



# NEWINGTON

## Street Tree Plan

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**CITY OF  
PARRAMATTA**





Prepared by:



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Capital Projects | Landscape Architecture





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Street trees in Newington are a significant natural asset and it is essential to establish a comprehensive plan to inform future street tree planting. This Newington Street Tree Plan recognises the environmental, economic, social and aesthetic character that the existing trees provide.

This Street Tree Plan is a guide to assist the City of Parramatta and the community of Newington with a strategic framework and plan for the future management of street trees. The Plan will contribute to a sustainable and practical approach to the planning, maintenance and enhancement of the tree canopy cover. This Plan sets an approach to street tree planting that will outline the benefits of a suburban forest and respect the expectations of the community.

This Street Tree Plan will ensure that the appropriate tree species are selected for the scale of each street. This Plan will guide the continuation and enhancement of the character of the Newington area. The implementation of this Street Tree Plan will become an important legacy for future generations.





# EXECUTIVE SUMMARY

The existing street trees are an important component of the natural character of Newington. The street trees were planted prior to the Sydney 2000 Olympics. The Newington residential dwellings were built as part of the athlete's village for the games. A strong theme of the games was to create the "Green Games". Part of that design theme was the dense tree planting within the Newington street network. Today, the trees species planted are now mature dominating the scale of the streets. The existing tree palette is proving to be unsuitable with the streetscape. This is leading to infrastructure failures, loss of trees and resident dissatisfaction.

This Newington Street Tree Plan is a planning tool that will guide the design, planning and management of street trees in Newington. This Plan will assist the City of Parramatta and the community of Newington for future implementation.

This Newington Street Tree Plan has considered and is applicable to the verges and medians for the local street network within Newington. The Newington Street Tree Plan does not apply to private land, parks, reserves, bushland areas or Sydney Olympic Park Authority (SOPA) land.

## Newington Street Tree Plan Outcomes

The outcomes of the Plan include:

- Reinforcing the benefits of trees and their environmental importance;
- Develop a legacy of street tree planting that aligns with the character of Newington;
- Ensuring the appropriate tree species are planted, considering scale and site constraints;
- Provide guiding principles for tree selection to ensure quality and consistency;
- Foster community acceptance of street trees through education and awareness;
- Recognise the significance of trees as a valued community and environmental asset;
- Incorporate a continuation of the adjoining and highly valued green corridors to encourage fauna and ecological habitat;
- Provide implementation guidelines and tools to ensure quality outcomes for the benefit of the community, the local infrastructure and the environment.





Street trees are an important element in the appearance of streets and the public interface. Street trees significantly contribute to the amenity, identity and a sense of place. Trees provide a consistency of urban character and promote liveability. Trees are fundamentally important to the social, environmental and economic well-being of the Newington community.

This Street Tree Plan is critical to the short and long term management of trees in Newington. This document also establishes direction for the future implementation and replacement of the street trees.

### **Objectives**

As custodians of street trees, the City of Parramatta bases its street tree planning and management for Newington around the following objectives:

- Provide a safe and beautiful suburb for the community to live, work and visit;
- Select the most appropriate street tree species, based on current knowledge, experiences and the needs of the community and environment;
- Retain existing character by reinforcing and enhancing the leafy characteristics of Newington;
- Provide direction on the most appropriate species and planting techniques that are best suited to the environmental and growing conditions;
- Provide a street tree palette that is an appropriate scale;
- Minimise the heat island effect by providing continued tree canopy cover for shade and cooling of hard surfaces;
- Protect and enhance urban ecology and biodiversity for a healthy ecosystem;
- Increase tree species diversity;
- To educate the community on the values of street trees through participation and engagement;
- Guide Council decision making for planting, maintenance and management of new and existing trees.

### **Brief history of the area**

In 1807, John Blaxland, one of the first free settlers to arrive in Australia, acquired 520 hectares of land which he named Newington after his family estate in Kent, England.

Blaxland brought an experienced salt maker with him from England, who laid out salt pans on the edge of the Parramatta River. By 1827, the Newington Estate was sending eight tonnes of salt to Sydney each week. The Blaxlands were associated with the estate until the 1860s. In that time a tweed mill and flour mill were established in addition to cattle grazing, logging and coal mining exploration.

