

Annexure 4	Revised Arborist Report including updated Schedule C (4-4-17) and Council email not objecting to removal of Tree 3.
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Tree report

**144 -148 Killeaton St and 1-3 College Cres
St Ives NSW**

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April 2017

Introduction

This Tree Report was prepared at the request of RJA Projects on behalf of their client Estia Health Pty Ltd. to assist the development of 144-148 Killeaton St and 1-3 College Cres. St Ives NSW.

The report is prepared in accordance with **Section 2 Planning and the Tree Management Process Cl. 2.3.2 Preliminary Tree Assessment of AS 4970-2009 Protection of trees on development sites**

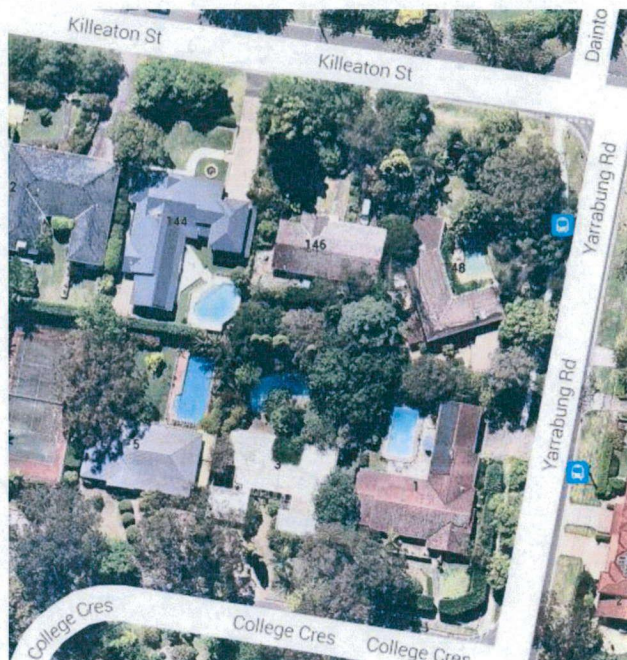
The report addresses existing trees noted on the attached marked up the Site Survey prepared by Lockley Registered Surveyors, Ref.42483DT Sheets 1 & 2 over 144-148 Killeaton Street and 1-3 College Cres. St Ives NSW now known as Tree Location Plan TP 01 and TP 02

Information contained in this Tree Report covers existing trees growing on the subject site and the adjacent street tree growing within the Killeaton Street, Yarrabung Road and College Crescent nature strips.

Plans referred to in the preparation of this tree report include:

- Site Survey Ref.42483DT Sheets 1 & 2 over 144-148 Killeaton St and 1-3 College Cres. St Ives
- Stormwater drainage plan SKCO1 July 2016 prepared by Taylor Thompson & Whitting Engineers
- Site sections A303 DA-02 prepared by Morrison Design Architects
- Site sections through TPZ trees 3,10,67 and 70 Prepared by Morrison Design Architects
- Landscape plans LA01-05 inclusive prepared by Taylor Brammer Landscape Architects.

This report is prepared in accordance with Ku ring gai Council's Local Centres DCP, Volume A - Tree and Vegetation - Part 13 Tree and Vegetation Preservation
Stuart Pittendrigh and his field assistant conducted the site assessment on 9 November 2013.



The Site 144-148 Killeaton St and 1-3 College Cres. St Ives NSW.



Part view of the development sites looking towards west along Killeaton Street.



Part view of the development sites looking towards south along Yarrabung Road



Part view of the development sites looking towards west along College Crescent.

The subject development sites comprising 6 residential dwellings bordered by Killeaton Street to the north, Yarrabung Road to the east and College Crescent to the south.

The site supports two old growth *Eucalyptus saligna* *Sydney Blue gum*, two *Angophora costata* *Smooth barked apple* and one *Eucalyptus paniculata* *Grey Ironbark*. The species is a major component of the Blue Gum High Forest a critically endangered ecological community under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Existing natural vegetation throughout the locality comprises remnant stands of old growth Blue Gum High Forest trees including Sydney Blue Gum (*Euc saligna*) and Blackbutt (*Euc pilularis*). The locality and the site also support a diversified range of introduced cultural plantings comprising ornamental trees, conifers, deciduous trees and tall evergreen hedges and screen plantings.

Aims

The aims of this report are to:

- Address Tree and Vegetation - Part 13 Tree and Vegetation Preservation
- Identify the subject trees shown on survey plans
- Appraise and assess the trees' condition, health, structure physical dimensions and form at the time of inspection
- Determine the Safe Useful Life Expectancy (SULE) of the tree (s)
- The landscape amenity provided by each individual tree
- Identify trees to be retained and
- Identify trees to be removed due to failing health, condition and perceived adverse impacts from the proposed civil works.

Methodology

The comments and recommendations in this report are based on observations and findings from the site inspection.

The trees were assessed from ground observation using standard methods of visual assessment criteria. No probing or coring, testing of woody tissue. No non invasive root investigations were carried out

Tree health was determined by:

Canopy density, extension growth, foliage size applicable to the species, and colour.

Presence of pest and disease

Termite activity

The amount of deadwood and dieback throughout the crown

Small branch and twig dieback and

Presence of epicormics

Tree structure was assessed by

Visual evidence of structural faults and potential points of failure

Evidence of past poor pruning practices

Physical and or storm damage

The heights of the trees were measured with a Nikon Forestry Pro hypsometer; the crown spread and trunk diameters were measured at breast height (DBH). The stem diameters above the root buttress (DRB) were determined using a diameter measuring tape in accordance with **AS 4970 –2009 Protection of trees on development sites.**

The nominated Tree Protection Zones and Structural Root Zones were determined by applying the methodology detailed in **Section 3 of AS 4070-2009 Protection of trees on development sites.** Refer to **Appendix A - Terms used in tree report.**

Tree Assessment.

Refer to **Appendix B - Tree Survey Assessment Sheets**

Impact on Trees and Recommendations

Refer to attached table **Appendix C**

Summary and Recommendations

Trees to be removed / retained

- The site currently supports 78 trees plus many evergreen under storey shrub layers comprising introduced species
- 39 Trees on the site are recommended for removal to accommodate the proposed development
- 39 Trees on the site are nominated for preservation including street trees and trees nominated for transplanting elsewhere on site – refer Landscape plan.

Trees to be retained and managed throughout the development shall be fenced off from the proposed development or in some situations depending on site access may require trunk protection as detailed in **Section 4 -Tree Protection Measures of AS4970 - 2009 The Protection of Trees on Development Sites** or in some situation the existing boundary fence shall be retained throughout proposed development so as to provide tree protection barrier.

- No excavation or filling of the natural ground level within the Tree Protection Zones of trees nominated for preservation shall occur unless authorised by an Arborist.
- Demolition works within the TPZ of trees to be preserved shall be carried out so as to avoid damage to the tree's roots. In sensitive areas manual excavation may be necessary. Manual excavation shall be by hand under the direction of the project arborist.
- Where the project arborist identifies roots to be pruned within or at the outer edge of the TPZ, they should be pruned with a final cut to undamaged wood. Pruning cuts should be made with sharp tools such as secateurs, pruners, handsaws or chainsaws. Pruning wounds should not be treated with dressings or paints. It is totally unacceptable acceptable for roots within the TPZ to be 'pruned' with machinery such as backhoes or excavators.
- Where roots within the TPZ are exposed by excavation, temporary root protection shall be installed to prevent them drying out. This may include jute mesh or hessian sheeting as multiple layers over exposed roots and excavated soil profile, extending to the full depth of the root zone. Root protection sheeting should be pegged in place and kept moist during the period that the root zone is exposed.
- All areas enclosed by protective fencing shall have the entire ground surface mulched to a depth of 100 mm with composted Eucalyptus leaf and woodchip to help retain soil moisture and reduce erosion.
- Any site activity close to or beneath the drip line of Trees 10, 48 and 70 shall have elevated protection installed clear of the ground to avoid compaction and damage to roots. Protection may comprise timber planks or metal decking supported on scaffolding or the like.
- Shoring. The preferred arboricultural method of shoring as part of the bulk earth works adjacent to Trees 48, 68 and 70 is by sheet piling. This method of excavation will cut the roots cleanly, retain the root ball intact, and allow excavation to occur up to a solid barrier.
- Hydraulic plans have provided by the applicant indicate that sub soil stormwater and sewer lines are to be installed within the TPZ of trees nominated for preservation. Trenching for stormwater / sewer installation within the TPZ and SRZ shall be avoided. Adopt directional drilling / approved under boring techniques as per **Section 4 of AS4970 CL.4.4.5** to avoid adverse impacts on tree roots.
- The directional drilling bore should be at least 600 mm deep. The project arborist shall assess the likely impacts of boring and bore pits on retained trees. Bore pits within the TPZ shall be hand dug under the direction of an Arborist. No excavation shall occur within the Structural Root Zones of trees nominated for preservation.

