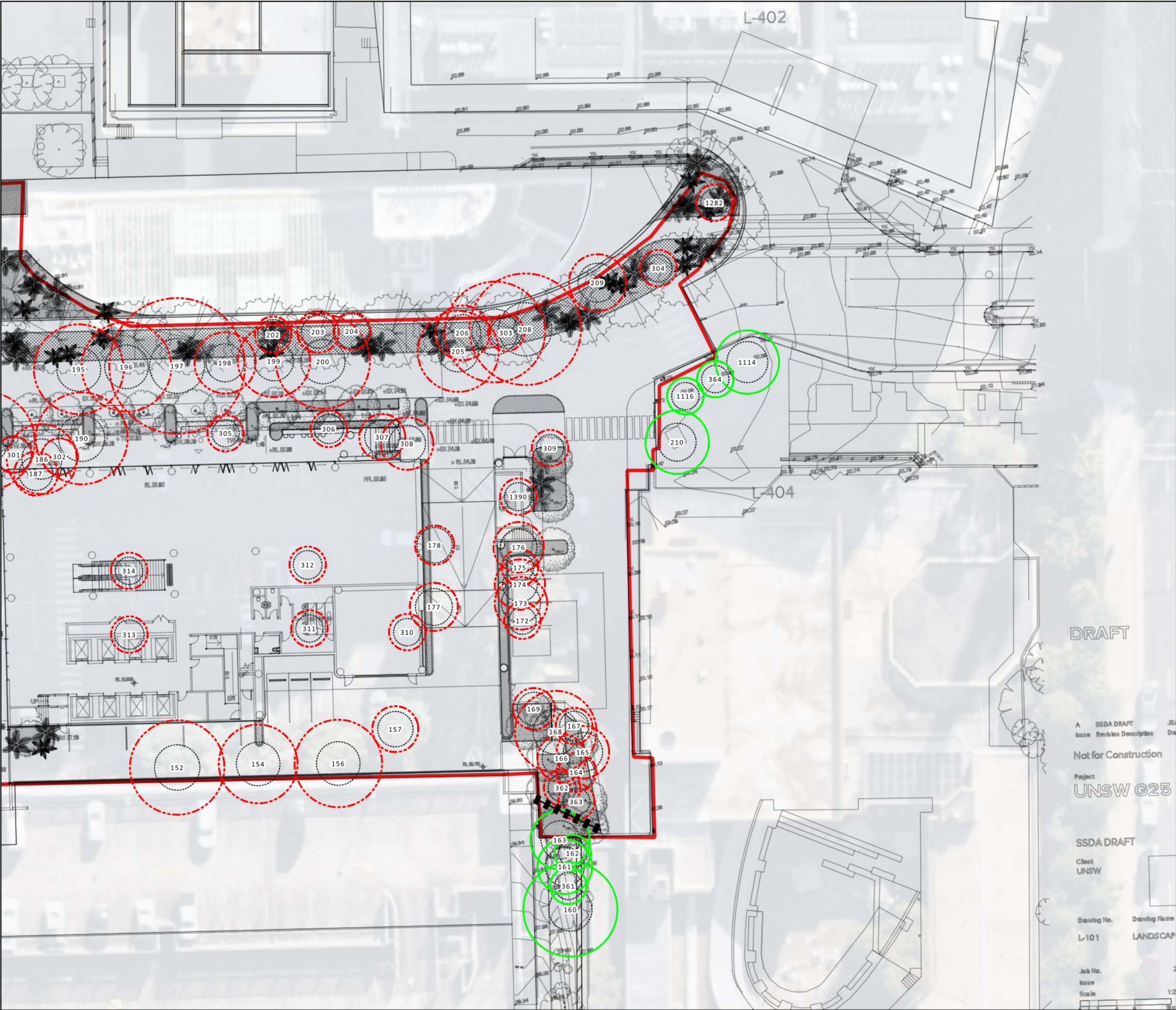
Suite 183, Unit 5,
7 Eden Park Drive,
Macquarie Park NSW 2113
E: info@canopyconsulting.com.au
P: 1300 1 CANOPY

