Pre Development Tree Assessment

238-240 Mona Vale Road
St Ives NSW.

Prepared by:
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Introduction

This Tree Report was prepared at the request of Midson Group Pty Ltd on behalf of their client BUPA.

The report is to assist the design of the proposed RACF development at 238- 240 Mona Vale Road, St Ives NSW. The site was previously owned by Camellia Grove Nursery.

The report addresses existing trees growing on the subject site and within the perimeter nature strips that surround the site. Refer to the attached marked up Site Survey now known as Tree Location Plan TP 02 for the location of the trees, the larger Camellia species recommended for preservation and the smaller Azalea, Camellia and shrub species that were growing for propagation purposes.

An inventory of the stock plants comprising Azalea, Camellia and associated shrub species is attached.

Information contained in this tree report covers only those trees and shrubs that were examined and reflects the condition of the trees at the time of inspection.

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 tree on development sites.

Stuart Pittendrigh *Consultant Arborist* conducted the site assessment on 27-11-2012

The Site

238-240 Mona Vale Road St Ives NSW.

Aims

The aims of this report are to:

- Review Council's policies and Tree Protection Order regarding the preparation of Arboricultural Reports
- Identify the subject trees
- Appraise and assess the trees' condition, health & structure at the time of inspection
- Determine the Safe Useful Life Expectancy (SULE) of the tree (s)

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 estimated and where applicable measured using an electronic clinometer; the crown spread and trunk diameters were measured at breast height (DBH). The stem diameters above the root buttress (DRB) were determined using a 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.**

Individual Tree Assessment.

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

Impact on Trees and Recommendations
Refer to attached table **Appendix C**

Summary

- No tree species on the site is considered rare or endangered.
- The White Magnolia (Magnolia denudata) located near the Mona Vale Rd. and the Killeaton St. West intersection is considered a landmark tree within the locality and is recommended for preservation. The tree is showing early signs of reduced vigour and some die back mostly likely to neglect.
- Future landscaping shall include species common throughout the locality so as to maintain cultural diversity of vegetation within the immediate neighbourhood.

Stuart Pittendrigh
Registered Consultant Arborist.

References

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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.*

(TPZ) 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.

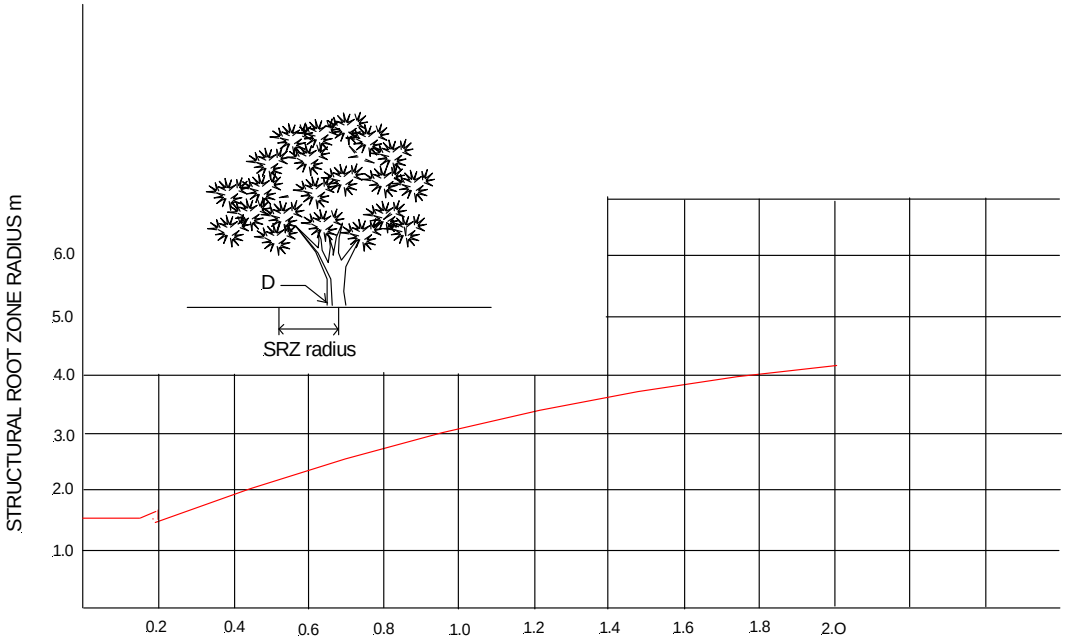
If an encroachment is less than 10% of the area of the TPZ and is outside the Structural Root Zone (SRZ) detailed root investigation should not be required. However if the proposed encroachment is greater than 10% or inside the SRZ root investigation by non-destructive methods may be required.

