



REPORT:

Arborist Impact
Assessment

REPORT COMMISSIONED FOR:

PROJECT STRATEGY
Stewart Johnson

54 -68 Ferndell Street
South Granville 2142
New South Wales

5th of June 2019

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1.0 ABSTRACT

- 1.1 An Arborist Impact Assessment was commissioned by Project Strategy for 54-68 Ferndell Street South Granville, New South Wales in relation to four hundred and twenty-five trees and tree groups (425) trees located over the entire site and the surrounding area of a proposed new development.
- 1.2 The proposed new development will impact majority of the trees on the site which will require the removal and replenishment of three hundred and ninety-one (391) trees. The front strips along the road edge of the property will have some trees retained and the Biodiversity area at the rear of the property will be impacted on and will have some trees removed from the area.
- 1.3 Thirty-four (34) trees are to be retained and protected and require protection via tree protection fence line/tree trunk protection and mulch 75mm depth over the TPZ. Sensitive construction is required for any works with the TPZ of Tree 15 and an AQF level 5 Arborist must supervise all works within the TPZ of retained trees.
- 1.4 Three hundred and ninety-one (391) trees are to be replenished on site using new stock indigenous trees of 30-litre (potted volume) and are to be planted according to the landscape plan. This is to be completed and certified by a certified AQF level 5 Arborist.
- 1.5 Design alterations are recommended to reconfigure the path and outdoor area outside of the SRZ of trees 9, 16 and 21 which would reduce the impact on the moderate to high value trees, making them viable for retention.
- 1.6 The methodologies used include Visual Tree Assessment (VTA) and Impact Assessment utilizing AS4970-2009 Protection of Trees on Development sites completed by an AQF Level 5 arborist and arborists under supervision.

2.0 INTRODUCTION

2.1 An Arborist Impact Assessment and Report was commissioned by Project Strategy C/o Stewart Johnson in relation to four hundred and twenty-five (425) trees and tree groups at 54-68 Ferndell Street, South Granville, New South Wales. The consenting authority is Parramatta Council and trees discussed are in accordance with The Parramatta Local Environmental Plan 2012 and The Parramatta Development Control Plan 2012.

2.2 McArdle Arboricultural Consultancy Pty Ltd prepared the report. The arboricultural Impact Assessment and Report is developed to assess the trees at the above address for health and status. Miss Tiffany Bignold BVA (Hons SYD) pending AQF level 5 Arborist under the supervision of Mr James McArdle AQF level 5 Consulting Arborist B.Ed E.Sc (SYD) conducted the evaluation using Visual Tree Assessment (VTA) according to Claus Mattheck and Breloer (1994) method for biological and lower level mechanical functions on the 29th October 2018. Miss Caryssa Jones BBio.Cons (Maq) assisted in the assessment process. The systems are in accordance with industry best practice and impact assessments are based upon the Australian Standards, Protection of Trees on Development sites AS4970-2009.

2.3 The proposed new development will impact majority of the trees on the site which will require the removal and replenishment of three hundred and ninety-one (391) trees numbered 1, 5, 7, 9, 10, 13, 10, 16, 18, 21, 22, 23, 24-32, 35-60, 66-329, 332,337-403, 409-411,414-418. Additionally, 400, 405 and 419 are dead and are recommended to be removed. The street frontage and the Biodiversity area at the rear of the property will be impacted on and will have some trees removed from this area. Three hundred and ninety-one (391) trees are to be replenished on site using new stock indigenous trees of 30-litre (potted volume) and are to be planted according to the landscape plan.

2.4 Thirty-four (34) trees numbered 2, 3, 4, 6, 8, 11, 12, 14, 15, 17, 20, 33, 34, 61, 62, 63, 64, 65, 330, 331, 333, 334, 335, 336, 404, 406, 407, 408, 412, 421, 422, 423, 424, 425 are to be retained and protected and require protection via tree protection fence line/tree trunk protection and mulch 75mm depth over the TPZ. Sensitive construction is required for any works with the TPZ of Tree 15 and an AQF level 5 Arborist must supervise all works within the TPZ of all retained trees. Reconfiguration of the path and outdoor area is recommended in order to retain trees 9, 16 and 21.

2.5 Holding points include compliance for; prohibitions within the TPZ, supervision with Tree Protection which is required to be installed prior to any demolition of existing structures.

3.0 REFERENCES

1. Parramatta Local Council LEP & DCP 2012.
2. Habit 8. Overall Landscape Plan. Dated 31.5.2019.
3. Nettleton tribe (NT), Car spaces. Dated October 29.5.2019.

4.0 AIMS

4.1 The Arborist Impact Assessment Report was developed to assess the tree at the above address for impacts to health and status according to As4970 2009 Protection of Trees on Development Sites.

4.2 The aim of this report is to:

1. Assess the trees at 54-64 Ferndell street South Granville New South Wales according to the methodologies presented in this report.
2. To give recommendations for management and protection during the proposed development. Protection measures will be referenced from As4970 2009 Tree Protection on Development Sites.

5.0 METHODOLOGY

5.1 This tree impact assessment uses a ground Visual Tree Assessment (VTA) method employed in this report. The VTA system is based on the theory of tree biology, physiology and tree architecture and structure and is a method used to identify visible signs on trees that indicate health and potential hazards. It identifies low-level mechanical functions and biological functions according to Mattheck and Breloer (1994).

5.2 The collection of data is performed in the field by an AQF Level 5 Arborist on the 23rd and 29th of October 2018. The assessment summaries the species, height and diameter, the tree health and structural condition of the tree, hazards, and retention categories were assigned.

5.3 Testing on site includes, mallet sounding, non-invasive testing for hollows, probing cavities, white ant infestation. Invasive tests will determine the depth of decay around cavities. All testing is ground based. It should be noted that this tree assessment report couldn't be considered final until all aerial inspections have been completed, as these may reveal further defects.

5.4 This data was recorded in a Tree Survey Table and various assessment methods were used including:

1. *Tree Useful Life Expectancy (TULE 2014)*. TULE 2014). Adapted from Jeremy Barrell (SULE) gives extra assessment life expectancy categories range to no potential for life expectancy. Interim tree management guidelines (D&JMcArdle2014)¹. Appendix A.
2. *Health & Structural Condition of Tree Assessment*. This describes the vigour and vitality of the tree. Claus Mattheck 1994. Appendix B.
3. *Retention Values*. Some trees have special restrictions including cultural, scientific, historical or threatened category and may be reviewed as part of this report or further reporting. Note the retention categories are similar to Melanie Howdens retention matrix found in the Newcastle councils website Appendix C.
4. *Impacts* are based on AS4970 2009 Protection of Trees on Development Sites. Extract in appendix D and setbacks given in table 1. Appendix D.

6.0 PLANNING GUIDELINES AND SPECIFIC LEGISLATION

6.1 TREE MANAGEMENT MEASURES

Tree management measures are in place for The Parramatta Local Council under the provisions of the Tree and Vegetation Preservation for properties covered by The Parramatta Local Environmental Plan 2011.

- The Land Zoning is General Industrial, IN1 (Plate 1)
- Acid Sulfate Soils, Class 5 (Plate 2)
- Terrestrial Biodiversity (Plate 3)

According to the NSW Planning Portal, the site has mapped terrestrial biodiversity, Courtesy of NSW Planning Portal. The Biodiversity Value Map indicate a terrestrial community and any specification related to the site should be referred to an ecologist. There are mapped areas along the boundary within the Campbell Hill Pioneer Reserve.

A search of Local and State heritage registers, tree registers and determination of landscape significance was carried out for tree identified in the survey, nothing of heritage significance is related to this property.

6.2 SIGNIFICANCE IN THE ENVIRONMENT

Trees are subject to the following legislation:

Biodiversity Act 2016 (NSW) (Bio Act) – Where identified, threatened species are considered in this report and an ecologist could further verify this. This biodiversity act repeals the Threatened Species Conservation Act 1995 (NSW) (TSC Act)

Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) - The EPBC Act provides provisions to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. Where identified, threatened tree species are considered in this report.

6.3 SIGNIFICANCE IN THE LANDSCAPE

Assessment of trees significance in the landscape is generally categorised as either:

- Significant in the landscape –Prominent from a broad landscape perspective, including streetscape. HIGH VALUE. *
- Significant in the landscape – Prominent from a neighbourhood perspective. -Retained due to its status but may have some conditions or health issues. HIGH VALUE. *
- Significant in the landscape – Prominent from adjacent areas surrounding the site. HIGH VALUE*
- Good and worthy of preservation – Retained due to its status, but may have minor conditions or health issues. MODERATE VALUE. *
- Worthy of preservation- retained due to its status, but may have major conditions or health issues. MODERATE VALUE. **According to *TULE²
- Low Retention-Retain if possible. - Exempt- Very Low

Significance of trees in environment and landscape has a retention value categorizing Trees with Melanie Howden and Andrew Mortons Retention Values Tables

7.0 ANALYSIS OF MAPPING CONTROLS

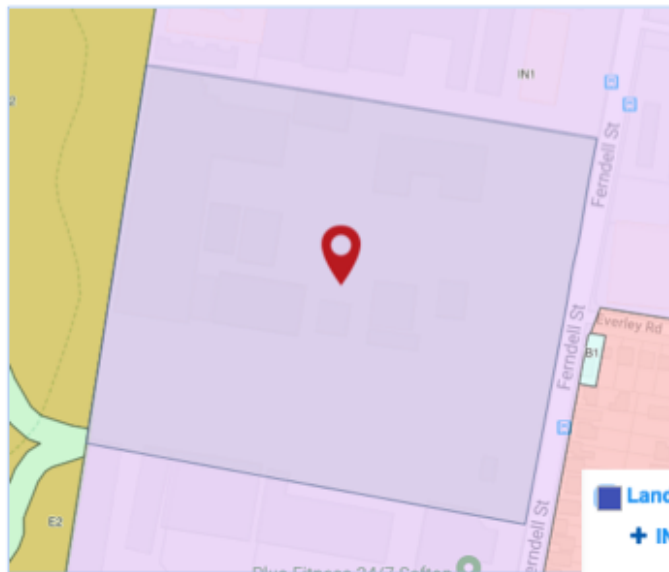


PLATE 1. LAND ZONING
General Industrial, IN1

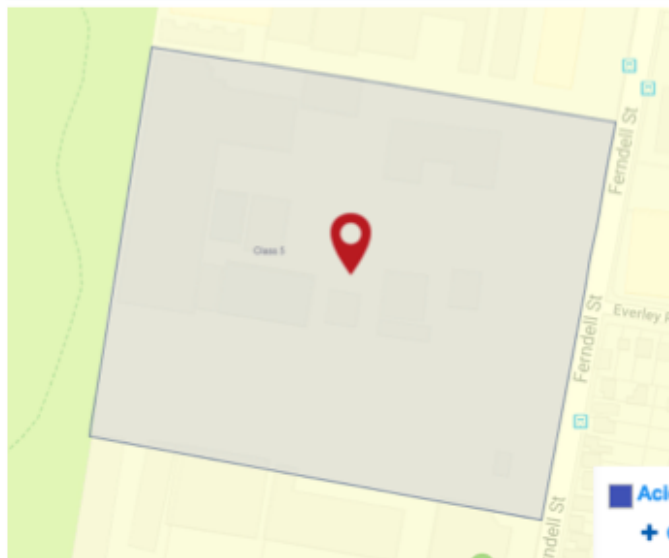


PLATE 2. ACID SULFATE SOILS
Class 5

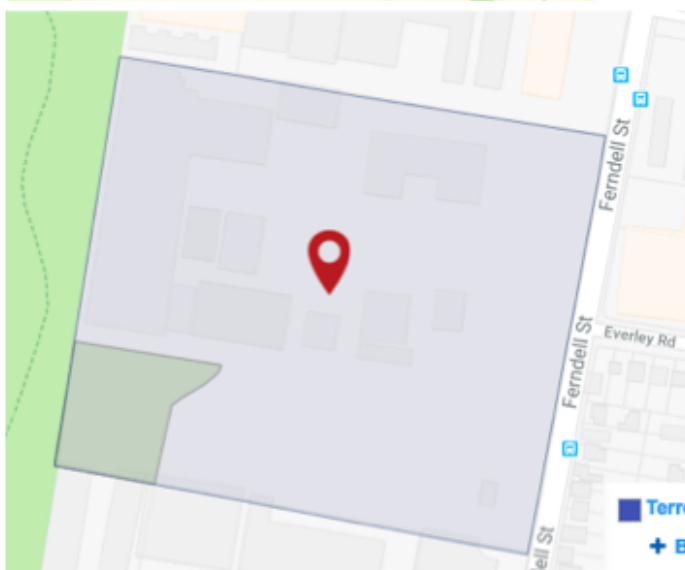


PLATE 3. TERRESTRIAL BIODIVERSITY

8.0 THE SITE

8.1 The site is located at 54-68 Ferndell Street South Granville New South Wales under Parramatta Council.

8.2 The collection of survey data was limited and an inspection was conducted on the afternoon of 23rd and 29th of October 2018 at the site.

8.3 Vegetation is predominantly exotic within the complex area with scattered native endemic trees. The biodiversity area contains vegetation associated with Cumberland Plain Forest Community, (*This could be further verified by an ecologist*). The grade and aspect are level and open respectively.

8.4 SCALED SITE MAP



Plate 4. Aerial plate of the site with hatched-yellow and red line designates the property. The biodiversity area which is fenced off was not assessed by the arborist at this time.

Plate. 54-68 Ferndell Street South Granville New South Wales

The satellite picture of the site. Courtesy of Google Maps

(<https://www.google.com.au/maps/>)

The scale is approximately 23mm: 20m

9.0 TREE SURVEY TABLE 1

Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
1	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	8	15	39 41	4.68 2.27	Immature, good condition but poor development, unbalanced canopy to West, parasitic vine present at base.	2d	Mod	Remove & Replenish
2	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	4	9	17 26	2.04 1.88	Immature, good condition but poor development, Epicormics, sprout at base and parasitic vine present.	2d	Low-Mod	Retain & Protect
3	Front along street.	<u>Eucalyptus rubida</u> Candle bark Gum	9	11	43 54	5.16 2.55	Immature, good condition but poor development, dehydration, slight Lean to South.	2d	Mod	Retain & Protect
4	Front along street.	<u>Eucalyptus rubida</u> Candle bark Gum	8	11	39 61	4.68 2.68	Immature, moderate condition, Epicormics, exudation, physical damage at base, dehydration, sparse foliage crown.	2d	Low-Mod	Retain & Protect
5	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	4	7	18 22	2.16 1.75	Immature, sparse foliage crown, unbalanced canopy to West, dehydration.	2d	Low	Remove & Replenish
6	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	7	10	30 31	3.6 2.02	Immature, good condition but poor development, dehydration, Inclusions at 2m.	2d	Low-Mod	Retain & Protect
7	Front along street.	<u>Eucalyptus rubida</u> Candle bark Gum	7	11	27 37	3.24 2.18	Immature, good condition but poor development.	2d	Mod	Remove & Replenish
8	Front along street.	<u>Eucalyptus rubida</u> Candle bark Gum	8	12	32 38	3.84 2.2	Immature, moderate condition, fracture in bark at base, multi attachment at 3m, sparse foliage crown.	2d	Low-Mod	Retain & Protect
9	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	12	20	67 92	8.04 3.195	Semi mature, poor development, previously pruned, unbalanced canopy to West, co-damaged stem canopy.	2d	High	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
10	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	5	16	78 68	9.36 2.81	Semi mature, moderate condition, Lean and unbalanced canopy to North. Previous failed leader, bracket fungi at base.	2d	Low	Remove & Replenish
11	Front along street.	<u>Eucalyptus rubida</u> Candlebark Gum	6	8	26 28	3.12 1.94	Immature, dead.	4c	Very Low	Retain & Protect
12	Front along street.	<u>Eucalyptus rubida</u> Candlebark Gum	7	11	34 38	4.08 2.2	Immature, good condition but poor development, co-damaged stem 2m.	2d	Low-Mod	Retain & Protect
13	Front along street.	<u>Eucalyptus paniculata</u> Grey Ironbark	6	10	34 36	4.08 2.15	Immature, moderate condition, fractured canopy, failed top of co-damaged stem, twisting.	2d	Low-Mod	Remove & Replenish
14	Front along street.	<u>Corymbia maculata</u> Spotted Gum	8	12	33 44	3.96 2.34	Immature, good condition but poor development, physical damage, insects.	2d	Mod	Retain & Protect
15	Front along street.	<u>Corymbia maculata</u> Spotted Gum	6	16	43 60	5.16 2.67	Immature, good condition but poor development, unbalanced canopy to East.	2d	Mod	Retain & Protect
16	Left of front gate	<u>Eucalyptus paniculata</u> Grey Ironbark	8	15	53 71	6.36 2.865	Immature-semi mature, co damage at 2m, previous failed branch, good condition but poor development, unbalanced canopy to West.	2d	Mod	Remove & Replenish
17	Left of front gate	<u>Eucalyptus tereticornis</u> Forest redgum	4	10	24 29	2.88 1.97	Immature, poor condition, Lean and unbalanced canopy to South West, dehydrated, sparse foliage crown.	3a	Low	Retain & Protect
18	Left of front gate	<u>Eucalyptus microcorys</u> Tallowood	6	11	25 34	3 2.1	Immature, moderate condition, sparse foliage crown.	2d	Low-Mod	Remove & Replenish

AQF Level 5 – Arborist Impact Assessment 2018

Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
19	Left of front gate	<i>Eucalyptus microcorys</i> Tallowood	7	9	31 30	3.72 2	Immature, good condition but poor development, dehydration, co damaged stem, unbalanced canopy to North.	2d	Low-Mod	Remove & Replenish
20	Left of front gate	<i>Eucalyptus microcorys</i> Tallowood	13	16	59 79	7.08 3	Semi mature, unbalanced canopy to North, good condition but poor development.	2d	Mod-High	Retain & Protect
21	Left of front gate	<i>Eucalyptus microcorys</i> Tallowood	12	17	60 81	7.2 3.03	Semi mature, good condition but poor development, unbalanced canopy to North.	2d	Mod-High	Remove & Replenish
22	Left of front gate	<i>Eucalyptus tereticornis</i> Forest redgum	3	14	20 30	2.4 2	Immature, moderate condition, dehydration, Dieback more than 20%, Lean and unbalanced canopy to North.	2d	Low	Remove & Replenish
23	Left of front gate	<i>Eucalyptus tereticornis</i> Forest redgum	8	18	54 77	6.48 2.97	Immature, dehydration, moderate condition, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
24	In carpark	<i>Eucalyptus tereticornis</i> Forest redgum	5	11	30 35	3.6 2.13	Immature, moderate condition, sparse foliage crown, dehydration.	2d	Low	Remove & Replenish
25		<i>Eucalyptus tereticornis</i> Forest redgum	5	10	21 28	2.52 1.94	Immature, moderate condition, sparse foliage crown, physical damage at base.	2d	Low	Remove & Replenish
26		<i>Eucalyptus tereticornis</i> Forest redgum	6	8	27 34	3.24 2.1	Immature, good condition but poor development, fracture in bark.	2d	Low	Remove & Replenish
27		<i>Eucalyptus tereticornis</i> Forest redgum	5	6	22 30	3.24 2	Immature, moderate condition, unbalanced canopy to West.	2d	Low	Remove & Replenish
28		<i>Eucalyptus tereticornis</i> Forest redgum	7	9	32 42	3.84 2.3	Immature, moderate condition, dehydration.	2d	Low	Remove & Replenish

