ALLIED TREE CONSULTANCY

Level 5 and 8 Arboriculturist

Arboricultural Impact Assessment Report

For the site address

Austral Public School
LOT 1 DP 512119, LOT 865 DP 2475, LOT 1 DP 398105, LOT 1 DP 398106,
LOTS 1 & 2 DP 509613
205 Edmondson Avenue,
AUSTRAL, NSW

Prepared for

School Infrastructure
Department of Education NSW

AUTHOR

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STATUS

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REFERENCE D4894

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EXECUTIVE SUMMARY

This Arboricultural Impact Assessment is for the proposed activity at Austral Public School; Edmondson Road, Austral. This is prepared to support the proposed activity that forms part of a REF approval and involves upgrades to existing school infrastructure. The site contains one hundred and fifty-seven (157) trees located on, and adjacent to the lot, and discusses the viability of these trees based on the proposed works. The trees are a combination of remnant and planted where the remnant trees are classed as High significance based on the vegetation community to which they form. This community is classed as a Critically Endangered Environmental Community and is protected by commonwealth legislation.

In summary, the following trees (Trees No. 1-8, 14-21, 24, 26-52, 55-64, 66-87, 91-103, 108-112, 121-129, 131-141, 143-151, 154-156 and 158-167), one hundred and thirty-six (136) can be retained based on conditions assigned to the work methodology, while these remaining trees (Trees No. 53, 54, 65, 88-90, 104-107, 113-120, 152, 153, and 157), twenty-one (21) in total will require removal to accommodate the design.

No mitigation has been proposed for bushfire protection. In response to this report, the assigned contractor shall provide a Tree Management Plan to protect the trees during construction.

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1.0 Introduction

1.1 This Arboricultural Impact Assessment Report (AIA) has been prepared to support a Review of Environmental Factors (REF) for the Department of Education (DoE) for the upgrade of Austral Public School (APS) (the activity). The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37 of the T&I SEPP.

The proposed activity is for the upgrades to the existing APS at 205 Edmondson Avenue, Austral, NSW, 2179 (the site).

1.2 The purpose of this report is to determine the viability of the site trees based on the proposed design. This report includes one hundred and fifty-seven (157) trees located on and adjacent to the lot as described in Section 1.3. As part of this, the report shall address the:

- species' identification, location, dimensions, and condition;
- SULE (Safe Useful Life Expectancy) and STARS (Significance of a Tree Assessment Rating System) rating;
- discussion and impact of the proposed works on each tree;
- tree protection zones and protection specifications for trees recommended for retention.

1.3 Site Description

APS is located at 205 Edmondson Avenue, Austral, on the south-eastern corner of the intersection between Edmondson Avenue and Tenth Avenue, see Figure 1. The site has an area of 2.986 ha and comprises 6 allotments, legally described as:

- Lot 1 DP 398105
- Lot 1 DP 398106
- Lot 1 DP 509613
- Lot 1 DP 512119
- Lot 2 DP 509613
- Lot 865 DP2475

The site currently comprises an existing co-educational primary (K-6) public school with:

- 8 permanent buildings;
- 14 demountable structures;
- interconnected paths;

- covered walkways;
- play areas: and
- at-grade parking.

The Austral Community Pre-school is also located within the site.

The existing buildings are clustered in the northern part of the site, ranging between 1 to 2 stories in height. There is a sports oval in the southeastern portion of the site and a densely vegetated informal play area located in the southwestern portion of the site.

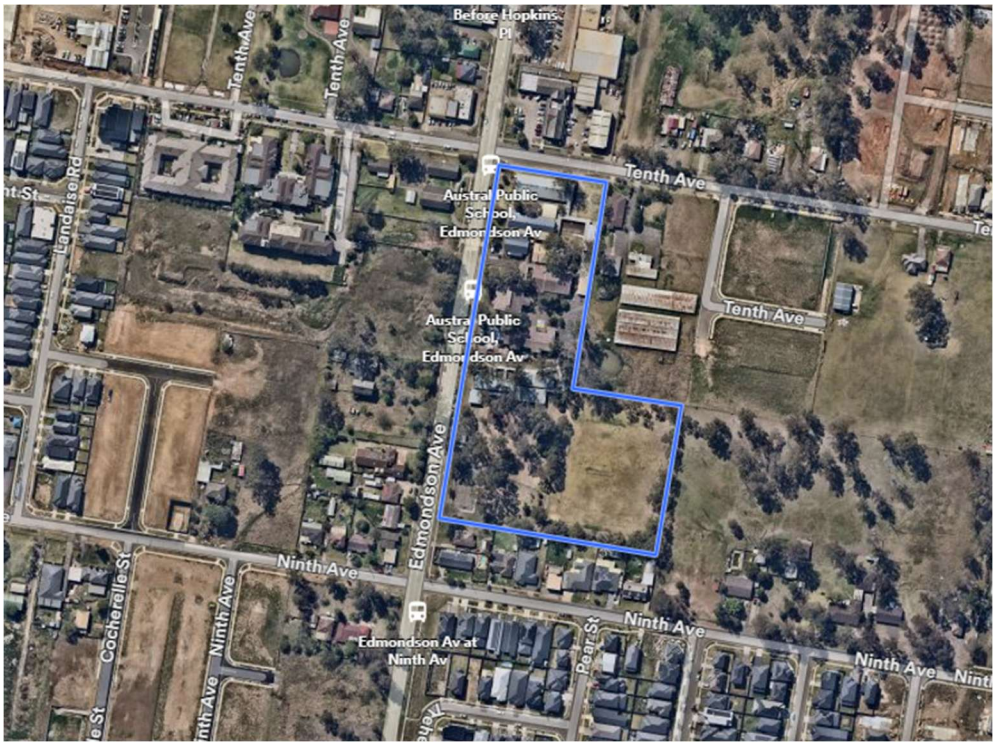


Figure 1: **Aerial image of site (Source: NearMap, taken 7 Sept 2023)**

1.4 Proposed Activity Decription

The proposed activity involves alterations and additions to the existing APS, including the following:

- Demolition of existing structures and removal of trees, as well as other site preparation works;
- The erection of a new 3-storey building comprising teaching spaces that includes 20 permanent teaching spaces and 3 support teaching spaces;
- Refurbishment and change of school function of Building I from classrooms to a Library;
- At-grade parking (57 new spaces, including 1 accessible space);
- New driveway and access gate from Edmondson Road;
- Erection of a substation within the site on the northern boundary;
- Upgrade of the sports field;
- Internal pathways, fencing, utility upgrades and associated works; and

- Off-site public domain improvements including retention and upgrading of the Kiss & Drop area and a temporary pedestrian road crossing on Tenth Avenue.

The intent of the activity is to allow for upgrades to APS that will provide a CORE 35 primary school compliant with the EFSG. The works will increase the capacity of the school from 681 students and 40 FTE teachers to 734 students and 64 FTE teachers, respectively. Furthermore, provision within the expanded 734 student capacity will be made for the creation of 30 support class students places. Figure 2 below shows the scope of works for the proposed activity.

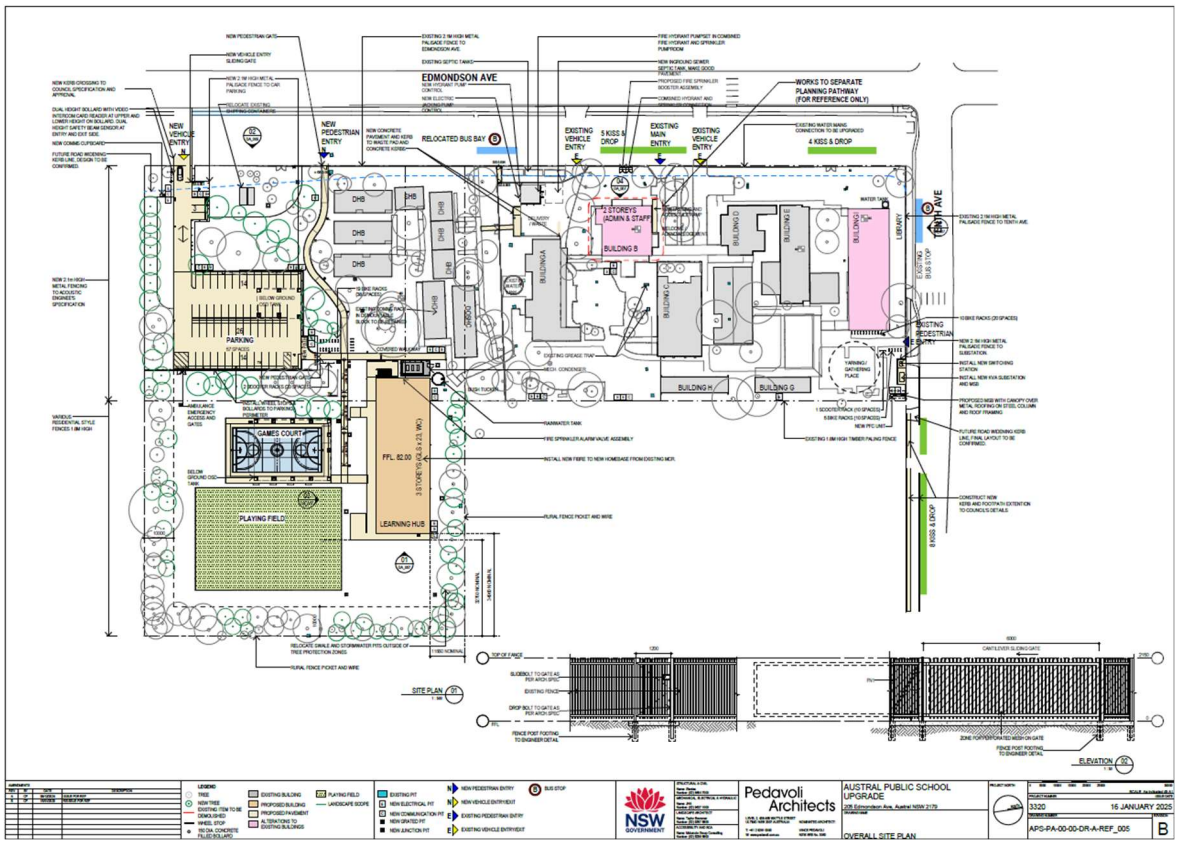


Figure 2: **Proposed Site Plan (Source: Pedavoli Architects, Overall Site Plan (Rev B)**

2.0 Standards

2.1 Allied Tree Consultancy provides an ethical and unbiased approach to all assignments, possessing no association with private utility arboriculture or organisations that may reflect a conflict of interest.

2.2 This report must be made available to all contractors during the tendering process so that any cost associated with the required works for the protection of trees can be accommodated.

2.3 It is the responsibility of the project manager to provide the requirements outlined in this report relative to the Protection Zones, Measures (Section 7.0) and Specifications (Section 8.0) to all contractors associated with the project before the initiation of work.

2.4 All tree-related work outlined in this report is to be conducted in accordance with the:

- Australian Standard – AS4373; Pruning of Amenity Trees.
- Guide to Managing Risks of Tree Trimming and Removal Work[1].
- All tree works must be carried out at a tertiary level (minimum Certificate-level 3) qualified and experienced (minimum five years) arboriculturist.
- For any works in the vicinity of electrical lines, the arboriculturist must possess the ISSC26 endorsement (Interim guide for operating cranes and plant in proximity to overhead powerlines).

2.5 As a minimum requirement, all trees recommended for retention in this report must have removed all deadwood, hangers and branch stubs to be pruned to the branch collar. This work must comply with the local government tree policy and Section 2.4.

2.6 Any tree stock subject to conditions for works carried out in this report must be supplied by a registered Nursery that adheres to the AS 2303; 2015[2].

- All tree stock must be of at least 'Advanced' size (minimum 75lt) unless otherwise requested.
- All tree stock requested must be planted with adequate protection. This may include tree guards (protect stem and crown) and if planted in a lawn area, a suitable barrier (planter ring) of an area, at least, $1m^2$ to prevent grass from growing within the area adjacent to the stem.

3.0 Disclosure Statement

Trees are living organisms and, for this reason, possess natural variability. This cannot be controlled. However, risks associated with trees can be managed. An arborist cannot guarantee that a tree will be safe under all circumstances, nor predict the time when a tree will fail. To live or work near a tree involves some degree of risk, and this evaluation does not preclude all the possibilities of failure.

[1] Safe Work Australia; July 2016; Guide to Managing Risks of Tree Trimming and Removal Work, Australia
[2] Australian Standard; 2015, AS2303, Tree stock for landscape use, Australia

4.0 Methodology

4.1 The following tree assessment was undertaken using criteria based on the guidelines issued by the International Society of Arboriculture.

4.2 The format of the report is summarised below;

4.2.1 Plans; Tree Location Relative to Site: These are unscaled plans reproduced from the Survey Plan as referenced in Section 4.4.1, depicting the area of assessment. The trees nominated for removal as part of this design have been incorporated in these plans.

4.2.2 Table 1; This table compiles the tree species, dimensions**,** brief assessment (history, structure, pest, disease or any other variables subject to the tree), significance, allocation of the zones of protection (i.e., Tree Protection Zone[3] ;TPZ and Structural Root Zone; SRZ) for each tree illustrated in Plan 1, Section 5.0. All measurements are in metres.

4.2.3 Discussion relating to the site assessment and proposed works regarding the trees.

4.2.4 Protection Specification; Section 8.0 details the requirements for that area designated as the Tree Protection Zone (TPZ), for those trees recommended for retention.

4.3 The opinions expressed in this report, and the material, upon which they are based, were obtained from the following process and data supplied:

4.3.1 Site assessment on the 29th July and the 2nd August 2022 using the method of the Visual Tree Assessment[4]. This has included a Level 2 risk assessment, being a *Basic Assessment*[5]. The assessment has been conducted Geoff Beisler[6] on behalf of *Allied Tree Consultancy*. This assessment formed part of a Preliminary Arboricultural Assessment Report, and assisted in identifying trees that are considered significant for the intent of retaining and designing around.

Tree removal since the initial assessment has been described in Section 7.0, and the Arborist statement issued, referenced in Section 4.4.5. These tree numbers have been retained in the plans, although

[3] Australian Standard, 4970; 2009 – Protection of Trees on Development Sites, Australia
[4] Mattheck, C. Breloer, H.,1994, The Body Language of Trees – A handbook for failure analysis The Stationary Office, London
[5] Dunster J.A., 2013, Tree Risk Assessment Manual, International Society of Arboriculture, 2013, USA
[6] Consulting Arborist, Diploma of Arboriculture (level 5)

highlighted (Section 5.0), and removed from Table 1, Section 6.0. That is, the tree numbering is no longer sequential.

4.3.2 Trees included in this report are those that conform to the description of a prescribed tree by the local government policy.

4.3.3 All measurements, unless specified otherwise are taken from the tree centre.

4.3.4 Tagging of trees with scribed aluminium tags nailed to the trees at chest level and facing the centre of the site.

4.3.5 Raw data from the preliminary assessment including the specimen's dimensions was compiled by the use of a diameter tape, height clinometer, angle finder, compass, steel probes, Teflon hammer, binoculars and recording instruments.

4.3.6 Plans 1-5, Sections 5.0-5.4, provide the location of each tree, with a corresponding number relative to Table 1 (Section 6.0) for means of interpretation within this report.

4.4 Documentation provided

The following documentation has been provided to Allied Tree Consultancy and utilised within the report.