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 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 diamater 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

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***

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

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
1	Fraxinus Raywoodii *Claret ash*	M	10	10	670	790	8	3	3	Deciduous tree introduced to the site, average condition, the species is not rare or endangered, structure and form modified by pruning, dead wood and die back, thinning crown, epicormic growth, tree stressed, decline in vigour.Approaching over-maturity,street tree, termite activity, suppressed	3e
2	Fraxinus Raywoodii *Claret ash*	M	11	11	550	710	6.6	2.9	2	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, dead wood and die back, minor epicormic growth, street tree	3a
3	Fraxinus Raywoodii *Claret ash*	M	12	12.5	740	960	8.9	3.3	2	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, dead wood and die back, offset crown towards north over adajacent road,street tree	3a
4	Fraxinus Raywoodii *Claret ash*	M	11	11	870	1090	10.4	3.4	3	Deciduous tree introduced to the site, poor condition, the species is not rare or endangered, structure and form modified by pruning, dead wood and die back, thinning crown, bracket fungi, trunk wound, termite activity, tree stressed, decline in vigour,approaching over-maturity, street tree	3e
5	Fraxinus Raywoodii *Claret ash*	SM	4	4	150	230	1.8	1.8	2	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, storm damage, street tree	2a
6	Fraxinus Raywoodii *Claret ash*	M	6	5.5	270	300	3.2	2	2	Deciduous 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, minor storm damage, street tree	2a
7	Fraxinus Raywoodii *Claret ash*	M	9	7	250	430	3	2.3	2	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, street tree	2a
8	Fraxinus Raywoodii *Claret ash*	M	11	8	150 250	450	4.8	2.4	2	Deciduous 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, street tree	2a

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	Fraxinus Raywoodii *Claret ash*	M	11	12	850	670	10.2	2.8	2	Deciduous tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, dead wood and die back, epicormic growth, trunk wound,decayed limbs, distinct lean to north over road, street tree	3a
10	Jacaranda mimosifolia *Jacaranda tree*	M	7	6	200	320	2.4	2.1	2	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, distinct lean to north west, street tree	2a
11	Liquidambar styraciflua *Sweet gum*	M	11	6	310	410	3.7	2.3	2	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, street tree	2a
12	Jacaranda mimosifolia *Jacaranda tree*	M	9	8	260	390	3.1	2.2	2	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, suppressed east elevation, street tree	2a
13	Fraxinus griffithii *Evergreen ash*	M	4.5	4	150	210	1.8	1.7	2	Evergreen tree introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, street tree	2a
14	Melaleuca quinquenervia *Broad leaf paper-bark*	M	11	4	400	490	4.8	2.5	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, small branch and twig die back, structure and form modified by pruning, street tree	2a
15	Melaleuca quinquenervia *Broad leaf paper-bark*	M	11.5	6	350	470	4.2	2.4	2	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, street tree.	2a
16	Melaleuca quinquenervia *Broad leaf paper-bark*	M	10	4	310	410	3.7	2.3	3	Evergreen native tree introduced to the site, average condition, the species is not rare or endangered, structure and form typical of the species, small branch and twig die back, street tree	3a

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	Melaleuca quinquenervia *Broad leaf paper-bark*	M	12	5	390	400	4.7	2.3	3	Evergreen native tree introduced to the site, average condition, the species is not rare or endangered, structure and form modified by pruning, small branch and twig die back, thinning crown, street tree.	3a
18	Melaleuca quinquenervia *Broad leaf paper-bark*	M	10	6	300 540	700	10.1	2.8	2	Evergreen native 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, street tree.	2a
19	Melaleuca quinquenervia *Broad leaf paper-bark*	M	8	5	190 290	450	5.8	2.4	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, street tree	2a
20	Melaleuca quinquenervia *Broad leaf paper-bark*	M	10	3.5	340	390	4.1	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, street tree.	2a
21	Melaleuca quinquenervia *Broad leaf paper-bark*	M	10	6	540	660	6.5	2.8	3	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form typical of the species, thinning crown, street tree.	2b
22	Fraxinus griffithii *Evergreen ash*	M	3.5	6	Multi stem 400	300	480	2	2	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, street tree	2a
23	Melaleuca quinquenervia *Broad leaf paper-bark*	M	10	9	4x200 3x250 3x300	870	15	3.1	2	Evergreen native 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, structure and form modified by pruning, street tree.	2a
24	Melaleuca quinquenervia *Broad leaf paper-bark*	M	3.5	4	2x180	4	4.3	1.5	2	Evergreen native 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, structure and form .modified by pruning, street tree	2a

