

Tree Assessment

**2 Smith St Summer Hill
Summer Hill Flour Mill**

Prepared by:
Stuart Pittendrigh *FAILA MAIH M.Arb.Aust.*
Registered Landscape Architect
Horticulturist/Consultant Arborist
May 2013

Introduction

This Tree Report was prepared at the request of Hassell Landscape Architecture on behalf of their client.

The report is to assist the design and development of the site known as 2 Smith Street Summer Hill NSW.

The report addresses existing trees growing throughout the subject known as 2 Smith Street Summer Hill – The Summer Hill Flour Mill and street trees located on Edwards St to the west. Refer to the attached marked up Tree Removal Plan DA 1001 plan now known as TP 01 for the location of the trees assessed.

The nominated trees were assessed and the report reflects the condition of the trees at the time of inspection.

Stuart Pittendrigh carried out the site assessment on May 16-2013

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)

The Site



Summer Hill Flour Mill

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 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

- No trees on the subject sites were considered rare or endangered.
- Future landscaping shall include species indigenous to the locality so as to maintain the bio-diversity of native vegetation within the neighbourhood.
- Trees to be retained shall be fenced off and protected from the proposed demolition and construction works as detailed in **Section 4 -Tree Protection Measures of AS 4970 - 2009 The Protection of Trees on Development Sites.**

Stuart Pittendrigh
Consultant Arborist.

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.

(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.

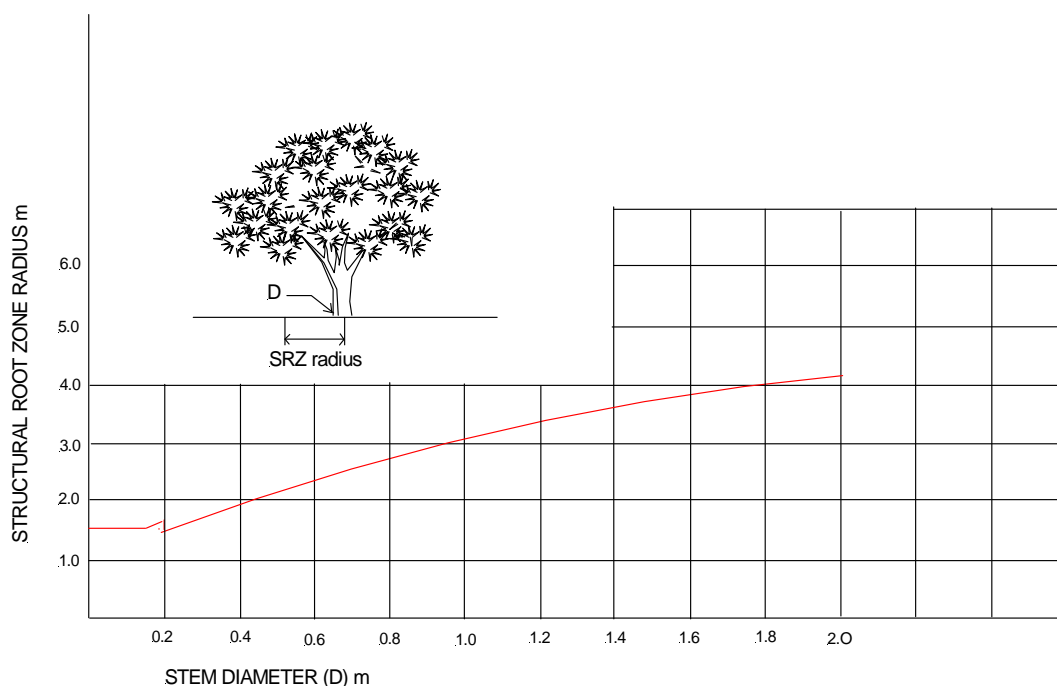
Non-destructive investigation methods may include pneumatic, hydraulic or penetrating radar.

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 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

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*

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 Assessment

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Summer Hill NSW.**

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Stuart Pittendrigh *FAILA MAIH Arb. Aust.*
Registered Landscape Architect
Horticulturist / Registered Consultant Arborist
September 2012

Introduction

This Tree Report was prepared at the request of Hassell Landscape Architecture on behalf of their client.

The report is to assist the design and development of the site known as 2 Smith Street Summer Hill NSW.