- The stormwater dissipater proposed for installation within the TPZ of Tree 10 as currently designed will result in covering a portion of the tree's roots. The extent of surface covering is approximate 23m² which equates to 6% of the TPZ. Given that this covering is placed on the existing natural grade with no excavation necessary I am comfortable with accepting this solution to disperse the runoff.
- The ground penetrating Radar Survey (root mapping) carried out by GBG Australia indicates that some roots will be adversely impacted by the proposed development. The information provided by GBG is limited to small areas of open space due to site constraints, existing pavements and built form. The impacts on roots identified in the report are within acceptable encroachments as noted in Appendix C for Tress 10, 33, 67, 68 and 70
- The crowns of all significant trees nominated for preservation are clear of the proposed development.

Stuart Pittendrigh

Consultant Arborist M. Arb. Aust. (#2003)

References

Fakes, J. (2004)

Introduction to Arboriculture RYDE TAFE

Hewett, P. in National Arborists Association of Australia (1997)

Assessing Hazardous Trees and their Safe Useful Life Expectancy, NAAA
Workshop, June 1997

Jeremy Barrel SULE- Data collection & SULE 11 Presentation of Data in association with the
National Arborists Association of Australia (2001)

Management of Mature Trees Seminar & Workshops 2001

Richard W. Harris

Arboriculture – Integrated Management of Landscape Trees

Standards Australia AS 4970 **Protection of trees on development sites.**

Appendix A

Terms used in Tree Report

Age Class

(Y)-Young refers to a well established but juvenile tree.

(SM)-Semi-mature refers to a tree at growth stages between immaturity and full size. A tree that has reached First Adult Form i.e. displays adult characteristics.

(M)-Mature refers to a full size tree with some capacity for further growth.

(OM)-Over-mature refers to a tree approaching decline or already declining.

Health refers to the trees vigour, growth rate, disease and/or insects.

Condition summarises observations about the health and structure of the tree on a scale of 1-5

(G) Good, (F) Fair, (A) Average, (P) Poor and (VP) Very Poor

SRZ) Height expressed in metres refers to estimated overall height of tree

Spread expressed in meters refers to estimated spread of crown at the drip line.

Diameter at Breast Height (DBH) expressed in millimetres refers to the trunk diameter at 1.4 meters above ground level.

(DRB) Diameter above Root Buttress (DRB) expressed in millimetres refers to the trunk diameter measured immediately above root buttress.

Tree Protection Zone (TPZ) refers to a specific radial offset expressed in metres to provide a specified area above and below the ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development.

The TPZ shall be calculated as a radial measurement based on twelve times the Diameter at Breast Height (DBH). A TPZ shall not be less than 2m.radius nor greater than a 15m radius as measured from the centre of the stem at ground level.

If an encroachment is less than 10% of the area of the TPZ and is outside the Structural Root Zone (SRZ) detailed root investigation should not be required. However if the proposed encroachment is greater than 10% or inside the SRZ root investigation by non- destructive methods may be required.

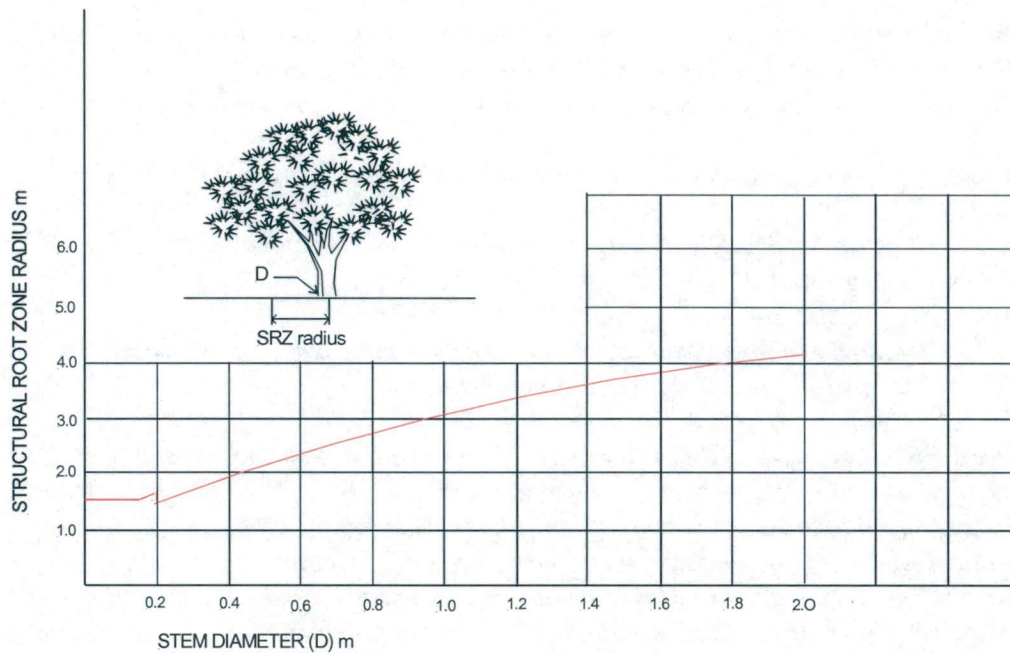
Non-destructive investigation methods may include pneumatic, hydraulic or penetrating radar.

Any encroachment should be compensated for elsewhere and be contiguous with the TPZ.

Structural Root Zone (SRZ) The area around the base of a tree required for the tree's stability in the ground that is necessary to hold the tree upright. The SRZ is nominally circular with the trunk at its centre and is expressed by its radius in metres.

This zone considers a tree's structural stability only, **not** the root zone required for a tree's vigour and long term viability, which will usually be a much larger area.

The SRZ only needs to be calculated when major encroachment into a TPZ is likely to occur



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

NOTES

- 1 R_{SRZ} is the structural root zone radius
- 2 D is the stem diameter measured immediately above to root buttress
- 3 The SRZ for trees less than 0.15 m diameter is 1.5m
- 4 The SRZ formula and graph do not apply to palms, other monocots, cycads & tree ferns
- 5 This does not apply to trees with an asymmetrical root plate

STRUCTURAL ROOT ZONE

S.U.L.E. Safe useful Life Expectancy Refer to attachment

Landscape Amenity Rating Scale

The landscape amenity value provided by trees indicates:

- How highly the tree is regarded as part of the local landscape
- How the tree provides and enhances the visual quality of the site

The importance of the tree's historical and cultural significance

- The provision of habitat and vegetation linkages within development sites, streetscapes, recreation areas or open space.

The protection, preservation and enhancement of the landscape amenity, particularly community and residential amenity are a core objective of site design, land use and planning.

The following rating scale is designed to assist in the site planning process for the proposed site works/development. Each tree in Schedule B is rated accordingly.

No 1 Rating

- *Recognised landmark*
- *Contributes to high visual amenity*
- *Major contribution to the sites landscape amenity*
- *Excellent condition, health, structure and form*
- *Forms part of a listed Critically Endangered Ecological Community*
- *Significant introduced native species that has successfully adapted to the site conditions and environment.*
- *Significant introduced evergreen or deciduous species that has successfully adapted to the site conditions and environment*
- *Indigenous to the locality*
- *Significant remnant species indigenous to site and locality*
- *Historic importance*
- *Cultural importance*
- *Recorded on significant tree register*
- *Listed as a threatened species*
- *Identified habitat tree*
- *Contributes to the bio-diversity of native vegetation within the locality*

No 2 Rating

Contributes to good visual amenity

- *Makes substantial contribution to the sites landscape amenity*
- *Good/Fair condition, health, structure and form*
- *Forms part of a listed Critically Endangered Ecological Community*
- *Indigenous to the locality*
- *Remnant species indigenous to site and locality*
- *Introduced native species that has adapted to the site conditions and environment.*
- *Introduced evergreen or deciduous species that has adapted to the site conditions and environment*
- *Listed as a threatened species*
- *Possible habitat tree*
- *Contributes to the bio-diversity of native vegetation within the locality*

No 3 Rating

- *Minor contribution to the sites landscape amenity*

- *Fair/Average condition, health, structure and form*
- *Average/poor visual amenity*
- *Indigenous to the locality*
- *Introduced species*
- *Forms part of a listed Critically Endangered Ecological Community*
- *Growth and development suppressed*
- *Wounds, structural fault extensive storm damage*
- *Observance of Pests and disease impacting on health and condition.*
- *Hazardous trees*

No 4 Rating

- *Little or no contribution to the sites landscape amenity*
- *Poor/very poor visual amenity*
- *Growth and development over-mature / suppressed*
- *Major structural faults that cannot be mitigated*
- *Recognised invasive or weed species*
- *Dangerous tree*
- *Species unsuitable for site conditions and environment*
- *Species exempt LGA Tree Protection Order/Management Plan*