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	Melaleuca quinquenervia *Broad leaf paper-bark*	M	3.5	3	290	270	3.5	1.9	2	Evergreen native tree introduced to the site, fair condition, the species is not rare or endangered, structure and form modified by pruning, street tree.	2a
26	Melaleuca quinquenervia *Broad leaf paper-bark*	M	3	3	150 190	280	4.1	1.9	2	Evergreen tree indigenous to the locality, average condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning, small branch and twig die back, street tree	2a
27	Robinia pseudoacacia 'Frisia' *Golden robinia*	M	12	9	520	630	6.2	2.7	2	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,foopath uplift, street tree.	2a
28	Robinia pseudoacacia 'Frisia' *Golden robinia*	M	12	10	500	570	6	2.6	2	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, street tree.	2a
29	Robinia pseudoacacia 'Frisia' *Golden robinia*	M	10	9.5	100 290	400	4.7	2.3	2	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, inclusion, suppressed	2a
30	Robinia pseudoacacia 'Frisia' *Golden robinia*	M	13	10	460	600	5.5	2.7	2	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, street tree.	2a
31	Brachychition acerifolius *Illawarra flame*	M	11	6	390	460	4.7	2.4	2	Deciduous 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, street tree	2a
32	Robinia pseudoacacia 'Frisia' *Golden robinia*	M	12	10.5	380	50	4.6	1.5	2	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, street tree.	2a

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	Michelia figo *Portwine magnolia*	M	6	4	Multi stem 300	300	3.6	2	3	Evergreen tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union	2a
34	Chamaecyparyis plumosa 'Squarrosa' *Squarrosa*	M	7	3	390	500	4.7	2.5	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
35	Chamaecyparis pisifera 'Filifera Aurea' *False cypress*	M	18	7	180 360	540	6.5	2.6	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, small branch and twig die back	2a
36	Michelia figo *Portwine magnolia*	M	4.5	5	150	175	1.8	1.6	3	Evergreen tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
37	Magnolia denudata *Yulan magnolia*	M	8.5	7	480	585	5.8	2.6	2	Deciduous tree 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 south elevation, thinning crown, structure and form modified by pruning	2a
38	Camellia sasanqua *Sasanqua -see details in Description*	M	4.7	3	Multi stem	270	3	1.9	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. C.S. 'Wahroonga'	2a
39	Camellia sasanqua *Sasanqua -see details in Description*	M	4	3	Multi srem	360	3	2.2	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. C.S. 'Hiriyo'	2a
40	Camellia japonica *Camellia- see details in description*	M	4.6	4.5	Multi stem	400	4.5	2.3	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. C.J. Nickey Crisp'	2a

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	Camellia japonica *Camellia- see details in description*	M	4.2	4.5	Multi stem	380	4.5	2.2	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. C.J. 'Emperor of Russia'	2a
42	Camellia sasanqua *Sasanqua -see details in Description*	M	4.3	4	Multi stem	350	4	2.1	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. EGAU	2a
43	Camellia reticulata *Reticulata-see details in description*	M	4	4	Multi stem	200	4	1.7	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. C.R.Hybrid 'Californian Sunset'	2a
44	Camellia reticulata *Reticulata-see details in description*	M	4.2	4	Multi stem	185	4	1.6	2	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union. C.R.Hybrid 'Red Crystal'	2a
45	Camellia sasanqua *Sasanqua -see details in Description*	M	4.5	3	Multi stem	200	3	1.7	2	Evergreen tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, espaliered., small branch and twig die back. C.S 'Lucinda'	2a
46	Camellia sasanqua *Sasanqua -see details in Description*	M	4.5	3	Multi stem	220	3	1.8	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. C.S.'Lucinda'	2a
47	Camellia sasanqua *Sasanqua -see details in Description*	M	4.7	3	Multi stem	215	3	1.7	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. C.S.'Lucinda'	2a
48	Camellia sasanqua *Sasanqua -see details in Description*	M	4.2	3	Multi stem	225	3	1.8	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. C.S 'Yuletide'	2a

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
49	Camellia sasanqua *Sasanqua -see details in Description*	M	4.5	3	Multi stem	280	3	1.9	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, species name unknown	2a
50	Camellia sasanqua *Sasanqua -see details in Description*	M	4.5	3	Multi stem	400	3	2.3	2	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. C.S 'Plantation Pink'	2a
51	Camellia sasanqua *Sasanqua -see details in Description*	M	4.5	3	Multi stem	500	3	2.5	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. C.S 'Hiryu'	2a
52	Camellia sasanqua *Sasanqua -see details in Description*	M	4.5	3	Multi stem	300	3	2	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. C.S. 'Jennifer Susan'	2a
53	Camellia reticulata *Reticulata-see details in description*	M	3	2.5	Multi stem	230	3	1.8	3	Evergreen tree introduced to the site, average condition, the species is not rare or endangered, co-dominant stems, strong union. C.R.Hy. 'Howard Asper'	3a
54	Camellia sasanqua *Sasanqua -see details in Description*	M	4	3	Multi stem	370	3	2.2	2	Good condition, the species is not rare or endangered, co-dominant stems, strong union. C.S. 'Edna Butler'	2a
55	Camellia reticulata *Reticulata-see details in description*	M	4	3	Multi stem	300	3	2	2	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, structure and form modified by pruning C.R. 'Doctor Clifford Parkes'	3a
56	Olea africana *Wild olive*	M	9	13	420 440	920	10.3	3.2	2	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	2c