The report addresses the two trees growing within the landscape area that surround the car park located at the intersection of Smith and Edward Street Summer Hill. Refer to the attached Survey Plan. Reference 07/0321 prepared by Watson Buchan dated 15-01-2008 marked Tree Location Plan TP 01 for the location of the tree assessed.

The report has been updated (May 2013) to address the current site design and impacts from development on the *Callistemon viminalis* and the *Ulmus parvifolia* growing in the open space on Smith Street, Summer Hill.

Information contained in this tree report covers only those trees that was examined and reflects the condition of the tree 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 25-09-2012

The Site



2 Smith Street Summer Hill NSW.

Aims

The aims of this report are to:

- Refer to Council's policies and Tree Protection Order regarding the preparation of Arboricultural Reports
- Identify the subject tree
- 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 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.

Tree 1

Botanical Name.	<i>Callistemon viminalis</i>
Common Name.	Weeping bottlebrush
Age class.	Mature
Height.	11m.
Spread.	12m.
Trunk DCH.	2 x 350mm, 375mm and 380mm.
TPZ	7.6m. radius
DRB	930 mm.dia.
SRZ	3.2m. radius
SULE	2a
Landscape Amenity Rating 2.	

An evergreen native tree introduced to the site, the species is not considered rare or endangered. The tree is in good condition and displays a full broad crown of healthy foliage; the weeping form is typical of the species.

The tree is located within an area that is surrounded by raised concrete and sandstone capped brick edgings that have most likely acted as a root barrier to prevent the shallow surface roots from invading the adjacent grassed areas. Clipped evergreen shrubs are planted around the base of the tree.

Small branch and twig die back observed throughout the crown, the union of the co-dominant stems is strong. The structure and form of the tree has been modified by past pruning.

The proposed development exceeds an acceptable encroachment within the Structural Root Zones of the trees as defined by AS4970-2009 The Protection of Trees on Development Sites The encroachment within the SRZ of 46% is considered major and will impact on the tree's stability especially given that the tree has a broad spreading crown. Removal is therefore recommended.

Tree 2

Botanical Name.	<i>Ulmus parvifolia</i>
Common Name.	Chinese Elm
Age class.	Mature
Height.	11m.
Spread.	23m.
Trunk DCH.	490mm, 690mm, 940mm
TPZ	15m. radius
DRB	1400 mm.dia.
SRZ	3.8m. radius
SULE	2a
Landscape Amenity Rating 3.	

A deciduous tree introduced to the site the species is not considered rare or endangered. The tree at the time of assessment was just coming into leaf following its winter dormant period.

The tree is located within an area that is surrounded by a sandstone capped low brick wall, a raised concrete kerb and areas of open lawn.

The tree is in average condition and appears to be approaching over maturity as indicated by the extent of epicormic growth, the thinning crown, small branch and twig die back, dead wood and declining vigour.

The union of the co-dominant stems on the western elevation displays sharp angles of attachment with included bark (weak union) whilst the union of the stem on the eastern elevation has a bark ridge up in the crotch is stronger. The structure and form of the tree has been modified by past pruning.

The perimeter low retaining wall, car park pavement defines the extent of the Trees roots system to the north and south. The area to the east is open lawn. The area occupied by the roots within the TPZ (15m.rad.) as calculated by AS4970 equals 250m². The impact from the installation of the proposed built form to include a small section of the building, associated pavements, the amended perimeter retaining wall within the TPZ equals approximately 108 m² ie 43.2% encroachment.

The excavation and construction of the pavement within the SRZ of the tree will result in a 12% encroachment. This is encroachment is considered major.

In conclusion it is my view that the proposed works will result in the demise of the tree therefore removal is recommended and that a replacement tree be planted to compensate for its removal.

Stuart Pittendrigh

Registered Consultant Arborist.

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**

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Management of Mature Trees Seminar & Workshops 2001

Richard W. Harris

Arboriculture – Integrated Management of Landscape Trees

P.W. Hadlington & J.A. Johnston

Australian Trees – Their Care & Repair

Proceedings of an International Workshop on Trees & Buildings

Edited by Dr. Gary Watson and Dr. Dan Neely.

Trees & Building Sites

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

Appendix A

Terms used in Tree Report

Age Class

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(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.