4.4.1 Surveyor

Drawn by *Monteath and Powys*
Date: 24 May 2024
Reference: 22/0216
Drawing No: Sheets 1-7/7, revision 8

4.4.2 Design

Drawn by *Pedavoli Architects P/L*
Date: 16 January 2025
Reference: 3320
Drawing No: 24 Sheets; Revision B

4.4.3 Engineering

Drawn by *Stantec P/L*
Date: 17 January 2025
Reference: 304000720
Drawing No: (21 pages); Revision I

4.4.4 Document

Biodiversity Constraints Assessment
Author: *ERM*
Date: 20 January 2025
Project No. 0638451
Page number: 458 pages

4.4.5 Document

Bushfire Assessment Report
Author: *Blackash*
Date: 30 January 2025
Version: Vo.1
Page number: 43 pages

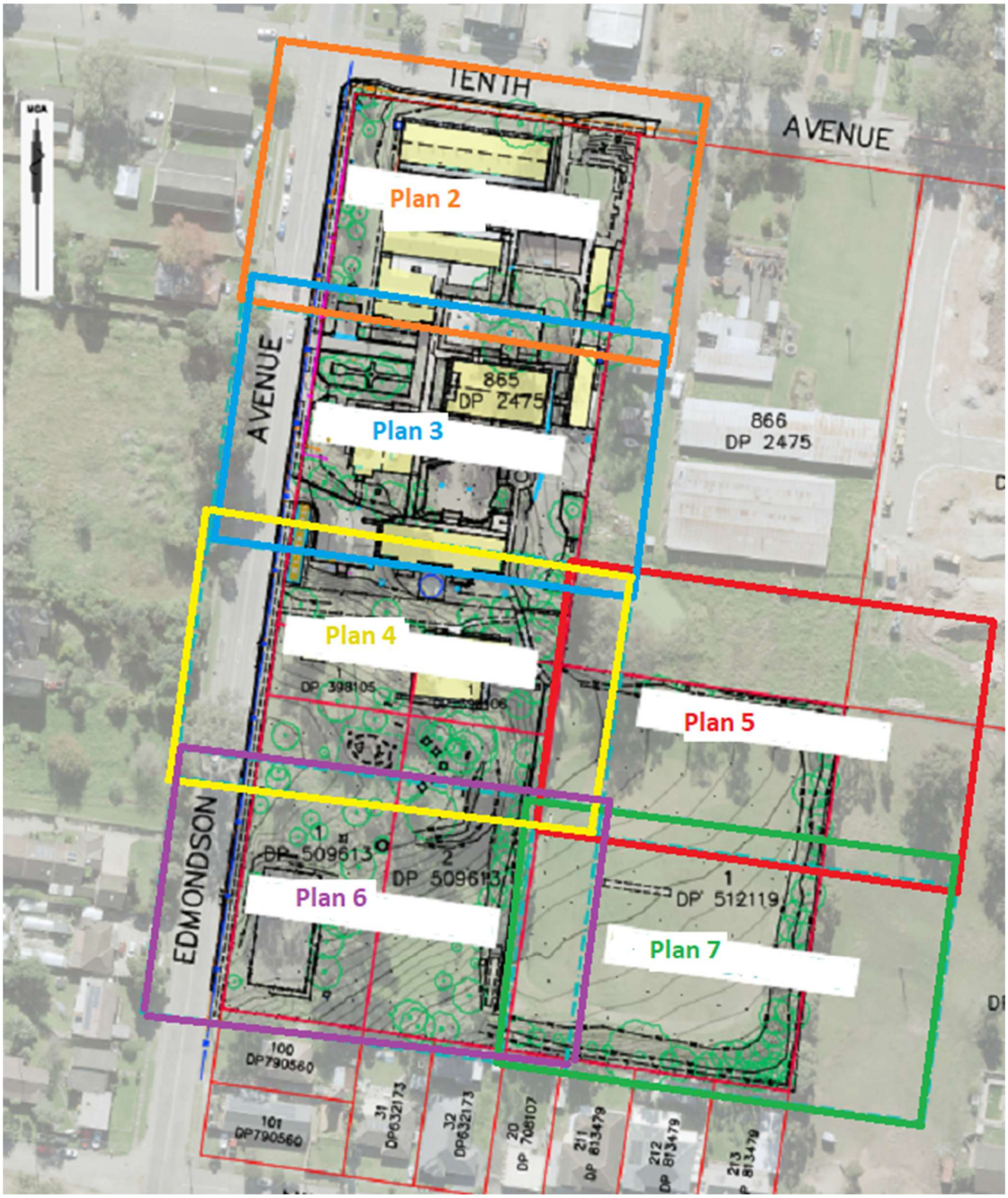
4.5 Limitations of the assessment/discussion process

4.5.1 The assessment has considered only those target zones that are apparent to the author and the visually apparent tree conditions, during the time of assessment.

4.5.2 Any tree regardless of apparent defects would fail if the forces applied to exceed the strength of the tree or its parts, for example, extreme storm conditions.

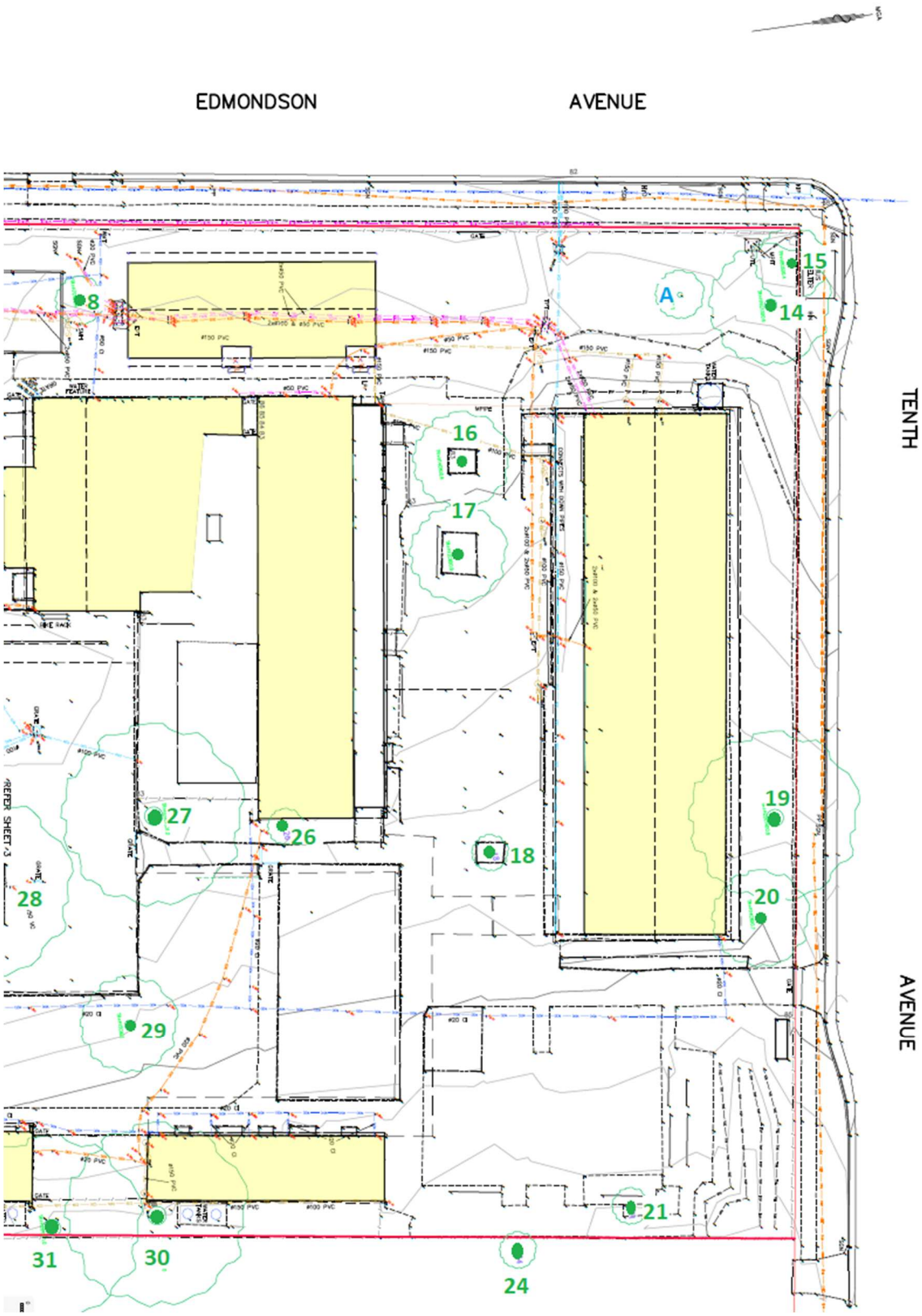
4.5.3 The assessment has been limited to that part of the tree which is visible, existing from the ground level to the crown. Root decay can exist and in some circumstances provide no symptoms of the presence. This assessment responds to all the symptoms provided by a tree, however, cannot provide a conclusive recommendation regarding any tree that may have extensive root decay that leads to windthrow without the appropriate symptoms.

5.0 Plan 1; Area of assessment



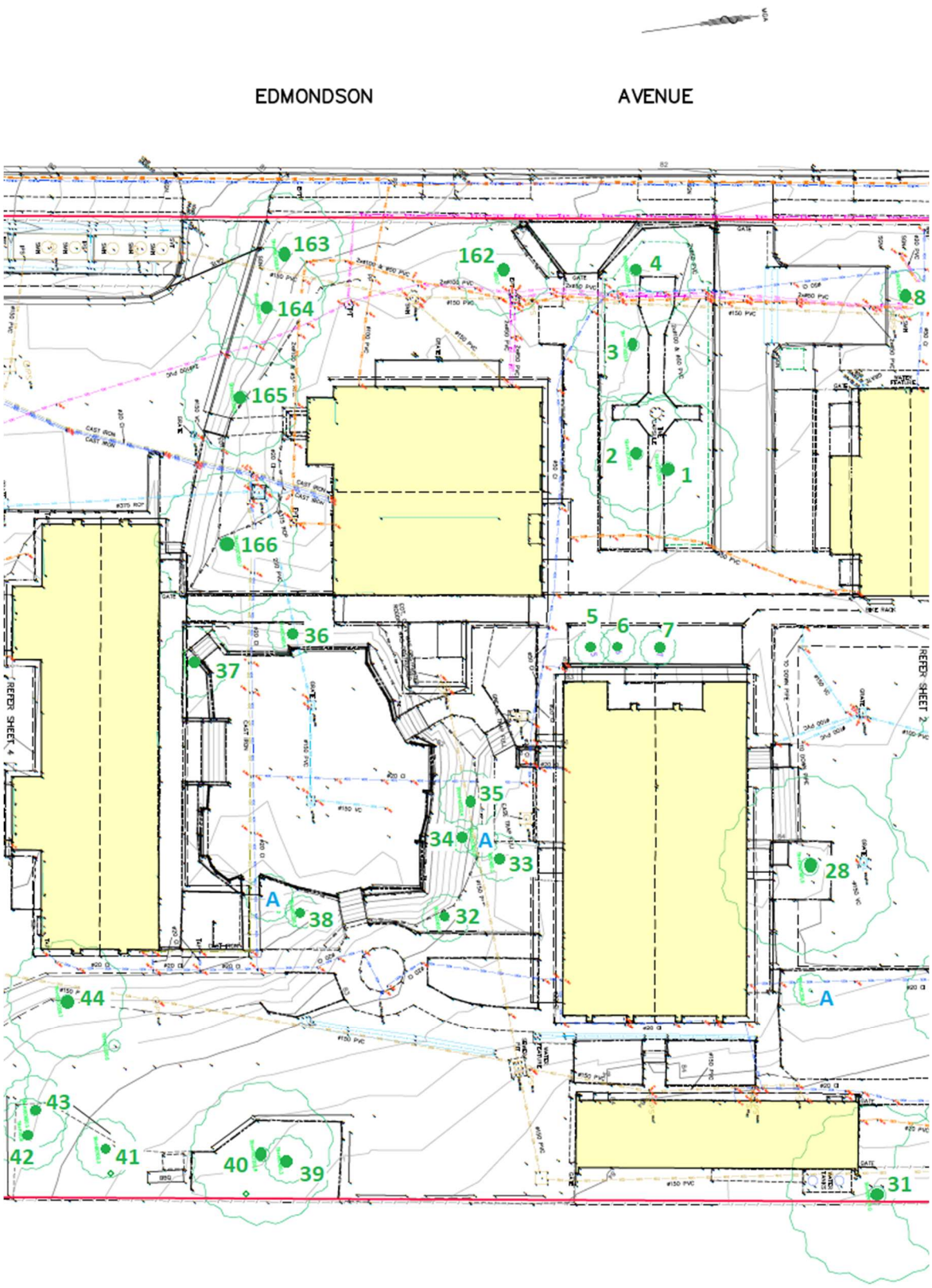
Not to scale
Source: Adapted from *Monteath and Powys P/L,* see Section 4.4.1

5.1 Plan 2; Area of assessment illustrating tree location



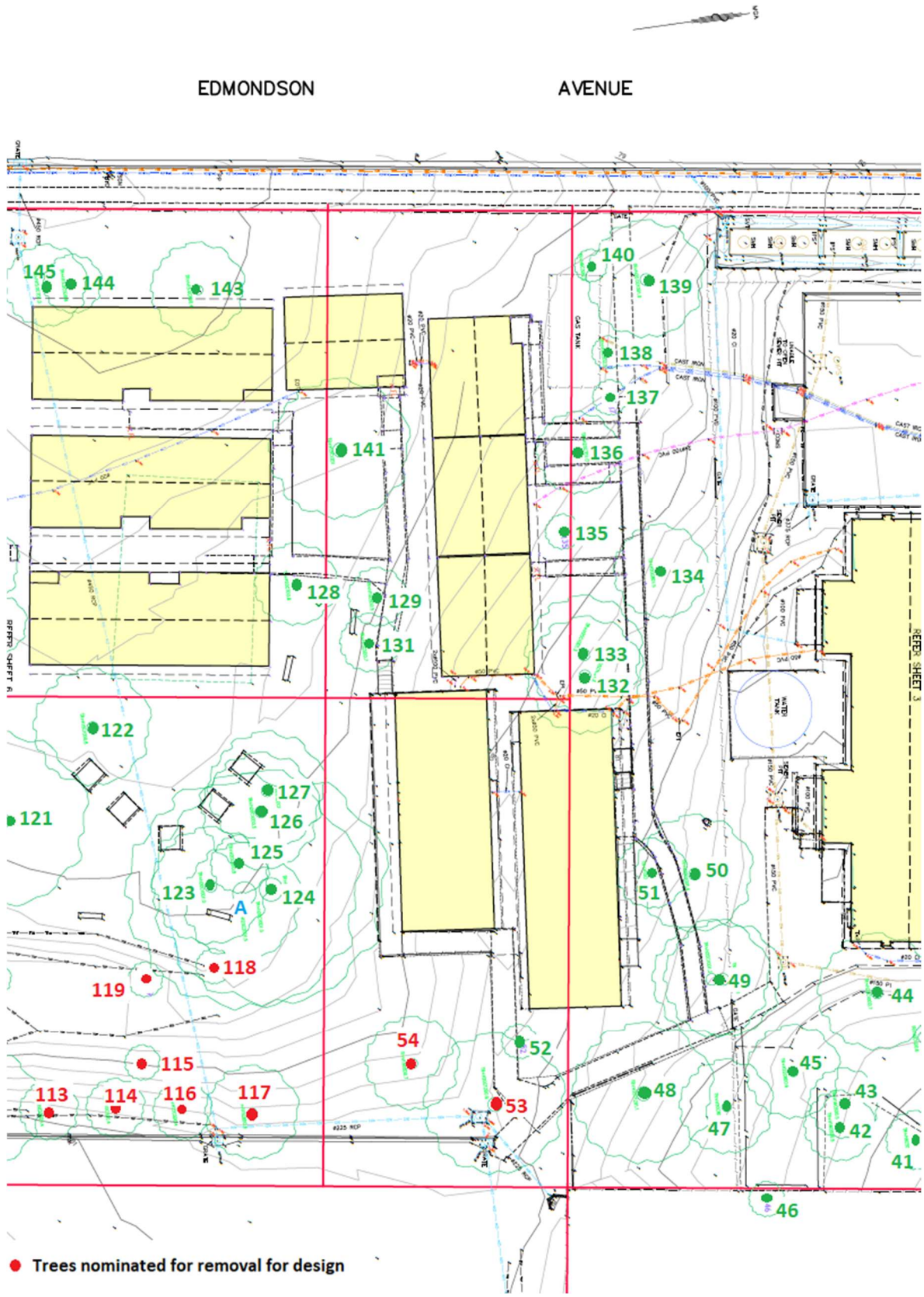
Not to scale.
Trees labelled A: are <5m see Section 8.0.
Source: Adapted from *Monteath and Powys,* see Section 3.5.1.