AQF Level 5 – Arborist Impact Assessment 2018

Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
29		<u>Eucalyptus tereticornis</u> Forest redgum	5	7	20 24	3.48 1.82	Immature, moderate condition, dehydration.	2d	Low	Remove & Replenish
30		<u>Eucalyptus tereticornis</u> Forest redgum	7	10	38 33	4.56 2.077	Immature, poor condition, Dieback more than 20%, dehydration, Epicormics.	4c	Very Low	Remove & Replenish
30a		<u>Casuarina glauca</u> She Oak	8	12	42 49	5.04 2.45	Immature, moderate condition.	2d	Low	Remove & Replenish
31		<u>Plumeria rubra</u> Frangipani	3	4	10 12	2 1.5	Immature, good condition but poor development, in planter.	2d	Low	Remove & Replenish
32		<u>Plumeria rubra</u> Frangipani	3	5	10 12	2 1.5	Immature, good condition but poor development, in planter.	2d	Low	Remove & Replenish
33		<u>Syzygium smithii</u> Lillypilly	6	10	25 27	3 1.91	Immature, good condition but poor development.	2a	Mod	Retain & Protect
34		<u>Syzygium smithii</u> Lillypilly	6	10	27 27	3.24 1.91	Immature, good condition but poor development.	2a	Mod	Retain & Protect
35		<u>Syzygium smithii</u> Lillypilly	6	7	22 22	2.64 1.75	Immature, moderate condition, borers.	2a	Low-Mod	Remove & Replenish
36		<u>Syzygium smithii</u> Lillypilly	7	8	25 27	3 1.91	Immature, lean, moderate condition.	2a	Low-Mod	Remove & Replenish
37		<u>Syzygium smithii</u> Lillypilly	8	7	45 46	5.4 2.39	Semi mature, minor fracture on stem.	?	Mod	Remove & Replenish
38		<u>Syzygium smithii</u> Lillypilly	6	7	18 20	2.16 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
39		<u>Syzygium smithii</u> Lillypilly	5	8	16 18	1.92 1.61	Immature, moderate condition, physical damage, interference from Tree 41.	2d	Low	Remove & Replenish
40		<u>Syzygium smithii</u> Lillypilly	6	8	20 24	2.4 1.82	Immature, moderate condition.	2d	Low-Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
41		<u>Eucalyptus tereticornis</u> Forest redgum	8	18	43 51	5.16 2.49	Immature, unbalanced canopy and lean in moderate condition.	2d	Mod	Remove & Replenish
42		<u>Eucalyptus tereticornis</u> Forest redgum	EW 11 NS 13	24	55 58	6.6 2.63	Semi mature, Inclusions at 9m.	3d-4c	Mod	Remove & Replenish
43		<u>Syzygium smithii</u> Lillypilly	5	6	24 24	2.88 1.82	Immature, multi stemmed, physical damage at crossed branch with the canopy	2d	Low	Remove & Replenish
44		<u>Eucalyptus sideroxylon</u> Ironbark	8	12	18 20	2.16 1.68	Immature, Epicormics.	2d	Low-Mod	Remove & Replenish
45		<u>Eucalyptus sideroxylon</u> Ironbark	10		45 46	5.4 2.39	Semi mature, Inclusions at 10m, minor fracture.	2d	Mod	Remove & Replenish
46	Carpark	<u>Eucalyptus sideroxylon</u> Ironbark	6	7	33 30	3.96 2.00	Immature, good condition but poor development, inclusions at 1m, unbalanced canopy to North.	2d	Low	Remove & Replenish
47		<u>Eucalyptus sideroxylon</u> Ironbark	4	7	23 36	2.76 2.15	Immature, moderate condition and insect damage	2d	Low	Remove & Replenish
48		<u>Eucalyptus crebra</u> Red Ironbark	6	10	34 40	4.08 2.25	Immature, moderate condition, physical damage at 5m and exudation.	2d	Mod	Remove & Replenish
49		<u>Eucalyptus sideroxylon</u> Ironbark	2	7	15 18	2.001 .61	Juvenile, moderate condition, dead main stem.	2d	Low	Remove & Replenish
50		<u>Eucalyptus crebra</u> Red Ironbark	7	14	39 50	4.68 2.47	Immature, moderate condition, unbalanced canopy to North, sparse foliage crown.	2d	Low	Remove & Replenish
51		<u>Eucalyptus crebra</u> Red Ironbark	9	13	40 48	4.8 2.43	Immature, good condition but poor development, Lean to West.	2d	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
52		<u>Eucalyptus microcorys</u> Tallowood	7	12	50 59	6 2.65	Immature, poor condition, dieback more than 20%, dying, epicormics, exposed roots, root girdling, termites.	4c	Very Low	Remove & Replenish
53		<u>Corymbia maculata</u> Spotted Gum	5	12	26 32	3.12 2.05	Dying, immature, epicormics.	4c	Very Low	Remove & Replenish
54		<u>Eucalyptus tereticornis</u> Forest Redgum	7	11	34 38	4.08 2.20	Immature tree in very poor condition and dying	4c	Very Low	Remove & Replenish
55		<u>Casuarina glauca</u> She Oak	10	13	35 48	4.2 2.43	Immature-semi mature, lean and unbalanced canopy to South, poor condition.	2d	Low	Remove & Replenish
56		<u>Casuarina glauca</u> She Oak	7	15	40 60	4.8 2.67	Immature, moderate condition, inclusions at 6m, unbalanced canopy to North.	2d	Low	Remove & Replenish
57		<u>Casuarina glauca</u> She Oak	8	15	33 47	3.96 2.41	Immature, unbalanced canopy to South, moderate condition.	2d	Low	Remove & Replenish
58		<u>Casuarina glauca</u> She Oak	6	14	36 53	4.32 2.53	Immature, moderate condition, unbalanced canopy to West.	2d	Low	Remove & Replenish
59		<u>Casuarina glauca</u> She Oak	7	13	33 40	3.96 2.25	Immature-semi mature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
60		<u>Casuarina glauca</u> She Oak	8	16	40 61	4.8 2.68	Immature, moderate condition, unbalanced canopy to West.	2d	Low	Remove & Replenish
61		<u>Eucalyptus sideroxylon</u> Ironbark	11	12	40 42	4.8 2.3	Immature, good condition but poor development, unbalanced canopy and lean to West.	2d	Mod	Retain & Protect
62		<u>Eucalyptus sideroxylon</u> Ironbark	8	8	34 35	4.08 2.13	Immature, moderate condition, unbalanced canopy, lean to West.	2d	Mod	Retain & Protect
63		<u>Eucalyptus sideroxylon</u> Ironbark	12	15	37 38	4.44 2.2	Immature, moderate condition, unbalanced canopy, lean to West.	2d	Mod	Retain & Protect

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
64		<u>Eucalyptus sideroxylon</u> Ironbark	12	15	31 38	3.72 2.2	Immature, moderate condition, unbalanced canopy, lean to West.	2d	Mod	Retain & Protect
65		Stag	10	13	45 50	-	Dead	4c	Very Low	Remove & Replenish
66		<u>Corymbia citriodora</u> Lemon Scented	18	25	74 90	8.88 3.17	Semi mature, moderate condition.	2d	High	Remove & Replenish
67		<u>Corymbia citriodora</u> Lemon Scented Gum	EW 12 NS 10	25	68 20	8.16 1.68	Semi mature, moderate condition, unbalanced canopy to East West.	2d	Mod-High	Remove & Replenish
68		<u>Corymbia citriodora</u> Lemon Scented	22	24	58 77	6.96 2.97	Semi mature, lean to West.	2d	Mod-High	Remove & Replenish
69		<u>Corymbia citriodora</u> Lemon Scented	20	16	52 54	6.24 2.55	Immature, moderate condition and exposed roots with physical damage	2d	Mod	Remove & Replenish
70		<u>Corymbia citriodora</u> Lemon Scented	20	24	59 60	7.08 2.67	Semi mature, moderate condition.	2d	Mod-High	Remove & Replenish
71a	X 3	Stag	6	7	20 22	2.4 1.75	Dead.	4c	Very Low	Remove & Replenish
72		<u>Melaleuca sp.</u> Paperbark	7	7	21 20	2.52 1.68	Immature, lean to West, unbalanced canopy.	2d	Low	Remove & Replenish
73		<u>Melaleuca sp.</u> Paperbark	7	10	35 35	4.2 2.13	Semi mature, moderate condition, vine.	2d	Mod	Remove & Replenish
74		<u>Melaleuca sp.</u> Paperbark	6	8	15 20	1.8 1.68	Immature, moderate condition, lean to West, physical damage.	3d	Low	Remove & Replenish
75		<u>Melaleuca styphelioides</u> Prickly-leaved paperbark	8	16	39 33	4.68 2.077	Semi mature, moderate condition.	2d	Mod	Remove & Replenish
76		<u>Leptospermum species</u> Tea tree	5	4	21 20	2.52 1.68	Immature, moderate condition, parasitic vine present.	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
77		<u>Callistemon viminalis</u> Bottlebrush	3	2	21 20	2.52 1.68	Immature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
78		<u>Eucalyptus cladocalyx</u> Sugar Gum	7	12	40 49	4.8 2.45	Semi mature, moderate condition, epicormic regrowth and lean to West.	2d	Low-Mod	Remove & Replenish
79		<u>Corymbia maculata</u> Spotted Gum	7	14	33 38	3.96 2.2	Semi mature, moderate condition, lean to West, unbalanced canopy to West.	2d	Low-Mod	Remove & Replenish
80		<u>Corymbia maculata</u> Spotted Gum	8	15	35 40	4.2 2.25	Semi mature, good condition but poor development, sparse foliage crown.	2a	Mod	Remove & Replenish
81		<u>Corymbia maculata</u> Spotted Gum	9	16	41 52	4.92 2.51	Semi mature, sparse foliage crown, unbalanced canopy to South West.	2a	Mod	Remove & Replenish
82		<u>Corymbia maculata</u> Spotted Gum	9	17	40 50	4.8 2.47	Semi mature, good condition but poor development.	2d	Mod-High	Remove & Replenish
83		<u>Corymbia maculata</u> Spotted Gum	7	18	31 37	3.72 2.18	Semi mature, moderate condition.	2d	Mod-High	Remove & Replenish
84		<u>Eucalyptus tereticornis</u> Forest Redgum	6	14	29 40	3.48 2.25	Semi mature, moderate condition, sparse foliage crown, inclusions at 16m.	2d	Mod	Remove & Replenish
85		<u>Eucalyptus rubida</u> Candlebark gum	7	15	30 35	3.6 2.13	Semi mature, good condition but poor development.	2a	Mod	Remove & Replenish
86		<u>Corymbia citriodora</u> Lemon Scented Gum	6	12	25 31	3 2.02	Semi mature, lean to North, unbalanced canopy to North, good condition but poor development.	2d	Mod	Remove & Replenish
87		<u>Corymbia citriodora</u> Lemon Scented Gum	8	16	34 38	4.08 2.2	Semi mature, good condition but poor development, unbalanced canopy to West.	2d	Mod	Remove & Replenish
88		Stag	3	4	18 20	2.16 1.68	Immature, Poor condition	4a	Very Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
89		<u>Corymbia maculata</u> Spotted Gum	8	27	40 52	4.8 2.51	Semi mature, good condition but poor development, slight unbalanced canopy to West.	2a	Mod	Remove & Replenish
90		<u>Corymbia maculata</u> Spotted Gum	9	21	41 48	4.92 2.43	Semi mature, good condition but poor development.	2a	Mod-High	Remove & Replenish
91		<u>Casuarina glauca</u> She Oak	7	18	36 40	4.32 2.25	Semi mature, twin stem, good condition but poor development.	2d	Mod	Remove & Replenish
92		<u>Casuarina glauca</u> She Oak	6	8	32 38	3.84 2.2	Immature, multi attachment at 2m, good condition but poor development.	2d	Low-Mod	Remove & Replenish
93		<u>Casuarina glauca</u> She Oak	3	5	18 20	2.16 1.68	Immature, moderate condition.	3a	Low	Remove & Replenish
94		<u>Casuarina glauca</u> She Oak	6	18	38 46	4.56 2.39	Semi mature, good condition but poor development, unbalanced canopy to West.	2d	Mod	Remove & Replenish
95		Stag		3	10	-	Dead.	4d	Very Low	Remove & Replenish
96		<u>Syzygium smithii</u> Lillypilly	5	10	22 26	2.64 1.88	Semi mature, moderate condition, sparse foliage crown, dieback more than 20%.	3d	Low	Remove & Replenish
97		Stag	3	5	18 20	-	Immature, very poor condition.	3d	Low	Remove & Replenish
98		Stag	3	6	18 20	-	Dead.	4d	Very Low	Remove & Replenish
99	X 11	<u>Acer Negundo</u> Box Elder Maple	3-16	6-8	18-28 24-38	3.36 2.2	Immature, good condition but poor development, epicormics.	2d	Low	Remove & Replenish
99a		<u>Robinia pseudoacacia</u> Black Locust	3	7	13 18	2 1.61	Immature, poor condition.	3d	Low	Remove & Replenish
100		<u>Robinia pseudoacacia</u> Black Locust	3	8	20 22	2.4 1.75	Immature, moderate condition, lean to North, unbalanced canopy to North.	3a	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
101		<u>Syzygium smithii</u> Lillypilly	3	5	16 20	2.00 1.68	Immature, poor condition, sparse foliage crown, dieback more than 20%.	3d	Very Low	Remove & Replenish
102		<u>Syzygium smithii</u> Lillypilly	2	3	16 18	2.001 .61	Immature, poor condition, sparse foliage crown, dieback more than 20%.	3d	Very Low	Remove & Replenish
103		<u>Robinia pseudoacacia</u> Black Locust	5	9	34 38	4.08 2.2	Semi mature, moderate condition, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
104		<u>Grevillea robusta</u> Silky Oak	6	14	33 38	3.96 2.2	Semi mature, moderate condition, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
105		<u>Grevillea robusta</u> Silky Oak	5	12	30 36	3.6 2.15	Semi mature, moderate condition, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
106		<u>Grevillea robusta</u> Silky Oak	7	12	32 38	3.84 2.2	Semi mature, moderate condition.	2d	Mod	Remove & Replenish
107		<u>Eucalyptus botryoides</u> Bangalay	10	16	56 70	6.72 2.85	Semi mature, good condition but poor development, slight unbalanced canopy to North, termite damage.	2d	Mod-High	Remove & Replenish
108		<u>Eucalyptus botryoides</u> Bangalay	9	14	42 50	5.04 2.47	Immature, good condition but poor development, unbalanced canopy to West, termite damage.	2d	Mod	Remove & Replenish
109		<u>Grevillea robusta</u> Silky Oak	8	13	28 32	3.36 2.05	Immature – semi mature, unbalanced canopy to East, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
110		<u>Eucalyptus grandis</u> Flooded Gum	11	18	60 89	7.2 3.15	Semi mature, good condition but poor development and termite damage.	2d	Mod-High	Remove & Replenish
111		<u>Grevillea robusta</u> Silky Oak	7	16	24 30	2.88 2	Immature, good condition but poor development, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
112		<u>Eucalyptus microcorys</u> Tallowood	8	17	48 54	5.76 2.55	Semi mature, lean to North, unbalanced canopy to South, termite damage, lifting south of root plate.	2d	Mod	Remove & Replenish
113		<u>Syzygium smithii</u> Lillypilly	5	9	26 30	3.12 2	Mature, good condition but poor development, sparse foliage crown.	2d	Low-Mod	Remove & Replenish