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	Camellia reticulata *Reticulata-see details in description*	M	5	3.5	Multi stem	315	0	2	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. Specific species name unknown.	2a

Tree No.	Botannical Name *Common Name*	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
1	Fraxinus Raywoodii *Claret ash*	Average	8	3	Removal recommended, replace with plantings indigenous to the locality
2	Fraxinus Raywoodii *Claret ash*	Fair	6.6	2.9	Removal recommended, replace with tree indigenous to the locality
3	Fraxinus Raywoodii *Claret ash*	Fair	8.9	3.3	Removal recommended, replace with tree indigenous to the locality
4	Fraxinus Raywoodii *Claret ash*	Poor	10.4	3.4	Removal recommended, replace with tree indigenous to the locality
5	Fraxinus Raywoodii *Claret ash*	Good	1.8	1.8	Removal recommended, replace with tree indigenous to the locality
6	Fraxinus Raywoodii *Claret ash*	Fair	3.2	2	Removal recommended, replace with tree indigenous to the locality
7	Fraxinus Raywoodii *Claret ash*	Good	3	2.3	Removal recommended, replace with tree indigenous to the locality
8	Fraxinus Raywoodii *Claret ash*	Good	4.8	2.4	Removal recommended, replace with tree indigenous to the locality
9	Fraxinus Raywoodii *Claret ash*	Fair	10.2	2.8	Removal recommended, replace with tree indigenous to the locality
10	Jacaranda mimosifolia *Jacaranda tree*	Good	2.4	2.1	Removal recommended, replace with plantings indigenous to the locality
11	Liquidambar styraciflua *Sweet gum*	Good	3.7	2.3	Retain tree, no perceived impact from proposed development, protect 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 *Common Name*	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
12	Jacaranda mimosifolia *Jacaranda tree*	Good	3.1	2.2	Removal recommended, replace with plantings indigenous to the locality
13	Fraxinus griffithii *Evergreen ash*	Good	1.8	1.7	Removal recommended, replace with tree indigenous to the locality
14	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	4.8	2.5	Removal recommended, replace with tree indigenous to the locality
15	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	4.2	2.4	Removal recommended, replace with tree indigenous to the locality
16	Melaleuca quinquenervia *Broad leaf paper-bark*	Average	3.7	2.3	Removal recommended, replace with tree indigenous to the locality
17	Melaleuca quinquenervia *Broad leaf paper-bark*	Average	4.7	2.3	Removal recommended, replace with tree indigenous to the locality
18	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	10.1	2.8	Removal recommended, replace with tre indigenous to the locality
19	Melaleuca quinquenervia *Broad leaf paper-bark*	Good	5.8	2.4	Removal recommended, replace with tree indigenous to the locality
20	Melaleuca quinquenervia *Broad leaf paper-bark*	Good	4.1	2.2	Removal recommended, replace with tree indigenous to the locality
21	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	6.5	2.8	Removal recommended, replace with tree indigenous to the locality
22	Fraxinus griffithii *Evergreen ash*	Fair	480	2	Removal recommended, replace with tree indigenous to the locality

Tree No.	Botannical Name *Common Name*	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
23	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	15	3.1	Removal recommended, replace with tree indigenous to the locality
24	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	4.3	1.5	Removal recommended, replace with tree indigenous to the locality
25	Melaleuca quinquenervia *Broad leaf paper-bark*	Fair	3.5	1.9	Removal recommended, replace with tree indigenous to the locality
26	Melaleuca quinquenervia *Broad leaf paper-bark*	Average	4.1	1.9	Removal recommended, replace with tree indigenous to the locality
27	Robinia pseudoacacia 'Frisia' *Golden robinia*	Good	6.2	2.7	Removal recommended, replace with tree indigenous to the locality
28	Robinia pseudoacacia 'Frisia' *Golden robinia*	Good	6	2.6	Removal recommended, replace with tree indigenous to the locality
29	Robinia pseudoacacia 'Frisia' *Golden robinia*	Good	4.7	2.3	Removal recommended, replace with tree indigenous to the locality
30	Robinia pseudoacacia 'Frisia' *Golden robinia*	Good	5.5	2.7	Removal recommended, replace with tree indigenous to the locality
31	Brachychition acerifolius *Illawarra flame*	Fair	4.7	2.4	Removal recommended, replace with tree indigenous to the locality
32	Robinia pseudoacacia 'Frisia' *Golden robinia*	Good	4.6	1.5	Removal recommended, replace with tree indigenous to the locality
33	Michelia figo *Portwine magnolia*	Good	3.6	2	Tree will be adversly impacted by proposed development and will need to be removed