Newington House, the Blaxland family's home and the Chapel of St Augustine, the family's chapel, survived from this period. Built in 1832, Newington House still stands today within Silverwater Correctional Complex. The house is an excellent example of an early colonial, regency-style villa.

In 1997, Newington was established for the Sydney 2000 Olympic Game athlete's village and eventually the suburb.

### **Scope**

This Newington Street Tree Plan has been considered and is applicable to the verges and medians for the local street network within Newington. The Newington Street Tree Plan does not apply to private land, parks, reserves, bushland areas or Sydney Olympic Park Authority (SOPA) land.

### **Implementation**

This Street Tree Plan is used to strategically plan and proactively manage the street trees of Newington. This plan outlines which tree species are to be used as replacement species when they reach the end of their useful life. This document is a guide to future street tree planting for Newington.

The City of Parramatta will continuously explore opportunities for improvement to meet the objectives outlined. Council highly values the benefits of street trees. Unless there are specific public risk issues to address or the health and vigour of the tree is in decline, the tree is unlikely to be removed.

This plan is to be implemented over time in succession as trees are removed for health or safety reasons. Vacant sites that are appropriate for planting may be implemented as funding becomes available.





# STREET TREE PRINCIPLES

## **Benefits of street trees for the Newington community**

Street trees play a critical role in maintaining the health and liveability of Newington by:

- Providing character and a 'sense of place';
- Improving and maintaining the health, well-being and happiness of the residents and community of Newington;
- Providing an attractive streetscape that promotes walkability and active living;
- Providing environmental, economic and social benefits that contribute to creating a resilient and sustainable suburb.

Environmental benefits of street trees include:

- A single mature tree can absorb carbon dioxide and release enough oxygen back into the atmosphere to support two people;
- Shading of pavement and buildings reduces energy consumption;
- Shading of asphalt road pavements can extend its asset life;
- Removing gaseous pollutants by absorbing them through tiny pits (stomates) in the leaf surface;
- The leaf surface also captures and removes dust from the air acting of natural pollution filters;
- Promoting urban ecology by providing habitat and food sources for urban native fauna.

Economic benefits of street tree plantings include:

- Streets with well planted trees have shown to attract higher property rents and sale prices;
- Trees provide shade and cooling that reduce hard surface temperatures and the heat island effect. As a result, trees reduce radiating heat and cooling costs for dwelling occupants.

Social benefits of street tree plantings include:

- Trees can provide orientation, suburb identity and contribute to urban form;
- Trees create a feeling of relaxation and well-being;
- Providing shade for pedestrians, reduces glare, soften the built environment and diminishes noise;
- Calming traffic, slowing speeds, and providing a buffer between pedestrians and cars. They are also useful in delineating and signifying curves in a street;
- Provide a link to nature and living within a 'leafy' suburb;
- Provides seasonal foliage colour that are visually pleasing;
- Provides contrast in leaf colours, patterns, flower, bark and tree form.





# STREET TREE PRINCIPLES

## **Street trees and the urban environment**

Every tree species has its genetic and growth characteristics. The tree is a dynamic organism and growing limitations imposed on the trees determine the trees growth habits. The limitations include structures, pavements, kerb and gutters and existing utilities. All limitations contribute to the growth constraints of street trees. These limitations are considered when establishing a selection criteria for appropriate tree species and location of planting.

There is no such thing as the 'perfect' street tree that will fulfil all aspects of a selection criteria. Each tree species planted within a street can present different growth forms and rates dependant on the growing conditions. A goal is to create an environment for consistent tree growth. Trees planted within the streetscape are far removed from their natural environments. It is generally considered that the benefits of trees to the community far outweighs the negative aspects.

## **Damage to pavement and structures**

Larger established trees with a large base can cause pavement uplift and cracking. Selecting the right tree species that is appropriate for the location will prevent damage to the surrounding infrastructure. Some factors that contribute to the damage to pavements and structures include:

- Inappropriate size of selected species;
- Existing soil depth and type;
- The size and design of nearby structures;
- Quality of planting technique; and
- Age and quality of the pavements and structures.