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114		<u>Syzygium smithii</u> Lillypilly	4	7	20 24	2.4 1.82	Semi mature, good condition but poor development, unbalanced canopy to East.	2d	Low-Mod	Remove & Replenish
115		<u>Eucalyptus tereticornis</u> Forest redgum	6	10	22 32	2.64 2.05	Immature, good condition but poor development, dehydration, epicormics.	2d	Low	Remove & Replenish
116		<u>Eucalyptus tereticornis</u> Forest redgum	8	16	42 56	5.04 2.59	Immature, poor condition, dehydration, epicormics, dying.	3a	Low	Remove & Replenish
117		<u>Eucalyptus tereticornis</u> Forest redgum	4	8	20 27	2.4 1.91	Immature, moderate condition, dehydration, sparse foliage crown.	2d	Low	Remove & Replenish
118		<u>Lophostemon confertus</u> Brushbox	6	7	18 26	2.16 1.88	Immature, poor condition, dehydration, dieback more than 20% and physical damage at the base	3a	Low	Remove & Replenish
119		Stag	4	6	15 20	2.00 1.68	Dead tree.	4c	Very Low	Remove & Replenish
120		<u>Casuarina glauca</u> She Oak	10	11	35 53	4.2 2.53	Semi mature, moderate condition, unbalanced canopy to North.	2d	Low-Mod	Remove & Replenish
121		<u>Casuarina glauca</u> She Oak	6	14	31 44	3.72 2.34	Immature, sparse foliage crown, moderate condition.	2d	Low	Remove & Replenish
122		<u>Casuarina glauca</u> She Oak	7	13	33 42	3.96 2.3	Immature, unbalanced canopy to West, epicormics.	2d	Low	Remove & Replenish
123		<u>Casuarina glauca</u> She Oak	6	12	36 49	4.32 2.45	Semi mature, moderate condition, exposed roots, unbalanced canopy to East.	2d	Low	Remove & Replenish
124 X 2		<u>Fraxinus excelsior</u> Golden Ash	1-3	6-8	10-14 10-20	2 1.68	Juvenile, poor condition, sparse foliage crown.	3a	Low	Remove & Replenish
125		<u>Fraxinus excelsior</u> Golden Ash	6	10	32 37	3.84 2.18	Immature, poor condition and dying.	4c	Very Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
126		<i>Fraxinus excelsior</i> Golden Ash	5	8	21 20	2.52 1.68	Immature, poor condition and dying.	4c	Very Low	Remove & Replenish
127		<i>Fraxinus excelsior</i> Golden Ash	2	7	10 15	2 1.5	Juvenile, dying, sparse foliage crown.	4c	Very Low	Remove & Replenish
128		<i>Casuarina glauca</i> She Oak	8	13	48 59	5.76 2.65	Semi mature, unbalanced canopy to West, moderate condition.	2d	Low	Remove & Replenish
129		<i>Eucalyptus crebra</i> Red Ironbark	6	14	31 40	3.72 2.25	Immature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
130		<i>Casuarina glauca</i> She Oak	3	4	15 23	2 1.79	Juvenile, dead main leader.	2d	Low	Remove & Replenish
131		<i>Eucalyptus crebra</i> Red Ironbark	7	8	34 39	4.08 2.23	Immature, co damaged stem 1m, moderate condition.	2d	Low	Remove & Replenish
132		<i>Syzygium smithii</i> Lillypilly	6	5	19 21	2.28 1.72	Immature, very poor condition, dying.	4c	Very Low	Remove & Replenish
133		Stag	5	5	10 20	2 1.68	Immature, dead.	4c	Very Low	Remove & Replenish
134		<i>Pittosporum undulatum</i> Pittosporum	5	8	23 28	2.76 1.94	Immature, good condition but poor development, physical damage at base.	2d	Low	Remove & Replenish
135		<i>Lophostemon confertus</i> Brushbox	5	8	22 30	2.64 2	Immature, moderate condition, dehydration, inclusions at 2m.	2d	Low	Remove & Replenish
136		<i>Pittosporum undulatum</i> Pittosporum	4	7	20 30	2.4 2	Immature, moderate condition, exposed roots, inclusions at 3m.	2d	Low	Remove & Replenish
137		<i>Eucalyptus pilularis</i> Blackbutt	6	16	44 57	5.28 2.61	Immature, moderate condition, sparse foliage crown, unbalanced canopy to North West, dieback more than 20%.	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
138		<u>Eucalyptus tereticornis</u> Forest Redgum	5	8	45 56	5.4 2.59	Immature, co damaged stem, moderate condition.	2d	Low-Mod	Remove & Replenish
139		<u>Eucalyptus crebra</u> Red Ironbark	7	10	38 46	4.56 2.39	Immature-semi mature, moderate condition, unbalanced canopy to North, inclusions at 3m.	2d	Low	Remove & Replenish
140		<u>Callistemon viminalis</u> Bottlebrush	6	5	25 26	3 1.88	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
141 X 4		<u>Callistemon viminalis</u> Bottlebrush	4	4	10-18 20	2.16 1.68	Immature, moderate condition.	2d	Low-Mod	Remove & Replenish
142		<u>Leptospermum species</u> Tea Tree	5	5	21 20	2.52 1.68	Immature, good condition but poor development.	2d	Low-Mod	Remove & Replenish
143		<u>Fraxinus sp.</u> Flowered Ash	5	6	20 20	2.4 1.68	Immature, good condition but poor development.	2a	Low	Remove & Replenish
144		<u>Melaleuca bracteata</u> Black tea tree	5	5	20 22	2.4 1.75	Immature, good condition but poor development.	2a	Low-Mod	Remove & Replenish
145 X 6		<u>Callistemon viminalis</u> Bottlebrush	3	3-4	8-12 16-18	2 1.61	Immature, moderate condition.	2d	Low-Mod	Remove & Replenish
146 X 4		<u>Cupressus sempervirens</u> Cypress	2	3-4	12 18	2 1.61	Immature, moderate condition, sparse foliage crown.	2d-3a	Low	Remove & Replenish
147 X 32		<u>Mixed shrubs & species</u>	2-3	3-4	8-18 10-20	2.16 1.68	Immature, good condition but poor development.	2d	Low	Remove & Replenish
148		<u>Melaleuca linariifolia</u> Paperbark	5	11	34 38	4.08 2.2	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
149		<u>Melaleuca linariifolia</u> Paperbark	8	9	42 40	5.04 2.25	Immature, multi stemmed, good condition but poor development.	2a	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
150		<u>Casuarina glauca</u> She Oak	9	11	42 52	5.04 2.51	Immature, moderate condition, previous failed branch, epicormics.	2d	Low	Remove & Replenish
151		<u>Casuarina glauca</u> She Oak	9	13	59 72	7.08 2.88	Immature, moderate condition, epicormics.	2d	Low	Remove & Replenish
152		<u>Casuarina glauca</u> She Oak	10	13	32 38	3.84 2.2	Immature, poor condition, sparse foliage crown, dehydrated.	4c	Very Low	Remove & Replenish
153		<u>Casuarina glauca</u> She Oak	6	13	20 27	2.4 1.91	Immature, poor condition, epicormics.	3a	Low	Remove & Replenish
154		<u>Casuarina glauca</u> She Oak	6	12	22 46	2.64 2.39	Immature, moderate condition, unbalanced canopy to West.	2d	Low	Remove & Replenish
155		<u>Casuarina glauca</u> She Oak	6	12	21 26	2.52 1.88	Immature, moderate condition.	2d	Low	Remove & Replenish
156		<u>Casuarina glauca</u> She Oak	7	13	31 39	3.72 2.23	Immature, poor condition, sparse foliage crown.	3a	Low	Remove & Replenish
157		<u>Casuarina glauca</u> She Oak	8	13	28 30	3.36 2	Immature, moderate condition, sparse foliage crown, epicormics.	2d	Low	Remove & Replenish
158 X 2		<u>Callistemon viminalis</u> Bottlebrush	5	5	5-10 20	2 1.68	Immature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
159		<u>Hymenosporum flavum</u> Native frangipani	3	4	10 14	2 1.5	Immature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
160		<u>Casuarina glauca</u> She Oak	5	10	15-20 18-25	2.4 1.85	Immature, moderate condition, sparse foliage crown, unbalanced canopy.	2d	Low	Remove & Replenish
161		<u>Cupressus sp.</u> Cypress	3	8	11 20	2 1.68	Immature, moderate condition, dieback more than 20%.	2d	Low	Remove & Replenish
162		<u>Angophora costata</u> Red gum	8	11	25 35	3 2.13	Immature, moderate condition, lean and unbalanced canopy to North, sparse foliage crown.	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
163 X 2		Stag	3	7	10-15 20	1.8 1.68	Dead.	4c	Very Low	Remove & Replenish
164		<u>Eucalyptus tereticornis</u> Forest redgum	12	14	80 70	9.6 2.85	Immature, good condition but poor development, inclusion at 1m, epicormics.	2d	Mod	Remove & Replenish
165		<u>Melaleuca sp.</u> Paperbark	5	9	34 30	4.08 2	Immature, moderate condition, unbalanced canopy and lean to West, twin stem.	2d	Low-Mod	Remove & Replenish
166		<u>Syzygium smithii</u> Lillypilly	3	5	5-10 10-20	2 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
167		<u>Casuarina glauca</u> She Oak	11	12	33 44	3.96 2.34	Immature, moderate condition.	2d	Low-Mod	Remove & Replenish
168		<u>Casuarina glauca</u> She Oak	8	12	31 40	3.72 2.25	Immature, moderate condition, epicormics.	2d	Low	Remove & Replenish
169		<u>Casuarina glauca</u> She Oak	9	12	35 42	4.2 2.3	Immature, moderate condition.	2d	Low-Mod	Remove & Replenish
170		<u>Casuarina glauca</u> She Oak	10	14	34 46	4.08 2.39	Immature, good condition but poor development.	2d	Low-Mod	Remove & Replenish
171		<u>Casuarina glauca</u> She Oak	7	13	34 37	4.08 2.18	Immature, moderate condition, fracture at 2m, cavity at 2m.	3a	Very Low	Remove & Replenish
172		<u>Casuarina glauca</u> She Oak	8	14	45 56	5.4 2.59	Immature, poor condition, inclusions at 2m, split down stem and crack 1m long.	4c	Very Low	Remove & Replenish
173		<u>Melaleuca quinquenervia</u> Paperbark-broad	8	9	91 93	10.9 3.21	Semi mature, good condition but poor development.	2a	Mod	Remove & Replenish
174		<u>Leptospermum species</u> Tea Tree	7	5	23 20	2.76 1.68	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
175		<u>Melaleuca quinquenervia</u> Paperbark-broad	10	9	99 115	11.8 3.51	Semi mature, good condition but poor development.	2a	High	Remove & Replenish

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176		<u>Melaleuca quinquenervia</u> Paperbark-broad	7	8	83 102	9.96 3.34	Semi mature, good condition but poor development.	2a	Mod-High	Remove & Replenish
177		<u>Leptospermum species</u> Tea Tree	5	5	10-15 18	2.00 1.61	Immature, good condition but poor development.	2a	Low-Mod	Remove & Replenish
178		<u>Lophostemon confertus</u> Brushbox	8	8	49 56	5.88 2.59	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
179		<u>Casuarina glauca</u> She Oak	7	5	18 20	2.16 1.68	Immature, good condition but poor development.	2a	Low-Mod	Remove & Replenish
180		<u>Trachycarpus fortunei</u> Chinese Wind Palm	5	7	46 50	5.52 2.47	Semi mature, moderate condition.	2d	Low	Remove & Replenish
181		<u>Lophostemon confertus</u> Brushbox	6	15	38 42	4.56 2.3	Immature, unbalanced canopy to North, moderate condition, heavily pruned.	3a	Low	Remove & Replenish
182		<u>Lophostemon confertus</u> Brushbox	8	10	30 34	3.6 2.1	Immature, moderate condition, heavily pruned.	3a	Low	Remove & Replenish
183		<u>Syzygium smithii</u> Lillypilly	3	6	14 20	2.00 1.68	Immature, good condition but poor development, twin stem.	2d	Low-Mod	Remove & Replenish
184 X2		<u>Leptospermum species</u> Tea Tree	3	3-4	10-12 18-20	2.00 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
185 X2		<u>Syzygium smithii</u> Lillypilly	3	3	8-10 12-16	2 1.53	Immature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
186		<u>Stenocarpus sinuatus</u> Firewheel Tree	2	3	12 16	2 1.53	Immature, moderate condition.	2d	Low	Remove & Replenish
187		<u>Melaleuca linariifolia</u> Paperbark	8	7	50 48	6 2.43	Immature, moderate condition, twin stem.	2a	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
188		<u>Lophostemon confertus</u> Brushbox	7	6	38 44	4.56 2.34	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
189		<u>Stag</u>	-	4	10	-	Dead.	4a	Very Low	Remove & Replenish
190 X3		<u>Elaeocarpus reticulatus</u> Blueberry Ash	-	4	12 14	2 1.5	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
191		<u>Melaleuca quinquenervia</u> Paperbark-broad	3	5	20 22	2.4 1.75	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
192		<u>Melaleuca quinquenervia</u> Paperbark-broad	5	5	30 34	3.6 2.1	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
193 X2		<u>Callistemon viminalis</u> Bottlebrush	3	5	23 20	2.76 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
194		<u>Melaleuca quinquenervia</u> Paperbark-broad	4	5	28 32	3.36 2.05	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
195		<u>Callistemon viminalis</u> Bottlebrush	6	5	41 52	4.92 2.51	Mature, good condition but poor development, multi stemmed.	2a	Mod-High	Remove & Replenish
196		<u>Melaleuca quinquenervia</u> Paperbark-broad	7	6	55 58	6.6 2.63	Semi mature, good condition but poor development, multi stemmed.	2a	Mod	Remove & Replenish
197		<u>Melaleuca quinquenervia</u> Paperbark-broad	2	6	18 20	2.16 1.68	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
198		<u>Melaleuca quinquenervia</u> Paperbark-broad	7	7	54 58	6.48 2.63	Semi mature, good condition but poor development.	2a	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
199		<u>Melaleuca quinquenervia</u> Paperbark-broad	3	7	52 50	6.24 2.47	Semi mature, good condition but poor development, sparse foliage crown, tall.	2d	Mod	Remove & Replenish
199a		<u>Melaleuca quinquenervia</u> Paperbark-broad	7	8	67 60	8.04 2.67	Semi mature, good condition but poor development.	2a	Mod	Remove & Replenish
200	Adj Bio-Diversit'y Area	<u>Casuarina glauca</u> She Oak	8	14	35 40	4.2 2.25	Immature, good condition but poor development and minor fails.	2d	Mod	Remove & Replenish
201		<u>Casuarina glauca</u> She Oak	8	12	35 38	4.2 2.2	Immature, good condition but poor development.	2a	Mod	Remove & Replenish
202 X2		<u>Cupressus sempervirens</u> Cypress	2-3	6-7	15 20	1.8 1.68	Immature, moderate condition, suppressed canopy.	2d	Low	Remove & Replenish
203 X2		Stag	-	6	15	-	Dead	4c	Very Low	Remove & Replenish
204		<u>Eucalyptus rubida</u> Candlebark Gum	8	10	35 36	4.2 2.15	Immature, moderate condition on bark.	2a	Mod	Remove & Replenish
205		<u>Cupressus sempervirens</u> Cypress	7	12	42 44	5.04 2.34	Immature, moderate condition on bark.	2a	Mod	Remove & Replenish
206 X3		<u>Cupressus sempervirens</u> Cypress	1-2	6-8	15 20	1.8 1.68	Immature, good condition but poor development, unbalanced canopy.	2d	Low	Remove & Replenish
207		<u>Eucalyptus rubida</u> Candlebark Gum	5	12	23 24	2.76 1.82	Immature, good condition but poor development, unbalanced canopy.	2d	Low-Mod	Remove & Replenish
208		<u>Eucalyptus rubida</u> Candlebark Gum	10	16	44 46	5.28 2.39	Immature, moderate condition.	2a	Mod	Remove & Replenish
209		<u>Eucalyptus rubida</u> Candlebark Gum	10	15	50 50	6 2.47	Semi mature, physical damage at 1.5m, cavity at 1.5m.	4c	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
210 X3		<u>Cupressus sempervirens</u> Cypress	3	8	15 20	1.8 1.68	Immature, moderate condition and sparse canopy	2d	Low	Remove & Replenish
211		<u>Eucalyptus rubida</u> Candlebark Gum	12	18	56 60	6.72 2.67	Semi mature, borers, parasitic vine present in overall moderate condition	3d	Low-Mod	Remove & Replenish
212		<u>Hymenosporum flavum</u> Native frangipani	3	6	18 15	2.16 1.5	Immature, good condition but poor development.	2a	Low	Remove & Replenish
213		<u>Lophostemon confertus</u> Brushbox	4	5	10 14	2 1.5	Immature, lean to East, unbalanced canopy.	2d	Low	Remove & Replenish
214		<u>Brachychiton acerifolius</u> Flame Tree	6	10	18 20	2.16 1.68	Immature, moderate condition, physical damage to bark.	2d	Low	Remove & Replenish
215		<u>Eucalyptus moluccana</u> Grey Box	7	20	34 35	4.08 2.13	Immature, good condition but poor development, lean, unbalanced canopy to West.	2d	Mod	Remove & Replenish
216		<u>Eucalyptus rubida</u> Candlebark Gum	12	20	40 42	4.8 2.3	Immature, moderate condition, vine, physical damage to bark.	2d-3d	Mod	Remove & Replenish
217		<u>Eucalyptus moluccana</u> Grey Box	12	16	51 53	6.12 2.53	Semi mature, lean to West, physical damage, failed leader, parasitic vine present.	4c	Low	Remove & Replenish
218 X5		<u>Cupressus sempervirens</u> Cypress	3	6	12-15 15-20	2 1.68	Immature, moderate condition, physical damage on bark, encroachment.	3d	Low	Remove & Replenish
219		<u>Melaleuca quinquenervia</u> Paperbark-broad	6	7	18 20	2.16 1.68	Immature, lean to South, encroachment in overall moderate condition	2d	Low	Remove & Replenish
220		<u>Eucalyptus moluccana</u> Grey Box	8	17	37 38	4.44 2.2	Immature, moderate condition, minor dehydration, encroachment.	2d	Mod	Remove & Replenish

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221		<u>Eucalyptus moluccana</u> Grey Box	8	17	37 38	4.44 2.2	Immature, moderate condition, cavity at 10m on East side, termite damage.	3d	Low-Mod	Remove & Replenish
222		<u>Eucalyptus moluccana</u> Grey Box	7	14	24 25	2.88 1.85	Immature, twin codominant stem, encroachment.	2d	Low	Remove & Replenish
223		<u>Eucalyptus moluccana</u> Grey Box	9	17	40 40	4.8 2.25	Immature, inclusions at 1m, parasitic vine present, encroachment, North leader leaning precariously.	4c	Low-Mod	Remove & Replenish
224 X2		<u>Brachychiton acerifolius</u> Flame Tree	4	5	18 20	2.16 1.68	Immature, good condition but poor development, encroachment.	2d	Low	Remove & Replenish
225		<u>Eucalyptus moluccana</u> Grey Box	10	19	50 50	6 2.47	Immature, triple stem, parasitic vine present, encroachment, inclusions at 10m.	3d	Low-Mod	Remove & Replenish
226		<u>Eucalyptus moluccana</u> Grey Box	8	18	28 30	3.36 2	Immature, inclusions, physical damage.	4c	Low	Remove & Replenish
227 X5		<u>Casuarina glauca</u> She Oak	4-6	10-12	25	3	Immature, moderate condition, encroachment.	3d	Low	Remove & Replenish
228		<u>Eucalyptus moluccana</u> Grey Box	5	18	25	3	Immature, good condition but poor development, encroachment.	3d	Low	Remove & Replenish
229		<u>Eucalyptus moluccana</u> Grey Box	5	14	21 25	2.52 1.85	Immature, multi stemmed.	4c	Low	Remove & Replenish
230		<u>Eucalyptus moluccana</u> Grey Box	12	20	40 42	4.8 2.3	Immature, moderate condition, encroachment.	2d	Mod-High	Remove & Replenish