5.2 Plan 3; Area of assessment illustrating tree location



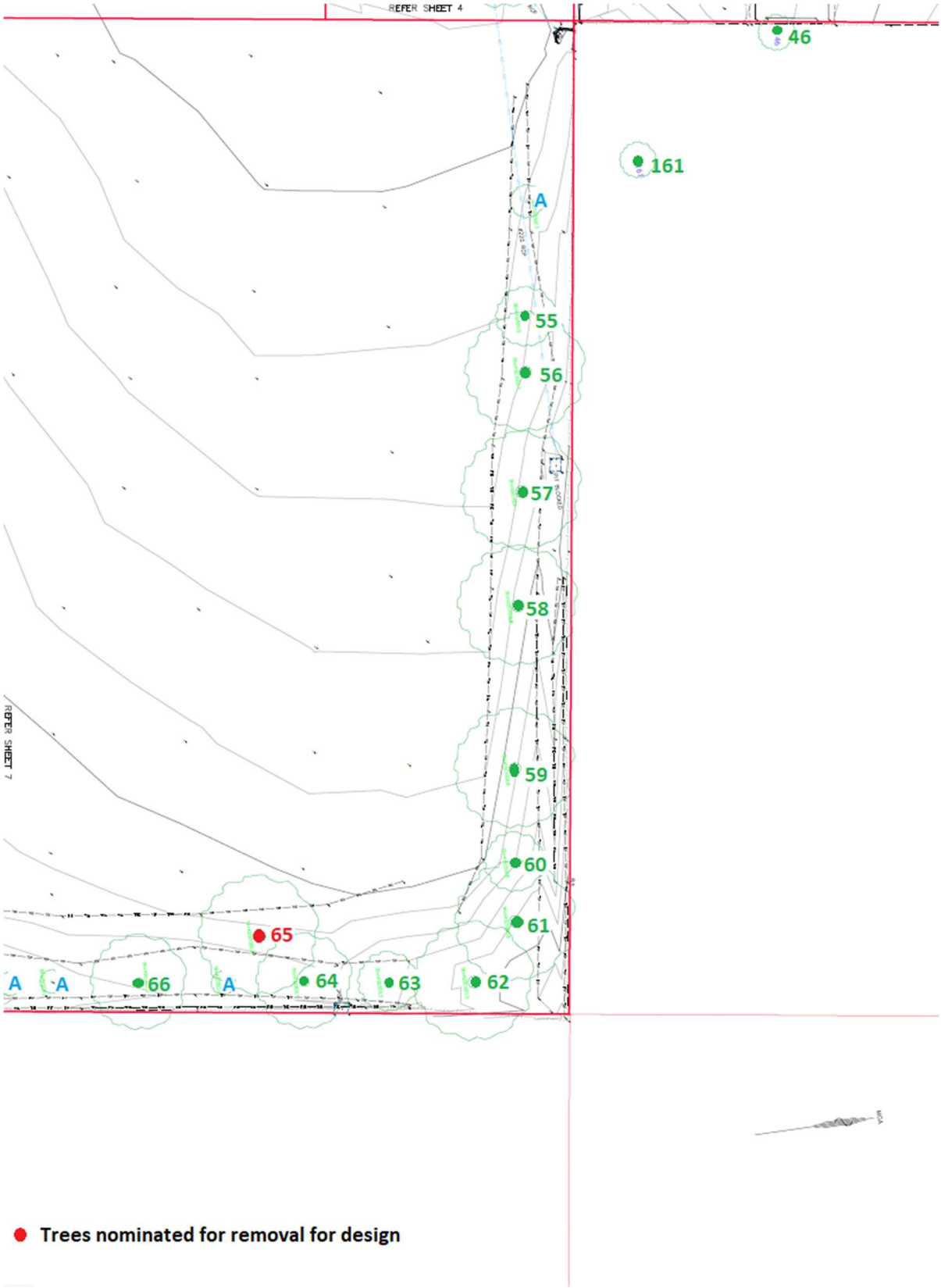
Not to scale.
Trees labelled A: are <5m see Section 8.0.
Source: Adapted from *Monteath and Powys,* see Section 3.5.1.

5.3 Plan 4; Area of assessment illustrating tree location



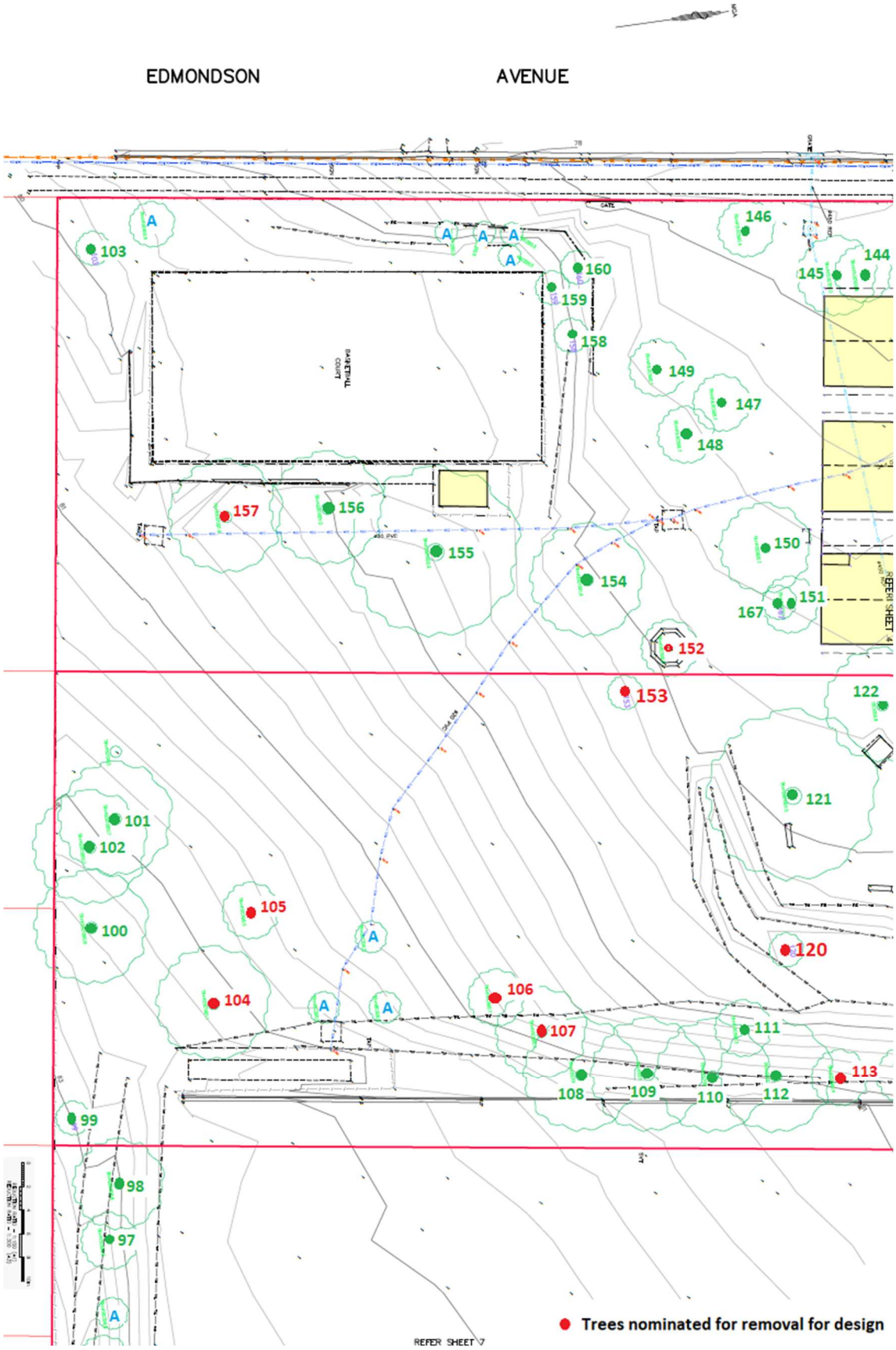
Not to scale.
Trees labelled A: are <5m see Section 8.0.
Source: Adapted from *Monteath and Powys,* see Section 3.5.1.

5.4 Plan 5; Area of assessment illustrating tree location



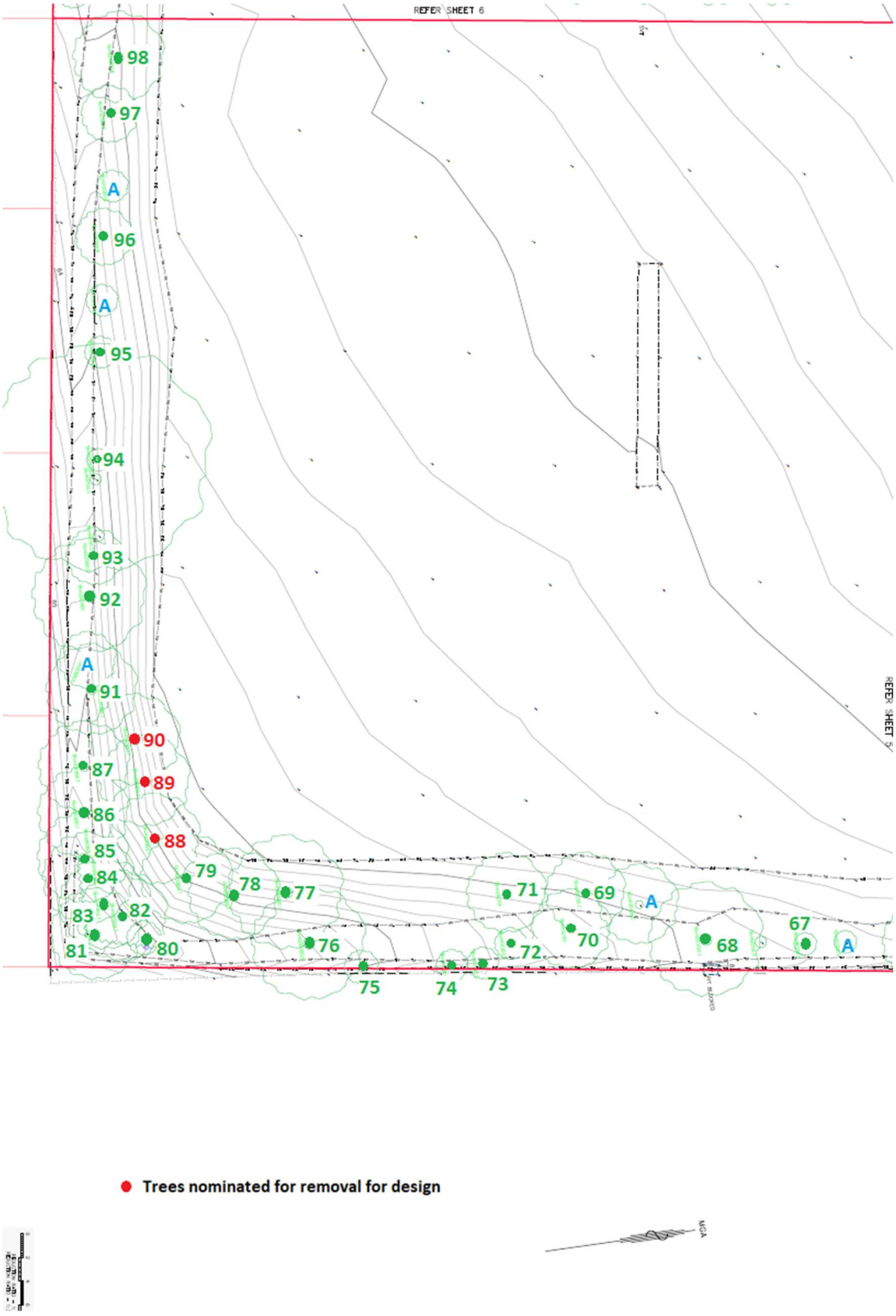
Not to scale.
Trees labelled A: are <5m see Section 8.0.
Source: Adapted from *Monteath and Powys,* see Section 3.5.1.

5.5 Plan 6; Area of assessment illustrating tree location



Not to scale.
Trees labelled A: are <5m see Section 8.0.
Source: Adapted from *Monteath and Powys,* see Section 3.5.1.

5.6 Plan 7; Area of assessment illustrating tree location



Not to scale.
Trees labelled A: are <5m see Section 8.0.
Source: Adapted from *Monteath and Powys,* see Section 3.5.1.

6.0 Table 1 – Tree Species Data

Terminology/references provided in Appendix A.