Tree roots are opportunistic rather than aggressive. Tree root growth will occur with sufficient soil moisture and oxygen. Roots will find it difficult to grow when conditions are too moist or the soil is heavily compacted.

## **Dropping of leaves and debris**

All trees drop leaves and debris, including evergreen trees. There are tree species however that drop less leaf litter and debris. These considerations are part of the tree selection criteria. Trees with heavy fruiting are avoided as decaying material can be slippery on pedestrian pavements.

## **Pruning**

Safe clearance heights for pedestrians and vehicles forms part of a maintenance regime. All pruning shall be done in accordance with Australian Standards and by a

qualified arborist. All pruning shall be undertaken by Council's Tree Management team (public land) or by a qualified arborist (private land). It is recommended to avoid pruning practices that disfigure or compromise the structural integrity of the tree. Additionally, poor pruning techniques can be an entry point for pests and diseases. Poor pruning techniques can lead to a decline in tree health and heighten the risk to public safety.

## **Identify tree risks**

Existing street trees, regardless of species will be left to grow until the end of their useful life expectancy. A street tree will only be removed once it has become a safety issue and an unacceptable hazard. Unnecessary tree removal will be avoided where possible.

## **Tree removals, replacements and implementation strategies**

Continuation of the existing street character and the benefits of street trees is an important consideration. Should a street tree need to be removed based on professional recommendations, it is likely it will be replaced.

Opportunities for additional street trees in appropriate vacant locations will be ongoing. The street tree implementation will be depended on suitable funding and resourcing that become available to Council.

## **Proposed tree succession**

As the Newington tree population is not self-renewing it needs to be planted, managed and replenished on a recurring basis. To ensure a continuation of street character and tree canopy it is essential to plant street trees as part of an ongoing succession plan. As mature trees reach the end of their useful life or needs to be removed for other reasons, it is important to continuously plant the next generations of trees. This will be an ongoing renewal process to sustain a consistent street tree canopy.

## **Unauthorised planting on Council land**

Within the public streets, it is essential Council undertakes all street tree planting. Council does not permit residents to undertake planting within their street or verge. This ensures quality of practice and minimises the long-term risk to the community and infrastructure. Residents are encouraged to submit a request to Council should they feel the front of their property is suitable for tree planting.





# STREET TREE STRATEGY AND SELECTION

The existing street tree palette in Newington contributes to excessive leaf debris, branch drop, the shading of solar panel on roofs, damage to pavements and public or private infrastructure.

This Plan will promote a continuation of the consistent streetscape character by nominating appropriate species for the right street. Tree succession will be implemented as part of a long-term vision. The Newington Street Tree Audit will inform and guide future tree removals.

## **Right tree for the right street**

The 'right tree for the right street' is an often stated as professional practice. One of the key tree selection objective is to ensure the species selection is appropriate for the street scale and the growing conditions.

The right tree for the right street means selecting species that will reach maturity without compromising other assets, risking property damage or personal injury. The proposed tree species selection endeavours to make a long term positive contribution to the street amenity and environmental value by minimising undesirable aspects and future risks.

## **Considerations for street tree selection**

The environmental conditions greatly influence the successful growth of street trees. Climate, quality of soil types, exposure and diversity for resilience are basic considerations for selecting street trees. Generally, the climate of Newington is typically warm and wet in Summer and Autumn with cooler, drier Winters. Street trees selected will need to tolerate seasonal temperatures and adverse climatic conditions. Street trees will need to be capable of surviving prolonged periods of drought.

The soil layers in Newington are highly disturbed due to residential development. Soil types greatly influence the vitality of the street trees. Trees will benefit from an imported well drained growing media. For new tree plantings it is recommended a larger excavated tree pit will provide the required nutrients and improve growing conditions.





# STREET TREE STRATEGY AND SELECTION

Selected street trees need to tolerate the growing constraints of surrounding pavement areas. These trees must minimise disturbance to infrastructure and have the ability to adapt to compacted, low oxygenated and modified soil conditions.

Native tree species are climatically suited to variations of change such as drought and intense periods of rain. Using predominantly native species promotes biodiversity and reinforces a sense of place.