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231		<u>Eucalyptus moluccana</u> Grey Box	6	18	28 32	3.36 2.05	Immature, inclusions at 5m, physical damage.	3d	Low	Remove & Replenish
232 X2		<u>Brachychiton acerifolius</u> Flame Tree	5	6	18 20	2.16 1.68	Immature, good condition but poor development, encroachment.	2d	Low	Remove & Replenish
233		<u>Eucalyptus moluccana</u> Grey Box	6	16	28 30	3.36 2	Immature, moderate condition, encroachment.	2d	Low-Mod	Remove & Replenish
234		<u>Eucalyptus moluccana</u> Grey Box	6	18	40 42	4.8 2.3	Immature, moderate condition, encroachment.	2d	Low-Mod	Remove & Replenish
235		<u>Eucalyptus moluccana</u> Grey Box	10	18	52 54	6.24 2.55	Immature, unbalanced canopy to South, encroachment.	2d	Mod	Remove & Replenish
236		<u>Eucalyptus moluccana</u> Grey Box	10	18	43 48	5.16 2.43	Immature, unbalanced canopy to South, encroachment	2d	Mod	Remove & Replenish
237		Stag	-	6	15	-	Dead. Encroachment.	4a	Very Low	Remove & Replenish
238		<u>Hymenosporum flavum</u> Native frangipani	4	6	15 20	2.00 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
239		<u>Cupressus sempervirens</u> Cypress	3	7	28 30	3.36 2	Immature, multi stemmed, encroachment.	2d	Low	Remove & Replenish
240		<u>Eucalyptus tereticornis</u> Forest redgum	12	18	45 50	5.4 2.47	Semi mature, lean to East, inclusions, fracture.	4c	Very Low	Remove & Replenish

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241		<u>Brachychiton acerifolius</u> Flame Tree	6	8	25 27	3 1.91	Immature, moderate condition, damage to roots.	2d	Low-Mod	Remove & Replenish
242		<u>Eucalyptus moluccana</u> Grey Box	10	24	37 39	4.44 2.23	Immature, moderate condition, inclusions at 8m, encroachment.	3d	Mod	Remove & Replenish
243		<u>Eucalyptus moluccana</u> Grey Box	8	13	27 35	3.24 2.13	Immature, co dominant stem, dehydration.	3d	Low-Mod	Remove & Replenish
244		<u>Eucalyptus moluccana</u> Grey Box	6	17	28 30	3.36 2	Immature, moderate condition, unbalanced canopy.	2d	Mod	Remove & Replenish
245		<u>Eucalyptus moluccana</u> Grey Box	6	18	32 34	3.84 2.1	Immature, good condition but poor development.	2d	Mod	Remove & Replenish
246		<u>Eucalyptus moluccana</u> Grey Box	4	6	10 12	2 1.5	Immature, good condition but poor development.	2a	Low	Remove & Replenish
247		<u>Eucalyptus moluccana</u> Grey Box	8	16	26 27	3.12 1.91	Immature, moderate condition, lean to West.	2d	Low-Mod	Remove & Replenish
248		<u>Eucalyptus moluccana</u> Grey Box	7	16	32 35	3.84 2.13	Immature, lean to West, borers.	2d-3a	Low-Mod	Remove & Replenish
249		<u>Eucalyptus nicholi</u> Black Peppermint	8	17	35 40	4.2 2.25	Immature, Inclusions at 10m, vine on stem.	2d-4c	Mod	Remove & Replenish
250		<u>Eucalyptus nicholi</u> Black Peppermint	4	8	15 20	2 1.68	Immature, moderate condition, lean to East.	2a	Low	Remove & Replenish

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251		<i>Eucalyptus nicholi</i> Black Peppermint	8	20	38 42	4.56 2.3	Immature, twin stem, lean to East, parasitic vine present, insect damage in overall moderate condition	2d	Mod	Remove & Replenish
252		<i>Eucalyptus nicholi</i> Black Peppermint	8	15	29 30	3.48 2	Immature, lean to East, unbalanced canopy, parasitic vine present.	2d	Mod	Remove & Replenish
253 X2		<i>Brachychiton acerifolius</i> Flame Tree	6	5	12-15 20	2 1.68	Immature, good condition but poor development, encroachment.	2a	Low	Remove & Replenish
254		<i>Eucalyptus tereticornis</i> Forest redgum	-	4	25 26	3 1.88	Immature, physical damage.	4c	Very Low	Remove & Replenish
255		<i>Eucalyptus tereticornis</i> Forest redgum	5	8	18 20	2.16 1.68	Immature, good condition but poor development, encroachment.	2a	Low	Remove & Replenish
256		<i>Eucalyptus tereticornis</i> Forest redgum	8	10	34 30	4.08 2	Immature, failed branch at 5m – crossed.	2d	Low	Remove & Replenish
257		<i>Eucalyptus tereticornis</i> Forest redgum	1	5	20 22	2.4 1.75	Immature, moderate condition.	4c	Very Low	Remove & Replenish
258		<i>Eucalyptus tereticornis</i> Forest redgum	8	17	28 31	3.36 2.02	Immature, moderate condition.	2d	Mod	Remove & Replenish
259		Stag	-	18	50	-	Dead.	4c	Very Low	Remove & Replenish
260 X3		<i>Brachychiton acerifolius</i> Flame Tree	6	8	21 22	2.52 1.75	Immature, moderate condition, encroachment.	2d	Low-Mod	Remove & Replenish
261		<i>Eucalyptus tereticornis</i> Forest redgum	10	18	39 42	4.68 2.3	Immature, moderate condition, parasitic vine present, inclusions at 4m.	4c	Low-Mod	Remove & Replenish

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262		<u>Eucalyptus tereticornis</u> Forest redgum	8	18	39 40	4.68 2.25	Immature, unbalanced canopy to East, fractured branch at 6m.	2d	Low-Mod	Remove & Replenish
263 X3		<u>Casuarina glauca</u> She Oak	2	8	18 20	2.16 1.68	Immature, moderate condition, parasitic vine present.	2d	Low	Remove & Replenish
264		<u>Casuarina glauca</u> She Oak	8	13	32 33	3.84 2.077	Immature, moderate condition, minor dehydration.	2d	Low-Mod	Remove & Replenish
265 X14	Main Building	<u>Robinia pseudoacacia</u> Golden Robinia	1	3	20-24 26	2.88 1.88	Immature, heavily pruned, good condition but poor development.	3a	Low	Remove & Replenish
266		<u>Eucalyptus crebra</u> Narrow-leaved Ironbark	5	14	20 24	2.4 1.82	Immature, good condition but poor development.	2d	Low-Mod	Remove & Replenish
267 & 267		<u>Eucalyptus sideroxylon</u> Gum Tree	4	14	20 27	2.4 1.91	Immature, good condition but poor development, tall.	2d	Low-Mod	Remove & Replenish
268		<u>Eucalyptus tereticornis</u> Forest redgum	9	13	36 54	4.32 2.55	Immature, good condition but poor development, sparse foliage crown, borer.	2d	Low-Mod	Remove & Replenish
269		<u>Eucalyptus sideroxylon</u> Gum Tree	6	12	31 43	3.72 2.32	Immature, good condition but poor development, termite damage.	2d	Low-Mod	Remove & Replenish
270		<u>Eucalyptus tereticornis</u> Forest redgum	7	15	43 49	5.16 2.45	Immature, good condition but poor development, inclusions at 4m.	2a	Low-Mod	Remove & Replenish
271		<u>Eucalyptus sideroxylon</u> Gum Tree	4	6	20 22	2.4 1.75	Immature, moderate condition, lean to West, unbalanced canopy to West.	2d	Low	Remove & Replenish
272		<u>Eucalyptus tereticornis</u> Forest redgum	9	13	53 66	6.36 2.78	Immature, good condition but poor development, inclusions at 3m, termite damage.	2d	Low-Mod	Remove & Replenish

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273		<u>Eucalyptus tereticornis</u> Forest redgum	6	11	34 51	4.08 2.49	Immature, moderate condition, sparse foliage crown.	2d	Low-Mod	Remove & Replenish
274 X9		<u>Cupressus sempervirens</u> Cypress	2	1-3	10 12	2 1.5	Immature, moderate condition.	2d	Low	Remove & Replenish
275		<u>Eucalyptus tereticornis</u> Forest redgum	6	11	29 39	3.48 2.23	Immature, good condition but poor development, unbalanced canopy to East.	2d	Low	Remove & Replenish
276		<u>Eucalyptus crebra</u> Narrow-leaved Ironbark	3	8	15 19	2 1.64	Immature, good condition but poor development, tall, sparse foliage crown.	2d	Low	Remove & Replenish
277		<u>Eucalyptus tereticornis</u> Forest redgum	8	11	33 77	3.96 2.97	Immature, good condition but poor development, dehydration, inclusions at 3m.	2d	Low	Remove & Replenish
278		<u>Eucalyptus tereticornis</u> Forest redgum	9	11	34 43	4.08 2.32	Immature, good condition but poor development, borer.	2d	Low	Remove & Replenish
279		<u>Eucalyptus tereticornis</u> Forest redgum	8	12	31 40	3.72 2.25	Immature, moderate condition, exposed roots, lean to North.	2d	Low	Remove & Replenish
280		<u>Eucalyptus paniculata</u> Grey Ironbark	6	11	26 31	3.12 2.02	Immature, moderate condition.	2d	Low	Remove & Replenish
281		<u>Eucalyptus tereticornis</u> Forest redgum	5	11	26 33	3.12 2.077	Immature, moderate condition, borer.	2d	Low	Remove & Replenish
282		<u>Eucalyptus tereticornis</u> Forest redgum	6	12	28 35	3.36 2.13	Immature, moderate condition, dehydration.	2d	Low	Remove & Replenish

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283		<u>Eucalyptus tereticornis</u> Forest redgum	10	4	17 25	2.04 1.85	Immature, moderate condition, sparse foliage crown.	2d	Low	Remove & Replenish
284		<u>Eucalyptus paniculata</u> Grey Ironbark	3	6	13 16	2 1.53	Immature, moderate condition, unbalanced canopy to West.	2d	Low	Remove & Replenish
285		<u>Eucalyptus tereticornis</u> Forest redgum	8	13	36 44	4.32 2.34	Immature, moderate condition, dehydration.	2d	Low	Remove & Replenish
286		<u>Eucalyptus paniculata</u> Grey Ironbark	4	11	18 20	2.16 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
287		<u>Eucalyptus tereticornis</u> Forest redgum	7	11	32 38	3.84 2.2	Immature, moderate condition.	2d	Low	Remove & Replenish
288		<u>Eucalyptus tereticornis</u> Forest redgum	5	7	23 30	2.76 2	Immature, moderate condition.	2d	Low	Remove & Replenish
289		<u>Eucalyptus tereticornis</u> Forest redgum	5	8	18 20	2.16 1.68	Immature, moderate condition.	2d	Low	Remove & Replenish
290		<u>Eucalyptus tereticornis</u> Forest redgum	11	8	29 33	3.48 2.077	Immature, moderate condition.	2d	Low	Remove & Replenish
291		<u>Eucalyptus tereticornis</u> Forest redgum	10	5	22 26	2.64 1.88	Very poor condition.	4c	Very Low	Remove & Replenish
291		<u>Eucalyptus tereticornis</u> Forest redgum	10	5	22 26	2.64 1.88	Very poor condition.	4c	Very Low	Remove & Replenish

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292		<u>Eucalyptus paniculata</u> Grey Ironbark	13	7	26 30	3.12 2	Immature, moderate condition, sparse foliage crown	2d	Low	Remove & Replenish
293		<u>Eucalyptus paniculata</u> Grey Ironbark	12	6	26 32	3.12 2.05	Immature, good condition but poor development	2d	Low	Remove & Replenish
294		<u>Eucalyptus paniculata</u> Grey Ironbark	8	6	20 24	2.4 1.82	Immature, good condition but poor development	2d	Low	Remove & Replenish
295		<u>Eucalyptus paniculata</u> Grey Ironbark	12	9	44 49	5.28 2.45	Immature, moderate condition	2d	low	Remove & Replenish
296		<u>Eucalyptus tereticornis</u> Forest red gum	10	8	30 32	3.6 2.05	Immature, moderate condition, lean east	2d	Low	Remove & Replenish
297		<u>Eucalyptus paniculata</u> Grey Ironbark	8	3	21 23	2.52 1.79	Immature, moderate condition	2d	Low	Remove & Replenish
298		<u>Dead stag</u>		14	14	2	Stag	4c	Very low	Remove & Replenish
299		<u>Eucalyptus tereticornis</u> Forest red gum	12	9	39 46	4.68 2.39	Immature, sparse foliage crown, moderate condition	2d	Low	Remove & Replenish
300 301		<u>Leptospermum Sp.</u> Tea tree	6	7	18/18 30	3 2	Immature, inclusion at 1m, unbalanced canopy	2d	Low	Remove & Replenish
302		<u>Hymenosporum flavum</u> Native frangipani	4	8	15 20	2 1.68	Immature, good condition but poor development, lean west, root damage	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
303		<u>Melaleuca linariifolia</u> Narrow leaf paperbark	6	8	23 25	2.76 1.85	Immature, good condition but poor development	2a	Low	Remove & Replenish
304		<u>Melaleuca linariifolia</u> Narrow leaf paperbark	6	8	15 18	2 1.61	Immature, moderate condition, inclusion	2d	Low	Remove & Replenish
305		<u>Tristaniaopsis laurina</u> Water gum	3	5	10 10	2 1.5	Immature, excellent condition	2a	Low	Remove & Replenish
306		<u>Corymbia viminalis</u> Ribbon gum	4	5	8 10	2 1.5	Immature, excellent condition	2a	Low	Remove & Replenish
307		<u>Melaleuca linariifolia</u> Narrow leaf paperbark	7	8	32 35	3.84 2.13	Immature, moderate condition lean north	2d	Moderate	Remove & Replenish
308		<u>Hymenosporum flavum</u> Native frangipani	5	7	18 20	2.16 1.68	Immature, good condition but poor development, heavily pruned	2d	Low-mod	Remove & Replenish
309		<u>Robinia pseudoacacia</u> Black locust X15	11	4	20 25	2.4 1.85	Immature, heavily pruned pollarded for feature.	2a	Low	Remove & Replenish
310		<u>Syzygium smithii</u> lily pilli	5	7	15 20	2 1.68	Immature, unbalanced canopy	2d	Low	Remove & Replenish
311		<u>Syzygium smithii</u> lily pilli	-	8	22 24	2.64 1.82	Immature, moderate condition, dehydration	2d	Low-mod	Remove & Replenish
312		<u>Dead stag</u>	6	7	20 22	2.4 1.75	Dead tree	4a	Very low	Remove & Replenish
313		<u>Syzygium smithii</u> lily pilli	6	7	20 22	2.4 1.75	Immature, low vigor, unbalanced canopy, heavily pruned	2d	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
314		<u>Syzygium smithii</u> lilly pilli	6	7	18 20	2.16 1.68	Immature, heavily pruned, dehydration, inclusion at 2m	2d	Low	Remove & Replenish
315		<u>Syzygium smithii</u> lilly pilli	4	5	15 16	2 1.53	Immature, dehydration, heavily pruned	3a	Low	Remove & Replenish
316		<u>Syzygium smithii</u> lilly pilli	6	7	22 23	2.64 1.79	Immature, inclusion at 7m, dehydration, unbalanced canopy	3a	Low	Remove & Replenish
317		<u>Syzygium smithii</u> lilly pilli	5	7	18 20	2.16 1.68	Immature, good condition but poor development	2d	Low	Remove & Replenish
318		<u>Syzygium smithii</u> lilly pilli	4	7	16 17	2 1.57	Immature, excellent condition	2a	Low	Remove & Replenish
319		<u>Syzygium smithii</u> lilly pilli	5	7	15 12	2 1.5	Immature, unbalanced and suppressed canopy	2d	Low	Remove & Replenish
320		<u>Syzygium smithii</u> lilly pilli	6	8	18 22	2.16 1.75	Immature, good condition but poor development, unbalanced and suppressed canopy	2a	Low	Remove & Replenish
321		<u>Syzygium smithii</u> lilly pilli	5	6	15 20	2 1.68	Immature, insect damage and dehydration	2a	Low	Remove & Replenish
322		<u>Syzygium smithii</u> lilly pilli	7	8	20 29	2.4 1.97	Immature, unbalanced canopy east-west	2d	Mod	Remove & Replenish
323		<u>Syzygium smithii</u> lilly pilli	8	9	26 24	3.12 1.82	Immature, unbalanced canopy	2c	Mod	Remove & Replenish
324		<u>Syzygium smithii</u> lilly pilli	8	9	27 17	3.24 1.57	Immature, good condition but poor development	2d	Mod	Remove & Replenish
325		<u>Syzygium smithii</u> lilly pilli	6	8	22 24	2.64 1.82	Immature, moderate condition, unbalanced canopy and dehydration	2a	Mod	Remove & Replenish
326		<u>Lagerstroemia</u> Crepe myrtle X3	4-6	3-5	10-12 15	2 1.5	Immature, good condition but poor development	2a	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
327		<u>Eucalyptus tereticornis</u> Forest red gum	19	18	48 50	5.76 2.47	Semi mature, unbalanced canopy west, significant physical damage, some borer damage	2d	Mod	Remove & Replenish
328		<u>Eucalyptus tereticornis</u> Forest red gum	8	12	29 30	3.48 2	Immature, lean northeast, moderate condition	2d	Low-mod	Remove & Replenish
329		<u>Eucalyptus paniculata</u> Grey gum	6	13	18 20	2.16 1.68	Immature, excellent condition	2a	Mod	Remove & Replenish
330		<u>Eucalyptus tereticornis</u> Forest red gum	8	18	40 42	4.8 2.3	Immature, minor fungal damage at 2m	2d	Mod	Retain & Protect
331		<u>Eucalyptus sideroxylon</u> Red ironbark	14	14	37 39	4.44 2.23	Immature, epicormics, unbalanced canopy, parasitic vine on stem	3a	Low-mod	Retain & Protect
332		<u>Eucalyptus tereticornis</u> Forest red gum	12	17	40/32 42	6.12 2.3	Immature, moderate condition and dehydration, some epicormics	3a	Mod	Remove & Replenish
333		<u>Eucalyptus tereticornis</u> Forest red gum	10	17	32 42	3.84 2.3	Immature, unbalanced canopy east and dehydration	2d	Mod	Retain & Protect
334		<u>Eucalyptus tereticornis</u> *	12	15	24 36	2.88 2.15	Immature, moderate condition, root damage	2d	Mod	Retain & Protect
335		<u>Eucalyptus tereticornis</u> *	14	12	26/25	4.32	Immature, inclusion at 50cm	2a	Mod	Retain & Protect
336		<u>Melaleuca linariifolia</u> Narrow leaf ironbark X3	3	5	10 12	2 1.5	Immature, good condition but poor development	2a	Low	Retain & Protect