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
1	*Corymbia maculata* Spotted Gum	13	0.60	9 x 9	M	D	Sym	A	**1B**	**High**	**7.20**	**2.67**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
2	*Jacaranda mimosifolia* Jacaranda	7	0.45[B]	6 x 7	M	S	Sym	A	**2A**	**Medium**	**5.40**	**2.37**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
3	*Corymbia maculata* Spotted Gum	13	0.52	6 x 8	M	C	Sym	A	**1B**	**High**	**6.24**	**2.51**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
4	*Corymbia maculata* Spotted Gum	12	0.39	6 x 6	M	C	Sym	A	**1B**	**High**	**4.68**	**2.23**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
5	*Polyscias elegans* [A] Celery Wood	8	0.22	4 x 4	M	C	Sym	A	**1B**	**Medium**	**2.64**	**1.75**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
6	*Archontophoenix cunninghamiana* Bangalow Palm	9	0.22	3 x 3	M	C	Sym	A	**1A**	**Medium**	**2.64**	**1.75**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
7	*Archontophoenix cunninghamiana* Bangalow Palm	9	0.20	3 x 3	M	C	Sym	A	**1A**	**Medium**	**2.40**	**1.68**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
8	*Callistemon viminalis* Weeping Red Bottlebrush	5	0.37[B]	5 x 5	M	C	Sym	A	**2A**	**Medium**	**4.44**	**2.18**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
14	*Eucalyptus sideroxylon* Mugga Ironbark	9	0.53	6 x 6	M	D	Sym	A	**2A**	**Medium**	**6.36**	**2.53**
Assessment This tree presents as typical for the species, however the lower crown, northern side, has been lopped for power line clearance.											**Development Impact** See Section 7.2.1	
15	*Acacia spp.* Wattle[A]	4	0.27	4 x 4	M	I	N	A	**2D**	**Low**	**3.24**	**1.91**
Assessment This tree is impacting the adjacent bus stop and school fencing.											**Development Impact** See Section 7.2.1	
16	*Cupressus torulosa* Bhutan Cypress [A]	8	0.56	5 x 5	M	C	Sym	A	**2A**	**Medium**	**6.72**	**2.59**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
17	*Erythrina crista galli* Cocks Comb[A]	7	0.80[B,C]	9 x 9	M	C	Sym	-[D]	**2A**	**Low**	**9.60**	**3.01**
Assessment This deciduous tree was void of foliage, nullifying comments on vitality. Multiple large, open pruning wounds are present.											**Development Impact** See Section 7.2.1	
18	*Lophostemon confertus* Brush Box	6	0.40[B]	5 x 5	M	D	Sym	B	**3A**	**Low**	**4.80**	**2.25**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents decline. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	
19	*Eucalyptus moluccana* Grey Box	14	0.84	12 x 12	M	D	Sym	B	**2D**[C,E]	**High**	**10.08**	**3.08**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.1	
20	*Eucalyptus crebra* Narrow Leafed Ironbark	8	0.36 0.44	4 x 7	M	I	S	C	**3A**	**Low**	**6.82**	**2.61**
Assessment This tree presents excessive decline. This tree has been subjected to excessive crown lift pruning.											**Development Impact** See Section 7.2.1	
21	*Corymbia maculata* Spotted Gum	11	0.49	8 x 8	M	D	Sym	B	**2D**	**Medium**	**5.88**	**2.45**
Assessment This tree presents decline. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	
24	*Hymenosporum flavum* Native Frangipani	6	0.20[B,C]	2 x 2	M	C	Sym	C	**3A**	**Low**	**2.40**	**1.68**
Assessment This neighbouring tree presents excessive decline. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	
26	*Callistemon viminalis* Weeping Red Bottlebrush	5	0.14[B]	2 x 1	M	D	Sym	A	**3B**	**Low**	**1.68**	**1.45**
Assessment This tree is not suited to its location, excessive lopping events have to been undertaken to reduce conflicts with the surroundings.											**Development Impact** See Section 7.2.1	
27	*Eucalyptus microcorys* Tallowwood	19	0.76	11 x 13	M	D	Sym	A	**1B**	**High**	**9.12**	**2.95**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
28	*Eucalyptus microcorys* Tallowwood	21	0.89	13 x 13	M	D	Sym	A	**1B**[C]	**High**	**10.68**	**3.15**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents as typical for the species, however the assessment is greatly limited by the surrounding structures.											**Development Impact** See Section 7.2.1	
29	*Eucalyptus moluccana* Grey Box	18	0.99[B]	11 x 12	M	D	Sym	B	**2D**[C,E]	**High**	**11.88**	**3.30**
Assessment This tree presents significant decline. This tree has been subjected to excessive crown lift pruning. Significant excavation has been undertaken on the western side; this includes the SRZ.											**Development Impact** See Section 7.2.1	
30	*Eucalyptus moluccana* Grey Box	18	0.76	10 x 10	M	C	Sym	A, B	**2A**	**High**	**9.12**	**2.95**
Assessment This tree presents as typical for the species, however a building has been installed within the SRZ, western side. Minor decline is evident.											**Development Impact** See Section 7.2.1	
31	*Corymbia maculata* Spotted Gum	18	0.75[C]	9 x 10	M	C	Sym	A, B	**3D**[C,E]	**Low**[C,E]	**9.00**	**2.93**
Assessment This tree presents minor decline. An aged pruning wound (stub) is located at 1.7m, northern side, a small associated cavity is present and apparent swelling is evident below. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue. A large, longitude wound on the lower half of the tree, northern side, presents the suggestion of fungal fruiting bodies at 8m, however this is somewhat obscured by decorticating bark. This tree would also require level 3 assessment (aerial assessment) to provide further details.											**Development Impact** See Section 7.2.1	
32	*Casuarina glauca* Swamp Sheoak[A]	7	0.17	3 x 3	M	C	Sym	A	**1B**	**Medium**	**2.04**	**1.57**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
33	*Casuarina glauca* Swamp Sheoak[A]	8	0.24	4 x 4	M	C	Sym	A	**2A**	**Medium**	**2.88**	**1.82**
Assessment This tree presents as typical for the species however is impacting adjacent building.											**Development Impact** See Section 7.2.1	
34	*Casuarina glauca* Swamp Sheoak[A]	5	0.14	4 x 2	Y	I	N	A	**1B**	**Medium**	**1.68**	**1.45**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
35	*Allocasuarina torulosa* Forest Oak	10	0.32	5 x 5	M	D	Sym	A	**1A**	**High**	**3.84**	**2.05**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
36	*Callistemon viminalis* Weeping Red Bottlebrush	6	0.34[B]	5 x 4	M	D	E	A	**2A**	**Medium**	**4.08**	**2.10**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
37	*Schefflera actinophylla* Queensland Umbrella Tree	10	0.55[B]	4 x 5	M	D	Sym	A	**3B**	**Low**	**6.60**	**2.57**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
38	*Melaleuca quinquenervia* Broad Leaf Paperbark	5	0.17	2 x 2	Y	D	Sym	A	**1B**	**Medium**	**2.04**	**1.57**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
39	*Grevillia robusta* Silky Oak	9	0.26	4 x 4	M	I	Sym	A	**2D**	**Medium**	**3.12**	**1.88**
Assessment This tree presents as typical for the species, however a branch from tree No. 40 is generating a large and ongoing abrasion wound.											**Development Impact** See Section 7.2.1	
40	*Eucalyptus moluccana* Grey Box	20	0.86	12 x 12	M	D	Sym	A	**1B**	**High**	**10.32**	**3.11**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
41	*Eucalyptus moluccana* Grey Box	8	0.22	5 x 4	M	I	N	A	**2A**	**High**	**2.64**	**1.75**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
42	*Eucalyptus moluccana* Grey Box	20	0.44	7 x 8	M	C	E	B	**2D**	**High**	**5.28**	**2.34**
Assessment This tree presents decline, upper crown.											**Development Impact** See Section 7.2.1	
43	*Eucalyptus scoparia* Wallangarra White Gum[A]	11	0.31	6 x 6	M	I	Sym	A	**2D**[C,E]	**Medium**	**3.72**	**2.02**
Assessment This tree presents some apparent swelling, lower stem, Resonance sounding suggests a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the apparent internal issue.											**Development Impact** See Section 7.2.1	
44	*Eucalyptus moluccana* Grey Box	20	0.66	9 x 10	M	D	N	A, B	**2A**	**High**	**7.92**	**2.78**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.1	
45	*Eucalyptus moluccana* Grey Box	20	0.60	7 x 7	M	C	S	B	**3D**[C,E]	**Medium**	**7.20**	**2.67**
Assessment This tree presents swelling in the lower stem; resonance sounding suggests a cavity. This tree has been subjected to excessive crown lift pruning and significant decline is evident. An apparent small cavity is located at 6m, northern side, and further wounding is evident at 8m, however mostly obscured by decorticating bark. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue, and also level 3 assessment (aerial assessment).											**Development Impact** See Section 7.2.1	
46	*Eucalyptus moluccana* Grey Box	11	0.30[C]	5 x 5	M	C	Sym	A	**1B**	**High**	**3.60**	**2.00**
Assessment This neighbouring tree presents as typical for the species. No tree tag could be installed; the tag has been attached to the school boundary fence adjacent the tree. Another mature specimen of the same species is located immediately behind this											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
tree, however its protection zones are protected by/. Consumed by those of this tree, and therefore has not been included. Not located on the survey supplied.												
47	*Eucalyptus moluccana* Grey Box	12	0.43	4 x 4	M	C	Sym	B	**2D**	**High**	**5.16**	**2.32**
Assessment This tree presents decline, upper crown.											**Development Impact** See Section 7.2.1	
48	*Eucalyptus moluccana* Grey Box	12	0.54	6 x 4	M	C	S	B	**2D**	**High**	**6.48**	**2.55**
Assessment This tree presents a large open wound on the lower stem, western side. Decline is evident, upper crown.											**Development Impact** See Section 7.2.1	
49	*Eucalyptus moluccana* Grey Box	15	0.63	8 x 6	M	C	Sym	B	**2D**[C,E]	**High**	**7.56**	**2.73**
Assessment This tree presents decline, upper crown. Swelling is evident in the lower stem; resonance sounding indicates a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
50	*Eucalyptus moluccana* Grey Box	15	0.47 0.46	9 x 7	M	C	NW	A, B	**2D**[C,E]	**High**	**7.89**	**2.78**
Assessment This tree presents minor decline. Composed of 2 stems at the base, the union appears sound. An occluded, vertical wound is located on the lower northern stem, western side; resonance sounding indicates a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
51	*Eucalyptus moluccana* Grey Box	13	0.38	6 x 4	M	I	S	B	**2D**[C,E]	**High**	**4.56**	**2.20**
Assessment This tree presents an open wound on the lower stem, eastern side, swelling is evident. Resonance sounding indicates a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
52	*Eucalyptus moluccana* Grey Box	8	0.29	6 x 4	M	D	Sym	A, B	**2A**	**High**	**3.48**	**1.97**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.4	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
53	*Eucalyptus moluccana* Grey Box	10	0.35	4 x 4	M	D	S	B	**2D**	**Medium**	**4.20**	**2.13**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.3	
54	*Eucalyptus microcorys* Tallowwood	6	0.24	4 x 4	Y	D	Sym	A	**1B**	**High**	**2.88**	**1.82**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	
55	*Eucalyptus microcorys* Tallowwood	7	0.21	3 x 3	Y	C	Sym	A	**1B**	**Medium**	**2.52**	**1.72**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
56	*Eucalyptus microcorys* Tallowwood	7	0.31	4 x 4	M	C	Sym	B	**2D**	**Low**	**3.72**	**2.02**
Assessment This tree presents significant decline.											**Development Impact** See Section 7.2.4	
57	*Corymbia maculata* Spotted Gum	10	0.41	7 x 7	M	C	Sym	B	**2A**	**Medium**	**4.92**	**2.28**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.5	
58	*Corymbia maculata* Spotted Gum	10	0.37	6 x 6	M	C	Sym	A	**1B**	**High**	**4.44**	**2.18**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.5	
59	*Eucalyptus amplifolia* Cabbage Gum[A]	7	0.34 0.20	6 x 6	M	C	Sym	A,B	**2A/2D**	**Medium**	**4.73**	**2.24**
Assessment This tree presents minor decline, lower decline.											**Development Impact** See Section 7.2.5	
60	*Eucalyptus amplifolia* Cabbage Gum[A]	8	0.28	4 x 2	M	C	Sym	C	**3A**	**Low**	**3.36**	**1.94**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents excessive decline.											**Development Impact** See Section 7.2.4	
61	*Eucalyptus amplifolia* Cabbage Gum[A]	10	0.35	5 x 5	M	I	Sym	A	**2A**	**High**	**4.20**	**2.13**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
62	*Eucalyptus microcorys* Tallowwood	11	0.42 0.44	9 x 8	M	D	Sym	C	**3A**	**Low**	**7.30**	**2.69**
Assessment This tree presents excessive decline.											**Development Impact** See Section 7.2.4	
63	*Grevillia robusta* Silky Oak	7	0.18	2 x 2	M	I	Sym	B	**2D**	**Low**	**2.16**	**1.61**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.4	
64	*Lophostemon confertus* Brush Box	8	0.21 0.25	4 x 4	M	I	Sym	A	**1B**	**High**	**3.92**	**2.07**
Assessment This tree contains an acute angle union at the base; the bark is included, however appears sound.											**Development Impact** See Section 7.2.5	
65	*Eucalyptus tereticornis* Forest Red Gum	12	0.39	6 x 5	M	D	Sym	B	**2D**	**Medium**	**4.68**	**2.23**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.3	
66	*Eucalyptus microcorys* Tallowwood	12	0.66	8 x 8	M	D	Sym	B	**3D**	**Low**	**7.92**	**2.78**
Assessment This tree presents excessive decline.											**Development Impact** See Section 7.2.4	
67	*Eucalyptus nicholii* Black Peppermint[A]	5	0.17	2 x 2	Y	I	N	B	**2D**	**Low**	**2.04**	**1.57**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
68	*Eucalyptus microcorys* Tallowwood	10	0.54	10 x 10	M	D	Sym	A	**2A**	**Medium**	**6.48**	**2.55**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.1	
69	*Eucalyptus saligna x botryoides* Wollongong Woollybutt[A]	10	0.34	5 x 5	M	C	Sym	A	**1B**	**Medium**	**4.08**	**2.10**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.5	
70	*Eucalyptus scoparia* Wallangarra White Gum	8	0.22 0.18	4 x 4	M	I	E	A	**2A**	**Medium**	**3.41**	**1.95**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
71	*Eucalyptus saligna x botryoides* Wollongong Woollybutt[A]	9	0.30	7 x 6	M	C	Sym	A	**1B**	**Medium**	**3.60**	**2.00**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
72	*Lophostemon confertus* Brush Box	6	0.08 0.08	2 x 2	Y	I	Sym	A,B	**2D**	**Low**	**1.36**	**1.33**
Assessment This tree contains an acute angle union at the base; the bark is included, however appears sound. Minor decline is evident.											**Development Impact** See Section 7.2.1	
73	*Corymbia maculata* Spotted Gum	7	0.10	1 x 1	Y	I	Sym	A	**1B**	**Medium**	**1.20**	**1.26**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
74	*Corymbia maculata* Spotted Gum	9	0.14	2 x 2	Y	I	Sym	A	**1B**	**Medium**	**1.68**	**1.45**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
75	*Corymbia maculata* Spotted Gum	7	0.14	2 x 2	Y	I	E	A	**2A**	**Medium**	**1.68**	**1.45**
Assessment This tree presents as typical for the species however swelling is evident surrounding a wound instigated by the attachment of fencing wire, installed at 1.7m.											**Development Impact** See Section 7.2.1	
76	*Eucalyptus microcorys* Tallowwood	9	0.46	8 x 8	M	C	NE	B	**2D**	**Medium**	**5.52**	**2.39**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.1	
77	*Eucalyptus microcorys* Tallowwood	10	0.28	6 x 6	M	C	Sym	A, B	**2A**	**Medium**	**3.36**	**1.94**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.4	
78	*Eucalyptus microcorys* Tallowwood	8	0.26	6 x 6	M	C	Sym	A	**2A**	**Medium**	**3.12**	**1.88**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
79	*Eucalyptus microcorys* Tallowwood	8	0.26	4 x 6	M	C	N	A	**2A**	**Medium**	**3.12**	**1.88**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
80	*Corymbia maculata* Spotted Gum	9	0.29	5 x 6	M	I	NE	A	**2D**[C,E]	**Medium**	**3.48**	**1.97**
Assessment This tree presents as typical for the species however an open wound in the lower stem, western side, reveals frass and resonance sounding suggests a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
81	*Corymbia citriodora* Lemon Scented Gum	11	0.32	8 x 6	M	C	E	A	**1B**	**High**	**3.84**	**2.05**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
82	*Corymbia maculata* Spotted Gum	11	0.30	6 x 7	M	C	N	A	**1B**	**High**	**3.60**	**2.00**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
83	*Corymbia maculata* Spotted Gum	12	0.36	7 x 7	M	C	Sym	A	**1B**	**High**	**4.32**	**2.15**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
84	*Corymbia maculata* Spotted Gum	12	0.33	8 x 5	M	C	S	A	**1B**	**High**	**3.96**	**2.08**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
85	*Eucalyptus botryoides* Bangalay	8	0.26	3 x 4	M	S	Sym	A	**1B**	**Low**	**3.12**	**1.88**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
86	*Eucalyptus amplifolia* Cabbage Gum[A]	7	0.27[B]	4 x 2	M	S	Sym	C	**3A**	**Low**	**3.24**	**1.91**
Assessment This tree presents excessive decline.											**Development Impact** See Section 7.2.1	
87	*Eucalyptus microcorys* Tallowwood	12	0.48	11 x 8	M	C	Sym	B	**2D**	**Medium**	**5.76**	**2.43**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
88	*Eucalyptus microcorys* Tallowwood	9	0.27	8 x 7	M	I	Sym	A	**2A**	**Medium**	**3.24**	**1.91**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.5	
89	*Eucalyptus microcorys* Tallowwood	9	0.30	8 x 8	M	I	NW	A	**2A**	**Medium**	**3.60**	**2.00**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.5	
90	*Eucalyptus microcorys* Tallowwood	6	0.25	5 x 5	M	I	N	A	**2A**	**Medium**	**3.00**	**1.85**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.5	
91	*Corymbia gummifera* Red Bloodwood	8	0.24	3 x 3	M	I	Sym	A	**2A**	**Medium**	**2.88**	**1.82**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
92	*Eucalyptus microcorys* Tallowwood	12	0.62	10 x 10	M	C	Sym	A	**1B**	**High**	**7.44**	**2.71**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
93	*Corymbia gummifera* Red Bloodwood	7	0.22	1 x 1	M	F	Sym	A	**2A**	**Medium**	**2.64**	**1.75**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
94	*Corymbia maculata* Spotted Gum	12	0.53	11 x 8	M	D	Sym	A	**2A**	**Medium**	**6.36**	**2.53**
Assessment This tree presents as typical for the species however several open wounds are present, mid stem.											**Development Impact** See Section 7.2.4	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
95	*Callistemon viminalis* Weeping Red Bottlebrush	5	0.40[B,C]	5 x 5	M	C	Sym	A, B	**2D**	**Low**	**4.80**	**2.25**
Assessment This tree presents minor decline, lower crown.											**Development Impact** See Section 7.2.1	
96	*Eucalyptus microcorys* Tallowwood	14	0.65	11 x 11	M	D	Sym	A	**1B**	**High**	**7.80**	**2.76**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
97	*Eucalyptus robusta* Swamp Mahogany	9	0.39	8 x 6	M	I	Sym	A	**2A**	**Medium**	**4.68**	**2.23**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
98	*Eucalyptus microcorys* Tallowwood	13	0.53	10 x 10	M	C	Sym	A	**1B**	**High**	**6.36**	**2.53**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
99	*Eucalyptus tereticornis* Forest Red Gum[A]	14	0.46	7 x 6	M	D	Sym	B	**3D**[C,E]	**Low**	**5.52**	**2.39**
Assessment This tree presents significant decline; a large deadwood stub enters the basal flare. A distinct 'sunken' area is present on the northern stem at 1m; Resonance sounding indicates cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue- this does not appear to be justified.											**Development Impact** See Section 7.2.1	
100	*Eucalyptus robusta* Swamp Mahogany	10	0.65[B]	8 x 9	M	I	Sym	A	**2D**[C,E]	**Medium**	**7.80**	**2.76**
Assessment This tree presents as typical for the species however wounding and swelling are evident on the lower stem. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.4	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
101	*Eucalyptus robusta* Swamp Mahogany	9	0.59	7 x 6	M	C	N	A	**2A**	**Medium**	**7.08**	**2.65**
Assessment This tree presents as typical for the species however recent disturbance is evident within TPZ, southern side.											**Development Impact** See Section 7.2.5	
102	*Eucalyptus microcorys* Tallowwood	9	0.36	5 x 5	M	C	NW	A	**2A**[C,E]	**Medium**	**4.32**	**2.15**
Assessment This tree presents as typical for the species however minor swelling is evident in the lower stem.											**Development Impact** See Section 7.2.1	
103	*Eucalyptus moluccana* Grey Box	27	0.94[B]	14 x 14	M	D	Sym	A	**1B**	**High**	**11.28**	**3.22**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.5	
104	*Eucalyptus robusta* Swamp Mahogany	10	0.61	8 x 8	M	D	Sym	A, B	**2D**[C,E]	**Medium**	**7.32**	**2.69**
Assessment This tree presents as typical for the species however minor decline is evident. Swelling is present in the mid stem. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.2	
105	*Ficus obliqua* Small Leafed Fig	5	0.19[B]	5 x 4	Y	D	Sym	A	**1B**	**Medium**	**2.28**	**1.65**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	
106	*Corymbia gummifera* Red Bloodwood	7	0.13 0.13 0.13	2 x 3	M	I	Sym	A	**2D**	**Medium**	**2.70**	**1.77**
Assessment This tree appears to be coppiced regrowth. The most westerly stem has been removed at the base.											**Development Impact** See Section 7.2.2	
107	*Eucalyptus microcorys* Tallowwood	9	0.37	5 x 5	M	I	SW	A	**2A**	**Medium**	**4.44**	**2.18**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents as typical for the species. An occluded wound is present on the lower stem, some apparent swelling is evident.											**Development Impact** See Section 7.2.5	
108	*Eucalyptus microcorys* Tallowwood	10	0.45	8 x 8	M	C	Sym	A	**1B**	**High**	**5.40**	**2.37**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
109	*Eucalyptus microcorys* Tallowwood	10	0.35	5 x 8	M	C	Sym	A	**1B**	**High**	**4.20**	**2.13**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.4	
110	*Eucalyptus microcorys* Tallowwood	10	0.31	5 x 8	M	C	Sym	A	**1B**	**High**	**3.72**	**2.02**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
111	*Eucalyptus microcorys* Tallowwood	7	0.16	3 x 3	Y	I	SW	A	**1B**	**Medium**	**1.92**	**1.53**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
112	*Eucalyptus microcorys* Tallowwood	10	0.30 0.19	5 x 7	M	C	Sym	A	**1B**	**High**	**4.26**	**2.14**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
113	*Eucalyptus microcorys* Tallowwood	8	0.28	4 x 6	M	C	Sym	A	**1B**	**High**	**3.36**	**1.94**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.5	
114	*Eucalyptus microcorys* Tallowwood	7	0.29	4 x 5	M	I	Sym	A	**1B**	**High**	**3.48**	**1.97**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.3	
115	*Eucalyptus microcorys* Tallowwood	6	0.26[B,C]	3 x 3	Y	I	Sym	A	**1B**	**Medium**	**3.12**	**1.88**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	
116	*Eucalyptus microcorys* Tallowwood	10	0.31	6 x 7	M	C	Sym	A	**1B**	**High**	**3.72**	**2.02**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	
117	*Eucalyptus microcorys* Tallowwood	8	0.31	5 x 5	M	C	Sym	A	**1B**	**High**	**3.72**	**2.02**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	
118	*Eucalyptus tereticornis* Forest Red Gum	17	0.85[B]	11 x 12	M	C	E	A	**3D**[C,E]	**Medium**[C,E]	**10.20**	**3.09**
Assessment This tree presents as typical for the species. A large 1st order branch has been removed in the past, at 1.6m, northern side. Fruiting bodies of the fungal pathogen, *Phellinus* are present i.e., a fungal pathogen has colonised the wound, and the body language indicates extensive decay in lower stem. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.5	
119	*Olea spp.* Olive	6	0.40[B,C]	6 x 6	M	I	Sym	A	**2A**	**Medium**	**4.80**	**2.25**
This tree presents as typical for the species. Not located on the survey supplied.											**Development Impact** See Section 7.2.2	
120	*Olea spp.* Olive	6	0.30[B,C]	5 x 5	M	D	Sym	A	**2A**	**Medium**	**3.60**	**2.00**
This tree presents as typical for the species. Not located on the survey supplied.											**Development Impact** See Section 7.2.2	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
121	*Eucalyptus tereticornis* Forest Red Gum	16	0.77	11 x 9	M	C	Sym	A,B	**2A/2D**	**Medium**	**9.24**	**2.97**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.5	
122	*Eucalyptus tereticornis* Forest Red Gum	15	0.64	9 x 10	M	C	Sym	A	**2A**	**Medium**	**7.68**	**2.74**
Assessment This tree presents minor decline. Several fractured branches/ stubs are present, lower crown.											**Development Impact** See Section 7.2.5	
123	*Eucalyptus tereticornis* Forest Red Gum	14	0.48	6 x 6	M	I	Sym	A	**2A**[C,E]	**Medium**	**5.76**	**2.43**
Assessment This tree presents as typical for the species however some swelling is evident within the lower stem. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
124	*Eucalyptus tereticornis* Forest Red Gum	18	0.72	9 x 8	M	C	N	A	**2A**[C,E]	**Medium**	**8.64**	**2.88**
Assessment This tree presents as typical for the species however some swelling is evident within the lower stem. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.5	
125	*Eucalyptus tereticornis* Forest Red Gum	57	0.52[B]	4 x 4	M	C	Sym	B	**3D**[C,E]	**Medium**	**6.24**	**2.51**
Assessment This tree presents a small crown. A long, partly occluded wound is located on the lower stem, and some swelling is evident. Resonance sounding indicates a pipe cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
126	*Eucalyptus tereticornis* Forest Red Gum	12	0.35	3 x 7	M	S	Sym	A	**2A**	**High**	**4.20**	**2.13**
Assessment This tree has been subjected to excessive crown lift pruning.											**Development Impact** See Section 7.2.1	
127	*Eucalyptus tereticornis* Forest Red Gum	17	0.79	8 x 6	M	C	Sym	A, B	**2D**[C,E]	**Medium**	**9.48**	**3.00**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree has been subjected to excessive crown lift pruning. This tree presents minor decline. An occluded vertical wound between 2-3m, northern side, reveals associated swelling between base-2m. Another occluded vertical wound is located between the base-2m, eastern side. Resonance sounding clearly indicates cavity within the lower stem. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
128	*Eucalyptus tereticornis* Forest Red Gum	16	0.60	9 x 6	M	C	SW	A	**2D**[C,E]	**Medium**	**7.20**	**2.67**
Assessment This tree presents as typical for the species, however swelling is evident in the lower stem, resonance sounding indicates a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
129	*Eucalyptus moluccana* Grey Box	16	0.51	7 x 4	M	C	Sym	B	**2D**[C,E]	**High**	**6.12**	**2.49**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.1	
131	*Eucalyptus moluccana* Grey Box	15	0.55	8 x 7	M	C	Sym	B	**2D**[C,E]	**High**	**6.60**	**2.57**
Assessment This tree has been subjected to excessive crown lift pruning. This tree has had a concrete slab installed within the SRZ; it is touching the basal flare of the tree; decline is evident and appears related to the combined impacts.											**Development Impact** See Section 7.2.1	
132	*Eucalyptus moluccana* Grey Box	17	0.66	12 x 10	M	C	Sym	B	**2D**[C,E]	**Medium**	**7.92**	**2.78**
Assessment This tree presents decline, likely related to the disturbance with the TPZ and SRZ.											**Development Impact** See Section 7.2.1	
133	*Eucalyptus moluccana* Grey Box	17	0.46	9 x 5	M	C	Sym	A	**2D**[C,E]	**High**	**5.52**	**2.39**
Assessment This tree presents decline, likely related to the disturbance with the TPZ and SRZ. Swelling is evident, lower stem. Resonance sounding clearly indicates cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
134	*Eucalyptus moluccana* Grey Box	18	0.72	9 x 9	M	D	Sym	B	**2D**	**High**	**8.64**	**2.88**
Assessment This tree presents decline; a concrete footpath has been installed within the SRZ, southern side.											**Development Impact** See Section 7.2.1	
135	*Eucalyptus moluccana* Grey Box	17	0.54	8 x 8	M	C	S	B	**2D**	**High**	**6.48**	**2.55**
Assessment This tree presents decline; a concrete footpath has been installed within the SRZ, northern side.											**Development Impact** See Section 7.2.1	
136	*Eucalyptus moluccana* Grey Box	17	0.74	10 x 10	M	C	W	A	**2A**[C,E]	**High**	**8.88**	**2.92**
Assessment This tree presents decline; a concrete footpath has been installed within the SRZ, western side. This tree has been subjected to excessive crown lift pruning. The lower stem reveals swelling, and some 'sunken' vertical strips; resonance sounding is inconclusive. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
137	*Corymbia maculata* Spotted Gum	6	0.15 0.12	2 x 2	Y	C	Sym	A	**2A**	**Medium**	**2.31**	**1.66**
Assessment Composed of 2 stems at the base, a concrete footpath has been installed within the SRZ, northern side.											**Development Impact** See Section 7.2.1	
138	*Casuarina glauca* Swamp Sheoak	6	0.23	3 x 3	M	C	Sym	A	**1B**	**Medium**	**2.76**	**1.79**
Assessment This tree presents as typical of the species; a concrete footpath has been installed within the SRZ, northern side.											**Development Impact** See Section 7.2.1	
139	*Eucalyptus moluccana* Grey Box	17	0.81	12 x 11	M	D	Sym	A, B	**2A**	**High**	**9.72**	**3.03**
Assessment This tree presents minor decline. A concrete footpath has been installed within the SRZ, southern side.											**Development Impact** See Section 7.2.1	
140	*Casuarina glauca* Swamp Sheoak	5	0.21	3 x 3	M	I	Sym	A	**2A**	**Medium**	**2.52**	**1.72**
Assessment This tree presents as typical of the species, however the upper crown has been lopped, reason unknown.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
141	*Eucalyptus moluccana* Grey Box	17	0.63	10 x 7	M	D	Sym	B	**2D**	**High**	**7.56**	**2.73**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.1	
143	*Corymbia maculata* Spotted Gum	10	0.33	6 x 6	M	I	Sym	A	**1B**	**High**	**3.96**	**2.08**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
144	*Eucalyptus moluccana* Grey Box	18	0.59	9 x 9	M	C	N	B	**2D**	**High**	**7.08**	**2.65**
Assessment This tree presents decline.											**Development Impact** See Section 7.2.4	
145	*Eucalyptus tereticornis* Forest Red Gum	18	0.85	9 x 12	M	C	S	A, B	**2D**[C,E]	**Medium**	**10.20**	**3.09**
Assessment This tree presents apparent swelling between the base-4m. Resonance sounding suggests a cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.5	
146	*Eucalyptus tereticornis* Forest Red Gum	17	0.33	7 x 6	M	I	Sym	A	**1B**	**High**	**3.96**	**2.08**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.5	
147	*Eucalyptus moluccana* Grey Box	18	0.56	9 x 8	M	C	Sym	A	**2D**[C,E]	**High**	**6.72**	**2.59**
Assessment The recent failure of another tree located within the SRZ has recently occurred; this has possibly instigated damage/ severance to roots of this tree. Apparent swelling presents in the stem between 6-8m, around an acute angle union, and 1st order branch, 7m, southern side, however this area is largely obscured by decorticating bark.											**Development Impact** See Section 7.2.4	
148	*Eucalyptus moluccana* Grey Box	19	0.67	11 x 10	M	C	Sym	B	**2D**	**High**	**8.04**	**2.80**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree presents decline.											**Development Impact** See Section 7.2.5	
149	*Eucalyptus moluccana* Grey Box	16	0.64	9 x 8	M	I	SW	B	**3D**[C,E]	**Medium**	**7.68**	**2.74**
Assessment This tree presents significant decline. This tree presents significant decline. An apparent bark tear is evident is located below a pruning wound at 6m, eastern side; the wound face suggests the presence of fruiting bodies of the fungal pathogen, *Phellinus*. This tree would require level 3 assessment (internal diagnostics) facilitated by aerial access, to provide further details of the internal issue.											**Development Impact** See Section 7.2.1	
150	*Eucalyptus moluccana* Grey Box	16	0.47	8 x 5	M	C	Sym	A	**2A**	**High**	**5.64**	**2.41**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.5	
151	*Eucalyptus tereticornis* Forest Red Gum	18	0.49 0.62	9 x 7	M	C	Sym	B	**3D**[C,E]	**Medium**	**9.48**	**3.00**
Assessment This tree presents decline, and is composed of 2 stems at 1m. The eastern stem reveals swelling between2-3m, and resonance sounding clearly indicates a cavity. The western stem presents swelling from the union to 5m, again resonance sounding clearly indicates cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.5	
152	*Eucalyptus microcorys* Tallowwood	9	0.22	5 x 5	M	C	Sym	A	**1A**	**Medium**	**2.64**	**1.75**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	
153	*Eucalyptus microcorys* Tallowwood	8	0.22	6 x 6	M	C	SE	A	**1A**	**Medium**	**2.64**	**1.75**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.2	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
154	*Eucalyptus moluccana* Grey Box	16	0.76	8 x 8	M	I	Sym	A, B	**2D**[C,E]	**High**	**9.12**	**2.95**
Assessment This tree presents minor decline. This tree has been subjected to excessive crown lift pruning. Composed of 2 stems at 2m, the union is acute, however appears sound. The west stem has an apparent bark tear wound between 3-6m, swelling is present, however is beyond the reach of resonance sounding. Furthermore, this area is largely obscured by decorticating bark. The eastern stem presents swelling at and above the union, and resonance sounding suggests cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue.											**Development Impact** See Section 7.2.5	
155	*Eucalyptus moluccana* Grey Box	23	0.96	12 x 13	M	D	Sym	A, B	**2A**	**High**	**11.52**	**3.25**
Assessment This tree presents minor decline.											**Development Impact** See Section 7.2.5	
156	*Eucalyptus moluccana* Grey Box	18	0.63	11 x 10	M	I	S	A, B	**2A**	**High**	**7.56**	**2.73**
Assessment This tree presents minor decline. This tree has been subjected to excessive crown lift pruning. Excavation undertaken/ a basketball court has been installed within the TPZ, western side, this includes the SRZ.											**Development Impact** See Section 7.2.4	
157	*Eucalyptus moluccana* Grey Box	13	0.58	9 x 9	M	I	Sym	B	**3D**	**Medium**	**6.96**	**2.63**
Assessment This tree presents significant decline. Excavation undertaken/ a basketball court has been installed within the TPZ, western side, this includes the SRZ.											**Development Impact** See Section 7.2.2	
158	*Leptospermum spp.* Tea Tree	5	0.11	2 x 2	M	I	Sym	A	**2A**	**Medium**	**1.32**	**1.31**
This tree presents as typical for the species. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	
159	*Olea spp.* Olive	6	0.38[B,C]	6 x 6	M	S	S	A	**2B**	**Low**	**4.56**	**2.20**