## **Acceptable leaf and fruit fall characteristics**

The selected species must have an acceptable shedding level of leaves and fruit. Typically, dwellings in Newington have minimal setbacks so the shedding of debris should be kept to a minimum to reduce the impact and nuisance created by the street trees. Trees with excessive leaf, fruit and flower drop may lead to slippery pavement hazards should be avoided.

## **Not prone to major limb drop**

Limb drop of trees can occur on an occasional basis. This can be due to wind and storm events. This is a natural process of trees and must be expected from time to time. Some tree species are known to have brittle branches and frequent branch drop. Selecting a small scale street tree with a smaller branch structure will minimise the frequency and potential for harm and damage.

## **Low risk of becoming an environmental weed**

Some tree species are known to be potential environmental weeds due to their ability to self-propagate and invade natural bushland areas. Given Newington's close proximity to Sydney Olympic Park and bushland areas it is highly recommended high risk species be avoided.





# STREET TREE STRATEGY AND SELECTION

## **Narrow footpaths and verges**

An important factor in a tree species is the width of the pedestrian pavement. Typically, in Newington the existing footpath width is 1.2 metres. This width creates a narrow-grassed verge and therefore a limited space to grow an adequate sized tree. It is important to select and appropriate tree species suitable for the scale of the verge and avoid planting trees with a large trunk base to ensure the risk of pavement lift and disturbance is limited.

## **Value of street tree diversity**

Tree species diversity is a critical element in managing a sustainable suburban ecology. The more diverse a street tree community is the lower the likelihood of tree loss in the event of unexpected pest and disease outbreaks and impacts of drought or excessive rainfall. A diverse street tree population supports a wider range of fauna species by providing a variety of habitat and food offerings.

It is important to distribute the proposed species widely throughout the streets to create biodiversity and mitigate the potential impacts of new pest and disease incursions. This will ensure such events are minimised to manageable levels.

## **Low maintenance**

It is recommended that street planting occurs between early March and late October to avoid the warmer months. Despite best efforts some trees may not survive this initial establishment period. Council will endeavour to replace trees as required.

The City of Parramatta has a preference for selecting species that require minimal maintenance after the tree establishment phase.

## **Proven performance record**

Council has a preference for street trees that are proven performers for the local environmental conditions. Street trees are a significant investment for Council and using long-lived species will assist in minimising the tree management costs over time.





**Tree Species:**  
*Alloxylum flammeum*

**Common Name:**  
Queensland Waratah

**Family Name:**  
PROTEACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 15 to 20m

**General Comments:**

- Leaves are glossy green;
- Bright red flowers in clusters during spring and early summer;
- The tree is listed as 'Vulnerable' and facing a high risk of extinction in the wild;
- Drought and frost tolerant.



**Tree Species:**  
*Angophora bakeri* subsp. *bakeri*

**Common Name:**  
Narrow-leaved Apple

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 20m

**General Comments:**

- Flowers creamy white;
- Flower from December to February;
- Bark is grey-brown, soft, fibrous and corky.



**Tree Species:**  
*Angophora costata* subsp. *costata*

**Common Name:**  
Smooth-barked Apple

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 20m

**General Comments:**

- Dense round headed evergreen tree.



**Tree Species:**  
*Backhousia citriodora*

**Common Name:**  
Lemon-Scented Myrtle

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 20m

**General Comments:**

- Light green lemon scented leaves;
- Cream-white flowers in clusters during summer and autumn;
- Tolerates most soil types.



**Tree Species:**  
*Brachychiton acerifolius*

**Common Name:**  
Illawarra Flame Tree

**Family Name:**  
MALVACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 10m

**General Comments:**

- Significant red flowers;
- Deciduous in late winter to December;
- Large glossy green leaves (300mm long).



**Tree Species:**  
*Buckinghamia celestissima*

**Common Name:**  
Ivory Curl Flower

**Family Name:**  
PROTEACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 5m

**General Comments:**

- Creamy-white flowers, 200mm long;
- Flowers in late summer to early autumn;
- Can flower twice a year;
- Low maintenance.