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St,1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
1	Liquidambar orientalis <i>Oriental sweet gum</i>	M	11	9	665	900	8	3.2	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, no visible evidence of pests or disease, low hanging branches impact public access.	2a
						Area m2	201	32			
2	Liquidambar orientalis <i>Oriental sweet gum</i>	M	11	9	540	750	6.5	2.9	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, no visible evidence of pests or disease, , low hanging branches impact public access.	2a
						Area m2	133	26			
3	Lophostemon confertus <i>Brushbox</i>	M	11	10	303	673	7.2	2.8	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, thinning crown, no visible evidence of pests or disease. The tree root system is compromised by the previous excavation to 950mm within the TPZ & SRZ for the construction of a retaining wall 1.5m from the trunk.	3a
					517	Area m2	163	25			
4	Magnolia grandiflora 'Exmouth' <i>Magnolia 'Exmouth'</i>	M	4	4	180	250	2.2	1.8	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, decline in vigour	3a
						Area m2	15	10			
5	Franklinia axillaris <i>Fried - egg tree</i>	M	5	4	183	340	3.4	2.1	3	Small evergreen tree/tall shrub introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, no visible evidence of pests or disease	3a
					215	Area m2	36	14			
6	Liquidambar styraciflua <i>Sweet gum</i>	M	15	10	507	820	6.1	3	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, minor small branch and twig die back, no visible evidence of pests or disease	2a
						Area m2	117	28			
7	Pistacia chinensis <i>Chinese Pistachio</i>	M	4.5	7	173	300	2.1	2	2	Street tree, deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, no visible evidence of pests or disease, poor structure and form.	2e
						Area m2	14	13			
8	Liquidambar styraciflua <i>Sweet gum</i>	M	16	13	2x250	920	8.2	3.2	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, minor small branch and twig die back, structure and form modified by pruning low hanging branches impact public access	2e
					2x300	Area m2	211	32			
					403						

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
9	Liquidambar styraciflua Sweet gum	M	11	12	646	850	7.8	3.1	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, aerial cables above/through crown	2a
						Area m2	191	30			
10	Agathis robusta Queensland Kauri	M	23	7	910	1050	10.9	3.4	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, no visible evidence of pests or disease, invaded by ivy vine	2e
						Area m2	373	36			
11	Eucalyptus scoparia Willow gum	M	17	13	840	1300	10.1	3.7	3	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, thinning crown, epicormic growth, storm damage, invaded by ivy vine	3a
						Area m2	320	43			
12	Cupressus species Cypress tree	M	16	5	3x150 4x250	810	6.8	3	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, decline in vigour	4b
						Area m2	145	28			
13	Arbutus unedo Strawberry tree	M	8	7	290	540	5.6	2.6	2	Evergreen tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, modified by pruning	2a
					365	Area m2	99	21			
14	Eucalyptus scoparia Willow gum	OM	13	6	680	1100	8.2	3.4	4	Evergreen native tree introduced to the site, very Poor condition, the species is not rare or endangered, dead wood and die back, storm damage, tree stressed, decline in vigour	4b
						Area m2	211	36			
15	Liquidambar styraciflua Sweet gum	M	9	7	370	506	4.4	2.5	2	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, suppressed, exempt Council's TPO	3a
						Area m2	61	20			
16	Eucalyptus scoparia Willow gum	M	15	7	820	1350	9.8	3.8	3	Evergreen native tree introduced to the site, poor condition, the species is not rare or endangered, small branch and twig die back, storm damage, tree stressed, decline in vigour, invaded by ivy vine, tree overturned towards NE, hazardous.	4c
						Area m2	302	45			

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
17	Cedrus deodara Himalayan cedar	M	17	11	700	1000	8.4	3.3	3	Conifer species introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, dead wood and die back, heavily suppressed by adjoining trees.	3a
						Area m2	222	34			
18	Cupressus species Cypress tree	M	12	4	192	464	3.8	2.4	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, dead wood and die back, tree stressed, decline in vigour	4b
					248	Area m2	45	18			
19	Cupressus species Cypress tree	OM	12	2	257	452	3.1	2.4	4	Conifer species introduced to the site, poor condition, the species is not rare or endangered, dead wood and die back, suppressed, tree stressed, decline in vigour	4b
						Area m2	30	18			
20	Cupressus species Cypress tree	OM	12	3	317	405	3.8	2.3	4	Conifer species introduced to the site, poor condition, the species is not rare or endangered, dead wood and die back, suppressed, tree stressed, decline in vigour	4b
						Area m2	45	17			
21	Harpephyllum caffrum Kaffir-plum	M	11	9	645	1015	7.7	3.3	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, storm damage, decline in vigour	3a
						Area m2	186	34			
22	Harpephyllum caffrum Kaffir-plum	M	11	7	507	830	6.1	3.1	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, decline in vigour, heavily invaded by ivy vine	3a
						Area m2	117	30			
23	Pistacia chinensis Chinese Pistachio	M	5	7	215	356	3.1	2.1	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back	2a
					148	Area m2	30	14			
24	Harpephyllum caffrum Kaffir-plum	M	11	8	280	703	6.2	2.9	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, thinning crown, decline in vigour	3a
					290	Area m2	121	26			
					322						

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144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
25	Arecastrum romanzoffianum <i>Queen palm</i>	M	10	5	310	660	3.7	2.8	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	43	25			
26	Archontophoenix alexandrae <i>Alexander palm</i>	M	6	4	181	285	2.2	2	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	15	13			
27	Araucaria heterophylla <i>Norfolk Island pine</i>	SM	12	4	272	382	3.3	2.2	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	34	15			
28	Angophora costata <i>Smooth bark apple</i>	SM	9	1.5	113	162	1.4	1.5	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	6	7			
29	Arecastrum romanzoffianum <i>Queen palm</i>	M	15	5	281	620	3.4	2.7	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2a
						Area m2	36	23			
30	Arecastrum romanzoffianum <i>Queen palm</i>	M	10	5	270	415	3.2	2.3	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2a
						Area m2	32	17			
31	Araucaria heterophylla <i>Norfolk Island pine</i>	SM	11	4.5	252	329	3	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	28	14			
32	Araucaria heterophylla <i>Norfolk Island pine</i>	SM	9	4	179	252	2.1	1.9	3	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	14	11			

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Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
33	Eucalyptus paniculata Grey iron bark	M	18	15	599	820	7.2	3	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, thinning crown, no visible evidence of pests or disease	2a
						Area m2	163	28			
34	Melaleuca quinquenervia Broad leaf paper-bark	SM	8	4	230	360	2.8	2.2	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, dead wood and die back, small branch and twig die back, no visible evidence of pests or disease	2a
						Area m2	25	15			
35	Eucalyptus scoparia Willow gum	M	14	16	663	1050	8	3.4	3	Evergreen native tree introduced to the site, poor condition, the species is not rare or endangered, most of the foliage derived from epicormics, tree stressed, decline in vigour, distinct lean towards SW	3c
						Area m2	201	36			
36	Tristania laurina Water gum	M	11	9	2X172	715	5.2	2.9	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, co-dominant stems, inclusion, small branch and twig die back, structure and form modified by pruning	2a
					197	Area m2	85	26			
					300						
37	Jacaranda mimosifolia Jacaranda tree	M	8	3	259	281	3.1	1.9	3	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, poor form	3a
						Area m2	30	11			
38	Melaleuca quinquenervia Broad leaf paper-bark	M	15	9	2x114	820	6.8	3	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, no visible evidence of pests or disease	2a
					542	Area m2	145	28			
39	Corymbia gummiifera Red blood wood	SM	11	2.5	158	239	1.9	1.8	2	Small evergreen tree/tall shrub introduced to the site, tree not tagged, evergreen tree indigenous to the locality, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back	2a
						Area m2	11	10			
40	Eucalyptus saligna Sydney Blue gum	SM	8	3	95	150	1.1	1.5	2	Street tree, tree not tagged, evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, co-dominant stems, strong union, no visible evidence of pests or disease	2a
						Area m2	4	7			

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
41	Eucalyptus saligna Sydney Blue gum	M	12	4	210	307	2.5	2	2	Street tree, tree not tagged, evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species, trunk wound, small branch and twig die back	2e
						Area m2	20	13			
42	Tecoma stans Yellow bells	M	10	6	2x110	360	3.7	2.2	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning, invasive species	2c
					205	Area m2	43	15			
					170						
43	Tristaniaopsis laurina Water gum	M	6	7	177	303	3.2	2	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, no visible evidence of pests or disease	2a
					200	Area m2	32	13			
44	Tristaniaopsis laurina Water gum	M	9	10	246	514	4.4	2.5	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, no visible evidence of pests or disease	2a
					268	Area m2	61	20			
45	Tristaniaopsis laurina Water gum	M	7	8	3x100	393	3.7	2.2	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, small branch and twig die back, no visible evidence of pests or disease	2a
					3x150	Area m2	43	15			
46	Harpephyllum caffrum Kaffir-plum	M	9	11	562	650	6.7	2.8	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, poor structure and form, small branch and twig die back	3a
						Area m2	141	25			
47	Eucalyptus robusta Swamp mahogany	M	19	11	870	1020	10.4	3.3	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, co-dominant stems at 1.5 m above ground level, strong union, small branch and twig die back, extensive exposed surface roots	3a
						Area m2	340	34			
48	Eucalyptus scoparia Willow gum	M	17	15	900	1700	10.8	4.1	3	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, thinning crown, storm damage, tree stressed, slight decline in vigour	3e
						Area m2	366	53			