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
Assessment This tree is experiencing significant conflict with the adjacent basketball court and the associated fencing. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	
160	*Eucalyptus moluccana* Grey Box	12	0.52 0.50	10 x 8	M	I	Sym	B	**2D**[C,E]	**High**	**8.66**	**2.89**
Assessment A retaining wall has been installed within the SRZ,; approximately 400mm of fill has been installed around the stem. Composed of 2stems at 1m, the union is acute, however appears sound. The north eastern stem has an occluded vertical wound between 2-4m, southern side. Resonance sounding suggests cavity. This tree would require level 3 assessment (internal diagnostics) to provide further details of the internal issue. The assessment is limited by surrounding vegetation and fencing. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	
161	*Eucalyptus moluccana* Grey Box	17	0.75[C]	16 x 16	M	C	Sym	A	**2A**	**High**	**9.00**	**2.93**
Assessment This neighbouring tree presents as typical for the species, however minor decline is evident. The assessment is limited by lack of access. Not located on the survey supplied. The tree tag has been installed on the end of the wooden fencing to the south west Crown ingress into the school is approximately 9000mm between 5-9m.											**Development Impact** See Section 7.2.4	
162	*Eucalyptus sideroxylon* Mugga Ironbark	12	0.38	6 x 7	M	D	NE	A	**1B**	**High**	**4.56**	**2.20**
Assessment This tree has been subjected to excessive crown lift pruning.											**Development Impact** See Section 7.2.1	
163	*Eucalyptus sideroxylon* Mugga Ironbark	14	0.63	9 x 9	M	C	Sym	A	**1B**	**High**	**7.56**	**2.73**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
164	*Corymbia maculata* Spotted Gum	12	0.40	8 x 5	M	C	S	A	**1B**	**High**	**4.80**	**2.25**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	