canopy consulting

Tree_Id	Latin_Name	TPZ_Str Root Zone (SRZ) Radius [m]	TPZ_Tre Protecti Zone (TPZ) Radius [m]	Recommendation	Tree Protection Measures
140	Eucalyptus botryoides x saligna	2.85	7.2	Retain - generic	TPZ Fencing
139	Lophostemon confertus	2.02	2.88	Retain - generic	TPZ Fencing
141	Lophostemon confertus	2.2	4.39	Retain - generic	TPZ Fencing and supervision of construction activities within the TPZ
318	Strelitzia nicolai	1.5	2.4	Retain - generic	TPZ Fencing and supervision of construction activities within the TPZ
142	Lophostemon confertus	1.5	2	Retain - generic	TPZ Fencing and supervision of construction activities within the TPZ
143	Lophostemon confertus	1.85	2.4	Retain - generic	TPZ Fencing and supervision of construction activities within the TPZ
144	Pittosporum undulatum	2.23	2.88	Remove - project impacts	
145	Lophostemon confertus	1.91	2.64	Remove - irrespective	
317	Strelitzia nicolai	1.5	2.58	Remove - irrespective	
146	Lophostemon confertus	2.41	5.44	Remove - project impacts	
315	Cupaniopsis anacardioides	1.5	2	Remove - project impacts	
316	Cupaniopsis anacardioides	1.5	2	Remove - project impacts	
189	Eucalyptus saligna	2.47	5.4	Remove - project impacts	
188	Banksia serrata	2	2.04	Remove - project impacts	
301	Banksia serrata	1.91	2	Remove - project impacts	
186	Lophostemon confertus	2.2	3.84	Remove - project impacts	
187	Macadamia tetraphylla	1.85	2.4	Remove - project impacts	
152	Lophostemon confertus	2.49	5.18	Remove - project impacts	
313	Cupaniopsis anacardioides	1.61	2	Remove - project impacts	
314	Cupaniopsis anacardioides	1.5	2	Remove - project impacts	
190	Eucalyptus saligna	2.53	5.04	Remove - project impacts	
302	Callistemon viminalis	1.97	2	Remove - project impacts	
197	Eucalyptus botryoides x saligna	3.01	7.44	Remove - project impacts	
198	Eucalyptus botryoides	2.08	3.36	Remove - project impacts	
196	Eucalyptus botryoides	2.39	4.92	Remove - project impacts	
195	Eucalyptus botryoides	2.41	4.92	Remove - project impacts	

Tree_Id	Latin_Name	TPZ_Str Root Zone (SRZ) Radius [m]	TPZ_Tre Protecti Zone (TPZ) Radius [m]	Recommendation	Tree Protection Measures
---------	------------	---	---	----------------	--------------------------

REV	DESCRIPTION	DATE
A	DRAFT - NOT FOR CONSTRUCTION	06/11/2024
B	DRAFT - NOT FOR CONSTRUCTION	14/11/2024
C	DRAFT - NOT FOR CONSTRUCTION	28/11/2024
D	DRAFT - NOT FOR CONSTRUCTION	25/02/2025
NOTES: © Canopy Consulting, 2023. All rights reserved. Intellectual property rights, including copyright, in the entire document and its parts, are held by Canopy Consulting. Reproduction, distribution, or use of any portion is strictly prohibited without prior written consent from Canopy Consulting or under prior contractual agreement.		
DRAWN: KH DWG NO: TPMP.01		
PROJECT: G25 EDUCATION BUIDLING DWG: TREE PROTECTION MANAGEMENT PLAN		
CLIENT: UNSW SITE: 8 HIGH STREET, KENSINGTON NSW 2031		
Suite 183, Unit 5, 7 Eden Park Drive, Macquarie Park NSW 2113 E: info@canopyconsulting.com.au P: 1300 1 CANOPY 		



REV	DESCRIPTION	DATE
A	DRAFT - NOT FOR CONSTRUCTION	06/11/2024
B	DRAFT - NOT FOR CONSTRUCTION	14/11/2024
C	DRAFT - NOT FOR CONSTRUCTION	28/11/2024
D	DRAFT - NOT FOR CONSTRUCTION	25/02/2025

NOTES:

© Canopy Consulting, 2023. All rights reserved. Intellectual property rights, including copyright, in the entire document and its parts, are held by Canopy Consulting. Reproduction, distribution, or use of any portion is strictly prohibited without prior written consent from Canopy Consulting or under prior contractual agreement.

- LEGEND**
- TPZ - Recommendation
- Remove - project impacts
 - Retain - generic
 - SRZ
- Tree Protection Measures
- TPZ Fencing

DRAFT

DRAWN: KH **5 0 5 10 m**

DWG NO: TPMP.03

SCALE: 1:400 @A3

PROJECT:

G25 EDUCATION BUILDING

DWG:

TREE PROTECTION MANAGEMENT PLAN

CLIENT: UNSW

SITE: 8 HIGH STREET, KENSINGTON NSW 2031

Suite 183, Unit 5,
7 Eden Park Drive,
Macquarie Park NSW 2113
E: info@canopyconsulting.com.au
P: 1300 1 CANOPY