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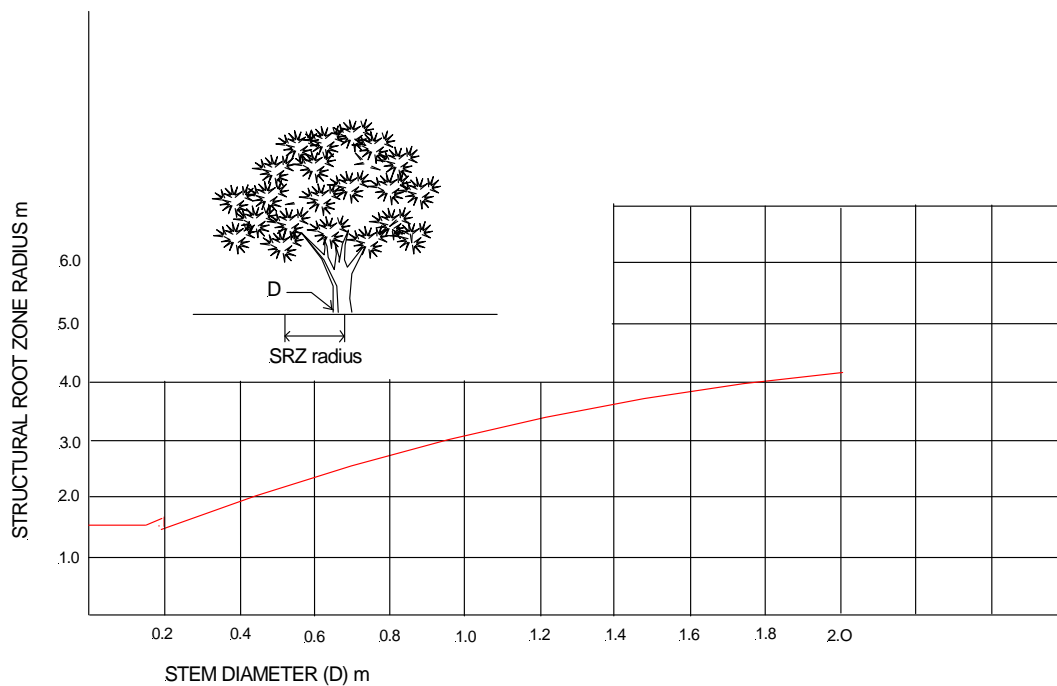
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Non-destructive investigation methods may include pneumatic, hydraulic or penetrating radar.

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 diameter is 1.5m
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- 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:

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- 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