Tree No.	Botannical Name *Common Name*	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
34	Chamaecyparyis plumosa 'Squarrosa' *Squarrosa*	Good	4.7	2.5	Tree will be adversly impacted by proposed development and will need to be removed
35	Chamaecyparis pisifera 'Filifera Aurea' *False cypress*	Good	6.5	2.6	Tree will be adversly impacted by proposed development and will need to be removed
36	Michelia figo *Portwine magnolia*	Good	1.8	1.6	Tree will be adversly impacted by proposed development and will need to be removed
37	Magnolia denudata *Yulan magnolia*	Fair	5.8	2.6	Retain tree, protect during development in accordance with Section 4 Tree protection Measures set out in AS4970-2009 The Protection of Trees on Development Sites
38	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	1.9	Retain Camellia, transplant to new location, refer landscape plan
39	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	2.2	Retain Camellia, transplant to new location, refer landscape plan
40	Camellia japonica *Camellia- see details in description*	Good	4.5	2.3	Retain Camellia, transplant to new location, refer landscape plan
41	Camellia japonica *Camellia- see details in description*	Good	4.5	2.2	Retain Camellia, transplant to new location, refer landscape plan
42	Camellia sasanqua *Sasanqua -see details in Description*	Good	4	2.1	Retain Camellia, transplant to new location, refer landscape plan
43	Camellia reticulata *Reticulata-see details in description*	Good	4	1.7	Retain Camellia, transplant to new location, refer landscape plan
44	Camellia reticulata *Reticulata-see details in description*	Good	4	1.6	Retain Camellia, transplant to new location, refer landscape plan

Tree No.	Botannical Name *Common Name*	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
45	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	1.7	Retain Camellia, transplant to new location, refer landscape plan
46	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	1.8	Retain Camellia, transplant to new location, refer landscape plan
47	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	1.7	Retain Camellia, transplant to new location, refer landscape plan
48	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	1.8	Retain Camellia, transplant to new location, refer landscape plan
49	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	1.9	Retain Camellia, transplant to new location, refer landscape plan
50	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	2.3	Retain Camellia, transplant to new location, refer landscape plan
51	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	2.5	Retain Camellia, transplant to new location, refer landscape plan
52	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	2	Retain Camellia, transplant to new location, refer landscape plan
53	Camellia reticulata *Reticulata-see details in description*	Average	3	1.8	Retain Camellia, transplant to new location, refer landscape plan
54	Camellia sasanqua *Sasanqua -see details in Description*	Good	3	2.2	Retain Camellia, transplant to new location, refer landscape plan
55	Camellia reticulata *Reticulata-see details in description*	Fair	3	2	Retain Camellia, transplant to new location, refer landscape plan

Tree No.	Botannical Name *Common Name*	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
56	Olea africana *Wild olive*	Fair	10.3	3.2	Removal recommended, species invasive of bushlands, gardens and open space areas
57	Camellia reticulata *Reticulata-see details in description*	Fair	0	2	Retain Camellia, transplant to new location, refer landscape plan

BUPA CARE Services St Ives NSW Inventory of existing Camellias

The camellias on the former Camellia Grove Nursery have been identified by the previous owner of Camellia Grove Nursery, Stephen Clark. An audit was conducted in August of 2013 and supplemented by a further audit in July 2014 by Bill Parker of of the Camellia Ark Project and proprietor of Parker's Camellias. The identification list and plan has been recorded by Emmanuel Ghali of Midson Group.

Bill Parker has reviewed the camellias and identified 20 rare cultivars. These rare species have been identified in the list below and are proposed to be removed off site to be preserved by Bill Parker.