# STREET TREE SPECIES LIST

The following schedule provides a list of the proposed species to be used in the streets of Newington. There are a total 16 street tree species proposed for ongoing use in Newington:



**Tree Species:**  
*Cupaniopsis anacardioides*

**Common Name:**  
Tuckeroo

**Family Name:**  
SAPINDACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 8m

**General Comments:**

- Hardy to frost and drought once established;
- Tolerates a variety of soil types;
- Rounded canopy;
- Cream flower in autumn.



**Tree Species:**  
*Eleocarpus eumundii*

**Common Name:**  
Eumundi Quandong

**Family Name:**  
ELAEOCARPACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 8 to 15m

**General Comments:**

- Dark green glossy leaves with flushes of bronze-red new growth.



**Tree Species:**  
*Eucalyptus cinerera*

**Common Name:**  
Argyle Apple

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 10 to 15m

**General Comments:**

- Silver foliage;
- White flower between Oct and Dec.



# STREET TREE SPECIES LIST



**Tree Species:**  
*Eucalyptus sclerophylla*

**Common Name:**  
Hard-leaved Sribbly Gum

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 20m

**General Comments:**

- Distinctive white / grey bark;
- glossy leaves;
- Good size and shape for street tree use.



**Tree Species:**  
*Lagerstroemia indica* x *L. fauriei* Natchez'

**Common Name:**  
Crepe Myrtle

**Family Name:**  
LYTHRACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 8m

**General Comments:**

- Attractive flower arrangements;
- Deciduous with good autumn colour;
- Attractive bark.



**Tree Species:**  
*Flindersia australis*

**Common Name:**  
Crow's Ash

**Family Name:**  
RUTACEAE

**Tree Dimensions (at maturity):**  
Approximate height is 20m

**General Comments:**

- Good shade tree;
- Robust and hardy;
- Dense rounded canopy.



**Tree Species:**  
*Stenocarpus sinuatus*

**Common Name:**  
Firewheel Tree

**Family Name:**  
PROTEACEAE

**Tree Dimensions (at maturity):**  
Approximate height is 20m

**General Comments:**

- Leaves 250mm long, glossy;
- Orange / red, spike like flowers;
- Flowers between March and June.



**Tree Species:**  
*Tristaniopsis laurina*

**Common Name:**  
Water Gum

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Maximum height is 12m

**General Comments:**

- Deep glossy green leaves;
- Bright yellow flowers in summer;
- Smooth trunk with patches of scaly bark.



**Tree Species:**  
*Melaleuca decora*

**Common Name:**  
White Feather Honeymyrtle

**Family Name:**  
MYRTACEAE

**Tree Dimensions (at maturity):**  
Approximate height is 7m

**General Comments:**

- Good shape street tree;
- Robust and hardy;
- Attractive flowers.





# STREET TREE DESIGN AND PLACEMENT

The quality of street tree design and implementation is critical in the successful growth of a tree. This section outlines considerations for street tree placement.

## **Locating street trees**

There are many limitations to the positioning of street trees within the verge. Distances from infrastructure elements such as intersections, light and electricity poles, stormwater inlets, underground service pits and bus stops, are important in determining final planting locations. Typically this requires individual site assessment and will be determined on a case-by-case basis. As a guide, recommended distances from infrastructure elements are:

- Bus Stop – 5 metres from determined bus stop;
- Driveway – 2 metres from driveways;
- Pedestrian Crossing – 5 metres from pedestrian crossings;
- Storm water inlet/outlet – 2 metres from storm water inlet/outlet pits;
- Street intersection – 10 metres from intersection kerb line;
- Street light pole – 3 metres from centre of light pole;
- Underground service pit - 2 metres from edge of pit.