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
49	Ulmus procera 'Louis van Houtte' <i>Golden elm</i>	M	4	10	3x150 2x200	580 Area m2	4.6 66	2.6 21	2	Street tree, deciduous tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning	2a
50	Ulmus procera 'Louis van Houtte' <i>Golden elm</i>	M	4	6	3x110 130	323 Area m2	2.8 25	2.1 14	2	Street tree, deciduous tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning	2a
51	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	M	8	1.5	200	350 Area m2	2.4 18	2.1 14	2	Conifer species introduced to the site, row planting comprising 4 trees, good condition, the species is not rare or endangered, structure and form typical of the species	2a
52	Arecastrum romanzoffianum <i>Queen palm</i>	M	9	5	212	405 Area m2	2.5 20	2.3 17	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
53	Camellia japonica <i>Camellia</i>	M	4	3	Multi stem	190 Area m2	3 28	1.6 8	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
54	Camellia reticulata <i>Reticulata</i>	M	4	3	Multi stem	180 Area m2	3 28	1.6 8	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
55	Camellia reticulata <i>Reticulata</i>	M	4.5	3	Multi stem	185 Area m2	3 28	1.6 8	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
56	Camellia japonica <i>Camellia</i>	M	4.5	3	Multi stem	190 Area m2	3 28	1.6 8	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
57	Celtis occidentalis Hackberry	M	9	10	360	480	4.3	2.4	3	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, invasive species	2c
						Area m2	58	18			
58	Callistemon viminalis Weeping bottlebrush	OM	6	6	3x100	300	2.1	2	3	Evergreen native tree introduced to the site, poor condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, thinning crown, decline in vigour, invaded by ivy vine	3e
						Area m2	14	13			
59	Tibouchina lepidota Lasiandra	M	6	8	9x100	710	3.6	2.9	3	Evergreen tree introduced to the site, average condition, the species is not rare or endangered, co-dominant stems, strong union, suppressed, thinning crown	3a
						Area m2	41	26			
60	Arecastrum romanzoffianum Queen palm	M	8	5	363	550	4.4	2.6	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
						Area m2	61	21			
61	Celtis occidentalis Hackberry	M	17	15	642	850	7.7	3.1	2	Deciduous tree introduced to the site, average condition, the species is not rare or endangered, invaded by ivy vine throughout entire crown, invasive species	3e
						Area m2	186	30			
62	Cupressus species Cypress tree	M	12	2	190	420	2.3	2.3	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
						Area m2	17	17			
63	Cupressus species Cypress tree	M	15	3	320	435	3.8	2.3	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
						Area m2	45	17			
64	Cupressus species Cypress tree	M	15	3	306	392	3.7	2.2	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
						Area m2	43	15			

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
65	Cupressus species Cypress tree	M	15	3	230	332	2.8	2.1	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
						Area m2	25	14			
66	Eucalyptus scoparia Willow gum	M	16	10	624	820	7.5	3	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, dead wood and die back, small branch and twig die back, distinct lean towards NE	3a
						Area m2	177	28			
67	Eucalyptus saligna Sydney Blue gum	M	20	20	850	1400	10.2	3.8	2	Evergreen tree indigenous to the locality, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, modified by past pruning. The existing masonry covers 84m2 or 26% of the TPZ.	2e
						Area m2	327	45			
68	Eucalyptus saligna Sydney Blue gum	M	33	22	1230	1450	14.8	3.9	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, bracket fungi observed main stem in trunk wound at 5 metres above ground level. May require further investigation with Resistograph by others.	2e
						Area m2	688	48			
69	Liquidambar orientalis Oriental sweet gum	M	99	0	452	780	5.4	3	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	92	28			
70	Angophora costata Smooth bark apple	M	18	17	722	1200	8.7	3.6	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, no visible evidence of pests or disease	2a
						Area m2	238	41			
71	Acer negundo Box elder	M	9	8	362	645	6.4	2.8	2	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, exempt Council's TPO	2c
					394	Area m2	129	25			
72	Howea forsteriana Kentia palm	M	7	4.5	142	330	1.7	2.1	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, transplant to new location on site	2a
						Area m2	9	14			

Appendix B - Tree Survey Assessment Sheet

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
73	Howea forsteriana <i>Kentia palm</i>	M	6	4.5	144	365	1.7	2.2	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, transplant to new location on site	2a
						Area m2	9	15			
74	Arecastrum romanzoffianum <i>Queen palm</i>	M	8	3	230	590	2.8	2.7	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
						Area m2	25	23			
75	Arecastrum romanzoffianum <i>Queen palm</i>	M	7	3	187	490	2.2	2.5	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
						Area m2	15	20			
76	Arecastrum romanzoffianum <i>Queen palm</i>	M	9	4	228	565	2.7	2.6	3	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
						Area m2	23	21			
77	Arecastrum romanzoffianum <i>Queen palm</i>	M	7	4	188	258	2.3	1.9	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
						Area m2	17	11			
78	Syzygium australe <i>Lillypilly spp.</i>	M	12	5	300	450	3.6	2.4	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, no visible evidence of pests or disease	2a
						Area m2	41	18			

Tree No.	Botannical Name Common Name	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
1	Liquidambar orientalis <i>Oriental sweet gum</i>	Good Area m2	8 201	3.2 32	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
2	Liquidambar orientalis <i>Oriental sweet gum</i>	Good Area m2	6.5 133	2.9 26	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
3	Lophostemon confertus <i>Brushbox</i>	Good Area m2	7.2 163	2.8 25	Removal recommended supported by Council in consultation with adjoining neighbour.
4	Magnolia grandiflora 'Exmouth' <i>Magnolia 'Exmouth'</i>	Fair Area m2	2.2 15	1.8 10	Removal recommended. Tree will be adversely impacted by proposed development, short safe useful life expectancy
5	Franklinia axillaris <i>Fried - egg tree</i>	Fair Area m2	3.4 36	2.1 14	Removal recommended. Tree will be adversely impacted by proposed development, short safe useful life expectancy
6	Liquidambar styraciflua <i>Sweet gum</i>	Good Area m2	6.1 117	3 28	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
7	Pistacia chinensis <i>Chinese Pistachio</i>	Fair Area m2	2.1 14	2 13	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
8	Liquidambar styraciflua <i>Sweet gum</i>	Good Area m2	8.2 211	3.2 32	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
9	Liquidambar styraciflua <i>Sweet gum</i>	Good Area m2	7.8 191	3.1 30	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
10	Agathis robusta <i>Queensland Kauri</i>	Good Area m2	10.9 373	3.4 36	Retain tree, encroachment into TPZ considered minor 32m2 which equates to 8.6%, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites, adopt tree sensitive construction measures such as pier & beam, suspended slabs, cantilevered building sections, screw piles to minimise the impact from the construction of the aboveground portion of the adjacent terrace. Adopt directional drilling techniques when installing stormwater within TPZ. The directional drilling bore shall be at least 600mm deep.

Appendix C - Impact on Trees and Recommendation

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name Common Name	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
11	Eucalyptus scoparia	Fair	10.1	3.7	Removal recommended, tree displays poor health and condition, declining vigour, short safe useful life expectancy.
	Willow gum	Area m2	320	43	
12	Cupressus species	Average	6.8	3	Removal recommended tree has short safe useful life expectancy
	Cypress tree	Area m2	145	28	
13	Arbutus unedo	Good	5.6	2.6	Removal recommended. Tree will be adversely impacted by proposed development
	Strawberry tree	Area m2	99	21	
14	Eucalyptus scoparia	Very Poor	8.2	3.4	Removal recommended, tree displays poor health and condition, declining vigour, short safe useful life expectancy.
	Willow gum	Area m2	211	36	
15	Liquidambar styraciflua	Fair	4.4	2.5	Removal recommended. Tree will be adversely impacted by proposed development
	Sweet gum	Area m2	61	20	
16	Eucalyptus scoparia	Poor	9.8	3.8	Removal recommended tree has short safe useful life expectancy
	Willow gum	Area m2	302	45	
17	Cedrus deodara	Fair	8.4	3.3	Removal recommended. Tree will be adversely impacted by proposed development, short safe useful life expectancy
	Himalayan cedar	Area m2	222	34	
18	Cupressus species	Average	3.8	2.4	Removal recommended tree has short safe useful life expectancy
	Cypress tree	Area m2	45	18	
19	Cupressus species	Poor	3.1	2.4	Removal recommended tree has short safe useful life expectancy
	Cypress tree	Area m2	30	18	
20	Cupressus species	Poor	3.8	2.3	Removal recommended tree has short safe useful life expectancy
	Cypress tree	Area m2	45	17	
21	Harpephyllum caffrum	Fair	7.7	3.3	Removal recommended. Tree will be adversely impacted by proposed development, short safe useful life expectancy
	Kaffir-plum	Area m2	186	34	