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
337		<u>Melaleuca stypheloides</u> Prickle leaf paperbark	6	8	30 32	3.6 2.05	Immature, lean and unbalanced canopy west	2d	Low-mod	Remove & Replenish
338		<u>Melaleuca stypheloides</u> Paperbark*	6	6	16/15 28	2.64 1.94	Immature, inclusion at 50cm, unbalanced canopy	2d	Low	Remove & Replenish
339		<u>Melaleuca stypheloides</u> Prickle leaf paperbark	6	8	32 34	3.84 2.1	Immature, moderate condition	2d	Mod	Remove & Replenish
340		<u>Eucalyptus sideroxylon</u> Red ironbark	18	17	36 38	4.32 2.2	Immature, good condition but poor development	2a	Mod	Remove & Replenish
341		<u>Eucalyptus paniculata</u> Grey ironbark	8	16	25 29	3 1.97	Immature, inclusion at 1.2m	4c	Low	Remove & Replenish
342		<u>Eucalyptus paniculata</u> Grey ironbark	8	14	34 35	4.08 2.13	Immature, good condition but poor development, tree in planter box	2d	Mod	Remove & Replenish
343		<u>Dead stag</u>	-	5	3 6	2 1.5	Dead	4a	Very low	Remove & Replenish
344		<u>Hymenosporum flavum</u> Native frangipani	13	5	8 10	2 1.5	Immature, unbalanced canopy, dehydration	3a	Low	Remove & Replenish
345		<u>Eucalyptus tereticornis</u> Forest red gum	12	16	43 45	5.16 2.37	Immature, borer damage and above 20% dieback	3a	Low-mod	Remove & Replenish
346		<u>Eucalyptus tereticornis</u> Forest red gum	8	12	27 28	3.24 1.94	Immature, unbalanced canopy east	2d	Mod	Remove & Replenish
347		<u>Eucalyptus paniculata</u> Grey ironbark	14	19	39 45	4.68 2.37	Immature, unbalanced canopy and minor dead wood, borer damage	2d	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
348		<u>Eucalyptus paniculata</u> Grey ironbark	8	11	22 24	2.64 1.82	Immature, good condition but poor development	2a	Mod	Remove & Replenish
349		<u>Eucalyptus paniculata</u> Grey ironbark	7	12	28 30	3.36 2	Immature, good condition but poor development	2d	Mod	Remove & Replenish
350		<u>Eucalyptus paniculata</u> Grey ironbark	7	10	18 20	2.16 1.68	Immature, moderate condition, parasitic vine on stem	2d	Low-mod	Remove & Replenish
351		<u>Hymenosporum flavum</u> Native frangipani	2	4	5 6	2 1.5	Immature, good condition but poor development, tree in planter box	2a	Low	Remove & Replenish
352		<u>Eucalyptus paniculata</u> Grey ironbark	12	14	30 32	3.6 2.05	Immature, moderate condition, kink in stem at 8m	2d	Mod	Remove & Replenish
353		<u>Eucalyptus paniculata</u>	8	12	22 24	2.64 1.82	Immature, moderate condition, minor damage south	2d	Low-mod	Remove & Replenish
354		<u>Eucalyptus punctata</u> Grey gum	12	15	32 35	3.84 2.13	Immature, good condition but poor development, high vigor	2a	Mod	Remove & Replenish
355		<u>Eucalyptus punctata</u> Grey gum	10	15	30 34	3.6 2.1	Immature, minor pruning at base	2d	Mod	Remove & Replenish
356		<u>Eucalyptus punctata</u> Grey gum	9	14	25 26	3 1.88	Immature, minor dehydration	2d	Mod	Remove & Replenish
357		<u>Eucalyptus sideroxylon</u> Red ironbark	10	15	23 30	2.76 2	Immature, minor pruning and borer damage	2d	Mod	Remove & Replenish
358		<u>Eucalyptus sideroxylon</u> Red ironbark	8	14	25 26	3 1.88	Immature, good condition but poor development	2d	Mod	Remove & Replenish
359		<u>Eucalyptus sideroxylon</u> Red ironbark	12	16	35 33	4.2 2.08	Immature, minor fail at 10m, parasitic vine on stem, moderate condition	2d	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
360		<u>Eucalyptus sideroxylon</u> Red ironbark	12	16	35 37	4.2 2.18	Immature, inclusion at 8m, termite damage	4c	Low	Remove & Replenish
361		<u>Hymenosporum flavum</u> Native frangipani		1-6	18 22	2.16 1.75	Immature, moderate condition, sparse foliage crown	2d	Low	Remove & Replenish
362		<u>Hymenosporum flavum</u> Native frangipani <u>Group x2</u>		1-6	18 22	2.16 1.75	Immature, moderate condition, sparse foliage crown	2d	Low	Remove & Replenish
363		<u>Eucalyptus tereticornis</u> Forest red gum	6	10	30 34	3.6 2.1	Immature, moderate condition, unbalanced canopy south	2d	Low	Remove & Replenish
364		<u>Eucalyptus tereticornis</u> Forest red gum	9	12	33 39	3.96 2.23	Immature, moderate condition	2d	Low	Remove & Replenish
365		<u>Eucalyptus tereticornis</u> Forest red gum	9	8	25 28	3 1.94	Immature, lean and unbalanced canopy east	2d	Low	Remove & Replenish
366		<u>Eucalyptus tereticornis</u> Forest red gum	13	12	45 56	5.4 2.59	Immature	2d	Low	Remove & Replenish
367		<u>Stag</u>		6	19/15/ 10	3.12	Dead tree	4c	Very low	Remove & Replenish
368		<u>Stag X2</u>		5	10/10/ 10	2.04	Dead tree	4a	Very low	Remove & Replenish
369		<u>Lagerstroemia</u> Crepe myrtle X3	4-5	4-5	18 20	2.16 1.68	Immature, moderate condition	2d	Low	Remove & Replenish
370		<u>Robinia pseudoacacia</u> Black locust <u>X5</u>	4	3-4	24 28	2.88 1.94	Immature, moderate condition, ,pollarded- heavily pruned	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
371		<u>Robinia pseudoacacia</u> Black locust <u>X5</u>	4	3-4	24 28	2.88 1.94	Immature, moderate condition, pollarded- heavily pruned	2d	Low	Remove & Replenish
372		<u>Lagerstroemia</u> Crepe myrtle <u>X5</u>	4-5	4-5	18-20 24	2.28 1.82	Immature, moderate condition	2d	Low	Remove & Replenish
373		<u>Melaleuca stypheloides</u> Prickle leaf paperbark	5	6	30 40	3.6 2.25	Immature, moderate condition, lean and unbalanced canopy south	2d	Low	Remove & Replenish
374		<u>Melaleuca linariifolia</u> Narrow leaf paperbark	6	8	50 59	6 2.65	Immature, good condition but poor development	2d	high	Remove & Replenish
375		<u>Melaleuca linariifolia</u> Narrow leaf paperbark	4	6	20/26 32	3.96 2.05	Immature, moderate condition	2d	Low-mod	Remove & Replenish
376		<u>Melaleuca linariifolia</u> Narrow leaf paperbark	4	6	18/18 28	3 1.94	Immature, moderate condition, sparse foliage crown	2d	Low	Remove & Replenish
377		<u>Hymenosporum flavum</u> Native frangipani	4	8	20 30	2.4 2	Immature, moderate condition, sparse foliage crown	2d	Low	Remove & Replenish
378		<u>Eucalyptus paniculata</u> Grey ironbark	6	10	24 28	2.88 1.94	Immature, moderate condition	2d	Low-mod	Remove & Replenish
379		<u>Eucalyptus crebra</u> Narrow leaf ironbark	9	15	44 49	5.28 2.45	Immature, good condition but poor development	2d	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
380		<u>Eucalyptus crebra</u> Narrow leaf ironbark	8	12	31 38	3.72 2.2	Immature, moderate condition, unbalanced canopy north	2d	Low-mod	Remove & Replenish
381		<u>Eucalyptus tereticornis</u> Forest red gum	10	13	35 42	4.2 2.3	Immature, moderate condition, sparse foliage crown	2d	Low-mod	Remove & Replenish
382		<u>Eucalyptus tereticornis</u> Forest red gum	9	10	36 40	4.32 2.25	Immature, moderate condition, lean, buckling bark on main stem.	2d	Low	Remove & Replenish
383		<u>Eucalyptus tereticornis</u> Forest red gum	8	11	26 30	3.12 2	Immature, moderate condition	2d	Low	Remove & Replenish
384		<u>Eucalyptus tereticornis</u> Forest red gum	6	12	26 40	3.12 2.25	Immature, poor condition, epicormics and sparse foliage crown.	3a	Low	Remove & Replenish
385		<u>Eucalyptus tereticornis</u> Forest red gum	9	12	28 30	3.36 2	Immature, sparse foliage crown, moderate condition	2d	Low	Remove & Replenish
386		<u>Eucalyptus tereticornis</u> Forest red gum	7	8	6/18 22	2.28 1.75	Immature, moderate condition, inclusion at 0.3m, termites and borers in stem	2d	Low	Remove & Replenish
387		<u>Eucalyptus tereticornis</u> Forest red gum	9	10	39 42	4.68 2.3	Immature, termites, sparse foliage crown, epicormics	2d	Low-mod	Remove & Replenish
388		<u>Eucalyptus sideroxylon</u> Red ironbark	5	8	21 24	2.52 1.82	Immature, moderate condition, unbalanced canopy west	2d	Low	Remove & Replenish
389		- <u>Eucalyptus sideroxylon</u> Red ironbark	9	10	36 45	4.32 2.37	Immature, moderate condition	2d	Low-mod	Remove & Replenish
390		<u>Eucalyptus tereticornis*</u>	6	9	22 24	2.64 1.82	Immature, moderate condition, unbalanced canopy north and west	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
391		<u>Eucalyptus tereticornis</u> Forest red gum	6	8	28 32	3.36 2.05	Immature, moderate condition, borers in stem	2d	Low	Remove & Replenish
392		<u>Eucalyptus tereticornis</u> Forest red gum	8	9	34 37	4.08 2.18	Immature, lean and unbalanced canopy east	2d	Low	Remove & Replenish
393		<u>Eucalyptus tereticornis</u> Forest red gum	6	8	23 26	2.76 1.88	Immature, average condition, sparse foliage crown	2d	Low	Remove & Replenish
394		<u>Eucalyptus tereticornis</u> Forest red gum	9	12	39 44	4.68 2.34	Immature, borers in stem, dehydration, moderate condition	2d	Mod	Remove & Replenish
395		<u>Eucalyptus tereticornis</u> Forest red gum	7	8	20 23	2.4 1.79	Immature, moderate condition, sparse foliage crown	2d	Low	Remove & Replenish
396		<u>Eucalyptus sideroxylon</u> Red ironbark	6	8	22 24	2.64 1.82	Immature, good condition but poor development	2d	Low	Remove & Replenish
397		<u>Ficus microcarpa var hilli</u> Hills Fig	10	9	20/32/ 24 71	6 2.87	Immature, moderate condition, unbalanced canopy and lean west	2d	Mod	Remove & Replenish
398		<u>Ficus microcarpa var hilli</u> Hills Fig	8	12	44 52	5.28 2.51	Immature, unbalanced canopy and lean west, moderate condition	2d	Mod	Remove & Replenish
399		<u>Ficus microcarpa var hilli</u> Hills Fig	8	12	16/36/ 34 81	6.24 3.09	Immature, moderate condition	2d	Mod	Remove & Replenish
400		<u>Stag</u>		10	32	3.84	Dead, lean on tree 319	4a	Very low	Remove
401		<u>Ficus microcarpa var hilli</u> Hills Fig	15	13	18/40/ 44 85	7.44 3.09	Immature – semi mature, moderate condition, unbalanced canopy northwest	2d	Mod	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
402		<u>Ficus microcarpa</u> var <u>hilli</u> Hills Fig	15	13	12/80 80	9.72 3.01	Immature, moderate condition, unbalanced canopy and lean west	2d	Mod	Remove & Replenish
403		<u>Eucalyptus cladocalyx</u> sugar gum	8	12	75 80	9 3.01	Immature, poor condition, sparse foliage crown	3d	Low	Remove & Replenish
404		<u>Eucalyptus cladocalyx</u> sugar gum	4	4	10 12	2 1.5	Immature, moderate condition	2d	Low	Retain & Protect
405		<u>Stag</u>		3	15	2	Dead	4a	Very low	Remove
406		<u>Angophora multifolia</u>	12	12	76 76	9.12 2.95	Immature, moderate condition, stem exudation	2d	Mod	Retain & Protect
407		<u>Erythrina sykesii</u> Coral tree	15	12	22/22/ 44 92	6.48 3.2	Semi mature, good condition but poor development	2d	Low	Retain & Protect
408		<u>Angophora multifolia</u>	12	13	40 55	4.8 2.57	Immature, good condition but poor development, unbalanced canopy and lean north	2d	Mod	Retain & Protect
409		<u>Eucalyptus tereticornis</u> Forest red gum	9	12	34 38	4.08 2.2	Immature, moderate condition, sparse foliage crown	2d	Low-mod	Remove & Replenish
410		<u>Lophostemon confertus</u> Brush box	5	6	19 20	2.28 1.68	Immature, suppressed canopy due to nearby hills fig tree	2d	Low	Remove & Replenish
411		<u>Ficus microcarpa</u> var <u>hilli</u> Hills Fig	16	133	40/42 45/46	6.96 2.74	Semi mature, good condition but poor development	2d	Mod-high	Remove & Replenish
412		<u>Eucalyptus tereticornis</u> Forest red gum	10	13	29 36	3.48 2.15	Immature, lean and unbalanced canopy east, budding in canopy	2d	Low	Retain & Protect
413		<u>Eucalyptus elata</u> River white gum	8	12	32 40	3.84 2.25	Immature, lean and unbalanced canopy east, termites	2d	Low	Remove & Replenish

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Tree No.	Location	Scientific & Common Name	Crown Spread (m)	Height (m)	Diam (cm)	TPZ SRZ (m)	Condition of Tree & Failure potential (Health & Structure) (Defect & Measurements)	TULE	Retention Values	Impacts
414		<u>Melaleuca quinquinervia</u> Broad leaf paperbark	4	5	18/22 25	3.36 1.85	Immature, moderate condition, sparse foliage crown, borers	2d	Low	Remove & Replenish
415		<u>Callistemon viminalis</u> bottlebrush	4	6	8/8/8/ 8 20	2 1.68	Immature, moderate condition	2d	Low	Remove & Replenish
416		<u>Eucalyptus tereticornis</u> Forest red gum	12	16	46 48	5.52 2.43	Semi mature, moderate condition and lean west	2d	Mod-high	Remove & Replenish
417		<u>Lophostemon confertus</u> Brush box	10	10	37 39	4.44 2.23	Immature, moderate condition and twin stem, unbalanced canopy	2a	Mod	Remove & Replenish
418		<u>Eucalyptus paniculata</u> Grey ironbark	12	15	28 30	3.36 2	Immature, good condition but poor development	2d	Mod	Remove & Replenish
419		<u>Stag</u>	12	16	50 50	6 2.47	Dead	4a	Very low	Remove
420		<u>Angophora floribunda</u> Rough bark apple	16	22	72 75	8.64 2.93	Semi mature, minor cavity, parasitic vine on stem	2d	Significant	Remove & Replenish
421		<u>Eucalyptus paniculata</u> Grey ironbark	10	13	24 29	2.88 1.97	Immature, moderate condition and lean west, minor dehydration	2d	Mod	Retain & Protect
422		<u>Eucalyptus sideroxylon</u> Red ironbark	10	13	29 30	3.48 2	Immature, moderate condition, physical damage on north	2d	Mod	Retain & Protect
423		<u>Eucalyptus sideroxylon</u> Red ironbark	10	14	32 34	3.84 2.1	Immature, lean west, vine on stem	2d	Mod	Retain & Protect
424		<u>Eucalyptus sideroxylon</u> Red ironbark	8	13	25 28	3 1.94	Immature, unbalanced canopy west, vine on stem	2d	Low-mod	Retain & Protect
425		<u>Ornamental sp. X50</u>	1	3	10 20	2 1.68	Immature, heavily pruned, moderate condition.	2d	Low	Retain & Protect

9.1 IMPACTS TABLE

Tree Number	Impacts and Tree Protection Requirements
1, 5, 7, 9,10,13,16,18,19, 21,22,23,24,25,26,27,28,29,30,31,32,35,37,38,39,40,41,42,43,44, 45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,66,67,68,69,70, 71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91, 92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,1 09,110,111,112,113,114,115,116,117,118,119,120,121,122,123,1 24,125,126,127,128,128,130,131,132,134,135,136,137,138,139,1 40,141,142,143,144,145,146,147,148,149,150,151,152,153,154,1 55,156,157,158,159,160,161,162,163,164,165,166,167,168,169,1 70,171,172,173,174,175,176,177,178,179,180,181,182,183,184,1 85,186,187,188, 189, 190, 191, 192, 193, 194, 195, 196,197, 198,199,200, 201,202,203,204,205,206,207,208,209,210,211,212,213,214,215, 216,217,218,219,220,221,222,223,224,225,226,227,228,229,230, 231,232,233,234,235,236,237,238,239,240,241,242,243,244,245, 246,247,248,249,250,251,252,253,254,255,256,257,258,259,260, 261,262,263,264,265,266,267,268,269,270,271,272,273,274,275, 276,277,278,279,280,281,282,283,284,285,286,287,288,289,290, 291,292,293,294,295,296,297,298,299,300,301,302,303,304,305, 306,307,308,309,310,311,312,313,314,315,316,317,318,319,320, 321, 322, 323, 324, 325,326,327,328,329 ,332,337,338,339,340,341,342,343,344,345,346,347,348,349,350 ,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365 ,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380 ,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395 ,396,397, 398, 399, 401,402,403,409, 410,411,413,414,415,416,417,418, 420 REMOVE & REPLENISH	TPZ/SRZ impacted by the proposed development greater than the Australian Standards allow to retain the trees. Removal and replenishment with suitable indigenous species
400,405,419 REMOVE	Trees which are dead without hollows and could be removed. Not necessarily impacted but unhealthy.
2,3,4,6,8,11,12,14,15,17,20, 33, 34, 61,62,63,64,65, 330, 331, 333, 334, 335, 336, 404, 406,407,408, 412, 421,422,423,424,425 RETAIN	No excavations within TPZ and if any works are required in the TPZ it must be supervised by an AQF Level 5 Arborist and must be no greater than 200mm in depth. Tree Protection Fence line/Tree Trunk Protection & Mulch 75mm depth over TPZ.

