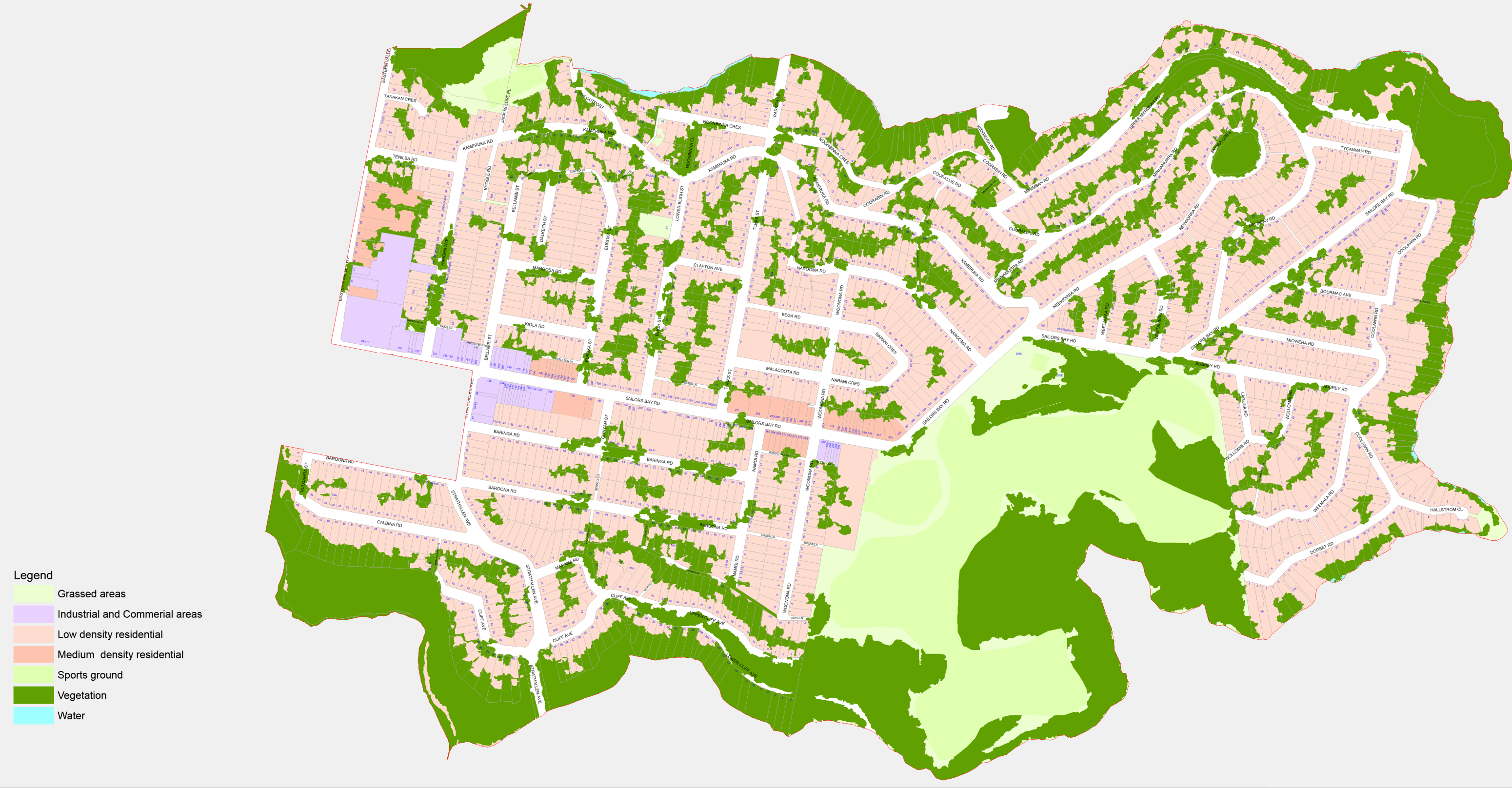


Willoughby City Councils Street Tree Master Plan.