Tree No.	Botanical Name Common Name	Height (m)	DBH (m)	Crown Spread (m)	Age	Crown Class	Crown Aspect	Vitality Rating	SULE Rating	STARS Rating	TPZ	SRZ
165	*Corymbia maculata* Spotted Gum	13	0.42	8 x 7	M	C	Sym	A	**1B**	**High**	**5.04**	**2.30**
Assessment This tree presents as typical for the species.											**Development Impact** See Section 7.2.1	
166	*Eucalyptus crebra* Narrow Leafed Ironbark	16	0.70	11 x 11	M	D	Sym	A	**1B**	**High**	**8.40**	**2.85**
Assessment This tree presents as typical for the species. Limited assessment due to the adjacent buildings and surrounding vegetation.											**Development Impact** See Section 7.2.1	
167	*Eucalyptus moluccana* Grey Box	12	0.29	6 x 4	M	I	S	B	**2D**	**High**	**3.48**	**1.97**
Assessment This tree presents significant decline. Located within the SRZ of tree No. 151. Not located on the survey supplied.											**Development Impact** See Section 7.2.1	

A. Incomplete identification of species due to insufficiently available plant material
B. Diameter taken below 1.4m due to low stem bifurcation
C. Estimate due to the overgrown area and/or limited access
D. Deciduous species, void of foliage at the time of assessment
E. Level 3 assessment required to determine the accurate rating

7.0 Site Trees Relative to Proposed Activity

The following sections refer to data and impacts to the site trees described in Table 1, Section 5.0. The trees are divided into two groups: those that are planted (a combination of native and exotic) and those that are remnants. The planted trees are of similar age and likely related to the school construction.

7.0.1 Tree significance

The trees, based on the remnant status form part of the vegetation assembly of the Cumberland Plain Woodland (CPW). This vegetation community is classed as a Critically Endangered Environmental Community (CEEC) and protected under Biosecurity Act, 2015 and under the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act). None of the trees contained in this report are endangered species and do not warrant legislative protection other than the vegetation community for which they belong. The significance of this planting, relative to the vegetation community, is beyond the scope of an arborist. Based on this point, the protection offered as an EEC would require further consultation by an ecologist, although trees identified in this community are rated as high significance, and efforts for retention are recommended.

7.0.2 Exempt trees

The trees labeled as A, that have been included on the survey drawing (Plans 2-7) however excluded from this report because of the failure to conform to the description of a prescribed tree based on the Liverpool Councils Development Control Plan.

Tree A: trees below 5m in height

7.0.3 Further trees not included

Since the initial assessment conducted for the Preliminary assessment report (25th and 26th July 2022), numerous trees have been removed from site for unknown reasons. This inclusion has not been based on a site assessment. However, updated survey drawings have not included these trees. That is, the removal of these trees has not been confirmed by on-site assessment by ATC. These trees have been excluded from the Plans, Section 5.0-5.8 and Table 1, Section 6.0. These trees are No. 9-13, 22, 23, 25, 130, and 142.

An area on the southeastern periphery (sports field area) contains juvenile trees less than 5m in height, not located on the survey. These trees are located within and/ or behind the tree protection zones of trees contained within this report, and therefore have not been included.

7.0.4 Trees providing a potential limited useful life expectancy based on risk

Trees No. 31, 45, 99, 125, 127, 128, 133, 149, 151, 154 and 160

These trees present signs and symptoms of active decay pathogens that can (pending the amount of decay) provide the tree as a risk for failure. The opportunity for failure will be pending the proportion of decay, and although such decay exists, does not necessarily warrant a risk. Based on the assigned significance and industry standards, a level 3 assessment (see Appendix A) is recommended to determine the risk and can be conducted via an internal diagnostic evaluation. Based on the annual audit for tree risk assessment conducted by the Department of Education, some or all of these trees may have been subject to such tests. This can be confirmed via the most recent tree risk assessment report provided to the school. For those trees that have not been included for this testing, the level 3 test is recommended for determining risk mitigation and the useful life expectancy. This should be conducted within 3 months.

7.0.5 Neighbours trees

Trees No. 24, 46, and 161 are located in the adjacent lot, therefore constitute ownership by a second party. Any proposed works within the zones of protection for these trees must not adversely impact these zones, and the trees shall be retained and protected from any site works unless permission for removal is granted by the tree owner and Liverpool City Council.

7.1 Activity Impact Method

This discussion is specific to the southern portion of the school containing the proposed car park and building. Based on the proposed design, the bulk earthworks will offer the greatest impact on site trees irrespective of design footprints. For this reason, the Bulk Earthworks Plan (Drawing CI-1-100-001 Section 4.4.3) has been utilised to determine impacts and respective discussion. Based on a meeting with *Stantec*, the following points have been included for determining impacts.

1. The proposed batters, (brown lines) have been included for new grading. The grades of these have not been included, although based on the work required, that is compaction associated with machinery, and the resulting cut, the edge of these proposed contours have been used as the edge of the encroachment calculation for each tree.
2. The ‘Notes’ window and specific to Point 6 refers to topsoil stripping of 200mm for bulkearthworks areas. Irrespective of the ‘Elevations Table’ to refer to minimum areas of cut to be 0.00 - 0.50/-0.50m, the actual cut will be 0.20 -0.50 and -0.2 - -0.50m. Therefore the impact, that is compaction associated with machinery, and the resulting cut, in any area

that is proposed for grade changes (coloured areas of the drawing), will form an encroachment on a tree.

The calculations included in the following discussion have not considered;

- Subsurface utilities that have not been included in the design,
- Work methods related to subsurface utilities, for example, concrete encasing or replacement of existing lines, or
- Work methods related to construction (stockpiling, site sheds, scaffolding) unless otherwise specified.
- Public infrastructure including footpaths, new kerb/guttering, and subsurface utilities on Edmundson and Tenth Avenue.

These may also increase the encroachment and tree impact and, therefore, the opportunity for tree retention.

Assumption 1: The excavation required for the retaining walls will need to be further from the outside edge of the proposed wall to allow for construction, waterproofing, and drainage. Therefore, the actual cut has been assumed within this report to be up to 400mm from the line, indicating the location of the retaining wall. All calculations for the encroachment of any zone of protection (TPZ, SRZ) have been based on this assumption.

The following discussion has been divided into three areas, being,

- Impact on trees for the primary works, being the southern portion of the school containing the proposed car park and building. This is described in Section 7.2.
- Impact on trees by sub-surface infrastructure, Section 7.3, and
- Impact on trees for Bushfire mitigation, Section 7.4.

7.2 Proposed development

This report discusses the impact of the proposed design on the trees. One hundred and fifty-seven (157) trees have been listed within this report based on the preliminary assessment. This includes any tree where any part of the zones of protection, such as the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ), encroach into the area of the school grounds. Recommendations based on the tree significance and condition, together with the impact on these trees regarding the proposed development (based on the documents contained in Section 4.4) and mitigation where available follow.

7.2.1 Trees and zones of protection (TPZ/SRZ) outside of the proposed design

Trees No. 1-8, 14-21, 24, 26-51, 55, 67, 68, 70, 72-76, 80-87, 91, 93, 95, 97-99, 102, 110-112, 123, 125-129, 131-141, 143, 149, 158-160 and 162-167.

None of the proposed works conflict with the location of these trees or respective zones of protection. These trees can be retained without impact by the proposed design.

7.2.2 Trees directly conflicting with the design

Trees No. 54, 104-106, 115-117, 119, 120, 152, 153 and 157.

These trees are located in the footprint of the proposed design and would require removal based on this premise alone. The conflict is summarised as follows;

Tree No. 54; within the footprint of the mech. condenser.

Trees No. 104-106, 152, 153; within the car park

Tree No. 115-117, 119, 120; within the footprint of the proposed building, pathway/stairs

Tree No. 157; within the road servicing the car park

7.2.3 Trees directly conflicting with the cut/fill

Trees No. 53, 65, and 114.

These trees are located in an area where no works are proposed other than cut and fill, based on the drawing by *Stantec*, No. CI-1-100-001 (C). The following impacts exists for each tree

Tree No. 53: 50% of the TPZ is subject to fill, 0-500mm depth. This tree is unable to be retained.

Tree No. 65: 100% of the TPZ is subject to cut, 0-1000mm. This tree is unable to be retained.

Tree No. 114: 100% of the TPZ is subject to cut, 500mm-1000mm depth. This tree is unable to be retained.

7.2.4 Trees subject to a minor encroachment

Trees No. 52, 56, 60-63, 66, 71, 77-79, 92, 94, 96, 100, 108, 109, 144, 147, 156, and 161.

These trees are not directly located in the footprint of the proposed design, however, are subject to a *minor encroachment*. That is, the proportion (<10%) of encroachment provided by design will not adversely impact on the tree. These trees can be retained relative to the design.

7.2.5 Trees subject to a major encroachment

Trees No. 57-59, 64, 69, 88-90, 101, 103, 107, 113, 118, 121, 122, 124, 145, 146, 148, 150, 151, 154, and 155.

These trees are not directly located in the footprint of the proposed design, however, are located close and adjacent to the design footprint and subject to a *major encroachment*, that is, in excess of 10% of the TPZ. The extent and type of encroachment for each tree are discussed and the relative implications in Table 2.

Table 2, Data describing the Major encroachment

Tree No.	Encroachment into SRZ	Type/% of encroachment	Comments
57	No	19% Fill, 0-0.50m	Capable of retention
58	No	16% Fill, 0-0.50mm	Capable of retention
59	No	18% Cut, 0-1.00m	Capable of retention
64	No	12% Cut, 0-1.00m	Capable of retention
69	No	14% Cut, 0-1.00m	Capable of retention
88	Yes	23% Cut, 0-1.00m	Remove tree Note 1
89	Yes	29% Cut, 0-1.00m	Remove tree Note 1
90	Yes	25% Cut, 0-1.00m	Remove tree Note 1
101	No	20% Cut, 0-0.50m	Capable of retention Note 1
103	No	16% Cut, 1-0.5m	Capable of retention
107	Yes	50% Cut, 0-0.50m	Remove tree Car park kerb
113	Yes	40% Cut, 1-1.50m	Remove tree Batter
118	Yes	50% Fill, 0-1.00m	Remove tree Note 5
121	Yes	< 100% Fill/Cut, 0-0.50m	Capable of retention Note 4
122	Yes	28% Fill, 0-0.50m	Capable of retention Note 2
124	No	15% Fill, 0-0.50m	Capable of retention Note 2
145	No	29% Fill, 0-0.50m	Capable of retention Note 2
146	No	13% Fill, 0-0.50m	Capable of retention Note 2
148	No	16% Fill, 0-0.50m	Capable of retention Note 2
150	No	13% Fill, 0-0.50m	Capable of retention Note 2
151	No	27% Fill, 0-0.50m	Capable of retention Note 3
154	Yes	27% Fill, 0-0.50m	Proposed carpark kerb Note 3
155	Yes	16% Fill, 0-0.50m	Proposed carpark kerb Note 3

Mitigation Notes related to Table 2

The following notes that are contained in the column titled *Comments* relate to mitigation for reducing the impact on these trees to allow for retention.

