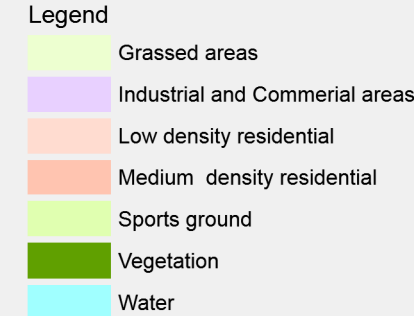
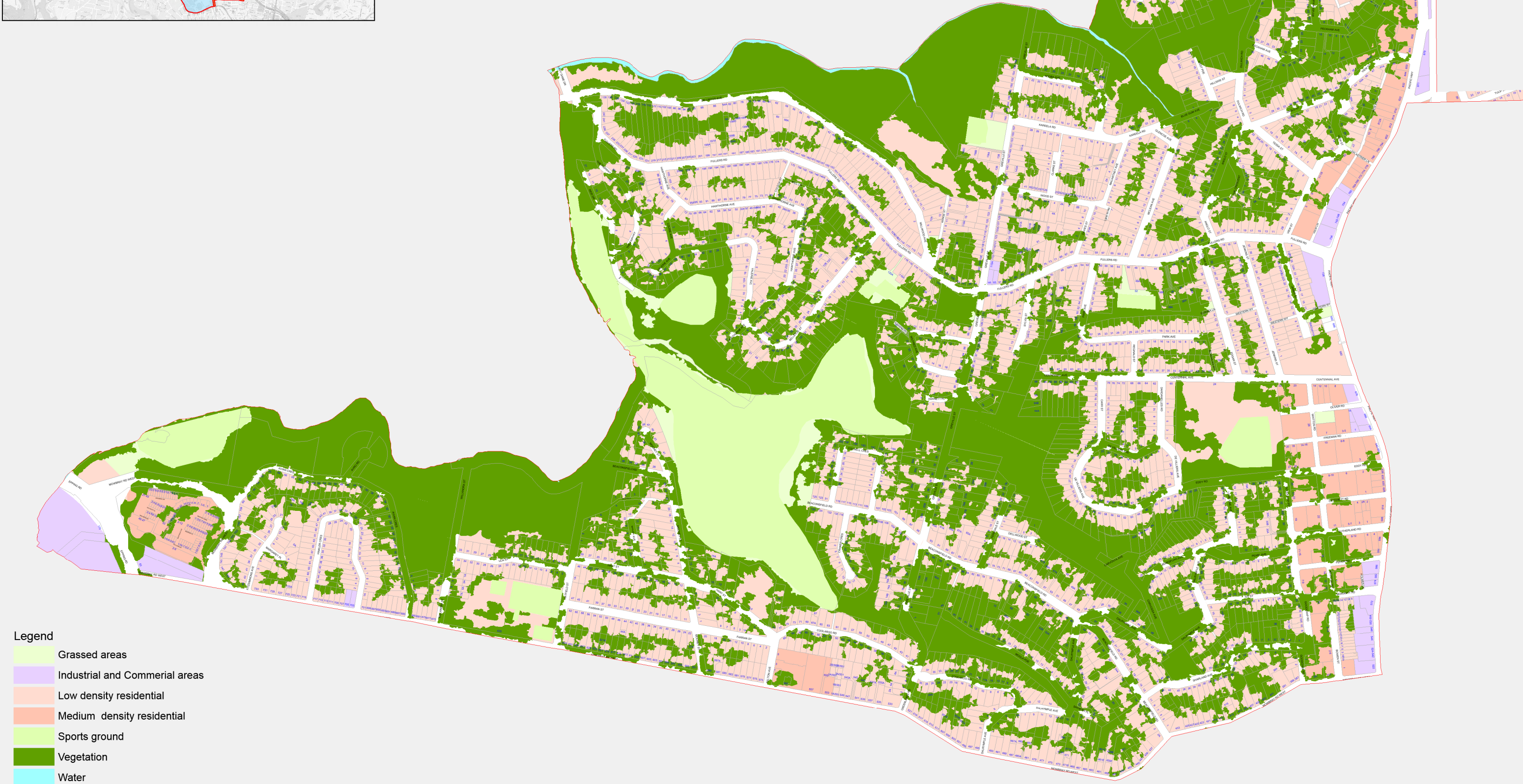