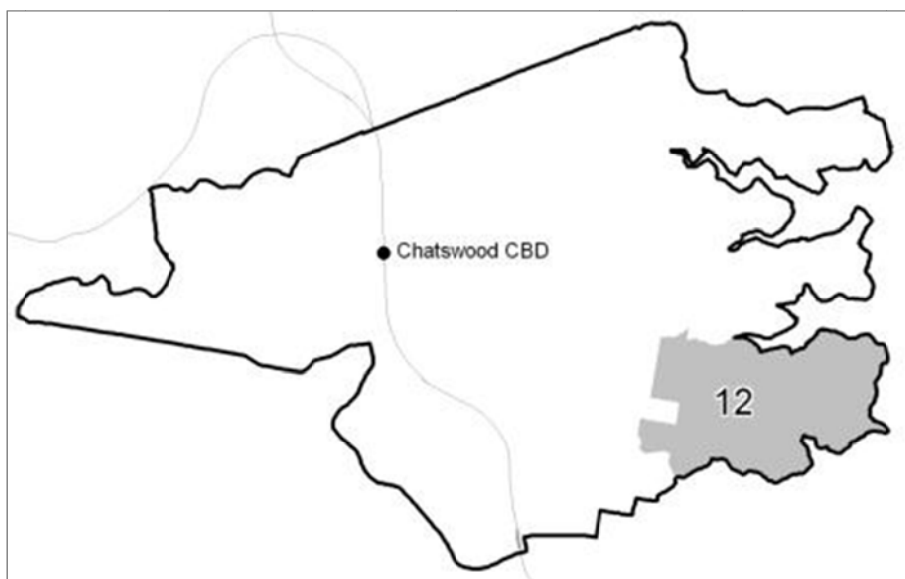
Precinct 12

Northbridge



- Legend
- Grassed areas
 - Industrial and Commercial areas
 - Low density residential
 - Medium density residential
 - Sports ground
 - Vegetation
 - Water

12. Northbridge residential and steep bushland slopes



Key landscape features

Geology and soils:

Central plateau and ridges – Mittagong Formation (approx. 25% of precinct) with alternating bands of fine to medium grained quartz sandstone and inter-bedded shale lenses; sandy loams overlying hard-setting sandy clay loam;
Northern, eastern and southern steep slopes and valleys – Hawkesbury sandstone (approx. 65% of precinct) – typically fine to coarse grained quartz sandstone with

inter-bedded shale lenses; soils are generally shallow, apedal and porous sandy to sandy loams with very low fertility; south-eastern and eastern upper slopes – typically stony, sandy to clay loams with gleyed soils along poorly drained benches;

Topography, slope and aspect:

Gently undulating to moderately inclined slopes along central ridge; localised knolls with rock outcrops; grading to moderate to very steep sandstone slopes with rock outcrops, bedrock pavements, benches, tors and broken scarps (up to 10 metres high); aspect varies.

Natural and cultural landscape:

Predominantly low density residential/ environmental living; some commercial (local and neighbourhood centre) and medium density residential; significant bushland reserves; parks and golf course; environmental conservation; Middle Harbour foreshores (eastern boundary); Eastern Valley Way/ Flat Rock Gully Reserve (western boundary).

Presence of remnant native vegetation:

Sydney Sandstone Gully Forest (SSGF) – including 10ag(i) Open Forest/ Woodland and 10ag(iii) Closed-forest; Sydney Sandstone Ridgetop Woodland (SSRW) – 10ar(i) including Woodland/ Low Woodland. Ecological communities are in accordance with Benson & Howell (1994). For further details see *Natural Heritage Register*.

Streetscape type/character:

Remnant native forest canopy trees (SSGF communities) and open-woodland trees and shrubs (SSRW);

Cultural plantations including single or mixed species (native and exotic), evergreen or deciduous avenues; significant 1930s-1950s avenue plantations

Heritage Conservation Areas:

n/a

Historic significance:

1930s: construction of the Harbour Bridge, Eastern Valley Way and rebuilding of Northbridge Suspension Bridge created a boom period for residential development; Brush Box avenue plantations; notably the major bushland reserves and the steeper foreshore slopes retained significant bushland.