Tree No.	Botannical Name Common Name	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
22	Harpephyllum caffrum <i>Kaffir-plum</i>	Fair Area m2	6.1 117	3.1 30	Removal recommended. Tree will be adversely impacted by proposed development, short safe useful life expectancy
23	Pistacia chinensis <i>Chinese Pistachio</i>	Good Area m2	3.1 30	2.1 14	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
24	Harpephyllum caffrum <i>Kaffir-plum</i>	Fair Area m2	6.2 121	2.9 26	Removal recommended. Tree will be adversely impacted by proposed development, tree has short safe usefull life expectancy
25	Arecastrum romanzoffianum <i>Queen palm</i>	Good Area m2	3.7 43	2.8 25	Retain tree. Transplant to new location on site, refer to landscape plan.
26	Archontophoenix alexandrae <i>Alexander palm</i>	Good Area m2	2.2 15	2 13	Retain tree. No perceived impact from proposed development, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
27	Araucaria heterophylla <i>Norfolk Island pine</i>	Good Area m2	3.3 34	2.2 15	Retain tree. No perceived impact from proposed development, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
28	Angophora costata <i>Smooth bark apple</i>	Good Area m2	1.4 6	1.5 7	Retain tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
29	Arecastrum romanzoffianum <i>Queen palm</i>	Good Area m2	3.4 36	2.7 23	Retain tree, transplant to new location on site, refer to landscape plan.
30	Arecastrum romanzoffianum <i>Queen palm</i>	Good Area m2	3.2 32	2.3 17	Retain tree. No perceived impact from proposed development, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
31	Araucaria heterophylla <i>Norfolk Island pine</i>	Good Area m2	3 28	2.1 14	Retain tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
32	Araucaria heterophylla <i>Norfolk Island pine</i>	Good Area m2	2.1 14	1.9 11	Retain tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
33	Eucalyptus paniculata <i>Grey iron bark</i>	Good Area m2	7.2 163	3 28	Retain tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites., adopt directional drilling techniques when installing stormwater within TPZ. The directional drilling bore shall be at least 600mm deep.
34	Melaleuca quinquenervia <i>Broad leaf paper-bark</i>	Good Area m2	2.8 25	2.2 15	Retain tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
35	Eucalyptus scoparia <i>Willow gum</i>	Poor Area m2	8 201	3.4 36	Removal recommended tree has short safe useful life expectancy
36	Tristaniopsis laurina <i>Water gum</i>	Good Area m2	5.2 85	2.9 26	Retain tree, encroachment into TPZ considered minor 5% which equates to 4.2m2, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
37	Jacaranda mimosifolia <i>Jacaranda tree</i>	Fair Area m2	3.1 30	1.9 11	Removal recommended due to poor structure and form
38	Melaleuca quinquenervia <i>Broad leaf paper-bark</i>	Good Area m2	6.8 145	3 28	Retain tree, encroachment into TPZ considered major 15.4m2 which equates to 10.6%, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
39	Corymbia gummifera <i>Red blood wood</i>	Fair Area m2	1.9 11	1.8 10	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
40	Eucalyptus saligna <i>Sydney Blue gum</i>	Good Area m2	1.1 4	1.5 7	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
41	Eucalyptus saligna <i>Sydney Blue gum</i>	Good Area m2	2.5 20	2 13	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
42	Tecoma stans <i>Yellow bells</i>	Fair Area m2	3.7 43	2.2 15	Removal recommended, species invasive of bushlands, gardens and open space areas
43	Tristaniopsis laurina <i>Water gum</i>	Good Area m2	3.2 32	2 13	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
44	Tristanopsis laurina <i>Water gum</i>	Good Area m2	4.4 61	2.5 20	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
45	Tristanopsis laurina <i>Water gum</i>	Good Area m2	3.7 43	2.2 15	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
46	Harpephyllum caffrum <i>Kaffir-plum</i>	Fair Area m2	6.7 141	2.8 25	Removal recommended. Tree will be adversely impacted by proposed development
47	Eucalyptus robusta <i>Swamp mahogany</i>	Fair Area m2	10.4 340	3.3 34	Removal recommended, shallow surface roots.
48	Eucalyptus scoparia <i>Willow gum</i>	Fair Area m2	10.8 366	4.1 53	Retain tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites, prune dead wood and small branch die back, repair storm damage.
49	Ulmus procera 'Louis van Houtte' <i>Golden elm</i>	Fair Area m2	4.6 66	2.6 21	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
50	Ulmus procera 'Louis van Houtte' <i>Golden elm</i>	Fair Area m2	2.8 25	2.1 14	Retain tree. Street tree, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
51	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	Good Area m2	2.4 18	2.1 14	Removal recommended
52	Arecastrum romanzoffianum <i>Queen palm</i>	Good Area m2	2.5 20	2.3 17	Removal recommended. Species exempt Councils TPO
53	Camellia japonica <i>Camellia</i>	Good Area m2	3 28	1.6 8	Retain tree, transplant to new location on site, refer to landscape plan.
54	Camellia reticulata <i>Reticulata</i>	Good Area m2	3 28	1.6 8	Retain tree, transplant to new location on site, refer to landscape plan.

Appendix C - Impact on Trees and Recommendation

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
55	Camellia reticulata	Good	3	1.6	Retain tree, transplant to new location on site, refer to landscape plan.
	<i>Reticulata</i>	Area m2	28	8	
56	Camellia japonica	Good	3	1.6	Retain tree, transplant to new location on site, refer to landscape plan.
	<i>Camellia</i>	Area m2	28	8	
57	Celtis occidentalis	Good	4.3	2.4	Removal recommended, species invasive of bushlands, gardens and open space areas
	<i>Hackberry</i>	Area m2	58	18	
58	Callistemon viminalis	Poor	2.1	2	Removal recommended tree has short safe useful life expectancy
	<i>Weeping bottlebrush</i>	Area m2	14	13	
59	Tibouchina lepidota	Average	3.6	2.9	Removal recommended tree has short safe useful life expectancy
	<i>Lasiandra</i>	Area m2	41	26	
60	Arecastrum romanzoffianum	Good	4.4	2.6	Removal recommended. Species exempt Councils TPO
	<i>Queen palm</i>	Area m2	61	21	
61	Celtis occidentalis	Average	7.7	3.1	Removal recommended, species invasive of bushlands, gardens and open space areas
	<i>Hackberry</i>	Area m2	186	30	
62	Cupressus species	Average	2.3	2.3	Removal recommended tree has short safe useful life expectancy
	<i>Cypress tree</i>	Area m2	17	17	
63	Cupressus species	Average	3.8	2.3	Removal recommended tree has short safe useful life expectancy
	<i>Cypress tree</i>	Area m2	45	17	
64	Cupressus species	Average	3.7	2.2	Removal recommended tree has short safe useful life expectancy
	<i>Cypress tree</i>	Area m2	43	15	
65	Cupressus species	Average	2.8	2.1	Removal recommended tree has short safe useful life expectancy
	<i>Cypress tree</i>	Area m2	25	14	

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
66	Eucalyptus scoparia	Fair	7.5	3	Removal recommended due to extensive lean, tree has short safe useful life expectancy
	<i>Willow gum</i>	Area m2	177	28	
67	Eucalyptus saligna	Fair	10.2	3.8	Retain tree, encroachment into TPZ considered major 16.4% which equates to 53.6m2. The impact is confined to one side of the tree and given the trees current condition and additional exposure to soil air and moisture resulting from the removal of the current driveway pavement I am of the view that the tree will not be adversely impacted by the proposed encroachment. Protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites, adopt directional drilling techniques when installing stormwater within TPZ. The directional drilling bore shall be at least 600mm deep.
	<i>Sydney Blue gum</i>	Area m2	327	45	
68	Eucalyptus saligna	Good	14.8	3.9	Retain tree, encroachment into TPZ considered minor 3% which equates to 22m2, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites, adopt directional drilling techniques when installing stormwater within TPZ. The directional drilling bore shall be at least 600mm deep.
	<i>Sydney Blue gum</i>	Area m2	688	48	
69	Liquidambar orientalis	Good	5.4	3	Retain tree. Street tree, encroachment into TPZ considered minor 5% which equates to 36m2, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
	<i>Oriental sweet gum</i>	Area m2	92	28	
70	Angophora costata	Good	8.7	3.6	Retain tree, encroachment into TPZ considered minor 7.5% which equates to 17.9m2, protect and manage tree during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites, adopt directional drilling techniques when installing stormwater within TPZ. The directional drilling bore shall be at least 600mm deep.
	<i>Smooth bark apple</i>	Area m2	238	41	
71	Acer negundo	Good	6.4	2.8	Removal recommended. Species exempt Councils TPO
	<i>Box elder</i>	Area m2	129	25	
72	Howea forsteriana	Good	1.7	2.1	Retain tree, transplant to new location on site, refer to landscape plan.
	<i>Kentia palm</i>	Area m2	9	14	
73	Howea forsteriana	Good	1.7	2.2	Retain tree, transplant to new location on site, refer to landscape plan.
	<i>Kentia palm</i>	Area m2	9	15	
74	Arecastrum romanzoffianum	Good	2.8	2.7	Removal recommended. Species exempt Councils TPO
	<i>Queen palm</i>	Area m2	25	23	
75	Arecastrum romanzoffianum	Good	2.2	2.5	Removal recommended. Species exempt Councils TPO
	<i>Queen palm</i>	Area m2	15	20	