10.0 FINDINGS

PHOTOGRAPHS FROM AROUND THE SITE AT 54-68 FERNDLE STREET SOUTH GRANVILLE



FIGURE 1. Trees 44 & 45



FIGURE 2.
Trees 132 - 139

FIGURE 3.
Trees 66 - 70



FIGURE 4.
Trees 186 – 193



FIGURE 5



FIGURE 6



FIGURE 7

FIGURE 6.
Trees 91 - 99

FIGURE 7.
Trees 24 & 25



FIGURE 8.
Biodiversity Area



FIGURE 9

FIGURE 9.
Trees 79 - 85

FIGURE 10. Trees 248 & 249



FIGURE 10

FIGURE 11.
Trees 175 & 179



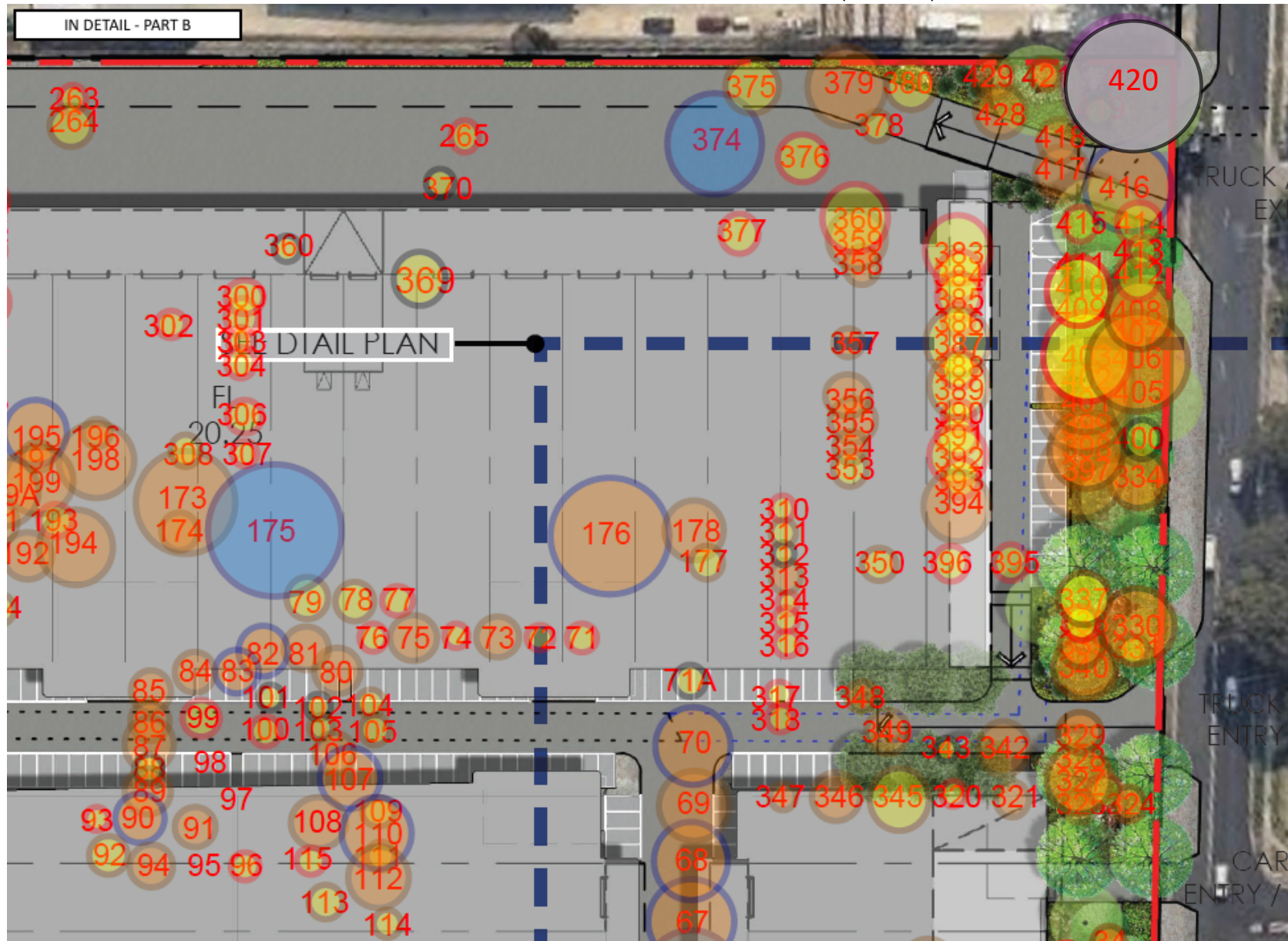
FIGURE 11

11.0 TREE RETENTION VALUE & PROTECTION ZONE MAP

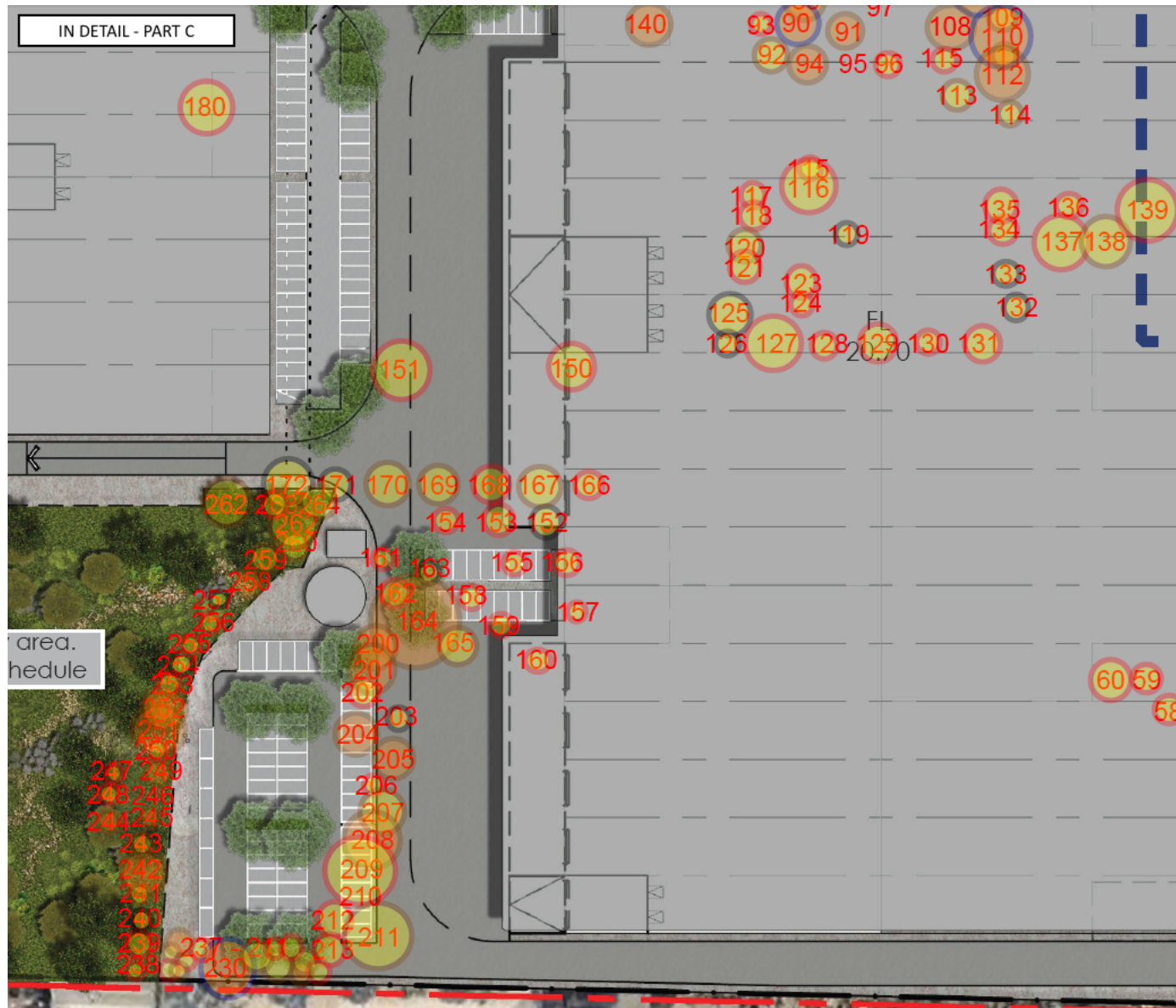




11.2 TREE RETENTION VALUE & PROTECTION ZONE MAP – IN DETAIL (PART B)



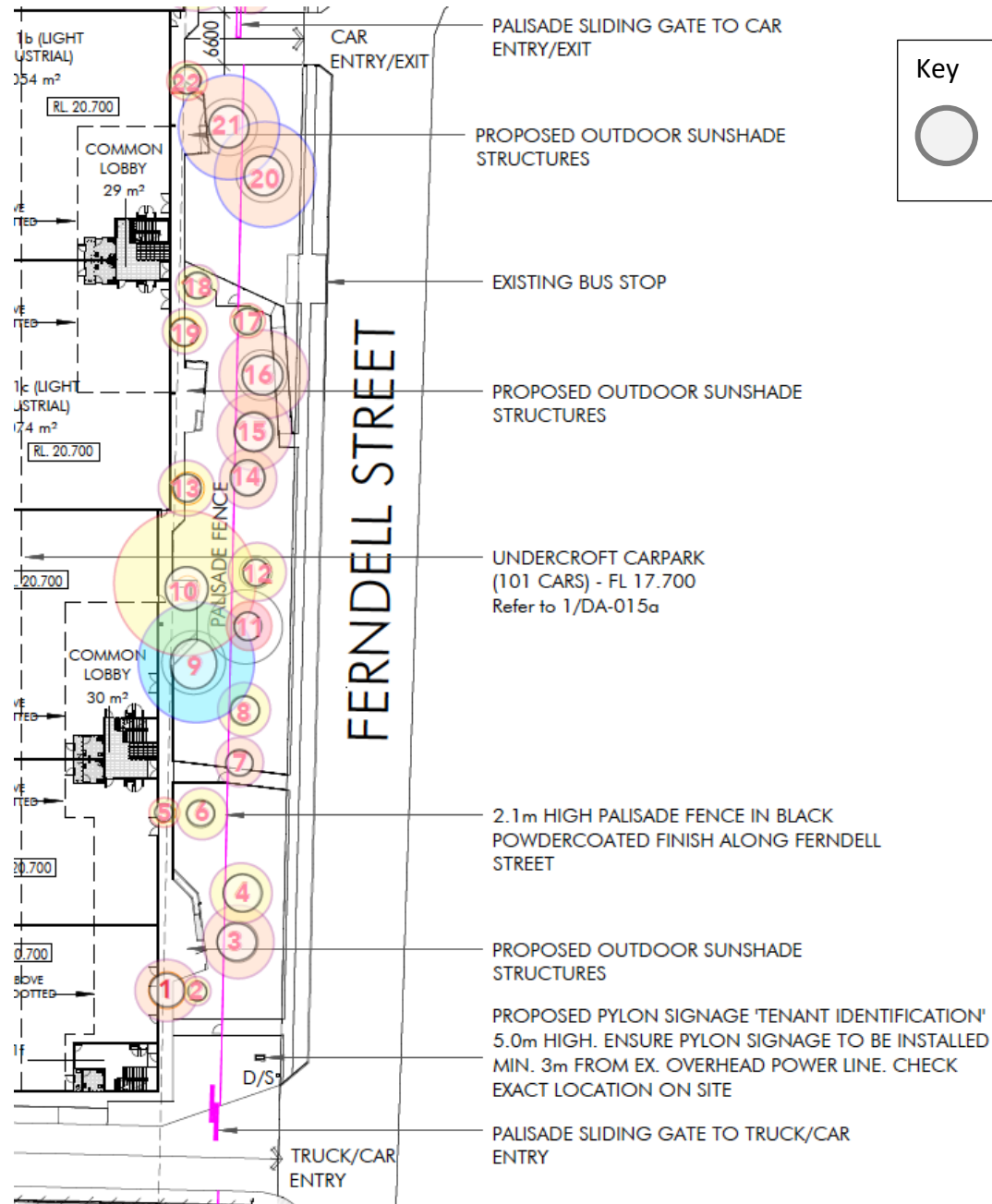
11.3 TREE RETENTION VALUE & PROTECTION ZONE MAP – IN DETAIL (PART C)



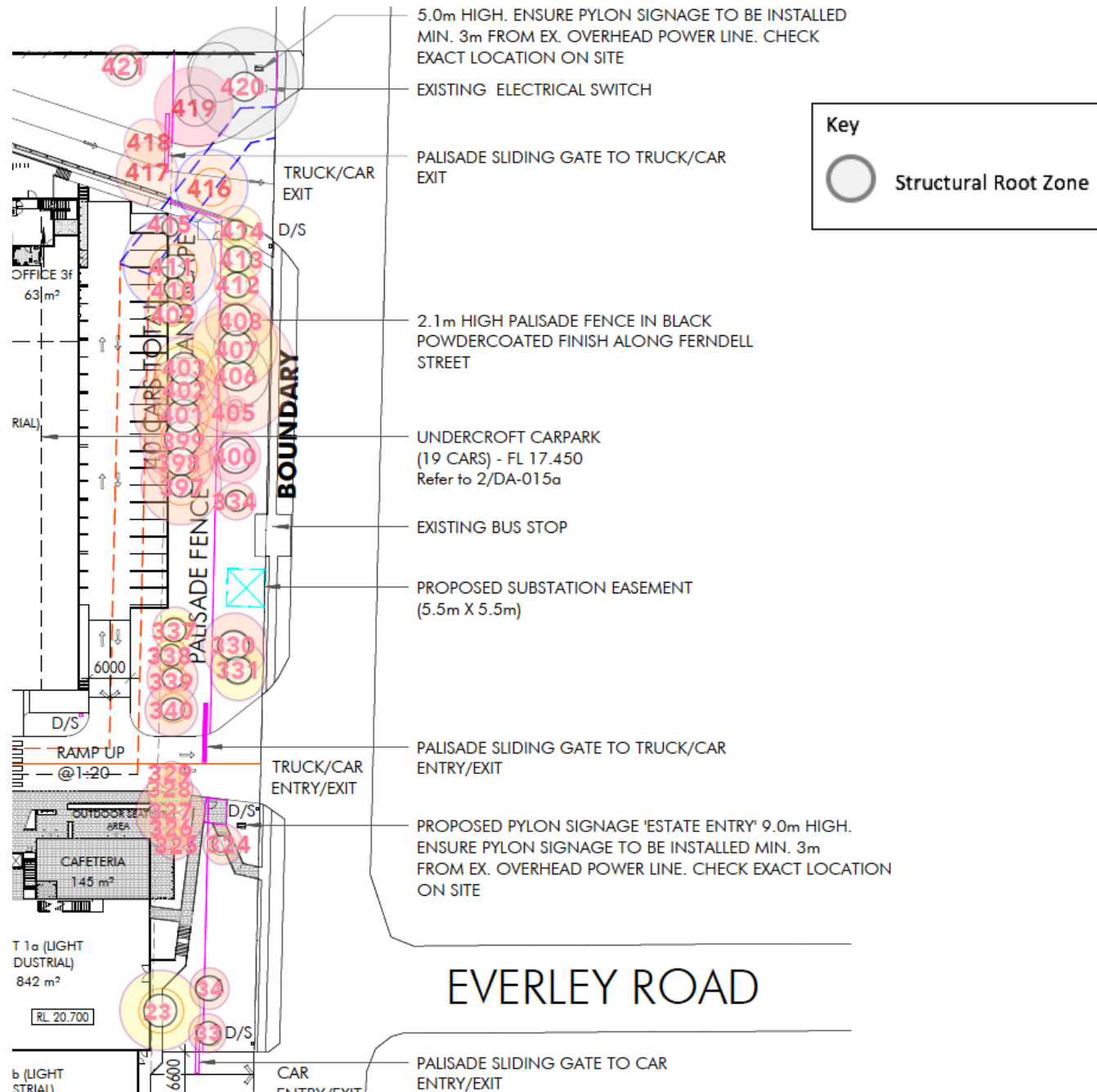
11.4 TREE RETENTION VALUE & PROTECTION ZONE MAP – IN DETAIL (PART D)



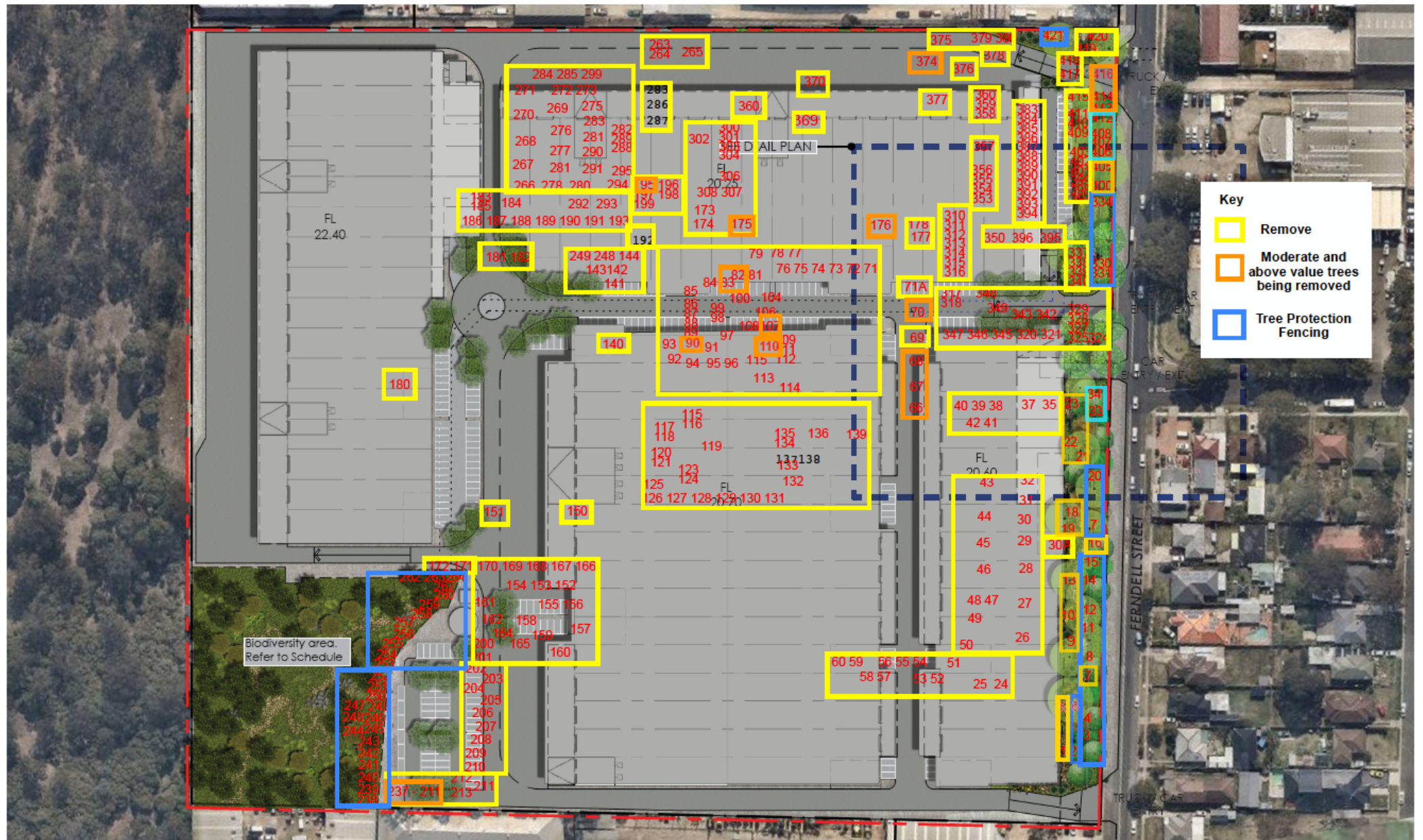
11.5 TREE PROTECTION ZONE & STRUCTURAL ROOT ZONE – STREET FRONT IN DETAIL (PART 1)



11.6 TREE PROTECTION ZONE & STRUCTURAL ROOT ZONE – STREET FRONT IN DETAIL (PART 2)



12.0 TREE MANAGEMENT PLAN



Key

- Remove
- Moderate and above value trees being removed
- Tree Protection Fencing

12.1 TREE MANAGEMENT PLAN - STREET FRONT IN DETAIL (PART 1&2)



13.0 DISCUSSION

13.1 Trees impacted by the proposed development are numbered 1, 5, 7, 9, 10, 13, 10, 16, 18, 21, 22, 23, 24-32, 35-60, 66-329, 332,337-403, 409-411,414-418 and require removal. Additionally, trees numbered 400,405 and 419 are dead and are to be removed. The total number of trees to be removed is (391) three hundred and ninety-one.