Ecological significance:

This precinct and its streetscapes conserve significant forest and woodland canopy trees (including many old growth specimens) representative of Sydney Sandstone Ridgetop Woodland and Sydney Sandstone Gully Forest. These remnant canopy trees are largely restricted to the lower steep slopes and foreshores. Opportunities

exist to enhance ecological connectivity between major bushland reserves (i.e. Flat Rock Gully reserve/ Tunks Park, Northbridge Golf Course, Clive Park, Warners Park/ Keep Reserve), other smaller bushland reserves and surrounding streetscapes.

Significant Inter-war and early Post-war period plantations:

Baringa Road – Brush Box
 Barooka Road – Brush Box
 Euroka Street – Brush Box
 Harden Avenue – Brush Box
 Weetawa Road – Brush Box
 Weetalibah Road – Brush Box
 Miowera Road – Brush Box
 Bligh Street - Jacaranda

Age structure of remnant native trees and plantations:

Native canopy: varies; incl. old growth specimens up to 100-150 years
 Dominant planting: Brush Box avenues (up to 60-75years+); and
 generic native planting (up to 30-40 years+)

PRECINCT 12: NORTHBRIDGE RESIDENTIAL AND STEEP BUSHLAND SLOPES Existing remnant (typical) native canopy species	
Location	Native Tree Species
Cliff Avenue/ Upper Cliff Avenue/ Lower Cliff Avenue	<i>Angophora costata</i> (Smooth-barked Apple) <i>Eucalyptus piperita</i> (Sydney Peppermint) <i>Eucalyptus sieberi</i> (Silvertop Ash)
Sailors Bay Road	<i>Eucalyptus piperita</i> (Sydney Peppermint) <i>Eucalyptus haemastoma</i> (Broad-leaved Scribbly Gum)
Narooma Road/ Noonbinna Crescent	<i>Eucalyptus haemastoma</i> (Broad-leaved Scribbly Gum) <i>Angophora costata</i> (Smooth-barked Apple) <i>Eucalyptus piperita</i> (Sydney Peppermint)
Byora Crescent	<i>Eucalyptus racemosa</i> (Narrow-leaved Scribbly Gum) <i>Corymbia gummifera</i> (Red Bloodwood) <i>Angophora costata</i> (Smooth-barked Apple)
Kameruka Road	<i>Angophora costata</i> (Smooth-barked Apple) <i>Eucalyptus piperita</i> (Sydney Peppermint) <i>Eucalyptus sieberi</i> (Silvertop Ash)
Coolawin Road	<i>Angophora costata</i> (Smooth-barked Apple) <i>Ficus rubiginosa f. rubiginosa</i> (Port Jackson Fig)
Minnamurra Road/ Minimbah Road/ Courallie Road	<i>Angophora costata</i> (Smooth-barked Apple) <i>Eucalyptus piperita</i> (Sydney Peppermint) <i>Corymbia gummifera</i> (Red Bloodwood)

PRECINCT 12: NORTHBRIDGE RESIDENTIAL AND STEEP BUSHLAND SLOPES
Existing typical or dominant planted tree species *

Location	Tree Species (cultivated)
Eastern Valley Way	<i>Eucalyptus/ Corymbia</i> spp. (mixed generic Eucalypts) <i>Lophostemon confertus</i> (Brush Box) <i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)
Baringa Road/ Baroona Road	<i>Lophostemon confertus</i> (Brush Box) <i>Callistemon viminalis</i> (Weeping Bottlebrush) <i>Tristaniopsis laurina</i> (Water Gum)
Harden Avenue/ Euroka Street/ Bligh Street	<i>Lophostemon confertus</i> (Brush Box) <i>Jacaranda mimosifolia</i> (Jacaranda)
Sailors Bay Road	<i>Platanus x acerifolia</i> (London Plane) <i>Eucalyptus/ Corymbia</i> spp. (mixed generic Eucalypts) <i>Lophostemon confertus</i> (Brush Box)
Kameruka Road/ Tenilba Avenue	<i>Tristaniopsis laurina</i> (Water Gum) <i>Callistemon</i> spp. (Bottlebrush) <i>Jacaranda mimosifolia</i> (Jacaranda)
Weetawa Road/ Weetalibah Road	<i>Tristaniopsis laurina</i> (Water Gum) <i>Callistemon viminalis</i> (Weeping Bottlebrush) <i>Melaleuca quinquenervia</i> (Broad-leaved Paperbark)
Miowera Road/ Bourmac Avenue/ Aubrey Street	<i>Lophostemon confertus</i> (Brush Box) <i>Callistemon viminalis</i> (Weeping Bottlebrush) <i>Robinia pseudoacacia</i> 'Frisia' (Golden Robinia)

* NOTE: Street tree planting is dominated by a wide range of exotic and generic native trees and shrubs, including various cultivars.