Plant No.	Species Name	Comments
CS-2	CS.Chansonette	Retained
CS-3	CS.Chansonette	Retained
CS-4	CS.Little Pearl	Remove
CJ-8	CJ.Emperor of Russia variegated	Retained
CJ-9	CJ Great Eastern	Retained
CS-10	CS.Plantation Pink	Retained
CS-11	CS Setsugekka	Retained
CS-17	CS Shisha-gashira	Remove
CJ-18	CJ Lady Loch	Remove
CJ-19	CJ Desire	Remove
CJ-21	CJ Erne Farmer	Stock specimens for future sourcing
CJ-22	CJ Margarete Hertrich	To be removed and reinstated on completion
CJ-23	CJ Easter Morn	Remove
CJ-24	CJ Tiny Princess	Remove
CJ-25	CJ Wilamina	Remove
CJ-26	CJ Black Magic	Remove
CJ-27	CJ Silver Waves	Stock specimens for future sourcing
CJ-28	CJ Betty Ridley	To be removed and reinstated on completion
CJ-29	CJ Dixie Knight	To be removed and reinstated on completion
CJ-30	CJ Tammia	Remove
CJ-31	CJ Pink Gold	Stock specimens for future sourcing
CJ-32	CJ Ellies Girl	Rare cultivars to be transplanted by Camellia Ark
CJ-33	CJ Fire Dance	Stock specimens for future sourcing
CJ-34	CJ Bob Hope	Remove
CJ-35	CJ Fashionista	Remove
CJ-36	CJ Silver Chalice	Rare cultivars to be transplanted by Camellia Ark
CJ-37	CJ Betty Ridley	Rare cultivars to be transplanted by Camellia Ark
CS-38	CS Otome Sazanka	Rare cultivars to be transplanted by Camellia Ark
CJ-39	CJ California Sunrise	Rare cultivars to be transplanted by Camellia Ark
C-40	C Laurie Bray	Remove
CR-41	CR Hybrid Lasca Beauty	Rare cultivars to be transplanted by Camellia Ark
CJ-42	CJ Prince Frederick William	Remove
CJ-43	CJ Bob Hope	Remove
CJ-44	CJ Dixie Knight	To be removed and reinstated on completion
CS-45	CS Shisha-gashira	Remove
CS-46	CS Shisha-gashira	Remove
CJ-47	CJ Fashionista	To be removed and reinstated on completion
CJ-48	CJ.Empeor of Russia	To be removed and reinstated on completion
CJ-49	CJ.Empeor of Russia variegated	Remove
CS-50	CS Edna Butler	Remove
CS-51	CS Shisha-gashira	Remove
CJ-52	CJ Grandslam	Remove
CS-53	CS Star above Star	Remove
CS-54	CS Jean May	Remove
CS-56	CS Bert Jones	Remove

Plant No.	Species Name	Comments
CS-57	CS Mine no Yuki	Remove
CS-58	CS Jennifer Susan	Remove
C59	C Eryldene Excelsior	To be removed and reinstated on completion
CS-60	CS Violet Weymouth	Remove
CS-61	CS Pure Silk	Remove
CR-66	CR Lois Shinault	Rare cultivars to be transplanted by Camellia Ark
CS-67	CS Brushfields Yellow	To be removed and reinstated on completion
CS-68	CS Cultivar unknown	Remove
CJ-69	CJ Cultivar unknown	Remove
CJ-71	CJ Red RED Rose	Remove
CJ-72	CJ Roger Hall	To be removed and reinstated on completion
CJ-73	CJ Betty Ridley	To be removed and reinstated on completion
CJ-74	CJ Bogan Snow	Rare cultivars to be transplanted by Camellia Ark
CJ-75	CJ Desire	Remove
CR -76	CR Lasca Beauty	Remove
CS-77	CS Bonanza	Remove
CS-78	CS Bonanza	Remove
CS-79	CS Bonanza	Remove
CS-80	CS Bonanza	Remove
CS-81	CS Bonanza	Remove
CJ-82	CJ R L Wheeler	To be removed and reinstated on completion
CRHy-83	CRHy Tiny princess	Stock specimens for future sourcing
CJ-84	CJ Love light	To be removed and reinstated on completion
CS-85	CS Phillipa Ifauld	To be removed and reinstated on completion
CJ-86	CJ Margaret Davis	To be removed and reinstated on completion
CJ-87	CJ Bettys Beauty	Rare cultivars to be transplanted by Camellia Ark
CRHy-88	CRHy Tiny princess	Stock specimens for future sourcing
CRHy-89	CRHy Tama-houra	Stock specimens for future sourcing
CRHy-90	CRHy Tiny princess	Remove
CJ-91	CJ Love light	To be removed and reinstated on completion
CJ-92	CJ Drama Girl	To be removed and reinstated on completion
CJ-93	CJ Elegans Champagne	To be removed and reinstated on completion
CRHy-94	CRHy Our Melissa	Stock specimens for future sourcing
CHRy-95	CRHy Wynne Rayner	To be removed and reinstated on completion
CHRy-96	CRHy Black Opal	Rare cultivars to be transplanted by Camellia Ark
CS-97	CS Silver Chalice	Rare cultivars to be transplanted by Camellia Ark
CR-98	CR Louis Shinault	Rare cultivars to be transplanted by Camellia Ark
CJ-99	CJ Debautant	Remove
CJ-100	CJ Elegans Champagne	Stock specimens for future sourcing
CJ-101	CJ Tammia	Stock specimens for future sourcing
CRHy-102	CHRy Scentious	Remove
CJ-103	CJ Marie Mackall	Rare cultivars to be transplanted by Camellia Ark
CJ-104	CJ Buttons & Bows	Remove
CJ-105	CJ Desire	Remove
CJ-106	CJ Happy Holidays	Remove
CJ-107	CJ White Nun	Stock specimens for future sourcing
CRHy-108	CRHy Lutchuensis	Stock specimens for future sourcing
CR-110	CR Ellies Girl	Rare cultivars to be transplanted by Camellia Ark
CJ-112	CJ Tinsie	Stock specimens for future sourcing
CRHy-113	CRHy Fairy Wand	Stock specimens for future sourcing
CJ-114	CJ LT Dees	Stock specimens for future sourcing
CJ-115	CJ Memphis Belle	Rare cultivars to be transplanted by Camellia Ark
CRHy-116	CRHy Wirlinga Princess	Stock specimens for future sourcing
CJ-117	CJ Betty Ridley	Remove
CJ-118	CJ Fire Dance	Stock specimens for future sourcing
CJ-119	CJ Nuccios Gem	Remove