canopy consulting

Tree_Id	Latin_Name	TPZ_Str Root Zone (SRZ) Radius [m]	TPZ_Tre Protecti Zone (TPZ) Radius [m]	Recommendation	Tree Protection Measures
186	Lophostemon confertus	2.2	3.84	Remove - project impacts	
187	Macadamia tetraphylla	1.85	2.4	Remove - project impacts	
163	Casuarina glauca	2.1	3.24	Retain - generic	TPZ Fencing and supervision of construction activities within the TPZ
363	Corymbia maculata	1.5	2	Remove - project impacts	
362	Casuarina glauca	1.53	2	Remove - project impacts	
164	Casuarina glauca	1.97	2.16	Remove - project impacts	
166	Casuarina glauca	2.13	2.64	Remove - project impacts	
165	Casuarina glauca	2.15	2.88	Remove - project impacts	
168	Casuarina glauca	2.49	4.47	Remove - project impacts	
156	Lophostemon confertus	2.39	4.8	Remove - project impacts	
154	Lophostemon confertus	2.39	4.32	Remove - project impacts	
167	Corymbia maculata	1.61	2	Remove - project impacts	
152	Lophostemon confertus	2.49	5.18	Remove - project impacts	
157	Lophostemon confertus	1.94	2.52	Remove - project impacts	
169	Corymbia maculata	1.82	2.28	Remove - project impacts	
172	Corymbia maculata	1.5	2	Remove - project impacts	
173	Corymbia maculata	2.15	2.88	Remove - project impacts	
310	Cupaniopsis anacardioides	1.5	2	Remove - project impacts	
177	Lophostemon confertus	2.02	2.64	Remove - project impacts	
311	Cupaniopsis anacardioides	1.5	2	Remove - project impacts	
174	Corymbia maculata	1.91	2.76	Remove - project impacts	
175	Corymbia maculata	1.5	2	Remove - project impacts	
313	Cupaniopsis anacardioides	1.61	2	Remove - project impacts	
178	Callistemon viminalis	1.94	2.15	Remove - project impacts	
312	Cupaniopsis anacardioides	1.57	2	Remove - project impacts	
314	Cupaniopsis anacardioides	1.5	2	Remove - project impacts	
309	Lophostemon confertus	1.5	2	Remove - project impacts	
308	Eucalyptus saligna	2.02	2.88	Remove - project impacts	
307	Eucalyptus saligna	1.91	2.52	Remove - project impacts	
306	Eucalyptus saligna	1.61	2	Remove - project impacts	
190	Eucalyptus saligna	2.53	5.04	Remove - project impacts	
302	Callistemon viminalis	1.97	2	Remove - project impacts	
305	Corymbia maculata	1.5	2	Remove - project impacts	
207	Agonis flexuosa	2.51	5.52	Remove - project impacts	
208	Agonis flexuosa	2.92	6.12	Remove - project impacts	
205	Agonis flexuosa	2.25	4.44	Remove - project impacts	

Tree_Id	Latin_Name	TPZ_Str Root Zone (SRZ) Radius [m]	TPZ_Tre Protecti Zone (TPZ) Radius [m]	Recommendation	Tree Protection Measures
200	Eucalyptus botryoides x saligna	2.43	5.16	Remove - project impacts	
197	Eucalyptus botryoides x saligna	3.01	7.44	Remove - project impacts	
206	Podocarpus elatus	2	3	Remove - project impacts	
199	Eucalyptus botryoides x saligna	2.15	3.96	Remove - project impacts	
303	Acmena smithii	1.72	2	Remove - project impacts	
198	Eucalyptus botryoides	2.08	3.36	Remove - project impacts	
196	Eucalyptus botryoides	2.39	4.92	Remove - project impacts	
195	Eucalyptus botryoides	2.41	4.92	Remove - project impacts	
209	Podocarpus elatus	2.13	3.12	Remove - project impacts	
204	Podocarpus elatus	1.88	2.04	Remove - project impacts	
202	Acmena smithii	1.68	2	Remove - project impacts	
203	Podocarpus elatus	1.79	2.28	Remove - project impacts	
304	Tristaniopsis laurina 'Luscious'	1.5	2	Remove - project impacts	
1282	Caesalpinia ferrea	1.5	2	Remove - project impacts	
176	Corymbia maculata	2	2.76	Remove - project impacts	
1390	Corymbia maculata	1.53	2	Remove - project impacts	
210	Brachychiton acerifolius	2.08	3.48	Retain - generic	Not required
1116	Caesalpinia ferrea	1.5	2	Retain - generic	Not required
364	Caesalpinia ferrea	1.5	2	Retain - generic	Not required
1114	Caesalpinia ferrea	2.25	3.48	Retain - generic	Not required

REV	DESCRIPTION	DATE
A	DRAFT - NOT FOR CONSTRUCTION	06/11/2024
B	DRAFT - NOT FOR CONSTRUCTION	14/11/2024
C	DRAFT - NOT FOR CONSTRUCTION	28/11/2024
D	DRAFT - NOT FOR CONSTRUCTION	25/02/2025
NOTES: © Canopy Consulting, 2023. All rights reserved. Intellectual property rights, including copyright, in the entire document and its parts, are held by Canopy Consulting. Reproduction, distribution, or use of any portion is strictly prohibited without prior written consent from Canopy Consulting or under prior contractual agreement.		
DRAWN: KH DWG NO: TPMP.03		
PROJECT: G25 EDUCATION BUIDLING DWG: TREE PROTECTION MANAGEMENT PLAN		
CLIENT: UNSW SITE: 8 HIGH STREET, KENSINGTON NSW 2031		
Suite 183, Unit 5, 7 Eden Park Drive, Macquarie Park NSW 2113 E: info@canopyconsulting.com.au P: 1300 1 CANOPY		
		



canopy
consulting