Key precinct objectives

Cultural streetscapes (incl. Inter-war and early Post-war period single species avenues):

- Protect and maintain the integrity and intactness of Inter-war and early Post-war period (1930s-1950s) single species avenues;
- Implement a program to phase-out unsuitable and/ or poorly performing street trees including removal of disparate elements (i.e. varying forms, habit, structure, texture, etc.) and variety of tree species;
- Promote consistency in tree species selection ensuring continuity, unity and cohesiveness in the palettes for each street;
- Avoid infill planting strategies which add further layers of inconsistent, disjunctive and/ or mixed generic native and exotic tree species of varying scale, form and texture;

- Prioritise Eastern Valley Way and Sailors Bay Road as key connector roads implementing a planting strategy using single or two (mixed) species within the streetscape (i.e. one species under overhead powerlines/ shop awnings and alternative species with no service restrictions).

Streetscapes conserving a strong 'natural landscape' character:

- Protect and maintain the significant biodiversity and geodiversity values of this precinct, particularly the diversity of ecological communities and native tree species within the street verges (as scheduled in WNHR);
- Investigate opportunities for extending current bush regeneration and restoration strategies in consultation with local Bushcare groups;
- Promote opportunities for natural recruitment of canopy trees and community-based restoration strategies in streetscapes linking to adjoining bushland reserves;
- Selection of native species to be in accordance with mapped geology, soils and ecological communities, noting the highly variable local conditions (e.g. bedrock pavement and often shallow, porous coarse-grained sandy soils);
- Promote strategies to supplement and enhance native tree canopy using provenance-sourced material;
- Avoid the use of generic native species in this precinct (i.e. species native to other geographic areas or of unknown provenance) and phase-out unsuitable and/ or poorly performing street trees;
- Protect scenic vistas, particularly along elevated ridges and scarps.
Promote the use of native broadleaf species (under overhead powerlines) and open-canopied local native species (no powerlines) in these locations.

PRECINCT 12: NORTHBRIDGE RESIDENTIAL AND STEEP BUSHLAND SLOPES
Proposed street tree species

Tree Species	Common Name	evergreen	deciduous	habit/form ¹	verge width ²	power-lines ³
Cultural streetscapes (including mature single species avenues):						
<i>Callistemon spp.</i>	Bottlebrush	E	-	cn	M	Y
<i>Ceratopetalum gummiferum</i>	NSW Christmas Bush	E	-	cn	N	Y
<i>Cupaniopsis anacardioides</i>	Tuckeroo	E	-	cr	N	Y
<i>Glochidion ferdinandi</i>	Cheese Tree	E	-	cs	M	Y
# <i>Jacaranda mimosifolia</i>	Jacaranda	-	D	os	M	N
# <i>Lophostemon confertus</i>	Brush Box	E	-	cr	W	N
<i>Tristania laurina</i>	Water Gum	E	-	cr	M	Y
<i>Waterhousea floribunda</i>	Weeping Lilly Pilly	E	-	cs	M	N
Streetscapes conserving a strong natural (bushland) landscape character:						
<i>Acmena smithii</i>	Lilly Pilly	E	-	cr	N	N
<i>Acmena smithii</i> var. minor	Lilly Pilly (incl. cv)**	E	-	cr	N	Y
<i>Angophora costata</i> (SGF1/SRW)*	Smooth-barked Apple	E	-	os	M	N
<i>Backhousia myrtifolia</i> (SGF1)*	Grey Myrtle	E	-	cr	N	Y
<i>Banksia spp.</i>	Banksia	E	-	os	M	Y
<i>Ceratopetalum gummiferum</i>	NSW Christmas Bush	E	-	cn	N	Y
<i>Corymbia gummifera</i> (SGF1/SRW)*	Red Bloodwood	E	-	os	M	N
<i>Eucalyptus camfieldii</i> (SRW)*	Heart-leaf Stringybark	E	-	os	N	Y
<i>Eucalyptus capitellata</i> (SRW)*	Brown Stringybark	E	-	os	M	N
<i>Eucalyptus haemastoma</i> (SRW)*	Scribbly Gum	E	-	os	W	N
<i>Eucalyptus piperita</i> (SGF1/SRW)*	Sydney Peppermint	E	-	os	W	N
<i>Eucalyptus racemosa</i> (SGF1/SRW)*	Scribbly Gum	E	-	os	M	N
<i>Eucalyptus resinifera</i> (SGF1)*	Narrow-leaved Ironbark	E	-	os	W	N
<i>Eucalyptus sieberi</i> (SGF1/SRW)*	Silvertop Ash	E	-	os	M	N
<i>Glochidion ferdinandi</i> (SGF1/SRW)*	Cheese Tree	E	-	cs	M	Y