13.2 Of the trees to be removed, there are four (4) trees of high value numbered 9, 66, 175, 374. The remaining trees impacted varying in retention values from very low to moderate and moderate to high (intermittent).

Tree 9 *Eucalyptus paniculata* Grey Ironbark is of high value and is semi mature in average condition with an unbalanced canopy. The tree has a major impact on the TPZ by the proposed development and the Structural Root Zone will be impacted. As these impacts affect the SRZ the tree is not viable for retention and is to be removed.

Tree 66 *Corymbia citriodora* Lemon-scented Gum is mature age and is tall within the stand/patch of similar trees. It was planted and is not endemic to this area, but has a landscape amenity value. The tree is located within the footprint of the proposal and is to be removed.

Trees 175 and 374 *Melaleuca quinquenervia* (Broad-leafed Paperbark) is indigenous and endemic to the area and mature. These two trees are of high value however as they located within the footprint of the proposed development management strategies cannot be used to retain the trees and they are to be removed.

13.3 One significant tree, Tree 420 *Angophora floribunda* Rough bark apple, located towards the eastern boundary adjacent the streetscape has been approved for removal in a previous DA and is to be removed.

13.4 Trees along the street front numbered 1, 5, 7, 9, 10, 13, 16, 18, 19, 21, 22, 23, 324-329, 337-340, 397-399, 401, 402, 403, 409, 410, 411, 413-418, 420 are to be removed as the impacts on the trees are greater than the standards allow. Trees numbered 21 and 397 have a significant TPZ impact by the proposed development and cannot be retained. Trees numbered 1, 5, 7, 9, 10, 13, 16, 18, 19, 22, 23, 324, 325, 326, 327, 328, 329, 337, 338, 339, 340, 398, 399, 401, 402, 403, 409, 410, 411, 413, 414, 415, 416, 417, 418 have an impact on their SRZ from the proposal. Impacts on a trees structural root zone are considered significant and cannot be managed with sensitive construction. Therefore, all trees with an impact on the SRZ are to be removed as they are not viable for retention.

13.5 Trees numbered 9, 16 and 21 are of moderate to high value and are proposed to be removed as the path and outdoor area impact the SRZ of these trees. Design alterations are recommended to reconfigure the path and outdoor area outside of the SRZ of trees 9, 16 and 21 which would reduce the impact on the trees, making them viable for retention.

13.6 Pruning for access may be required for trees numbered 17 and 33. Pruning must be carried out by an AQF level 3 arborist and must not exceed 10% of the canopy. Pruning must be carried out according to As4373 2007 Pruning of Amenity Trees.

14.0 TREE PROTECTION AND REPLENISHMENT MEASURES

14.1 Trees to be retained are numbered 2, 3, 4, 6, 8, 11, 12, 14, 15, 17, 20, 33, 34, 61, 62, 63, 64, 65, 330, 331, 333, 334, 335, 336, 404, 406, 407, 408, 412, 421, 422, 423, 424, 425. Trees to be retained require Tree Protection Fencing using barrier mesh of 1.5 metres with steel pickets every two metres. Signage that the fence is a tree protection area must be ensured and complied with. Trees numbered 17, 33, 34, 406, 407, 408, 412 require Tree Trunk Protection to allow for access around these trees. Tree Trunk protection must consist of 50mmx100mmx2m lengths of wood with 150mm airgaps secured with underlay of carpet or hessian wrapped around the trunk. There is to be no access within the Tree protection Fencing of retained trees unless supervised by the AQF level 5-project arborist.

14.2 Prohibitions are stated in Appendix D and must be adhered to. There are no proposed works within the TPZ of retained trees, excluding Tree 15. There is to be no work carried out within the TPZ of retained trees other than Tree 15. All work within the TPZ of Tree 15 must use sensitive construction and be under the supervision of an AQF level 5 arborist. No roots greater than 40mm are to be cut unless given consent by the project arborist. Any roots with a diameter of 40mm or above that requires cutting must use a clean sharp hand tool under the supervision of the project arborist.

14.3 Three hundred and ninety-one (391) trees are to be replenished on site. Replenishments must be new stock indigenous species (See appendix F for approved species) of 30-litre (potted volume). The plantings are to be completed and certified by a certified AQF level 5 Arborist prior to occupation. These will be planted according to the landscape plan, with the trees along the street scape creating a simulated bush landscape.

15.0 CONCLUSION

The proposed new development will impact majority of the trees on the site which will require the removal and replenishment of these trees. The front strips along the road edge of the property will have some trees retained. The Biodiversity area at the rear of the property will be impacted on and will have some trees removed from this area.

All retained trees are to be protected and require protection via tree protection fence line/tree trunk protection and mulch 75mm depth over the TPZ. Sensitive construction is required for any works with the TPZ of Tree 15 and an AQF level 5 Arborist must supervise all works within the TPZ of any of the retained trees.

16.0 HOLDING POINT

REQUIREMENTS PRIOR TO THE COMMENCEMENT OF ANY WORKS, INCLUDING DEMOLITION

- 1.1 Removal of (391) three hundred and ninety-one and tree groups numbered 1, 5, 7, 9, 10, 13, 10, 16, 18, 21, 22, 23, 24-32, 35-60, 66-329, 332,337-403, 409-411,414-418 and additionally three dead trees 400,405 and 419 marked by the project arborist or a competent person.
- 1.2 Any roots greater than 40mm within TPZ of preserved trees on this site or adjacent will need to be cut cleanly under supervision of an AQF Level 5 Arborist.
- 1.3 Retention and protection of thirty-four (34) trees. Install tree protection prior to demolition according to the Tree Management Plan.
- 1.4 Certification of tree protection as per Tree Protection Plan by AQF level 5 Arborist prior to any demolition, construction or re-landscaping. Fencing must be a minimum of 1.5 metres height and have steel pickets every two metres. Signage of the Tree protection zone and the project arborist name and contact detail in legible waterproof ink must be presented on signs on each fence.
- 1.5 No changes in soil level within TPZ of retained trees. A silted barrier is to assist in the resistance of topsoil erosion.
- 1.6 Mulch at 75mm depth is to be placed around retained trees adjacent the development. This is to be certified by an AQF level 5 arborist.
- 1.7 Replenishment of 391 trees of new stock indigenous trees (See appendix F for approved species) of 30-litre (potted volume) is to be completed and certified by a horticulturalist or certified AQF level 5 Arborist. These will be planted according to the landscape plan.
- 1.8 Prohibitions are listed in Appendix D to be complied with and certified by an AQF level 5 Arborist.
- 1.9 Certifications of the compliance and monthly reports by an AQF level 5 arborist would be adequate for this development ensuring trees which are retained and preserved can be remediated if damage occurs. Remediation reports must be completed within one week of reporting in order to complete remedial works within the shortest timeframe and (likely) ensuring viability of trees.
- 1.10 All drainage installations are to be carefully installed when they are through a Tree Protection Zone. No roots are to be cut greater than 40mm diameter unless supervised by an AQF level 5 arborist.
- 1.11 Sensitive construction is required within the TPZ of Tree 15. All work within the TPZ of Tree 15 must be carried out under the supervision of an AQF level 5 arborist.

17.0 RECOMMENDATION

1. The trees to be removed are numbered 1, 5, 7, 9, 10, 13, 10, 16, 18, 21, 22, 23, 24-32, 35-60, 66-329, 332,337-403, 409-411,414-418 and additionally 400, 405 and 419 to be removed as they are dead.
2. The biodiversity area will continue to be fenced off and can only be accessed with induction by the AQF level 5 and or ecologist.
3. Three hundred and ninety-one (391) trees will be replenished with indigenous species of 30 litre-potted volume and planted in the surrounding area of the development. The street scape is to utilise planting of indigenous species to create a Bush Landscape.
4. Retention and protection measures of all trees numbered in the tree survey table marked as 'Retain and Protect'.
5. Holding points 1.1-1.11 are to be certified by an AQF level 5 Arborist.
Including Tree Protection and the certification of the Prohibitions and replenishment of new stock species is to be completed by an AQF level 5 Arborist.
6. Sensitive Construction within the TPZ of Tree 15, with detail provided of any works adjacent this tree or within its TPZ.
7. Pruning of trees (outlined within the discussion) As4373 2007 Pruning of Amenity Trees by an AQF level 3 arborist who operates within a licensed business.
8. To assist in the trees being managed competently the following recommendation is given:
In maintaining the quality of the contractor selected to maintain the work in accordance with AS/4790-2009-Protection of Trees in Development Sites, AS/4743-2007 Pruning of Amenity Trees and Safe work Australia The Guide. The owner is to engage a contractor from the following associations; a registered current member of Tree Contractors Association Australia (TCAA) or Arborists Australia (AA) must complete the works.
9. Design alterations are recommended to reconfigure the path and outdoor area outside of the SRZ of moderate to high valued trees 9, 16 and 21 which would reduce the impact on the trees, making them viable for retention.

GLOSSARY

Crown: The width of the foliage in the upper canopy of the assessed tree to the four cardinal points.

Crown lifting means the removal of the lower branches of the tree

Crown thinning means the portion of the tree consisting of branches and leaves and any part of the stem from which branches arise.

Drip line: Where the canopy releases water shed from the foliage during precipitation.

DBH/Diameter: Diameter of trunk at 1.4meters in height of assessed tree.

Dead wooding means the removal dead branches from a tree.

Dieback: Tree deterioration where the branches and leaves die.

Flush cut: A cut that damages or removes the branch collar or removes the branch and stem tissue and is inconsistent with the branch attachment as indicated by the bark branch ridge.

Genus/ Species: The Genus and species of each tree has been identified using its scientific name. Where the species name is not known the letters species is used. The common name for trees may vary considerably in each area of geographical differences and so will not be used in the field survey.

Height: Height has been estimated to + / - 2 meters.

ISA: International Society of Arboriculture.

Maturity: Tree maturity has been assessed as over mature (last one third of life expectancy), mature (one third to two thirds life expectancy) and semi mature (less than one third life expectancy).

Remedial (restorative) pruning: includes: Removing damaged, deadwood; trimming diseased or infested branches. Trimming branches back to undamaged tissue in order to induce the production of shoots from latent or adventitious buds, from which a new crown will be established.

SRZ- Structural Root Zone: An area within the trees root zone in which roots stabilize the tree. Roots cut in this zone can cause instability and lead to anchorage loss.

Structural Integrity: Describes the internal supporting timber. (Substantial to frail)

TULE- Tree Useful Life Expectancy: An estimation of the trees useful life expectancy using appropriate industry methods with an inspection regime.

TPZ- Tree Protective Zone: This zone should be considered as optimal for tree growth and sustainability however the size of the zone is subjective and should be reassessed when individual design and construction methods are being discussed.

Tree Age: Trees have either been assessed as mature, immature or semi-mature.

Tree Numbering: All trees listed in the tree survey have been numbered and plotted

Vigor: This is an indication of the tree health. Trees have either been assessed as Good Vigor, Normal Vigor or Low Vigor.

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WEBSITE

<https://www.planningportal.nsw.gov.au>
<https://www.cityofparramatta.nsw.gov.au/>

APPENDIX A TULE – TREE USEFUL LIFE EXPECTANCY

Table 1 Revised 14.4.14 *ADAPTED FROM JEREMY BARREL (SULE) FOR TCAA CLIMBING CONSULTANT ARBORISTS*

	1 Long TULE	2 Medium TULE	3 Short TULE	4 Remove	5.No Potential for Retention REMOVE IMMEDIATELY	6 Small, Young or Regularly clipped
	Trees that appeared to be retainable at the time of assessment for more than 40 years with low level of risk	Trees that appeared to be retainable at the time of assessment for 15 to 40 years with and with low to medium level risk	Trees that appeared to be retainable at the time of assessment for 5 to 15 years with medium to high level of risk	Trees that should be removed within the next 5 years High to Very high level of risk	Trees that must be removed immediately. Very high to Extreme level of risk	Trees that can be easily transplanted or replaced.
A	Structurally sound trees located in positions that can accommodate future growth	Trees that may only live for between 15 and 40 more years	Trees that may only live for between 5 and 15 more years	Dead, dying, suppressed or declining trees through disease or inhospitable conditions.	Dead, dying or declining trees diseased or inhospitable conditions.	Small trees less than 5 meters in height
B	Trees that could be made suitable for retention in the long term by Intervention Works.	Trees that may live for more than 40 years, but would need to be removed for safety or Nuisance reasons	Trees that may live for more than 15 years, but would need to be removed for safety or nuisance reasons	Dangerous trees through instability or recent loss of adjacent trees	Dangerous trees through instability or recent loss of adjacent trees	Young trees less than 15 years old but over 5 meters in height
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 should 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	Dangerous trees through structural defects including cavities, decay, included bark, wounds or poor form	Dangerous trees through structural defects including cavities, decay, included bark, wounds or poor form	Trees that have been regularly pruned to artificially control growth
D		Trees that could be made suitable for retention in the medium term by Intervention Works.	Trees that require substantial Intervention Works, and are only suitable for retention in the short term	Damaged trees that are clearly not safe to retain	Damaged trees that are clearly not safe to retain and must be removed immediately	
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 planting	High Toxicity Allegan trees, asthmatic and poisonous trees and must be removed immediately.	
F				Trees that may cause damage to existing structures within 5 years	OTHER with legitimate explanation to be removed immediately	
G				Trees that will become dangerous after removal of other trees for reasons given in 1A-1F		
INSPECTION FREQUENCY	Inspection frequency 1-5 Years by competent inspector unless event monitored.	Inspection frequency 1-5 Years by competent inspector unless event monitored.	Inspection frequency 1-3 years by competent inspector unless event monitored.	Inspection frequency to 1 year by competent inspector unless event monitored.	1-7 days by competent inspector and event monitored	Inspection frequency Biannually by competent inspector

APPENDIX B HEALTH & STRUCTURAL CONDITION OF TREE- Visual
McArdle Arboricultural Consultancy Pty Ltd

Health & Structural Condition of Tree

1. *J- Juvenile; im- Immature; SM-Semi- Mature; M-Mature*
2. Excellent Condition
3. Good Condition but Poor Development / Habit
4. Dieback is more than 20%. 4b Epicormics
5. Sparse Foliage Crown 5b Unbalanced Canopy
6. Physical Damage
7. Cavity
8. Lean
9. Heavily Pruned
10. Inclusions
11. Damage to roots
12. Insect Damage 12b Borers
13. Termite Damage
14. Fungal Attack
15. Parasitic Vine Present
16. Damage by Climbing Plant
17. Habitat Tree
18. Endangered Species
19. Endangered community

Developed by Claus Mattheck in: *The Body Language of Trees*(1994), which have adapted versions from Hornsby Shire Council.