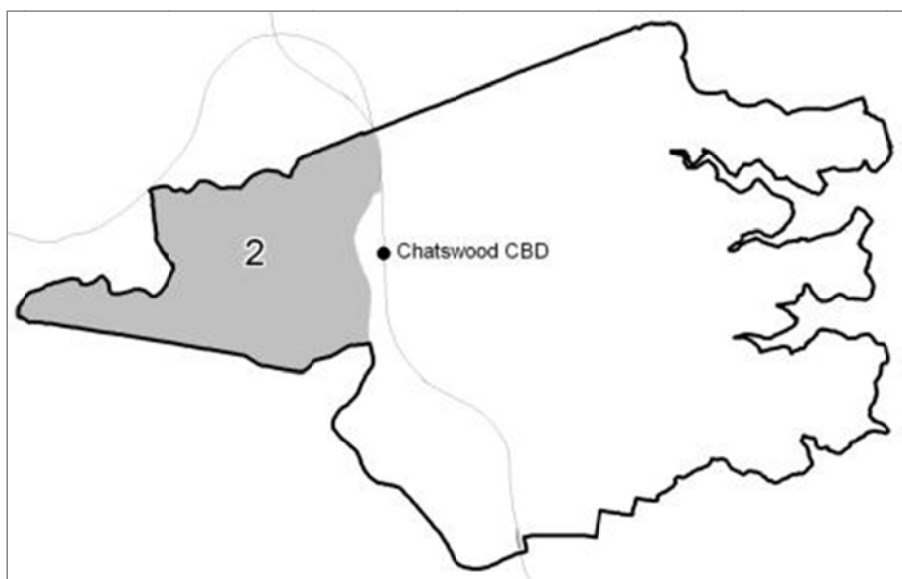
# Willoughby City Councils Street Tree Master Plan.

## Precinct 2

North-Western ridges, slopes and valleys



## 2. North-western ridges, slopes and valleys (incl. Blue Gum High Forest community)



### Key landscape features

#### Geology and soils:

Upper eastern slopes and valleys – Wianamatta Group shales with shallow to moderately deep loams, silty-loams and clay-loams grading to Hawkesbury sandstone, medium to coarse-grained quartz sandstone;

Western plateau/ ridges – Mittagong Formation with alternating bands of fine to medium grained quartz sandstone and inter-bedded shale lenses; soils moderately deep, typically loose sandy loams overlying stony, hard-setting sandy clay loam.

Lane Cove River Valley – alluvial floodplain consisting of fine and coarse-grained quartz sands, silts and clays (no streets in this area).

#### Topography, slope and aspect:

Upper eastern portion – gently undulating to moderately inclined slopes; no rock outcrops; aspect predominantly west to north-west.

Mid-slopes – undulating to rolling rises and low hills on Hawkesbury sandstone; localised steep slopes with rock outcrops on low broken scarps.

Western plateau and ridges – gently undulating crests and ridges; no rock outcrops.

#### Natural and cultural landscape:

Low density residential/ environmental living (incl. Conservation Areas), bushland reserves, parks and golf course, environmental conservation; Lane Cove River Valley; Pacific Highway (portion), Fullers Road, Mowbray Road West

#### Presence of remnant native vegetation:

Remnant Blue Gum High Forest (BGHF 6b) community (critically endangered); Sydney-Turpentine Ironbark Forest (STIF 9o) community (endangered); Sydney Sandstone Gully Forest (SSGF) – including 10ag(i) Open Forest/ Woodland and 10ag(ii) Tall Open Forest; Sydney Sandstone Ridgetop Woodland (SSRW) – 10ar(i) including Woodland/ Low Woodland. Ecological communities are in accordance with Benson & Howell (1994). For further details refer to FIGURE 2: Precinct 2 – Native Vegetation Communities Map and *Willoughby Natural Heritage Register*.