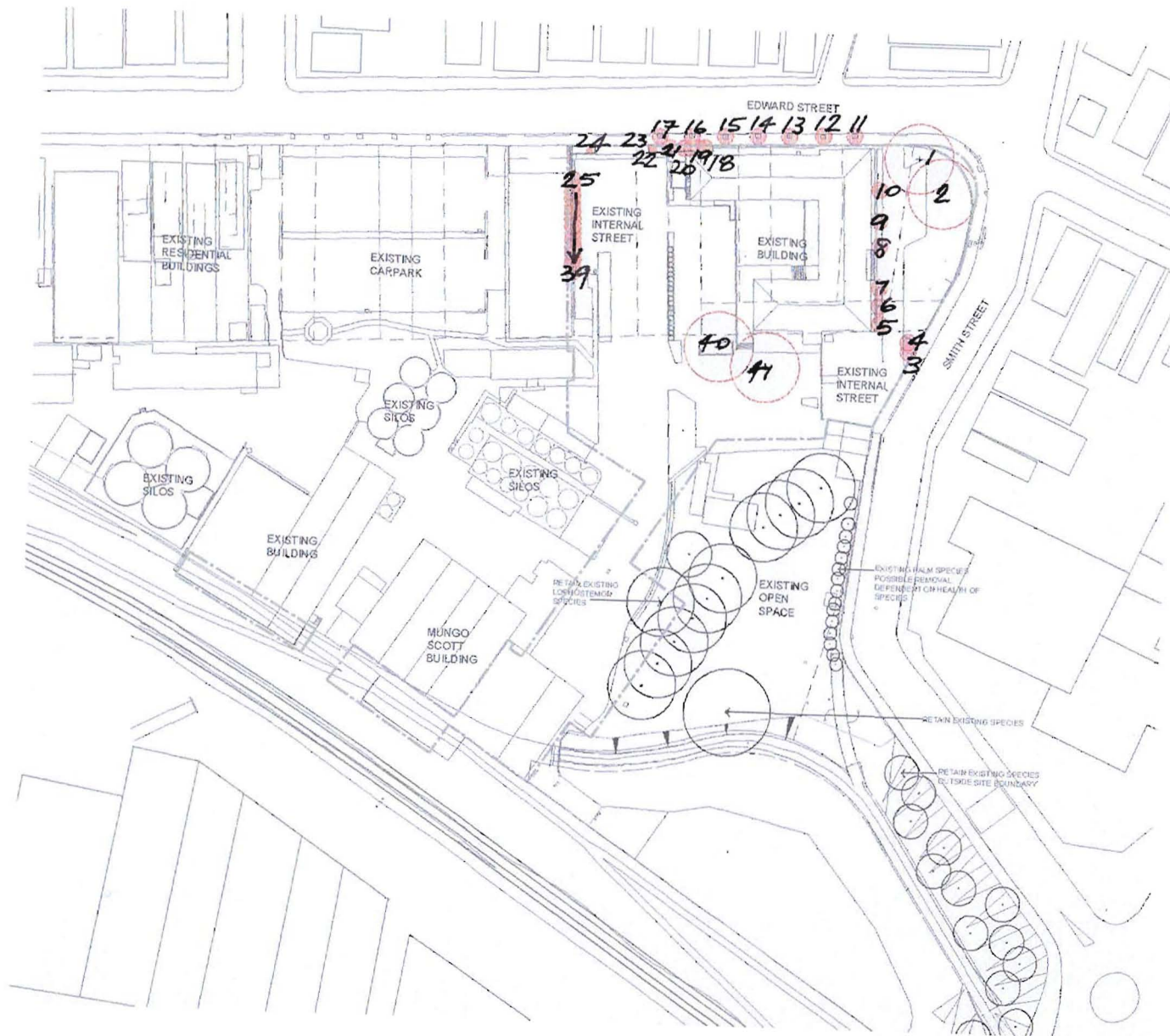
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- *Introduced evergreen or deciduous species that has adapted to the site conditions and environment*
- *Listed as a threatened species*
- *Possible habitat tree*
- *Contributes to the bio-diversity of native vegetation within the locality*