Plant No.	Species Name	Comments
CJ-120	CJ Wildfire	Stock specimens for future sourcing
CJ-121	CJ White Nun	Remove
C122	CJ Georgia Rouse	Stock specimens for future sourcing
CJ-123	CJ Margarete Hertrich	Stock specimens for future sourcing
CJ-124	CJ Carters Sunburst Pink	Remove
CJ-125	CJ Great Eastern	Remove
CJ-126	CJ Nicky Crisp	Remove
C-127	CJ Baby Doll	Rare cultivars to be transplanted by Camellia Ark
CJ-128	CJ Carters Sunburst Pink	Remove
CJ-129	CJ Grand Marshall	Stock specimens for future sourcing
CJ-130	CJ Henry E Huntington	Rare cultivars to be transplanted by Camellia Ark
CJ-131	CJ Paradise Illumination	Stock specimens for future sourcing
CJ-132	CJ Laurie Bray	Stock specimens for future sourcing
CS-133	CS Phillipa Ifauld	Stock specimens for future sourcing
CJ-134	CJ Dahlonega	Stock specimens for future sourcing
CJ-135	CJ Nonie Hayden	Rare cultivars to be transplanted by Camellia Ark
CJ-136	CJ Red Red Rose	Stock specimens for future sourcing
CJ-137	CJ Chrysantha	Rare cultivars to be transplanted by Camellia Ark
CJ-138	CJ Grandslam	Remove
CJ-139	CJ Julia France	To be removed and reinstated on completion
CJ-140	CJ Moshio	To be removed and reinstated on completion
CJ-141	CJ Grand Slam variegated	To be removed and reinstated on completion
CJ-142	CJ Mrs DW Davis Descanso	Rare cultivars to be transplanted by Camellia Ark
CJ-143	CJ Margaret Davis	Remove
CJ-144	CJ Herzilia De Freitas Magalhaes	Stock specimens for future sourcing
CJ-145	CJ Guilio Nuccio	To be removed and reinstated on completion
CJ-146	CJ Matilija poppy	Stock specimens for future sourcing
T-38	CS Wahroonga	Retained
T-39	CS Hiriyo	Retained
T-40	CS Nicky Crisp	Retained
T-41	CS Emperor of Russia	Retained
T-42	CS Egao	Retained
T-43	CRHy Californian Sunset	Retained
T-44	CRHy Red Crystal	Retained
T-45	CS Lucinda	Retained
T-46	CS Lucinda	Retained
T-47	CS Lucinda	Remove
T-48	CS Yuletide	Remove
T-49	CS Cultivar unknown	Remove
T-50	CS Plantation Pink	Remove
T-51	CS Hiryu	Remove
T-52	CS Jennifer Susan	Remove
T-53	CRHy Howard Asper	Remove
T-54	CS Edna Butler	Remove
T-55	CR Doctor Clifford Parkes	Remove
T-57	CR Cultivar Unknown	Remove
M-1	Magnolia Little Gem x3	Remove
AZ-5	AZ.Mauve Schryderri	Remove
AZ-6	AZ.Schryderri	Remove
AZ-7	AZ.Mauve Schryderri	Remove
AZ-12	AZ Redwings	Remove
AZ-13	AZ Hexe	Remove
AZ-14	AZ Alphonse Anderson	Remove
AZ-15	AZ Red Wings	Remove
AZ-16	AZ Alba Magna	Remove
AZ-20	AZ Splendens	Remove