Note 1: These trees are introduced species; although native, they are tolerant and cater to an inherent deep root system, and coupled with the crown bias, support an asymmetrical (southern bias) root system. That is, the proposed works could offer less impact on the root system than the percentage of calculated encroachment suggests. The start of the proposed batter is 1m from the stem, and accounting for the steep batter may remove a significant proportion of the root system. The encroachments are not excessively high (i.e.,>30%), allowing for the semi-mature age and tolerance of the species. An opportunity exists to retain these trees, although they will require monitoring on an annual basis to assess decline and respective risk. Alternatively, and based on the significance rating, these trees can be removed.

Note 2: Encroachment consists of fill material to accommodate pathway grade. The proportion of encroachment is not entire and reserved to a pathway that extends through the TPZ. These trees can be retained with minimal impact although require the following conditions,

1. The pathway must not be cut into the natural grade.
2. Fill must be outside of the SRZ.
3. Machine use within the area of the TPZ must be limited to rubber tracked skid steer loader with a tare weight no greater than 2 tonnes

Note 3: These trees are significant site trees based on the remnant status, size and amenity value and efforts to limit the impact are required. The area of encroachment is the proposed carpark area and kerb. Tree No. 155 could sustain this encroachment although tree No. 154 will be more affected with an increased propensity for decline. These trees could be retained based on the design, although some impact on the longevity can occur. These trees can be retained with limited impact although they would require the following conditions,

4. The portion of the car park within the TPZ should avoid any edge kerbing, that is structure that warrants a foundation that is deeper than natural grade. The proposed finished grade for this area supports a kerb foundation should not extend below natural grade.
5. The portion of the car park that extends into the TPZ be constructed with a porous type surface that can allow water percolation and gas exchange with the ground.
6. The fill material within the TPZ comprises river sand-based texture.

Note 4: This tree is a significant site tree based on the remnant status, size and amenity value and efforts to limit the impact are required. Encroachment consists of predominately fill material (and some cut) to the entire TPZ/SRZ. Depending on the depth of fill/cut, this can place the tree into decline where retention is unlikely. This extent of fill should be amended to remove any grade change to the majority of the TPZ other than the pathway.

Note 5: This tree (118) is one of the most significant site trees based on the size and amenity value, although a level 3 assessment (Section 7.0.4) is required to determine the viability. The batter extends flush with the tree, although the fill depth is minor which could allow for tree retention. In addition, is a covered walkway and three-story building. The compaction and cut for the foundations related to the construction methodology will likely place this tree into irreversible decline, especially based on the existing infection and proportion of crown pruning required. The tree is unlikely to be capable of retention due to the vicinity of work and current health. Although if retention is the preferred option, this tree should be subject to a Level 3 assessment to determine viability and, based on retention, design mitigation.

1.3 Subsurface utilities

Although drawings have been provided for the proposed route of sub-surface utilities, they have not been included as part of the tree impacts. For this reason, the impacts imposed by all sub-surface utilities will need to form part of the scope of works for the Arboricultural Method Statement and the proposed design routes as part of the application stage to be considered preliminary with possible amendment.

Any trenching, other than what has been allowed for should be avoided within the area of the TPZ's for any tree nominated for retention. Any proposed route shall be re-routed outside of the TPZ, and based on the flexibility of electrical and communications, these services can be rerouted. Other options for limiting impact will be bundling services. Underboring will be required based on some proposed routes. Underboring will need to be instructed by the project arborist, and entry and exit pits must be outside the SRZ, although in some circumstances and based on instruction by the project arborist, they can be within the TPZ. Any excavation in the area of a TPZ must be authorised and conditioned by the project arborist.

The final design for all subsurface utilities will be determined as part of the Arboricultural Method Statement.

7.4 Planning for Bushfire Protection

A report (Section 4.4.5) has been provided for the school's management relative to the Asset Protection Zone. According to Section 12.4, Vegetation Assessment of the Bushfire Report, “The trees within the site are not a bushfire hazard and do not require any management or modification.” That is, no tree work is required for bushfire mitigation.

7.5 Mitigation Measures

The following measures are required to avoid, minimise and offer options for rectification to reduce or eliminate any adverse environmental impacts of a Division 5.1 activity. These are summarised in Table 2; Environmental Mitigation.

7.5.1 Table 2: Environmental Mitigation

Activity Type	Hold Point	Mitigation Measure	Reason for mitigation
Tree management	Before start of work	A project arborist (conforms to the AS 4970) is required to be nominated before works start, and they are to be provided with all related site documents.	Protection of trees
Demolition/Construction	Before start of work	A Tree Management Plan (Arboricultural Method Statement) is prepared and issued to the entity responsible for the demolition/construction.	Protection of trees
Tree protection	Before start of work	Installation of tree protection measures as per Tree Management Plan (Arboricultural Method Statement)	Protection of trees
Tree removal	Demolition	Trees are identified and marked for removal	Avoid incorrect tree removal.
Tree removal	Demolition	Native wildlife habitats are identified, and to avoid injury to animals, refer to the biodiversity report for additional guidance.	Protection of native fauna.
Tree protection	Demolition/Construction stages	Site induction; All workers must be briefed about the conditions outlined in Tree Management Plan before the initiation of work. This is required as part of the site induction process.	Protection of trees
Council-owned trees	Demolition/Construction stages	Retention and protection of trees No. 1, 4-7, and 134. Avoiding works within TPZ's, inclusion of tree protection measures.	Protection of assets owned by a second party
Subsurface utilities not been included in the design	Construction stages	Trenching, shall avoid the TPZ's. Proposed routes shall be re-routed outside of the TPZ. Underboring required if unable	Protection of trees intended for retention

Activity Type	Hold Point	Mitigation Measure	Reason for mitigation
		reroute. Any excavation in the area of a TPZ must be authorised and conditioned by the project arborist.	
Construction design/methods	Construction stages	Refer to the Section 7.2.5; Mitigation Notes related to Table 2 Note 2: Conditions 1-3 Note 3: Conditions 4-6	Protection of trees intended for retention
Demolition/Construction Methods	Demolition/Construction stages	Work-related to demolition/construction, e.g. stockpiling, site sheds, and scaffolding, shall avoid the TPZs, see Section 8.0. Any activity within a TPZ must be authorised and conditioned by the project arborist.	Protection of trees intended for retention
Environmental Impact Tree loss; ecological impact	Project outcome	Planting of advanced specimens of the same species in groups.	Compensation for the loss of protected flora and related fauna habitats.
Environmental Impact Tree loss; amenity impact	Project outcome	Planting of advanced specimens of the same species in areas that offer visual/noise screening.	Compensation for the loss of amenity value.

7.6 Protection measures

Tree protection measures will be required during the demolition and construction stage. However, the design of these will be pending the work methodology and final design. The project arborist[7] shall be contracted after the completion/confirmation of design work for the instruction of the protection measures implementation, that is the Arboricultural Method Statement. Examples of the protection measures are contained in Appendix B.

8.0 Protection Specification

The retention and protection of these trees require the remaining Tree Protection Zone (TPZ) not subject to encroachment to conform to the conditions outlined below. These conditions provide the limitations of work permitted within the area of the Tree Protection Zone (TPZ) and must be adhered to unless otherwise stated.

1. Subsurface utilities can extend through the TPZ and Structural Root Zone (SRZ), however, are limited to the method of installation. That is under boring is permitted, however trenching is limited and depends on the proposed route within the TPZ. No trenching is permitted within the area of the TPZ unless stipulated by the project arborist.

2. Soil levels within the TPZ must remain the same. Any excavation within the TPZ must have been previously specified and allowed for by the project arborist:

   a) So it does not alter the drainage to the tree.

   b) Under specified circumstances,

      - Added fill soil does not exceed 100mm in depth over the natural grade. Construction methodologies exist that can allow grade increases in excess of 100mm, via the use of an impervious cover, an approved permeable material or permanent aeration system or other approved methods.

      - Excavation cannot exceed a depth of more than 50mm within the area of the TPZ, not including the SRZ. The grade within the SRZ cannot be reduced without the consent from a project arborist.

3. No form of material or structure, solid or liquid, is to be stored or disposed of within the TPZ.

4. No lighting of fires is permitted within the TPZ.

[7] Project Arborist: person nominated as responsible for the provision of the tree assessment, arborist report, consultation with stakeholders, and certification for the development project. This person will be adequately experienced and qualified with a minimum of a level 5 (AQF); Diploma in Horticulture (Arboriculture).

5. All drainage runoff, sediment, concrete, mortar slurry, paints, washings, toilet effluent, petroleum products, and any other toxic wastes must be prevented from entering the TPZ.

6. No activity that will cause excessive soil compaction is permitted within the TPZ. That is, machinery, excavators, etc. must refrain from entering the area of the TPZ unless measures have been taken, in consultation with the project arborist.

7. No site sheds, amenities or similar site structures are permitted to be located or extend into the area of the TPZ unless the project arborist provides prior consent.

8. No form of construction work or related activity such as the mixing of concrete, cutting, grinding, generator storage or cleaning of tools is permitted within the TPZ.

9. No part of any tree may be used as an anchorage point, nor should any noticeboard, telephone cable, rope, guy, framework, etc. be attached to any part of a tree.

10. (a) All excavation work within the TPZ will utilise methods to preserve root systems intact and undamaged. Examples of methods permitted are by hand tools, hydraulic, or pneumatic air excavation technology.

    (b) Any root unearthed which is less than 50mm in diameter must be cleanly cut and dusted with a fungicide, and not allowed to dry out, with minimum exposure to the air as possible.

    (c) Any root unearthed which is greater than 50mm in diameter must be located regarding their directional spread and potential impact. A project arborist will be required to assess the situation and determine future action regarding retaining the tree in a healthy state.

9.0 Summary of tree impact by design

Based on the design supplied as referenced in Section 4.4, the following summary provides the impacts imposed on the trees included in this report.

9.1 Trees that can be retained

Trees and zones of protection (TPZ/SRZ) that conform with the proposed design

Trees No. 1-8, 14-21, 24, 26-52, 55-64, 66-87, 91-103, 108-112, 121-129, 131-141, 143-151, 154-156 and 158-167.

These trees are not adversely impacted by the design, that is, they conform to an acceptable encroachment based on the nominated zones of protection (TPZ, SRZ) and the requirements of the Protection Specification, Section 8.0. The proposed design does not adversely affect these trees. These trees can be retained.

The following trees are subject to a major encroachment and require conditions to allow for long-term retention.

Trees No. 122, 124, 145, 146, 148, and 150.

1. The pathway must not be cut into the natural grade.
2. Fill must be outside of the SRZ.
3. Machine use within the area of the TPZ must be limited to rubber tracked skid steer loader with a tare weight no greater than 2 tonnes.

Trees No. 151 and 154.

4. The portion of the car park within the TPZ should avoid any edge kerbing, that is structure that warrants a foundation that is deeper than natural grade.
5. The portion of the car park that extends into the TPZ be constructed with a porous type surface that can allow water percolation and gas exchange with the ground.
6. The fill material within the TPZ is a sand-based texture.

Trees No. 31, 45, 99, 125, 127, 128, 133, 149, 151, 154 and 160

7. These trees present signs and symptoms of active decay pathogens that can (pending the amount of decay) provide the tree as a risk for failure. Based on the assigned significance and industry standards, a level 3 assessment (see Appendix A) is recommended to determine the risk and can be conducted via an internal diagnostic evaluation. This should be conducted within 3 months.

Tree No. 121

8. This extent of fill should be amended to remove any grade change to the majority of the TPZ other than the pathway.

9.2 Trees that require removal

Trees directly conflicting with the design

Trees No. 53, 54, 65, 88-90, 104-107, 113, 114-120, 152, 153 and 157.

The proposed design will conflict with the location of these trees and they are unable to be retained based on the design. These trees will require removal. The trees nominated for removal as part of this design have been incorporated in Section 5.0.

9.3 Sub-surface utilities

Although drawings have been provided for the proposed route of sub-surface utilities, they have not been included as part of the tree impacts. For this reason, the impacts imposed by all sub-surface utilities will need to form part of the scope of works for the Arboricultural Method Statement and the proposed design routes as part of the application stage to be considered preliminary with possible amendment.

Any trenching, other than what has been allowed for should be avoided within the area of the TPZ's for any tree nominated for retention. Any proposed route shall be re-routed outside of the TPZ, and based on the flexibility of electrical and communications, these services can be rerouted. Other options for limiting impact will be bundling services. Underboring will be required based on some proposed routes . Underboring will need to be instructed by the project arborist, and entry and exit pits must be outside the SRZ, although in some circumstances and based on instruction by the project arborist, they can be within the the TPZ. Any excavation in the area of a TPZ must be authorised and conditioned by the project arborist.

The final design for all subsurface utilities will be determined as part of the Arboricultural Method Statement.

9.4 Planning for Bushfire Protection

The report (Section 4.4.5) provided for the management of trees relative to the Asset Protection Zone has referred that no mitigation measures are required.

9.5 Protection measures

A project arborist (conforms to the AS 4970) is required to be nominated before works start, and they are to be provided with all related site documents.

A Tree Management Plan (Arboricultural Method Statement) is prepared and issued to the entity responsible for the demolition/construction.

Protection measures are required to be implemented for the trees nominated for retention (referenced in Section 9.1) and installed before initiation of site works (including demolition/excavation) and retained until the landscaping works are required unless otherwise specified.

All workers related to the construction process and before entering the site must be briefed about the requirements/conditions outlined in this report relative to the zone of protection, measures, and specifications before the initiation of work.

9.6 Overall tree impact

Accounting for the tree removal and respective design impacts and mitigation assigned to limit any construction impact, this proposal is not considered to have a significant impact on the site trees.

The opinions expressed in this report by the author have been provided within the capacity of a Consulting Arborist. Any further explanation or details can be provided by contacting the author.

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10.0 Appendix A- Terminology Defined

Height

Is a measure of the vertical distance from the average ground level around the root crown to the top surface of the crown, and on palms - to the apical growth point.

DBH

Diameter at Breast Height – being the stem diameter in meters, measured at 1.4m from ground level, including the thickness of the bark.; Mult. refers to multiple stems, that is in excess of 4 stems.

Crown Spread

A two-dimension linear measurement (in metres) of the crown plan. The first figure is the north-south span, the second being the east-west measurement.

Age

Is the estimate of the specimen's age based upon the expected lifespan of the species. This is divided into three stages.

Young (Y)	Trees less than 20% of life expectancy.
Mature (M)	Trees aged between 20% to 80% life expectancy.
Over-mature (O)	Trees aged over 80% of life expectancy with probable symptoms of senescence.

Crown Aspect

In relation to the root crown, this refers to the aspect the majority of the crown resides in. This will be either termed Symmetrical (Sym.) where the centre of the crown resides over the root crown or the cardinal direction the centre of the crown is biased towards, being either North (N), South (S), East (E) or West (W).