Appendix C - Impact on Trees and Recommendation

144-148 Killeaton St, 1 Yarrabung Rd & 1-5 College Cr St Ives

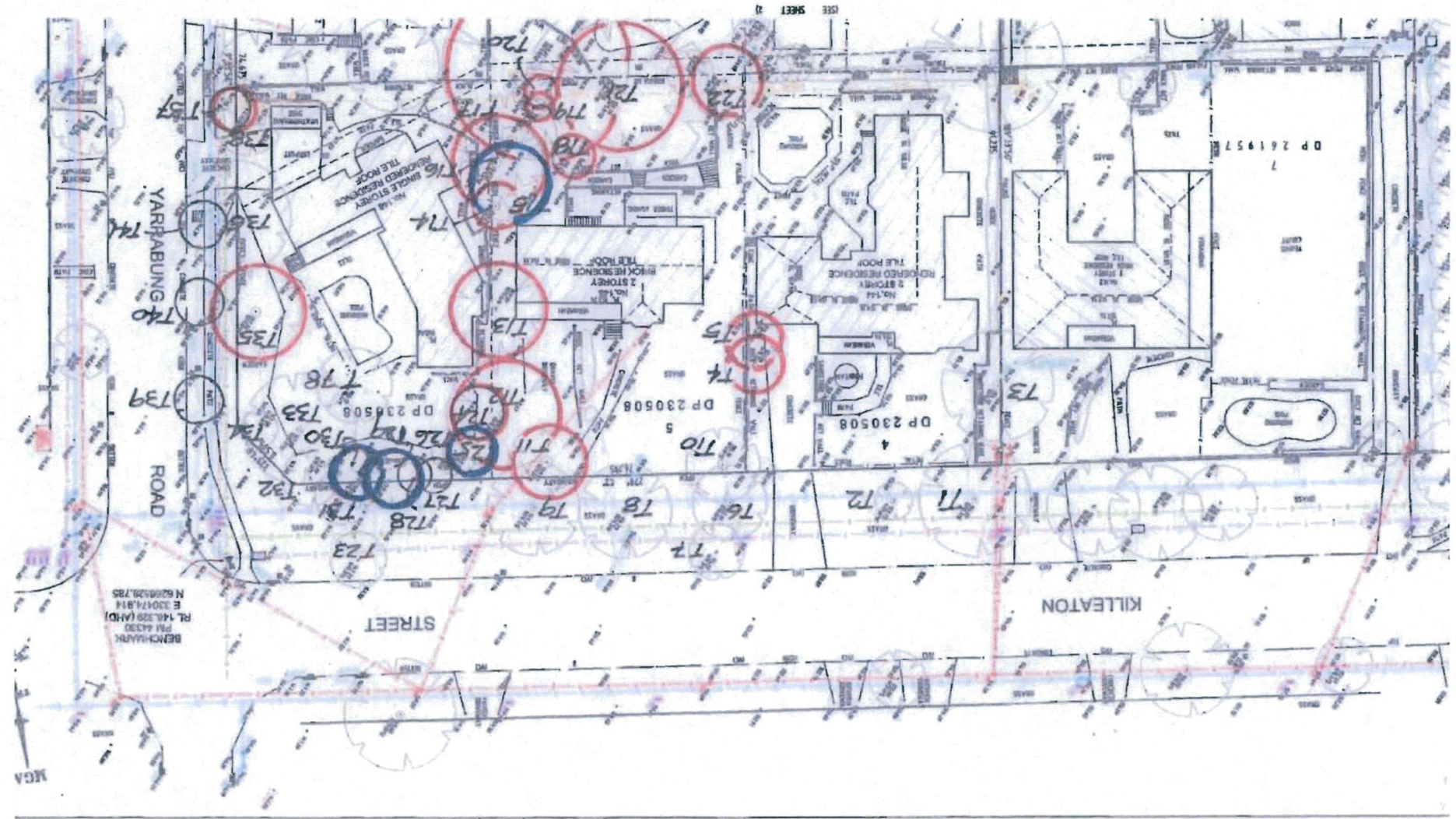
Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
76	Arecastrum romanzoffianum <i>Queen palm</i>	Good Area m2	2.7 23	2.6 21	Removal recommended. Species exempt Councils TPO
77	Arecastrum romanzoffianum <i>Queen palm</i>	Good Area m2	2.3 17	1.9 11	Removal recommended. Species exempt Councils TPO
78	Syzygium australe <i>Lillypilly spp.</i>	Fair Area m2	3.6 41	2.4 18	Removal recommended. Tree will be adversely impacted by proposed development

NO.	DESCRIPTION	DATE
1	STATION POINT	01/01/00
2	STATION POINT	01/01/00
3	STATION POINT	01/01/00
4	STATION POINT	01/01/00
5	STATION POINT	01/01/00
6	STATION POINT	01/01/00
7	STATION POINT	01/01/00
8	STATION POINT	01/01/00
9	STATION POINT	01/01/00
10	STATION POINT	01/01/00
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14	STATION POINT	01/01/00
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16	STATION POINT	01/01/00
17	STATION POINT	01/01/00
18	STATION POINT	01/01/00
19	STATION POINT	01/01/00
20	STATION POINT	01/01/00

(A) EASEMENT TO DRAIN WATER 1.5 WIDE (DP 230508)
(B) EASEMENT TO DRAIN WATER 2 WIDE (DP 230508)

1755 LOCATION PLAN TP 01

1. THE BOUNDARIES SHOWN ARE NOT TO BE USED FOR ANY OTHER PURPOSE.
2. ALL AREAS AND DISTANCES HAVE BEEN CHECKED FROM PLANS MADE AVAILABLE.
3. AREAS OF LAND & DISTANCES HAVE BEEN CHECKED FROM PLANS MADE AVAILABLE.
4. CORRECTION INTERVAL 1:50,000.
5. CORRECTION INTERVAL 1:50,000.
6. CORRECTION INTERVAL 1:50,000.
7. CORRECTION INTERVAL 1:50,000.
8. CORRECTION INTERVAL 1:50,000.
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16. CORRECTION INTERVAL 1:50,000.
17. CORRECTION INTERVAL 1:50,000.
18. CORRECTION INTERVAL 1:50,000.
19. CORRECTION INTERVAL 1:50,000.
20. CORRECTION INTERVAL 1:50,000.



RECOMMENDED FOR REMOVAL

EXEMPT TPO

RETRAYED

0 P 2 6 1 9 5 7

0 0 5 0 3 2 4 0
07

0 0 5 0 3 2 4 0

YARRABUNG

CRESCENT

COLLEGE

BENCH/
 SS 145/
 RL 160.12
 E 3304.73
 N 520642

ROAD

三

08 261957

DP 230508

1586 5421 11

NOTES ON SAFE USEFUL LIFE EXPECTANCY (SULE RATING) AS USED IN TREE DESCRIPTION TABLE

In a planning context the time a tree can expect to be usefully retained is the most important long-term consideration. Safe Useful Life Expectancy (SULE) is the life expectancy of the tree modified first by its age, health, condition, safety and location (to give safe life expectancy), then by economics, effects on better trees and sustained amenity (Barrell 1993 and 1995). Trees with short SULE may at present be making a contribution to the landscape but their value to the local amenity will decrease rapidly towards the end of this period, prior to their being removed for safety or aesthetic reasons.

SULE categories

	1 LONG SULE	2 MEDIUM SULE	3 SHORTSULE	4 REMOVALS	5 MOVED OR REPLACED
A	Long: appeared to be retainable all the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Medium: appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Short- appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance.	Removal: trees which should be removed within the next 5 years.	Moved or Replaced: Trees which can be readily moved or replaced
B	Structurally sound trees located in positions that can accommodate future growth	Trees that may only live between 15 and 40 more years	Trees that may only live between 5 and 15 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions	Small trees less than 5 metres (m) in height
C	Trees that could be made suitable for long-term retention by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through damage, structural defect, instability or recent loss of adjacent trees.	Young trees less than 15 years old but over 5m in height
D	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.	Trees that have been regularly pruned to artificially control growth'
E		Trees that could be made suitable for retention in the medium term by remedial tree care	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are 'clearly not safe to retain	
F				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	
G				Trees that are damaging or may cause damage to existing structures within 5 years	
H				Trees that will become dangerous after removal of other trees for the reasons given in A) to F).	