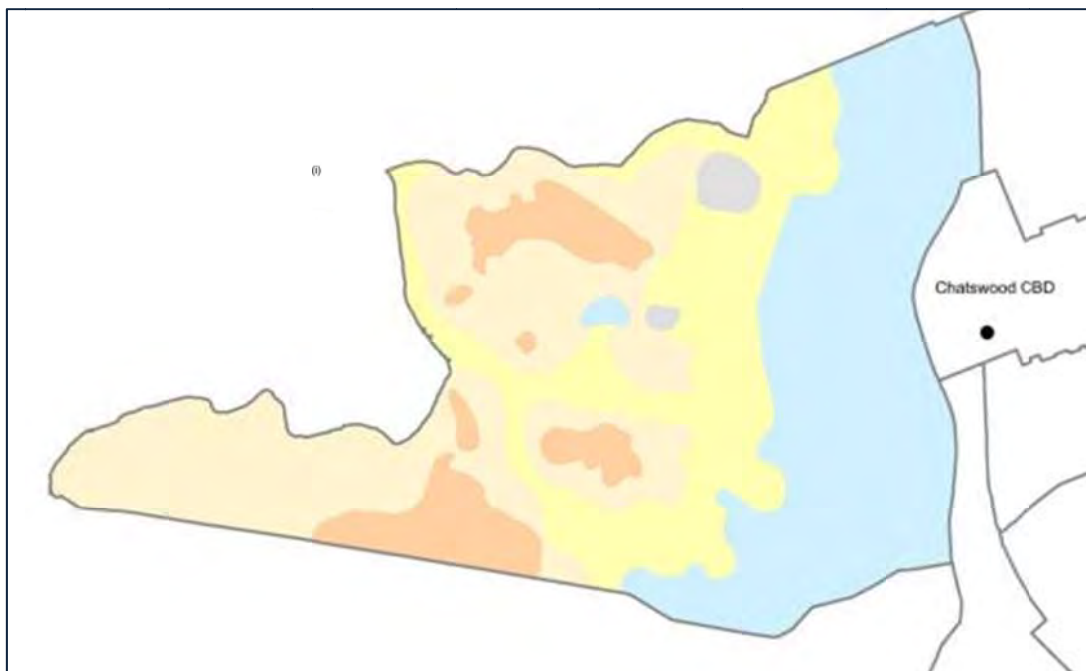


FIGURE 2:  
Precinct 2 – Native Vegetation Communities Map

#### **Streetscape type/character:**

Remnant native tall forest canopy trees (BGHF/ STIF/ SSGF communities) and open-woodland trees and shrubs (SSRW); Cultural plantations including single or mixed species (native and exotic), evergreen or deciduous avenues; significant Inter-war period plantations.

#### **Heritage Conservation Areas:**

1. Blue Gum Heritage Conservation Area: C2 (WDCP 2012 Part H: Heritage Item H3.3); and
2. Findlay and Wyvern Avenues Heritage Conservation Area: C3 (WDCP 2012 Part H: Heritage Item H3.4).



### Historic significance:

Timber-getting/ clearing followed by orchards and small farms after 1840; Blue Gum HCA – first residential subdivision in 1897, second in 1906 and last wave in 1913-1920. Residential development is representative of late Federation and Inter-war periods.

HCA-C2      Key period of significance: 1906-1920 (WDCP, 2012, H3-7);  
HCA-C3      Key period of significance: 1898-1940 (WDCP, 2012, H3-11).

### Ecological significance:

Remnant tall forest canopy trees are representative (regrowth) components of the listed critically endangered Blue Gum High Forest and endangered Sydney-Turpentine Ironbark Forest communities.

### Significant Inter-war period (mixed) plantations:

Findlay Avenue  
Sutherland Road  
Moriarty Road  
Sylvia Street

### Age structure of remnant native trees and plantations:

Remnant canopy:      varies; incl. old growth specimens up to 100-150 years  
Conservation Areas:      Inter-war period plantations (up to 70-80 years+)  
Dominant planting:      varies; generic native planting (up to 30-40 years+)

| PRECINCT 2: NORTH-WEST RIDGES, SLOPES & VALLEYS<br>Existing remnant (typical) native canopy species |  |
|---|--|
| Location  | Native Tree Species  |
| Anglo Street/<br>Peckham Avenue/<br>Dulwich Road  | <i>Eucalyptus saligna</i> (Sydney Blue Gum)<br><i>Eucalyptus pilularis</i> (Blackbutt)<br><i>Syncarpia glomulifera</i> (Turpentine)        |
| Eddy Road/<br>Dalrymple Avenue  | <i>Eucalyptus saligna</i> (Sydney Blue Gum)<br><i>Eucalyptus pilularis</i> (Blackbutt)<br><i>Angophora costata</i> (Smooth-barked Apple)   |
| Fullers Road  | <i>Eucalyptus pilularis</i> (Blackbutt)<br><i>Syncarpia glomulifera</i> (Turpentine)<br><i>Angophora costata</i> (Smooth-barked Apple)     |
| Greville Street/<br>Kooba Avenue  | <i>Syncarpia glomulifera</i> (Turpentine)<br><i>Eucalyptus resinifera</i> (Red Mahogany)<br><i>Angophora costata</i> (Smooth-barked Apple) |
| Beaconsfield Road/<br>Coolaroo Road/<br>Ferndale Street   | <i>Eucalyptus pilularis</i> (Blackbutt)<br><i>Syncarpia glomulifera</i> (Turpentine)<br><i>Angophora costata</i> (Smooth-barked Apple)     |