APPENDIX C RETENTION VALUES

TABLE 3 – DETERMINING LANDSCAPE SIGNIFICANCE RATING

RATING	HERITAGE VALUE	ECOLOGICAL VALUE	AMENITY VALUE
1. SIGNIFICANT	The subject tree is listed as a Heritage Item under the Local Environment Plan (LEP) with a local, state or national level of significance or is listed on Council's Significant Tree Register.	The subject tree is scheduled as a Threatened Species as defined under the Threatened Species Conservation Act 1995 (NSW) or the Environmental Protection and Biodiversity Conservation Act 1999.	The subject tree has a very large live crown size exceeding 300m ² with normal to dense foliage cover, is located in a visually prominent position in the landscape, exhibits very good form and habit typical of the species.
	The subject tree forms part of the curtilage of a Heritage Item (building/structure/artefact as defined under the LEP) and has a known or documented association with that item.	The tree is a locally indigenous species, representative of the original vegetation of the area and is known as an important food, shelter or nesting tree for endangered or threatened fauna species.	The subject tree makes a significant contribution to the amenity and visual character of the area by creating a sense of place or creating a sense of identity.
	The subject tree is a Commemorative Planting having been planted by an important historical person (s) or to commemorate an important historical event.	The subject tree is a Remnant Tree, being a tree in existence prior to development of the area.	The tree is visually prominent in view from surrounding areas, being a landmark or visible from a considerable distance.
2. VERY HIGH	The tree has a strong historical association with a heritage item (building/structure/artefact/garden etc) within or adjacent the property and/or exemplifies a particular era or style of landscape design associated with the original development of the site.	The tree is a locally-indigenous species, representative of the original vegetation of the area and is a dominant or associated canopy species of an Endangered Ecological Community (EEC) formerly occurring in the area occupied by the site.	The subject tree has a very large live crown size exceeding 200m ² , a crown density exceeding 70% (normal-dense), is a very good representative of the species in terms of its form and branching habit or is aesthetically distinctive and makes a positive contribution to the visual character and the amenity of the area.
3. HIGH	The tree has a suspected historical association with a heritage item or landscape supported by anecdotal or visual evidence.	The tree is a locally-indigenous species and representative of the original vegetation of the area and the tree is located within a defined Vegetation Link/Wildlife Corridor or has known wildlife habitat value.	The subject tree has a large live crown size exceeding 100m ² ; The tree is a good representative of the species in terms of its form and branching habit with minor deviations from normal (e.g. Crown distortion/suppression) with a crown density of at least 70% (normal); The subject tree is visible from the street and surrounding properties and makes a positive contribution to the visual character and the amenity of the area.
4. MODERATE	The tree has no known or suspected historical association, but does not detract or diminish the value of the item and is sympathetic to the original era of planting.	The subject tree is a non-local native or exotic species that is protected under the provisions of this DCP.	The subject tree has a medium live crown size exceeding 40m ² ; The tree is a fair representative of the species, exhibiting moderate deviations from typical form (distortion/suppression etc) with a crown density of more than 50% (thinning to normal); and
			The tree is visible from surrounding properties, but is not visually prominent – view may be partially obscured by other vegetation or built forms. The tree makes a fair contribution to the visual character and amenity of the area.
5. LOW	The subject tree detracts from heritage values or diminishes the value of a heritage item.	The subject tree is scheduled as exempt (not protected) under the provisions of this DCP due to its species, nuisance or position relative to building or other structures.	The subject tree has a small live crown size of less than 40m ² and can be replaced within the short term (5-10 years) with new tree planting.
6. VERY LOW	The subject tree is causing significant damage to a heritage item.	The subject tree is listed as an Environment Weed Species in the relevant Local Government Area, being invasive, or is a known nuisance species.	The subject tree is not visible from surrounding properties (visibility obscured) and makes a negligible contribution or has a negative impact on the amenity and visual character of the area. The tree is a poor representative of the species, showing significant deviations from the typical form and branching habit with a crown density of less than 50% (sparse).
7. INSIGNIFICANT	The tree is completely dead and has no visible habitat value.	The tree is a declared Noxious Weed under the Noxious Weeds Act (NSW) 1993 within the relevant Local Government Area.	The tree is completely dead and represents a potential hazard.

DETERMINING THE RETENTION VALUE OF TREES ON DEVELOPMENT SITES
EARTHSCAPE HORTICULTURAL SERVICES
December 2011

TABLE 4

RETENTION VALUE	RECOMMENDED ACTION
High	- These trees considered worthy of preservation; as such careful consideration should be given to their retention as a priority. - Proposed site design and placement of buildings and infrastructure should consider the Tree Protection Zones as discussed in the following section to minimise any adverse impact. - In addition to Tree Protection Zones, the extent of the canopy (canopy dripline) should also be considered, particularly in relation to a high-rise development. Significant pruning of the trees to accommodate the building envelope or temporary scaffolding is generally not acceptable.
Moderate	- The retention of these trees is desirable. - These trees should be retained as part of any proposed development if possible, however these trees are considered less critical for retention. - If these trees must be removed, replacement planting should be considered in accordance with Council's Tree Replacement Policy to compensate for loss of amenity.
Low	- These trees are not considered to be worthy of any special measures to ensure their preservation, due to current health, condition or suitability. They do not have any special ecological, heritage or amenity value, or these values are substantially diminished due to their SULE. - These trees should not be considered as a constraint to the future development of the site.
Very Low	- These trees are considered potentially hazardous or very poor specimens, or may be environmental or noxious weeds. - The removal of these trees is therefore recommended regardless of the implications of any proposed development.

APPENDIX D TREE PROTECTION

Extract from Australian Standard AS4970 2009 Protection of trees on development sites

3.3.5 Structural root zone (SRZ)

“The SRZ is the area required for street stability. A larger area is required to maintain a viable tree. The SRZ only needs to be calculated when a major encroachment into a TPZ is proposed. Root investigation may provide more information on the extent of these roots.”

Extract from Australian Standard AS4970 2009 Protection of trees on development sites

SECTION 4 TREE PROTECTION ZONES - STANDARD PROCEDURE

The Protective fencing where required may delineate the **TPZ** and should be installed using a 1.8 meter cyclone chain mail fence or star pickets at 2m intervals, connected by a continuous highly-visible barrier/hazard mesh at the height of 1.8 meters. It shall be installed prior to any demolition, clearing, grading or construction work and will remain in place until all the construction work has been completed in accordance with AS4970 *Protection of trees on development sites*,

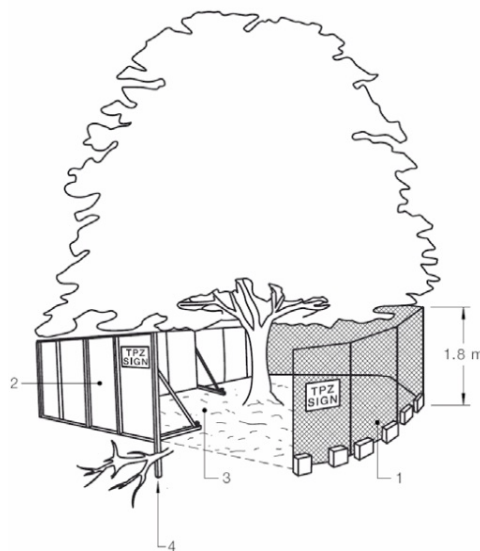


Fig 4. Protective fencing shows examples of such fencing.

Extract from Australian Standard AS4970 2009 Protection of trees on development sites

4.5 OTHER TREE PROTECTION MEASURES

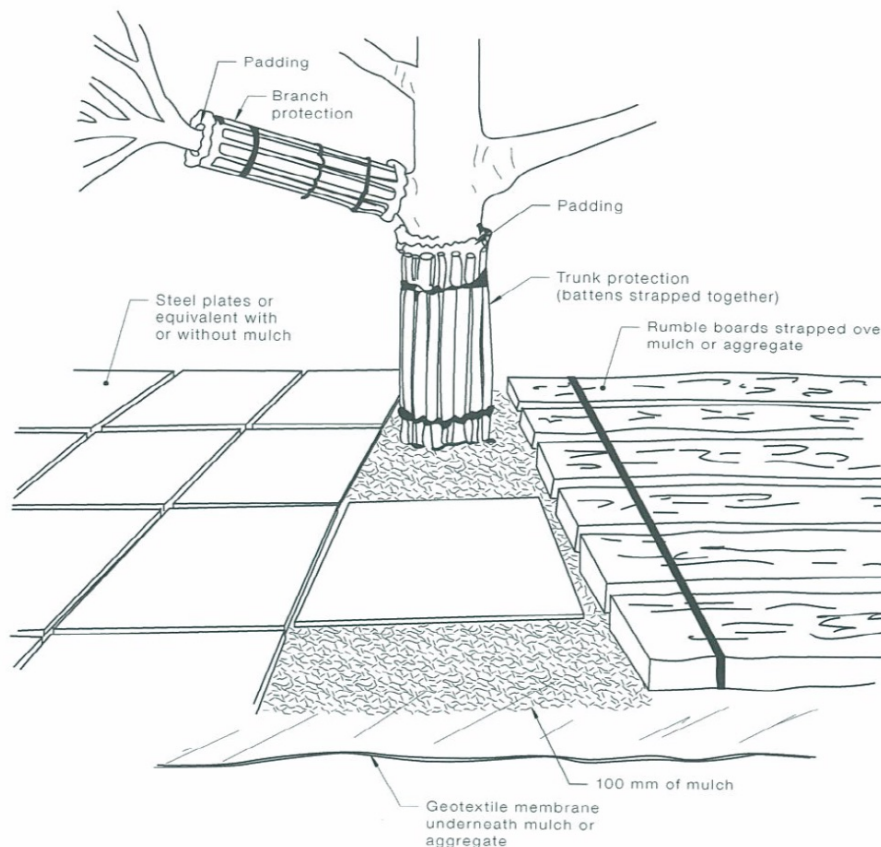
When tree protection fencing cannot be installed due to restricted access e.g. tree located along side an access way or requires temporary removal, other tree protection measure should be used, including those set out below;

4.5.2 TRUNK AND BRANCH PROTECTION see fig4.

4.5.3 GROUND PROTECTION

If temporary access for machinery is required within the TPZ, ground protection measure will be required to prevent compaction in the root zone. Measures may include permeable membrane such as geotextile fabric beneath a layer of mulch (100mm) or crushed rock below rumble boards as per fig 4.

Examples of Trunk, Branch and ground protection



NOTES:

- 1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
- 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

FIGURE 4 EXAMPLES OF TRUNK, BRANCH AND GROUND PROTECTION

4.4.5 Installing underground services within TPZ

"All services should be routed outside the TPZ. If underground services must be routed within the TPZ, they should be installed by directional drilling or in manually excavated trenches. The directional drilling bore should be at least 600 mm deep. The project arborist should assess the likely impacts of boring and bore pits on retained trees. For manual excavation trenches the project arborist should advise on roots to be retained and should monitor the works. Manual excavation may include the use of pneumatic and hydraulic tools.

Where the Project Arborist determines that tree protection fencing cannot be installed, as per this tree 1 and the tree protection fencing needs to be removed temporarily, access within or through the Tree Protection Zone is necessary or where work will be carried out within the Tree Protection Zone (as approved and supervised by the Project Arborist).

PROHIBITIONS

1. The following activities shall not be carried out within any Tree Protection Zone:
 - i. Disposal of chemicals and liquids (including concrete and mortar slurry, solvents, paint, fuel or oil);
 - ii. Stockpiling, storage or mixing of materials;
 - iii. Refuelling, parking, storing, washing and repairing tools, equipment, machinery and vehicles;
 - iii. Disposal of building materials and waste;
2. The following activities shall not be carried out within any Tree Protection Zone unless under the supervision of the Project Arborist:
 - A. Increasing or decreasing soil levels (including cut and fill);
 - B. Soil cultivation, excavation or trenching;
 - C. Placing offices or sheds;
 - D. Erection of scaffolding or hoardings; and/or
 - E. Any other act that may adversely affect the vitality or structural condition of the tree.
3. All work undertaken within or above a Tree Protection Zone shall be supervised by the Project Arborist.
4. Excavation within the Tree Protection Zone of any tree to be retained shall:
 - A. Be undertaken using non-destructive methods (eg. an Airspade or by hand) to ensure no roots greater than 40mm in diameter are damaged, pruned or removed. All care shall be taken to preserve and avoid damaging roots;
 - B. not occur within the Structural Root Zone.

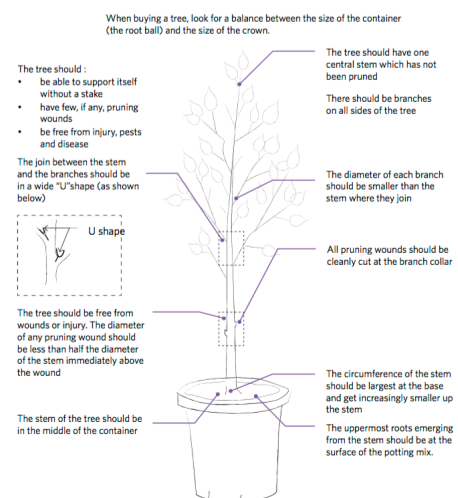
APPENDIX E TREE PLANTING SPECIFICATIONS AND MAINTENANCE

Before planting, careful consideration should be given to the location of trees and shrubs to minimize future problems. Review As2030 2015 for selection criteria of Planting Stock for Landscape Use. A basic guide for planting follows:

1. Don't plant too close to buildings or in-ground pools or plant large trees too close together: Determine the height and canopy of trees when fully grown. Allow room for root growth (at least twice the height of the tree). Large trees should be planted at least three meters from buildings.
2. Check when planting under wires or over drainage lines: Determine the mature size of the tree and the size and nature of its root system.
3. Consider your neighbours when choosing plants: Consider the effect on neighbouring properties (i.e. shading, loss of views, impact on foundations, fences and services).
4. Use trees to provide your home with summer shade and/or winter sun: Plant deciduous trees (suitable to the climate and soils of this Shire). Consider the summer and winter shadows of evergreen trees.
5. Don't grow climbers on trees: Climbers can strangle trees, leading to the tree's eventual death.
6. Retain and protect as many trees as possible when building or extending your home. (This will be a Council requirement).
7. Use locally native and non-invasive species in your garden: Increase the success rate of your garden. Attract native fauna to your garden. Reduce the amount of watering required.
8. Don't excavate or alter the ground level around trees: Can cause root damage or starving of the roots. Can cause limb drop, instability or tree death. Substantially altering soil level within three meters of the trunk is in breach of the Tree Preservation Order.
9. When buying plants, check their characteristics: Check on mature size, shade characteristics, potential for roots to cause damage, flowers, fruits and pollen, to determine their suitability.

Mature trees do need maintenance: Remove or trim misshapen branches. Check for fungal rots or other diseases. If in doubt, contact Council for a tree inspection or contact an experienced Arborist. Indiscriminate lopping can be dangerous to your safety and the health of the tree.

Figure 6.1 Choosing a good quality tree what to look for above ground



APPENDIX F INDIGENOUS TREE REPLENISHMENT

McArdle Arboricultural Consultancy Pty Ltd

The following species* are examples of endemic and native trees which could be utilised within this site.

Replacement Tree Species

Low Allergy Trees

Agonis flexuosa Willow Myrtle
Araucaria heterophylla Norfolk Is. Pine
Bauhinia blakeana Butterfly Tree
Eucalyptus spp. Eucalyptus Trees
**Grevillea robusta* Silky Oak
Hakea laurina Pincushion Plant
**Hakea salicifolia* Willow Leaved Hakea
Magnolia grandiflora Bull Bay
Malus floribunda Crab Apple
**Melaleuca quinquenervia* Broad Leaved Paperbark
Nyssa sylvatica Tupelo
Pistacia chinensis Pistachio
**Prunus x blireana* Flowering Plum
**Szygium smithii* Lilly Pilly

Recommended Replacement Species

**Szygium smithii* Lilly Pilly
Tristaniopsis laurina Water Gum
Corymbia eximia Yellow Bloodwood
**Backhousia citriodora* Lemon Scented Myrtle
Elaeocarpus reticulatus Blueberry Ash
Waterhousia floribunda Weeping Lilly Pilly
Syzygium leuhmannii Riberry
Hymenosporum flavum Native Frangipani
**Eucalyptus paniculata* Grey Ironbark
**Eucalyptus microcorys* Tallowood
Eucalyptus leucoxydon Yellow Gum
**Eucalyptus crebra* Narrow Leaved Ironbark
**Syncarpia glomulifera* Turpentine
**Lophostemon confertus* Brush Box

DISCLAIMER

McArdle Arboricultural Consulting Pty Ltd does not assume responsibility for liability associated with the tree on or adjacent to this project site, their future demise and/or any damage, which may result therefrom.

Any legal description provided to McArdle Arboricultural Consultancy Pty Ltd is assumed to be correct. Any titles and ownerships to any property are assumed to be good and sound. McArdle Arboricultural Consultancy Pty Ltd takes care to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

McArdle Arboricultural Consultancy's reports and recommendations shall not be viewed by others or for any other reason outside its intended target, either partially or whole, without the prior written consent of the consultant. Unauthorised alteration or separate use of any section of the report invalidates the whole report. McArdle Arboricultural Consultancy Pty Ltd cannot be held responsible for any consequences as a result of work carried out outside specifications, not in compliance with Australian Standards or by inappropriately qualified staff.

Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale. All recommendations contained within this report represent the current industry best practice methods of inspection. McArdle Arboricultural Consultancy Pty Ltd shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

LIMITS OF OBSERVATION

McArdle Arboricultural Consultancy Pty Ltd makes every effort to accurately identify current tree health and safety issues. Results may or may not correlate to actual tree structural integrity. There are many factors that may contribute to limb or total tree failure. Not all these symptoms are visible. There can be hidden defects that may result in a failure even though it would seem that other, more obvious defects would be the likely cause of failure.

All standing trees have an element of unpredictable risk. McArdle Arboricultural Consultancy Pty Ltd endeavors to identify the risk that the tree represents; however a level of risk associated with every tree will remain. McArdle Arboricultural Consultancy Pty Ltd does not provide any warranty or guarantee that problems, deficiencies or failures with regard to the plant/s, property or building/s will not arise in the future.

Ongoing monitoring may foresee deterioration of a tree and allow remedial action to be taken to prevent injury or damage. The timing for re-inspection on individual trees is subjective and will vary however an annual inspection is advisable for trees in subsequent years.

FURTHER RESEARCH *The report does not cover threatened, heritage or existing trees in relation to remnant forest. Further reporting may be considered as part of the relevant ASSESSMENT.*

"There are many factors that may contribute to limb or total tree failure. Factors include, decay (in the trunk, crown or branch junctions), external damage to branches leading to decay, poor branch taper, included bark, root rot/decay. Not all these symptoms are visible i.e. internal decay; of these some external symptoms may indicate the presence of deadwood but not the extent of decay. The most solid looking piece of timber may be riddled with breaks in continuity of growth caused by insect damage or poor pruning practices or other physical damage caused many years previous. Trees don't heal; they simply box in the damaged area ((CODIT) Compartmentalization of Decay In Trees.) and continue to expand in girth, completely disguising the fact that the branch or trunk has a hollow or decayed section. Having said this, not all areas, of decay past or present suggest a point of failure."

In addition to this information, other variables that can contribute to limb or total tree failure are tree species, wood densities, weight, age, location, exposure to the elements, soil types, disease and pests, birds using trees as habitat and food sources, termites causing structural problems and human influences such as, altered drainage, compaction or leaching of mineral