Smyth Planning

From: Robyn Askew <askew@kmc.nsw.gov.au>
Sent: Tuesday, 29 November 2016 9:02 AM
To: Smyth Planning
Cc: Janice Buteux-Wheeler
Subject: 144 - 148 Killeaton Street St Ives - tree removal

Dear Meg,

In reference to our telephone conversation yesterday I wish to confirm that Council would have no objection to the removal of T3 – *Lophostemon confertus* (Brushbox) provided that it is replaced with canopy tree in approximately the same location. The plans would need to be amended to reflect these changes.

I want to emphasise that the removal of T3 is solely your client's decision. If your client chooses not to remove T3 then Council will ensure that any future works carried out on the adjoining property will not result in unacceptable impacts on the tree.

Kind regards

Robyn Askew | Senior Landscape Assessment Officer | Ku-ring-gai Council

askew@kmc.nsw.gov.au P: 9424 0884 | F: 9424 0001

E: askew@kmc.nsw.gov.au | www.kmc.nsw.gov.au

Ku-ring-gai: Sydney's green heart



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NOTES ON SAFE USEFUL LIFE EXPECTANCY (SULE RATING) AS USED IN TREE
DESCRIPTION
TABLE

In a planning context the time a tree can expect to be usefully retained is the most important long-term consideration. Safe Useful Life Expectancy (SULE) is the life expectancy of the tree modified first by its age, health, condition, safety and location (to give safe life expectancy), then by economics, effects on better trees and sustained amenity (Barrell 1993 and 1995). Trees with short SULE may at present be making a contribution to the landscape but their value to the local amenity will decrease rapidly towards the end of this period, prior to their being removed for safety or aesthetic reasons.

SULE categories

	1 LONG SULE	2 MEDIUM SULE	3 SHORTSULE	4 REMOVALS	5 MOVED OR REPLACED
A	Long: appeared to be retainable alt the time of assessment for over 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Medium: appeared to be retainable at the time of assessment for 15 to 40 years with an acceptable degree of risk, assuming reasonable maintenance.	Short- appeared to be retainable at the time of assessment for 5 to 15 years with an acceptable degree of risk, assuming reasonable maintenance.	Removal: trees which should be removed within the next 5 years.	Moved or Replaced: Trees which can be readily moved or replaced
B	Structurally sound trees located in positions that can accommodate future growth	Trees that may only live between 15 and 40 more years	Trees that may only live between 5 and 1 5 more years.	Dead, dying, suppressed or declining trees through disease or inhospitable conditions	Small trees less than 5 metres (m) in height
C	Trees that could be made suitable for long-term retention by remedial tree care.	Trees that may live for more than 40 years but would be removed for safety or nuisance reasons.	Trees that may live for more than 15 years but would be removed for safety or nuisance reasons.	Dangerous trees through damage, structural defect, instability or recent toss of adjacent trees.	Young trees less than 1 5 years old but over 5m in height
D	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.	Trees that have been regularly pruned to artificially control growth'
E		Trees that could be made suitable for retention in the medium term by remedial tree care	Trees that require substantial remedial tree care and are only suitable for retention in the short term.	Damaged trees that are' clearly not safe to retain	
F				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	
G				Trees that are damaging or may cause damage to existing structures within 5 years	
H				Trees that will become dangerous after removal of other trees for the reasons given in A) to F).	

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
1	Liquidambar orientalis <i>Oriental sweet gum</i>	M	11	9	665	900	8	3.2	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, no visible evidence of pests or disease, low hanging branches impact public access.	2a
						Area m2	201	32			
2	Liquidambar orientalis <i>Oriental sweet gum</i>	M	11	9	540	750	6.5	2.9	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, no visible evidence of pests or disease, , low hanging branches impact public access.	2a
						Area m2	133	26			
3	Lophostemon confertus <i>Brushbox</i>	M	11	10	303	673	7.2	2.8	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, thinning crown, no visible evidence of pests or disease. The tree root system is compromised by the previous excavation to 950mm within the TPZ & SRZ for the construction of a retaining wall 1.5m from the trunk.	3a
					517	Area m2	163	25			
4	Magnolia grandiflora 'Exmouth' <i>Magnolia 'Exmouth'</i>	M	4	4	180	250	2.2	1.8	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, decline in vigour	3a
						Area m2	15	10			
5	Franklinia axillaris <i>Fried - egg tree</i>	M	5	4	183	340	3.4	2.1	3	Small evergreen tree/tall shrub introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, no visible evidence of pests or disease	3a
					215	Area m2	36	14			
6	Liquidambar styraciflua <i>Sweet gum</i>	M	15	10	507	820	6.1	3	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, minor small branch and twig die back, no visible evidence of pests or disease	2a
						Area m2	117	28			
7	Pistacia chinensis <i>Chinese Pistachio</i>	M	4.5	7	173	300	2.1	2	2	Street tree, deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, no visible evidence of pests or disease, poor structure and form.	2e
						Area m2	14	13			
8	Liquidambar styraciflua <i>Sweet gum</i>	M	16	13	2x250	920	8.2	3.2	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, minor small branch and twig die back, structure and form modified by pruning low hanging branches impact public access	2e
					2x300	Area m2	211	32			
					403						

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
9	Liquidambar styraciflua <i>Sweet gum</i>	M	11	12	646	850	7.8	3.1	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, aerial cables above/through crown	2a
10	Agathis robusta <i>Queensland Kauri</i>	M	23	7	910	1050	10.9	3.4	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, no visible evidence of pests or disease, invaded by ivy vine	2e
11	Eucalyptus scoparia <i>Willow gum</i>	M	17	13	840	1300	10.1	3.7	3	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, thinning crown, epicormic growth, storm damage, invaded by ivy vine	3a
12	Cupressus species <i>Cypress tree</i>	M	16	5	3x150 4x250	810	6.8	3	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, decline in vigour	4b
13	Arbutus unedo <i>Strawberry tree</i>	M	8	7	290 365	540	5.6	2.6	2	Evergreen tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, modified by pruning	2a
14	Eucalyptus scoparia <i>Willow gum</i>	OM	13	6	680	1100	8.2	3.4	4	Evergreen native tree introduced to the site, very Poor condition, the species is not rare or endangered, dead wood and die back, storm damage, tree stressed, decline in vigour	4b
15	Liquidambar styraciflua <i>Sweet gum</i>	M	9	7	370	506	4.4	2.5	2	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, suppressed, exempt Council's TPO	3a
16	Eucalyptus scoparia <i>Willow gum</i>	M	15	7	820	1350	9.8	3.8	3	Evergreen native tree introduced to the site, poor condition, the species is not rare or endangered, small branch and twig die back, storm damage, tree stressed, decline in vigour, invaded by ivy vine, tree overturned towards NE, hazardous.	4c

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
17	Cedrus deodara <i>Himalayan cedar</i>	M	17	11	700	1000	8.4	3.3	3	Conifer species introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, dead wood and die back, heavily suppressed by adjoining trees.	3a
18	Cupressus species <i>Cypress tree</i>	M	12	4	192	464	3.8	2.4	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, dead wood and die back, tree stressed, decline in vigour	4b
19	Cupressus species <i>Cypress tree</i>	OM	12	2	257	452	3.1	2.4	4	Conifer species introduced to the site, poor condition, the species is not rare or endangered, dead wood and die back, suppressed, tree stressed, decline in vigour	4b
20	Cupressus species <i>Cypress tree</i>	OM	12	3	317	405	3.8	2.3	4	Conifer species introduced to the site, poor condition, the species is not rare or endangered, dead wood and die back, suppressed, tree stressed, decline in vigour	4b
21	Harpephyllum caffrum <i>Kaffir-plum</i>	M	11	9	645	1015	7.7	3.3	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, storm damage, decline in vigour	3a
22	Harpephyllum caffrum <i>Kaffir-plum</i>	M	11	7	507	830	6.1	3.1	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, decline in vigour, heavily invaded by ivy vine	3a
23	Pistacia chinensis <i>Chinese Pistachio</i>	M	5	7	215	356	3.1	2.1	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back	2a
24	Harpephyllum caffrum <i>Kaffir-plum</i>	M	11	8	280	703	6.2	2.9	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, thinning crown, decline in vigour	3a