Plant No.	Species Name	Comments
AZ-55	AZ Red Wings	Remove
AZ-62	AZ Splendens	Remove
AZ-63	AZ Alphonse Anderson	Remove
AZ-64	AZ Species unknown	Remove
AZ-65	AZ Alba Magna	Remove
AZ-70	AZ Phoenicea	Remove
S109	Osmanthus	Remove
S111	Murraya	Remove
S147	Murraya	Remove

Legend

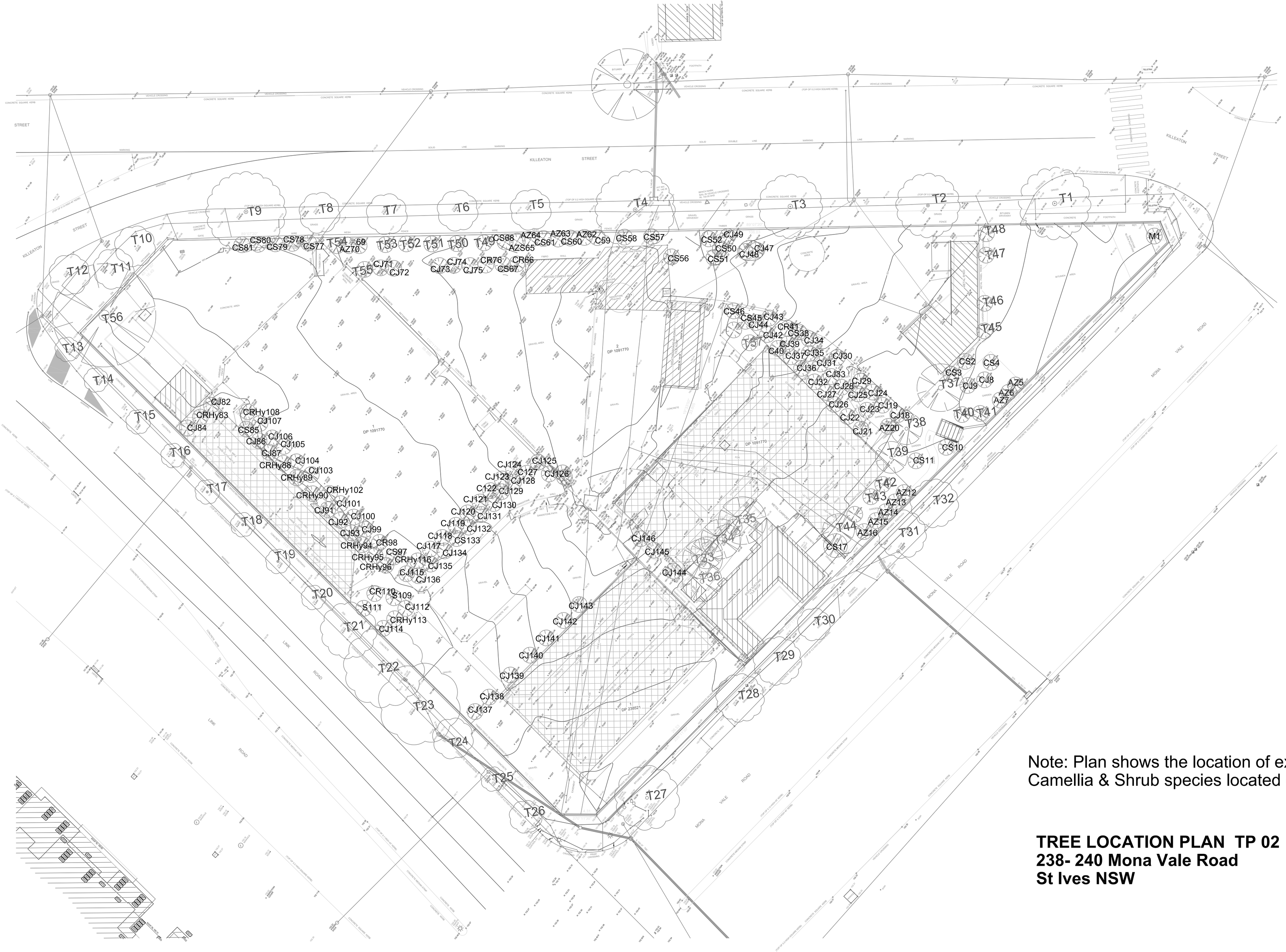
AZ	Azalea species
CJ	Camellia japonica
CS	Camellia sasanqua
CR	Camellia reticutata
CRHy	Camellia reticulata hybrid
M	Magnolia
S	Shrub

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 (Barrel! 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 detects 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).	



Note: Plan shows the location of existing Azalea, Camellia & Shrub species located on the subject site.

TREE LOCATION PLAN TP 02
238- 240 Mona Vale Road
St Ives NSW