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*



TREE REMOVAL SCHEDULE

REF. ITEM

○ TREE TO BE REMOVED

● TREE TO BE RETAINED AND PROTECTED

GENERAL NOTES

TREE LOCATIONS AND QUANTITIES ARE INDICATIVE ONLY. TO BE READ IN CONJUNCTION WITH ARBORIST REPORT

TREE LOCATION PLAN—
PLAN SHOWING TREES
ASSESSED 16 MAY 2013
N° TP 01

HASSELL

Revision
A

Date
13.05.13

Scale
1:200@A1

Client
EG FUNDS MANAGEMENT

Project Name
3430
SUMMER HILL FLOUR MILL TREE REMOVAL PLAN
STAGE 01

Drawing
DA1001



Appendix B - Tree Survey Assessment Sheet

Summer Hill Flour Mill 2 Smith St Summer Hill

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
3	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	M	10	3	348	407	4.2	2.3	2	Conifer species 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	2a
4	Magnolia soulangiana <i>Saucer magnolia</i>	M	5	3	3x65	153	2.3	1.5	3	Deciduous tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning	3a
5	Thuja otientalis <i>Chinese cedar</i>	M	8	5	287	412	3.4	2.3	2	Conifer species 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, distinct lean to east.	3a
6	Callistemon viminalis <i>Weeping bottlebrush</i>	M	7	6	286	460	3.4	2.4	2	Evergreen native tree introduced to the site, good condition, the species is not rare or endangered, small branch and twig die back, structure and form modified by pruning	2e
7	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	M	6	1.2	160	170	1.9	1.6	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
8	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	M	7.5	1.5	355	396	4.3	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
9	Thuja otientalis <i>Chinese cedar</i>	M	7	3	220	270	2.6	1.9	3	Conifer species 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, thinning crown, structure and form modified by pruning	3a
10	Thuja otientalis <i>Chinese cedar</i>	M	10	6	380	350	4.6	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, small branch and twig die back	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
11	Elaeocarpus reticulatus <i>Blueberry ash</i>	SM	3	1.3	50	120	0.6	1.5	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, trunk wound, needs to be re staked.	2a
12	Elaeocarpus reticulatus <i>Blueberry ash</i>	M	6	3	190	220	2.3	1.8	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
13	Elaeocarpus reticulatus <i>Blueberry ash</i>	SM	3	1.5	50	100	0.6	1.5	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species, needs to be re staked	2a
14	Elaeocarpus reticulatus <i>Blueberry ash</i>	M	6	4	158	213	1.9	1.7	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
15	Elaeocarpus reticulatus <i>Blueberry ash</i>	M	5.5	2	85	120	1	1.5	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
16	Sapium sebiferum <i>Chinese tallow</i>	Y	1	0.5		0	0	0		Street tree, deciduous tree introduced to the site, poor condition	3e
17	Callistemon viminalis <i>Weeping bottlebrush</i>	M	6	5	2x140	450	3.4	2.4	2	Street tree, evergreen native tree introduced to the site, good condition, the species is not rare or endangered, co-dominant stems, strong union, structure and form modified by pruning	2a
18	Cupressus torulosa <i>Bhutan cypress</i>	M	11.5	4	365	410	4.4	2.3	2	Conifer species introduced to the site, fair condition, the species is not rare or endangered, small branch and twig die back, suppressed south elevation, structure and form modified by pruning.	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
19	Cupressus torulosa	M	13	5	395	471	4.7	2.4	2	Conifer species introduced to the site, fair condition, the species is not rare or endangered, small branch and twig die back, suppressed west elevation, structure and form modified by pruning	3a
	Bhutan cypress										
20	Cupressus torulosa	M	13	5	405	457	4.9	2.4	2	Conifer species introduced to the site, fair condition, the species is not rare or endangered, small branch and twig die back, suppressed north elevation, structure and form modified by pruning	3a
	Bhutan cypress										
21	Cupressus torulosa	M	8	5	216	320	2.6	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, structure and form modified by pruning, distinct lean to west.	3e
	Bhutan cypress										
22	Cupressus torulosa	M	9	4.5	373	454	4.5	2.4	2	Conifer species introduced to the site, fair condition, the species is not rare or endangered, small branch and twig die back, suppressed north elevation, structure and form modified by pruning	3a
	Bhutan cypress										
23	Arecastrum romanzoffianum	M	11	4	320	460	3.8	2.4	2	Palm species introduced to the site, good condition, the species is not rare or endangered, structure and form typical of the species	2a
	Queen palm										
24	Arecastrum romanzoffianum	M	13	5	350	442	4.2	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	2a
	Queen palm										
25	Cupressus torulosa	M	14	4.5	410	500	4.9	2.5	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
26	Cupressus torulosa	M	13	4.5	365	437	4.4	2.3	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										

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
27	Cupressus torulosa	M	14	4.3	280	325	3.4	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
28	Cupressus torulosa	M	13	3.8	285	345	3.4	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, small branch and twig die back, part of hedge row planting	2a
	Bhutan cypress										
29	Cupressus torulosa	M	12	3.8	286	340	3.4	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
30	Cupressus torulosa	M	10	3.8	265	366	3.2	2.2	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
31	Cupressus torulosa	M	11	4	268	312	3.2	2	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
32	Cupressus torulosa	M	11	4	307	366	3.7	2.2	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
33	Cupressus torulosa	M	12	4	273	350	3.3	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
34	Cupressus torulosa	M	12	4.5	303	347	3.6	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										

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
35	Cupressus torulosa	M	12	4.5	286	326	3.4	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
36	Cupressus torulosa	M	12	4.5	283	320	3.4	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
37	Cupressus torulosa	M	13	4.5	326	410	3.9	2.3	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
38	Cupressus torulosa	M	13	4.5	277	328	3.3	2.1	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
39	Cupressus torulosa	M	13	4.5	330	418	4	2.3	2	Conifer species introduced to the site, good condition, the species is not rare or endangered, structure and form modified by pruning, part of hedge row planting	2a
	Bhutan cypress										
40	Cinnamomum camphora	M	11	985	985	1140	11.8	3.5	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, epicormic growth, storm damage, structure and form modified by pruning, growing within raised planter, roots have broken out and have invaded the underside of the adjacent pavement.	3a
	Camphor laurel										
41	Lophostemon confertus	M	14	14	850	1190	10.2	3.6	2	Evergreen native 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, tree surrounded by bitumen paving to the trunk.	2a
	Brushbox										