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LandArc Pty Limited

Int. Ref: 82741068

<i>Melaleuca linariifolia</i>	Snow in Summer	E	cr	M	N	
<i>Tristaniopsis laurina</i>	Water Gum	E	-	cr	M	Y

NOTES: Species are shown in alphabetical order and do not denote dominance or ranking.

* SGF1/SRW LOCAL NATIVE SPECIES recommended for this precinct.

SGF1 = Sydney Sandstone Gully Forest (*Eucalyptus piperita*/ *Angophora costata*);

SRW = Sydney Sandstone Ridgetop Woodland.

** *Acmena smithii* var. *minor* including extremely psyllid-resistant cultivars “Red Head” (burgundy red new foliage) and “Sublime” (lush green new foliage).

Jacaranda mimosifolia and *Lophostemon confertus* to be planted only within existing single species Inter-war and early Post-war period plantations (i.e. cultural context)

'HABIT/ FORM OF TREE

c = compact/dense foliage; o = open crown/ canopy;

upright = u; r = rounded; s = spreading; n = narrow/columnar or pyramidal.

²MINIMUM VERGE WIDTH (incl. footpath):

N = narrow (<2.5 metres)

M = medium (2.5-4.0 metres)

W = wide (>4.0 metres)

³PLANTING UNDER POWER-LINES (incl. ABC):

Item denotes suitability for planting under overhead power-lines or aerial bundled cabling:

N = NO; Y = YES

...



Lilly Pilly
Acmena smithii



Smooth-barked Apple
Angophora costata



Outeniqua Yellowwood
Afrocarpus falcatus



Lemon-scented Myrtle
Backhousia citriodora



Tree Waratah
Alloxylon flammeum



Grey Myrtle (immature)
Backhousia myrtifolia



Tuckeroo
Cupaniopsis anacardioides



Red Bloodwood – bark detail
Corymbia gummifera



Eumundi Quandong
Elaeocarpus eumundi



Heart-leaf Stringybark – leaf detail
Eucalyptus camfieldii



Broad-leaved Scribbly Gum
Eucalyptus haemastoma



Sydney Peppermint
Eucalyptus piperita



Narrow-leaved Scribbly Gum
Eucalyptus racemosa



Sydney Blue Gum
Eucalyptus saligna



Australian Teak
Flindersia australis



Bumpy Ash
Flindersia schottiana



Cheese Tree
Glochidion ferdinandi



Gordonia
Gordonia axillaris



Purple-leaf Hibiscus
Hibiscus tiliaceus var. *rubra*



Jacaranda
Jacaranda mimosifolia



Crepe Myrtle cv. Yuma
Lagerstroemia indica x *L. fauriei*



Southern Magnolia cv. Exmouth
Magnolia grandiflora 'Exmouth'



Ornamental Pear – autumn foliage
Pyrus calleryana 'Chanticleer'



Turpentine
Syncarpia glomulifera

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Cherry Satinash
Syzygium luehmannii



Weeping Lilly Pilly
Waterhousea floribunda



Water Gum cv. Luscious
Tristaniaopsis laurina 'Luscious'



Golden Penda
Xanthostemon chrysanthus