|   |  |
|---|--|
| Mowbray Road West<br>[upper east]                       | <i>Eucalyptus saligna</i> (Sydney Blue Gum)<br><i>Eucalyptus pilularis</i> (Blackbutt)<br><i>Angophora costata</i> (Smooth-barked Apple)               |
| Hart Street/<br>Farran Street                           | <i>Eucalyptus racemosa</i> (Narrow-leaved Scribbly Gum)<br><i>Eucalyptus resinifera</i> (Red Mahogany)<br><i>Corymbia gummifera</i> (Red Bloodwood)    |
| Avian Crescent/<br>Mowbray Road West<br>[western ridge] | <i>Eucalyptus piperita</i> (Sydney Peppermint)<br><i>Eucalyptus racemosa</i> (Narrow-leaved Scribbly Gum)<br><i>Corymbia gummifera</i> (Red Bloodwood) |
| Bellevue Street/<br>Hawthorne Avenue                    | <i>Eucalyptus punctata</i> (Grey Gum)<br><i>Eucalyptus racemosa</i> (Narrow-leaved Scribbly Gum)<br><i>Corymbia gummifera</i> (Red Bloodwood)          |

| PRECINCT 2: NORTH-WEST RIDGES, SLOPES & VALLEYS<br>Existing typical or dominant planted tree species* |  |
|---|--|
| Location  | Tree Species (cultivated)  |
| Wyvern Avenue/<br>Findlay Avenue  | <i>Jacaranda mimosifolia</i> (Jacaranda)<br><i>Lophostemon confertus</i> (Brush Box)<br><i>Cinnamomum camphora</i> (Camphor Laurel)            |
| Anglo Street/<br>Dulwich Road   | <i>Jacaranda mimosifolia</i> (Jacaranda)<br><i>Liquidambar styraciflua</i> (Liquidambar)<br><i>Callistemon viminalis</i> (Weeping Bottlebrush) |
| Eddy Road/<br>De Villiers Avenue  | <i>Lophostemon confertus</i> (Brush Box)<br><i>Liquidambar styraciflua</i> (Liquidambar)<br><i>Jacaranda mimosifolia</i> (Jacaranda)           |
| Sharland Avenue/<br>Dalrymple Avenue  | <i>Jacaranda mimosifolia</i> (Jacaranda)<br><i>Brachychiton acerifolius</i> (Illawarra Flame Tree)   |
| Sutherland Road/<br>Moriarty Road/<br>Centennial Avenue   | <i>Lophostemon confertus</i> (Brush Box)<br><i>Cinnamomum camphora</i> (Camphor Laurel)<br><i>Jacaranda mimosifolia</i> (Jacaranda)            |
| McLean Avenue/<br>Glencoe Avenue/<br>Greville Street  | <i>Jacaranda mimosifolia</i> (Jacaranda)<br><i>Lophostemon confertus</i> (Brush Box)<br><i>Callistemon viminalis</i> (Weeping Bottlebrush)     |

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

### Key precinct objectives

- 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);

- Promote strategies to supplement and enhance native tree canopy using provenance-sourced material (including critically endangered Blue Gum High Forest and endangered Sydney Turpentine-Ironbark Forest);
- Avoid the use of generic native species in this precinct (i.e. species native to other geographic areas or of unknown provenance);
- Selection of native species to be in accordance with mapped geology, soils and ecological communities;
- Promote opportunities for natural recruitment of canopy trees and community-based restoration strategies in streetscapes and adjoining bushland reserves;
- Protect and maintain high visual, aesthetic and environmental values including strong physical and historical connections with Heritage Conservation Areas;
- Protect and maintain integrity and intactness of historic single species and mixed species avenues avoiding infill programs using unsympathetic species.