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
3	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	Good	4.2	2.3	Tree will need to be removed to accommodate proposed development
4	Magnolia soulangiana <i>Saucer magnolia</i>	Good	2.3	1.5	Tree will need to be removed to accommodate proposed development
5	Thuja otientalis <i>Chinese cedar</i>	Fair	3.4	2.3	Tree will need to be removed to accommodate proposed development
6	Callistemon viminalis <i>Weeping bottlebrush</i>	Good	3.4	2.4	Tree will need to be removed to accommodate proposed development
7	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	Good	1.9	1.6	Tree will need to be removed to accommodate proposed development
8	Cupressus sempervirens 'Swanes G' <i>Swane's golden cypress</i>	Good	4.3	2.2	Tree will need to be removed to accommodate proposed development
9	Thuja otientalis <i>Chinese cedar</i>	Average	2.6	1.9	Tree will need to be removed to accommodate proposed development
10	Thuja otientalis <i>Chinese cedar</i>	Good	4.6	2.1	Tree will need to be removed to accommodate proposed development
11	Elaeocarpus reticulatus <i>Blueberry ash</i>	Good	0.6	1.5	Street tree, 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
12	Elaeocarpus reticulatus <i>Blueberry ash</i>	Good	2.3	1.8	Street tree, 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
13	Elaeocarpus reticulatus <i>Blueberry ash</i>	Good	0.6	1.5	Street tree, 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

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
14	Elaeocarpus reticulatus <i>Blueberry ash</i>	Good	1.9	1.7	Street tree, 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
15	Elaeocarpus reticulatus <i>Blueberry ash</i>	Good	1	1.5	Street tree, 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
16	Sapium sebiferum <i>Chinese tallow</i>	Poor	0	0	Street tree
17	Callistemon viminalis <i>Weeping bottlebrush</i>	Good	3.4	2.4	Street tree, 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.
18	Cupressus torulosa <i>Bhutan cypress</i>	Fair	4.4	2.3	Tree will need to be removed to accommodate proposed development
19	Cupressus torulosa <i>Bhutan cypress</i>	Fair	4.7	2.4	Tree will need to be removed to accommodate proposed development
20	Cupressus torulosa <i>Bhutan cypress</i>	Fair	4.9	2.4	Tree will need to be removed to accommodate proposed development
21	Cupressus torulosa <i>Bhutan cypress</i>	Average	2.6	2.1	Tree will need to be removed to accommodate proposed development
22	Cupressus torulosa <i>Bhutan cypress</i>	Fair	4.5	2.4	Tree will need to be removed to accommodate proposed development
23	Arecastrum romanzoffianum <i>Queen palm</i>	Good	3.8	2.4	Species exempt Council's Tree Preservation Order, may be removed without consent.
24	Arecastrum romanzoffianum <i>Queen palm</i>	Good	4.2	2.3	Species exempt Council's Tree Preservation Order, may be removed without consent.

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
25	Cupressus torulosa	Good	4.9	2.5	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
26	Cupressus torulosa	Good	4.4	2.3	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
27	Cupressus torulosa	Good	3.4	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
28	Cupressus torulosa	Good	3.4	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
29	Cupressus torulosa	Good	3.4	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
30	Cupressus torulosa	Good	3.2	2.2	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
31	Cupressus torulosa	Good	3.2	2	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
32	Cupressus torulosa	Good	3.7	2.2	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
33	Cupressus torulosa	Good	3.3	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
34	Cupressus torulosa	Good	3.6	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
35	Cupressus torulosa	Good	3.4	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				

Tree No.	Botannical Name <i>Common Name</i>	Condition	TPZ m. rad.	SRZ m. rad.	Comments / Recommendations
36	Cupressus torulosa	Good	3.4	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
37	Cupressus torulosa	Good	3.9	2.3	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
38	Cupressus torulosa	Good	3.3	2.1	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
39	Cupressus torulosa	Good	4	2.3	Tree will need to be removed to accommodate proposed development
	<i>Bhutan cypress</i>				
40	Cinnamomum camphora	Fair	11.8	3.5	Tree will need to be removed to accommodate proposed development
	<i>Camphor laurel</i>				
41	Lophostemon confertus	Good	10.2	3.6	Tree will need to be removed to accommodate proposed development
	<i>Brushbox</i>				