## **Spacing of the street trees**

Taking into account other relevant clearance requirements, street trees are to be typically planted as follows:

Townhouse or single dwelling frontages:

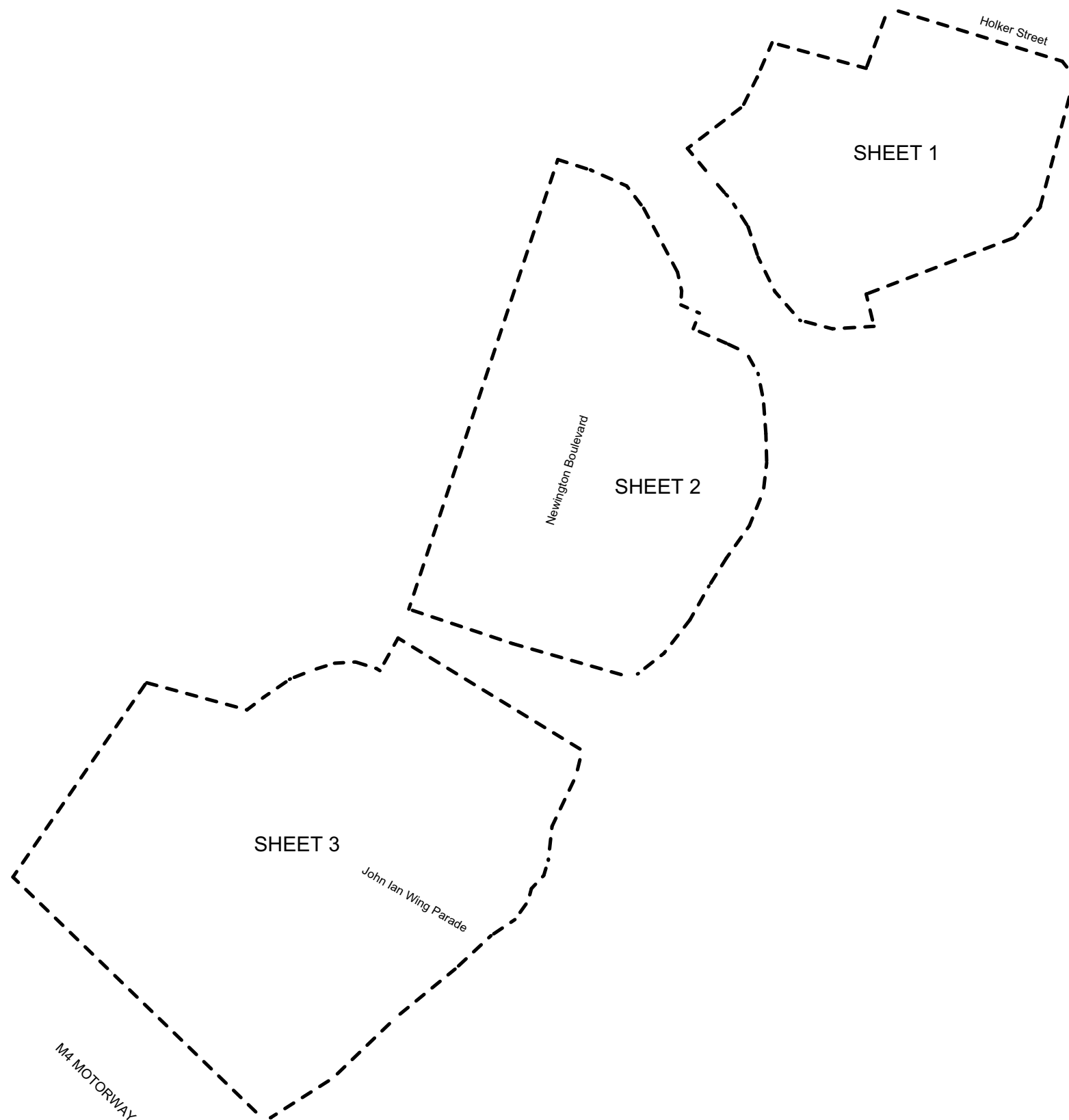
- 1 tree per property frontage; or,

Apartment complexes or open space / park frontages:

- Small trees (less than 15 metres in height at maturity) - spaced at 7 to 10 metre intervals;
- Medium trees (more than 15 metres in height at maturity) - spaced at 10 to 15 metre intervals.