| PRECINCT 2: NORTH-WEST RIDGES, SLOPES & VALLEYS<br>Proposed street tree species |                          |           |           |                         |                          |                          |
|---|--------------------------|-----------|-----------|-------------------------|--------------------------|--------------------------|
| Tree Species  | Common Name              | evergreen | deciduous | habit/form <sup>1</sup> | verge width <sup>2</sup> | power-lines <sup>3</sup> |
| <i>Acmena smithii</i> (ALL)*  | Lilly Pilly              | E         | -         | cr                      | N                        | N                        |
| <i>Acmena smithii</i> var. minor  | Lilly Pilly (incl. cv)** | E         | -         | cr                      | N                        | Y                        |
| <i>Alectryon subcinereus</i> (BGHF/SGF)*  | Native Quince            | E         | -         | cr                      | N                        | Y                        |
| <i>Angophora costata</i> (ALL)*   | Smooth-barked Apple      | E         | -         | os                      | M                        | N                        |
| <i>Angophora floribunda</i> (BGHF)*   | Rough-barked Apple       | E         | -         | os                      | M                        | N                        |
| <i>Backhousia myrtifolia</i> (BGHF)*  | Grey Myrtle              | E         | -         | cr                      | N                        | Y                        |
| <i>Corymbia gummifera</i> (SGF1/SRW)*   | Red Bloodwood            | E         | -         | os                      | M                        | N                        |
| <i>Elaeocarpus eumundi</i>  | Eumundi Quandong         | E         | -         | cu                      | M                        | N                        |
| <i>Eucalyptus capitellata</i> (SRW)*  | Brown Stringybark        | E         | -         | os                      | M                        | N                        |
| <i>Eucalyptus haemastoma</i> (SRW)*   | Scribbly Gum             | E         | -         | os                      | W                        | N                        |
| <i>Eucalyptus paniculata</i> (BGHF/STIF)*                                       | Grey Ironbark            | E         | -         | os                      | W                        | N                        |
| <i>Eucalyptus pilularis</i> (BGHF/SGF2)*  | Blackbutt                | E         | -         | os                      | W                        | N                        |

#### Willoughby Street Tree Master Plan

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|  |                        |   |   |    |   |   |
|--|------------------------|---|---|----|---|---|
| <i>Eucalyptus piperita</i> (SGF1/SRW)*               | Sydney Peppermint      | E | - | os | W | N |
| <i>Eucalyptus punctata</i> (SGF1/SGF2)*              | Grey Gum               | E | - | os | W | N |
| <i>Eucalyptus racemosa</i> (SGF1/SRW)*               | Scribbly Gum           | E | - | os | M | N |
| <i>Eucalyptus resinifera</i> (ALL)*                  | Narrow-leaved Ironbark | E | - | os | W | N |
| <i>Eucalyptus saligna</i> (BGHF)*                    | Sydney Blue Gum        | E | - | os | W | N |
| <i>Gordonia axillaris</i>                            | Gordonia               | E | - | cu | M | Y |
| <i>Jacaranda mimosifolia</i>                         | Jacaranda              | - | D | os | M | N |
| <i>Lagerstroemia indica</i> x <i>L. fauriei</i> var. | Crepe Myrtle cv.***    | - | D | cu | M | Y |
| <i>Lophostemon confertus</i>                         | Brush Box              | E | - | cr | W | N |
| <i>Magnolia grandiflora</i> 'Exmouth'                | Southern Magnolia cv.  | E | - | cu | M | N |
| <i>Magnolia grandiflora</i> 'Little Gem'             | Southern Magnolia cv.  | E | - | cu | N | Y |
| <i>Pistacia chinensis</i>                            | Chinese Pistachio      | - | D | cr | M | N |
| <i>Syncarpia glomulifera</i> (ALL)*                  | Turpentine             | E | - | cs | W | N |
| <i>Syzygium luehmannii</i>                           | Cherry Satinash        | E | - | cu | N | Y |
| <i>Tristanopsis laurina</i> 'Luscious'               | Water Gum 'Luscious'   | E | - | cr | M | Y |
| <i>Waterhousea floribunda</i>                        | Weeping Lilly Pilly    | E | - | cs | M | N |
| <i>Xanthostemon chrysanthus</i>                      | Golden Penda           | E | - | cr | N | Y |

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

\* LOCAL NATIVE SPECIES and ecological community (refer to FIGURE 2)

ALL = all ecological communities in precinct;

BGHF = Blue Gum High Forest (critically endangered EEC);

STIF = Sydney Turpentine-Ironbark Forest (endangered EEC);

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

SGF2 = Sydney Sandstone Gully Forest (*Eucalyptus pilularis*/ *Syncarpia glomulifera*);

SRW = Sydney Sandstone Ridgeway Woodland.

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

\*\*\* *Lagerstroemia indica* x *L. fauriei* select cultivars including "Acoma", "Sioux", "Natchez" and "Tuscarora".

'HABIT/ FORM OF TREE

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

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

<sup>2</sup>MINIMUM VERGE WIDTH (incl. footpath):

N = narrow (<2.5 metres)

M = medium (2.5-4.0 metres)

W = wide (>4.0 metres)

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<sup>3</sup>PLANTING UNDER POWER-LINES (incl. ABC):

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

= 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*





Cherry Satinash  
*Syzygium luehmannii*



Weeping Lilly Pilly  
*Waterhousea floribunda*



Water Gum cv. Luscious  
*Tristaniaopsis laurina* 'Luscious'



Golden Penda  
*Xanthostemon chrysanthus*