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
25	Arecastrum romanzoffianum <i>Queen palm</i>	M	10	5	310	660	3.7	2.8	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
26	Archontophoenix alexandrae <i>Alexander palm</i>	M	6	4	181	285	2.2	2	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
27	Araucaria heterophylla <i>Norfolk Island pine</i>	SM	12	4	272	382	3.3	2.2	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
28	Angophora costata <i>Smooth bark apple</i>	SM	9	1.5	113	162	1.4	1.5	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species	2a
29	Arecastrum romanzoffianum <i>Queen palm</i>	M	15	5	281	620	3.4	2.7	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2a
30	Arecastrum romanzoffianum <i>Queen palm</i>	M	10	5	270	415	3.2	2.3	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2a
31	Araucaria heterophylla <i>Norfolk Island pine</i>	SM	11	4.5	252	329	3	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
32	Araucaria heterophylla <i>Norfolk Island pine</i>	SM	9	4	179	252	2.1	1.9	3	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
33	Eucalyptus paniculata <i>Grey iron bark</i>	M	18	15	599	820	7.2	3	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, thinning crown, no visible evidence of pests or disease	2a
34	Melaleuca quinquenervia <i>Broad leaf paper-bark</i>	SM	8	4	230	360	2.8	2.2	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, dead wood and die back, small branch and twig die back, no visible evidence of pests or disease	2a
35	Eucalyptus scoparia <i>Willow gum</i>	M	14	16	663	1050	8	3.4	3	Evergreen native tree introduced to the site, poor condition, the species is not rare or endangered, most of the foliage derived from epicormics, tree stressed, decline in vigour, distinct lean towards SW	3c
36	Tristaniopsis laurina <i>Water gum</i>	M	11	9	2X172 197 300	715	5.2	2.9	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, co-dominant stems, inclusion, small branch and twig die back, structure and form modified by pruning	2a
37	Jacaranda mimosifolia <i>Jacaranda tree</i>	M	8	3	259	281	3.1	1.9	3	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, poor form	3a
38	Melaleuca quinquenervia <i>Broad leaf paper-bark</i>	M	15	9	2x114 542	820	6.8	3	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, no visible evidence of pests or disease	2a
39	Corymbia gummifera <i>Red blood wood</i>	SM	11	2.5	158	239	1.9	1.8	2	Small evergreen tree/tall shrub introduced to the site, tree not tagged, evergreen tree indigenous to the locality, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back	2a
40	Eucalyptus saligna <i>Sydney Blue gum</i>	SM	8	3	95	150	1.1	1.5	2	Street tree, tree not tagged, evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, co-dominant stems, strong union, no visible evidence of pests or disease	2a

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
41	Eucalyptus saligna <i>Sydney Blue gum</i>	M	12	4	210	307	2.5	2	2	Street tree, tree not tagged, evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species, trunk wound, small branch and twig die back	2e
42	Tecoma stans <i>Yellow bells</i>	M	10	6	2x110 205 170	360 Area m2	3.7 43	2.2 15	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning, invasive species	2c
43	Tristanopsis laurina <i>Water gum</i>	M	6	7	177 200	303 Area m2	3.2 32	2 13	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, no visible evidence of pests or disease	2a
44	Tristanopsis laurina <i>Water gum</i>	M	9	10	246 268	514 Area m2	4.4 61	2.5 20	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, no visible evidence of pests or disease	2a
45	Tristanopsis laurina <i>Water gum</i>	M	7	8	3x100 3x150	393 Area m2	3.7 43	2.2 15	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, small branch and twig die back, no visible evidence of pests or disease	2a
46	Harpephyllum caffrum <i>Kaffir-plum</i>	M	9	11	562	650 Area m2	6.7 141	2.8 25	3	Evergreen tree introduced to the site, fair condition, the species is not rare or endangered, poor structure and form, small branch and twig die back	3a
47	Eucalyptus robusta <i>Swamp mahogany</i>	M	19	11	870	1020 Area m2	10.4 340	3.3 34	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, co-dominant stems at 1.5 m above ground level, strong union, small branch and twig die back, extensive exposed surface roots	3a
48	Eucalyptus scoparia <i>Willow gum</i>	M	17	15	900	1700 Area m2	10.8 366	4.1 53	3	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, thinning crown, storm damage, tree stressed, slight decline in vigour	3e

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49	Ulmus procera 'Louis van Houtte'	M	4	10	3x150	580	4.6	2.6	2	Street tree, deciduous tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning	2a
	Golden elm				2x200	Area m2	66	21			
50	Ulmus procera 'Louis van Houtte'	M	4	6	3x110	323	2.8	2.1	2	Street tree, deciduous tree introduced to the site, fair condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning	2a
	Golden elm				130	Area m2	25	14			
51	Cupressus sempervirens 'Swanes G'	M	8	1.5	200	350	2.4	2.1	2	Conifer species introduced to the site, row planting comprising 4 trees, good condition, the species is not rare or endangered, structure and form typical of the species	2a
	Swane's golden cypress					Area m2	18	14			
52	Arecastrum romanzoffianum	M	9	5	212	405	2.5	2.3	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
	Queen palm					Area m2	20	17			
53	Camellia japonica	M	4	3	Multi stem	190	3	1.6	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
	Camellia					Area m2	28	8			
54	Camellia reticulata	M	4	3	Multi stem	180	3	1.6	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
	Reticulata					Area m2	28	8			
55	Camellia reticulata	M	4.5	3	Multi stem	185	3	1.6	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
	Reticulata					Area m2	28	8			
56	Camellia japonica	M	4.5	3	Multi stem	190	3	1.6	2	Small evergreen tree/tall shrub introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
	Camellia					Area m2	28	8			

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
57	Celtis occidentalis <i>Hackberry</i>	M	9	10	360	480	4.3	2.4	3	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, invasive species	2c
58	Callistemon viminalis <i>Weeping bottlebrush</i>	OM	6	6	3x100	300	2.1	2	3	Evergreen native tree introduced to the site, poor condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back, thinning crown, decline in vigour, invaded by ivy vine	3e
59	Tibouchina lepidota <i>Lasiandra</i>	M	6	8	9x100	710	3.6	2.9	3	Evergreen tree introduced to the site, average condition, the species is not rare or endangered, co-dominant stems, strong union, suppressed, thinning crown	3a
60	Arecastrum romanzoffianum <i>Queen palm</i>	M	8	5	363	550	4.4	2.6	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
61	Celtis occidentalis <i>Hackberry</i>	M	17	15	642	850	7.7	3.1	2	Deciduous tree introduced to the site, average condition, the species is not rare or endangered, invaded by ivy vine throughout entire crown, invasive species	3e
62	Cupressus species <i>Cypress tree</i>	M	12	2	190	420	2.3	2.3	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
63	Cupressus species <i>Cypress tree</i>	M	15	3	320	435	3.8	2.3	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
64	Cupressus species <i>Cypress tree</i>	M	15	3	306	392	3.7	2.2	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
65	Cupressus species <i>Cypress tree</i>	M	15	3	230	332	2.8	2.1	3	Conifer species introduced to the site, average condition, the species is not rare or endangered, small branch and twig die back, suppressed	3e
						Area m2	25	14			
66	Eucalyptus scoparia <i>Willow gum</i>	M	16	10	624	820	7.5	3	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, dead wood and die back, small branch and twig die back, distinct lean towards NE	3a
						Area m2	177	28			
67	Eucalyptus saligna <i>Sydney Blue gum</i>	M	20	20	850	1400	10.2	3.8	2	Evergreen tree indigenous to the locality, fair condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, modified by past pruning. The existing masonry covers 84m2 or 26% of the TPZ.	2e
						Area m2	327	45			
68	Eucalyptus saligna <i>Sydney Blue gum</i>	M	33	22	1230	1450	14.8	3.9	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, bracket fungi observed main stem in trunk wound at 5 metres above ground level. May require further investigation with Resistograph by others.	2e
						Area m2	688	48			
69	Liquidambar orientalis <i>Oriental sweet gum</i>	M	99	0	452	780	5.4	3	2	Street tree, deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
						Area m2	92	28			
70	Angophora costata <i>Smooth bark apple</i>	M	18	17	722	1200	8.7	3.6	2	Evergreen tree indigenous to the locality, good condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, no visible evidence of pests or disease	2a
						Area m2	238	41			
71	Acer negundo <i>Box elder</i>	M	9	8	362	645	6.4	2.8	2	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, exempt Council's TPO	2c
					394	Area m2	129	25			
72	Howea forsteriana <i>Kentia palm</i>	M	7	4.5	142	330	1.7	2.1	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, transplant to new location on site	2a
						Area m2	9	14			

Tree No.	Botannical Name <i>Common Name</i>	Age Class	Height m	Spread m	DCH mm	DRB mm	TPZ m. rad.	SRZ m. rad.	L/Sc Amen.	Description, Condition and Comments	SULE
73	Howea forsteriana	M	6	4.5	144	365	1.7	2.2	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, transplant to new location on site	2a
	<i>Kentia palm</i>					Area m2	9	15			
74	Arecastrum romanzoffianum	M	8	3	230	590	2.8	2.7	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
	<i>Queen palm</i>					Area m2	25	23			
75	Arecastrum romanzoffianum	M	7	3	187	490	2.2	2.5	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
	<i>Queen palm</i>					Area m2	15	20			
76	Arecastrum romanzoffianum	M	9	4	228	565	2.7	2.6	3	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
	<i>Queen palm</i>					Area m2	23	21			
77	Arecastrum romanzoffianum	M	7	4	188	258	2.3	1.9	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, exempt Council's TPO	2c
	<i>Queen palm</i>					Area m2	17	11			
78	Syzygium australe	M	12	5	300	450	3.6	2.4	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, no visible evidence of pests or disease	2a
	<i>Lillypilly spp.</i>					Area m2	41	18			