Vitality Rating

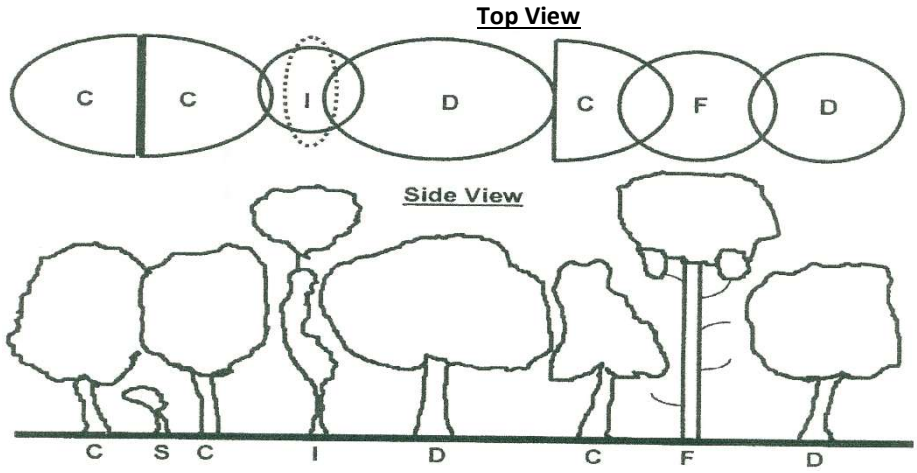
Is a rating of the health of the tree, irrespective and independent of the structural integrity, and defined by the 'ability for a tree to sustain its life processes' ((Draper, Richards, 2009). This is divided between three variables, and based on the assessment of symptoms including, but not limited to; leaf size, colour, crown density, woundwood development, adaptive growth formation, and epicormic growth.

A: Normal vitality, typical for the species
B: Below average vitality, possibly temporary loss of health, partial symptoms.
C: Poor vitality; obvious decline, potentially irreversible

Crown Class

Is the differing crown habits as influenced by the external variables within the surrounding environment. They are:

D	– *Dominant*	Crown is receiving uninterrupted light from above and sides, also known as emergent.
C	– *Codominant*	Crown is receiving light from above and one side of the crown.
I	– *Intermediate*	Crown is receiving light from above but not the sides of the crown.
S	– *Suppressed*	Crown has been shadowed by the surrounding elements and receives no light from above or sides.
F	– *Forest*	Characterised by an erect, straight stem (usually excurrent) with little stem taper and virtually no branching over the majority of the stem except for the top of the tree which has a small concentrated branch structure making up the crown.



D C, I & S, and side view, after (Matheny, N. & Clark, J. R. 1998, Trees Development, Published by International Society of Arboriculture, P.O. Box 3129, Champaign IL 61826-3129 USA, p.20, adapted from the Hazard Tree Assessment Program, Recreation and Park Department, City of San Francisco, California).

Levels of assessment

Level 1: Limited visual: a visual tree assessment to manage large populations of trees within a limited period and in order to identify obvious faults which would be considered imminent.

Level 2: Basic assessment: a standard performed assessment providing for a detailed visual assessment including all parts of the tree and surrounding environment and via the use of simple tools.

Level 3: Advanced assessment: specific type assessments conducted by either arborist who specialise with specific areas of assessment or via the use of specialised equipment. For example, aerial assessment by use of an EWP or rope/harness, or decay detection equipment.

TPZ; Tree Protection Zone

Is an area of protection required for maintaining the trees vitality and long-term viability. Measured in meters as a radius from the trees centre. The requirements of this zone are outlined within the Protection Specification, Section 8.0, and are to be adhered to unless otherwise stated.

The size of the Tree Protection Zone (TPZ) has been calculated from the *Australian Standard, 4970; 2009* – Protection of Trees on Development Sites

The TPZ does not provide the limit of root extension, however, offers an area of the root zone that requires predominate protection from development works. The allocated TPZ can be modified by some circumstances; however will require compensation equivalent to the area loss, elsewhere and adjacent to the TPZ.

SRZ; Structural Root Zone

Is the area around the tree containing the woody roots necessary for stability. Measured in meters as a radius from the trees centre. The requirements of this zone are outlined within the Protection Specification, Section 8.0, and are to be adhered to unless otherwise stated.

Protection Measures

These are required for the protection of trees during demolition/construction activities.
Protective barriers are required to be installed before the initiation of demolition and/or construction and are to be maintained up to the time of landscaping. Samples of the recommended protection measures are illustrated in Appendix B.

All other definitions are referenced from;

Draper D.B., Richards P.A., 2009, Dictionary for Managing Trees in Urban Environments
CSIRO Pub., Australia

Level 3 Asssessment: Internal Diagnostic Testing

Cavities and loss of supporting wood by decay can compromise the stability of a tree, and the risk for failure will be based on the extent of the wood loss. This often cannot be assessed without specialty equipment for diagnosing the internal structure of a tree. Methodologies exist for determining the extent of wood loss (be it from decay or termites), and based on industry standards, the risk of failure can be determined. This methodology is a specialised area of arboriculture and limited to consulting arborists who are equipped with the technology (internal diagnostic devices) to assess this area. The two most common forms of internal diagnostic testing consist of the 'Resistograph,' and 'Sonic Tomography.' This technology is not recommended for all trees; however, only those trees that are considered to present significant specimens. This is based on the size, species, amenity value, and use by native wildlife. Within most situations, the cost of tree removal far outweighs the cost related to the specialty assessment.

Significance Rating, Significance of a Tree Assessment Rating System (S.T.A.R.S), IACA, 2010[8]

Tree Significance – Assessment Criteria

1. High Significance in landscape

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

2. Medium Significance in landscape

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

3. Low Significance in landscape

- The tree is in fair-poor condition and good or low vitality;
- 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,

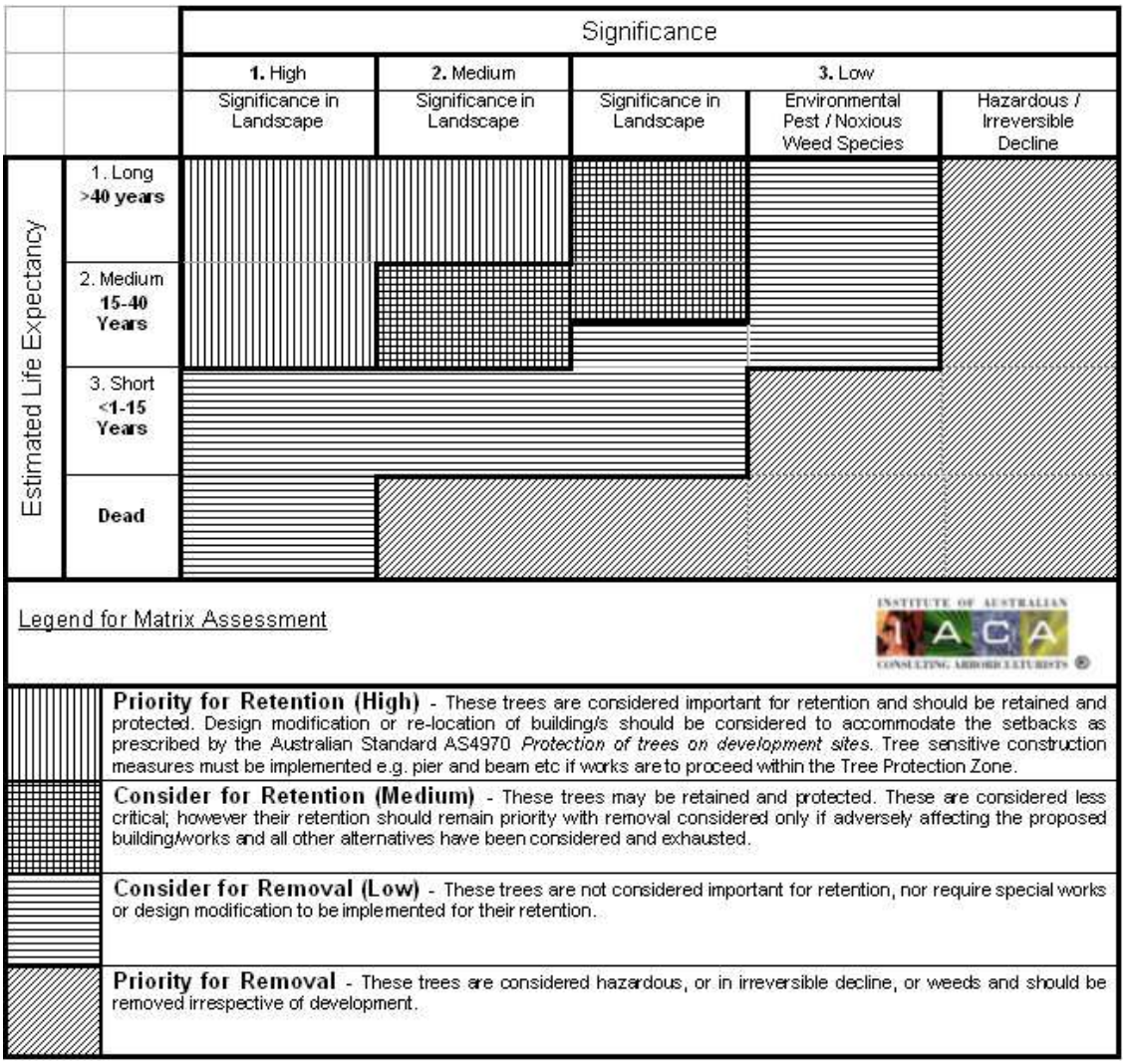
[8] IACA, 2010, IACA Significance of a Tree, Assessment Rating System (STARS), Institute of Australian Consulting Arboriculturists, Australia, www.iaca.org.au

unlikely to reach dimensions typical for the taxa in situ – tree is inappropriate to the site conditions,
- The tree is listed as exempt under the provisions of the local Council Tree Preservation Order or similar protection mechanisms,
- The tree has a wound or defect that has potential to become structurally unsound.
Environmental Pest / Noxious Weed Species
- The tree is an Environmental Pest Species due to its invasiveness or poisonous/ allergenic properties,
- The tree is a declared noxious weed by legislation.
Hazardous/Irreversible Decline
- The tree is structurally unsound and/or unstable and is considered potentially dangerous, - The tree is dead, or is in irreversible decline, or has the potential to fail or collapse in full or part in the immediate to short-term.

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

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

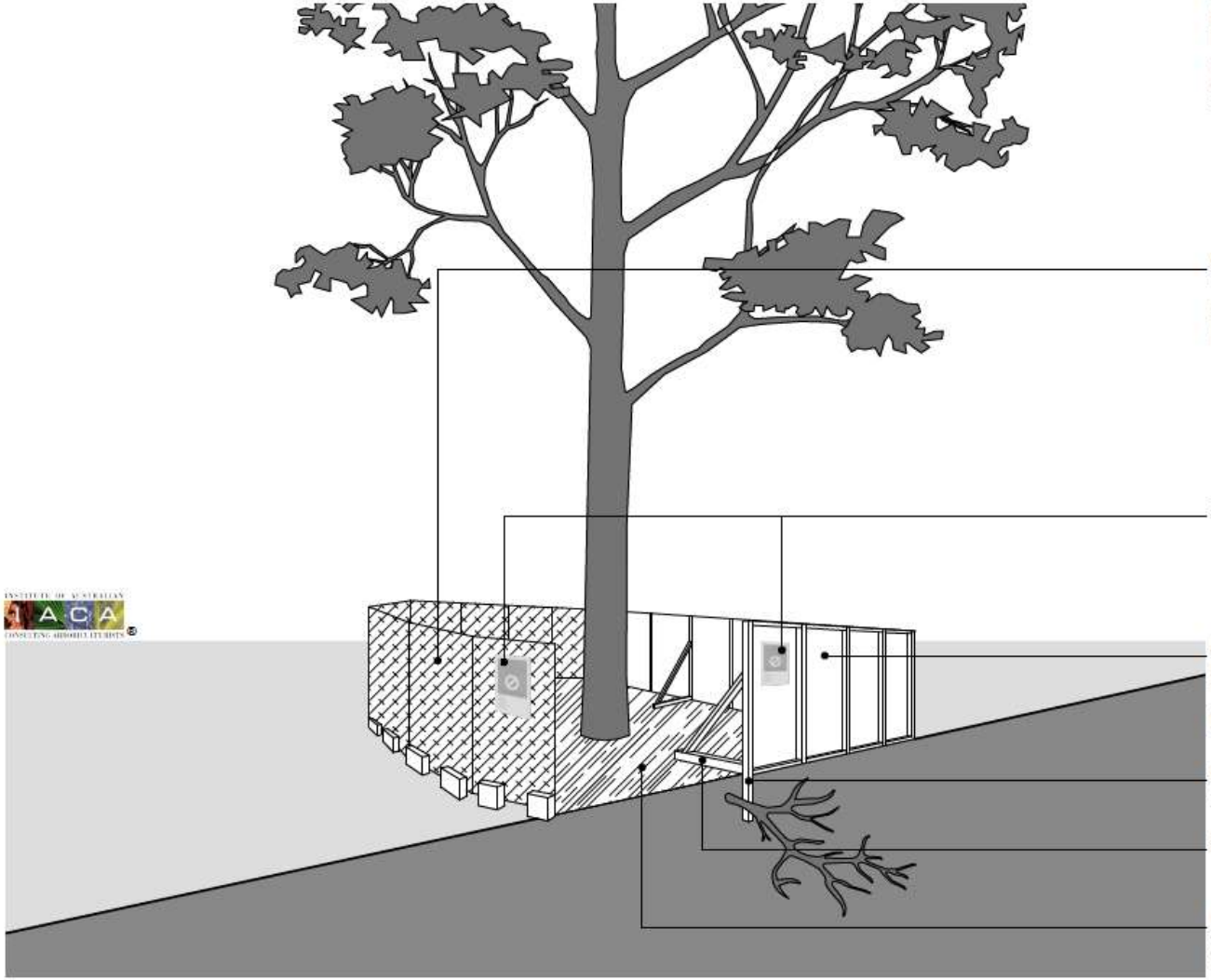
Table 3; Tree Development Impact – Priority Matrix.



Safe Useful Life Expectancy – S.U.L.E (Barell 1995)

	1. Long	2. Medium	3. Short	4. Removal	5. Moved or Replaced
	Trees that appeared to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.	Trees that appeared to be retainable at the time of assessment for 15 – 40 years with an acceptable level of risk.	Trees that appeared to be retainable at the time of assessment for 5 – 15 years with an acceptable level of risk.	Trees that should be removed within the next 5 years.	Trees which can be reliably moved or replaced.
A	Structurally sound trees located in positions that can accommodate future growth.	Trees that may only live between 15 and 40 years.	Trees that may only live between 5 and 15 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions.	Small trees less than 5m in height.
B	Trees that could be made suitable for retention in the long term by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through instability on recent loss of adjacent trees.	Young trees less than 15 years old but over 5m in heights
C	Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	Trees that may live for more than 40 years but would be removed to prevent interference with more suitable individuals or to provide space for new planting.	Trees that may live for more than 15 years but should be removed to prevent interference with more suitable individuals or to provide space for new planting.	Damaged trees through structural defects including cavities, decay, included bark, wounds or poor form.	Trees that have been pruned to artificially control growth.
D		Trees that could be made suitable for retention in the medium term by remedial tree care.	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are clearly not safe to retain.	
E				Trees that may live for more than 5 years but should be removed to prevent interference with more suitable individuals or to provide space for new plantings.	
F				Trees that are damaging or may cause damage to existing structures within 5 years.	
G				Trees that will become dangerous after removal of other trees for reasons given in (A) to (F).	

Appendix B- Protection measures; Protective fence



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

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

Tree Protection Zone (TPZ) sign

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

Installation of supports should avoid damaging roots.

Bracing is permissible within the TPZ.

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

Stem and Ground protection