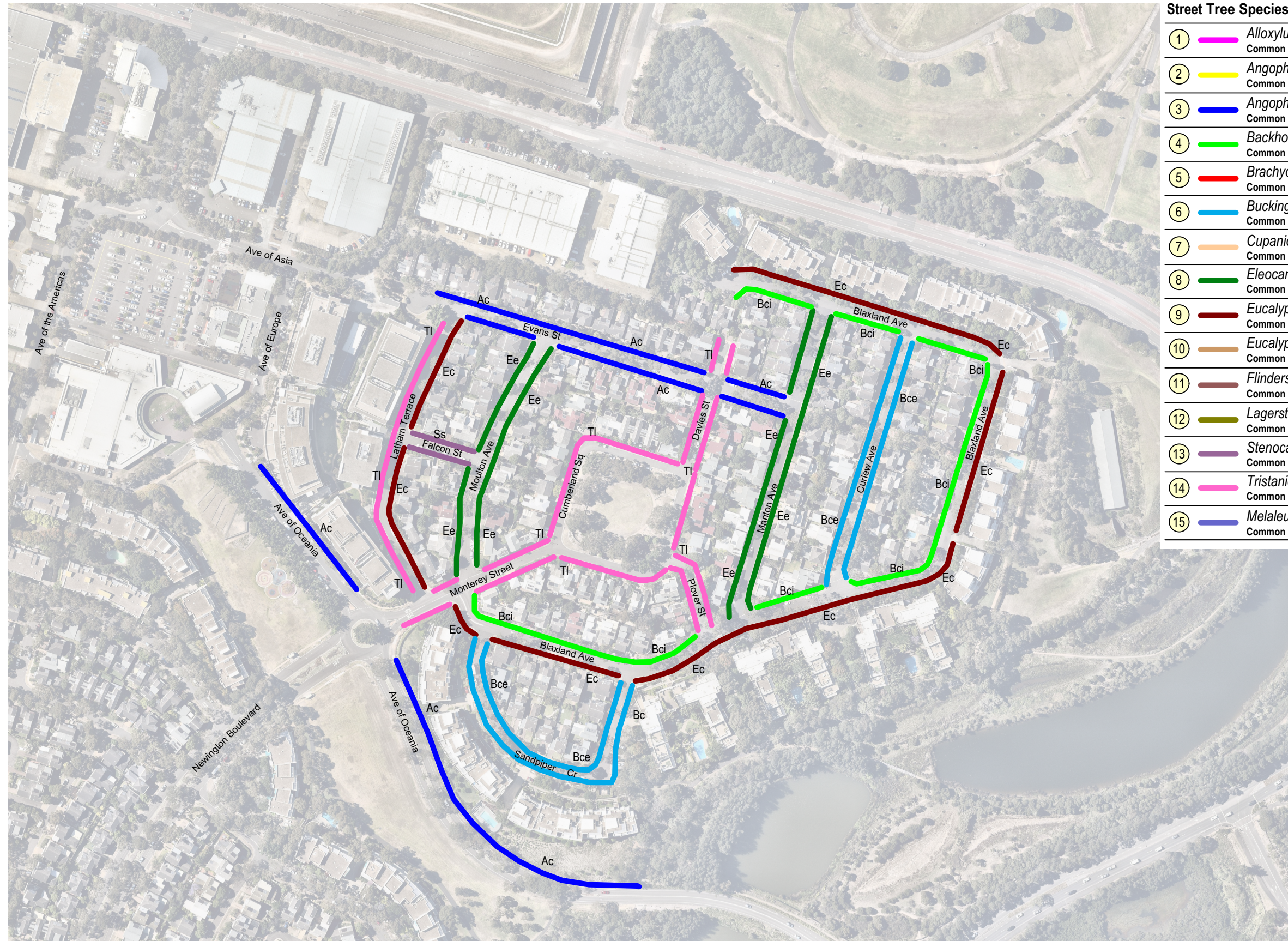


# STREET TREE PLAN





# STREET TREE PLAN



## Street Tree Species List:

- ① *Alloxylum flammeum* (Af)  
Common Name: Queensland Waratah
- ② *Angophora bakeri* subsp. *bakeri* (Ab)  
Common Name: Narrow-leaved Apple
- ③ *Angophora costata* subsp. *costata* (Ac)  
Common Name: Smooth-barked Apple
- ④ *Backhousia citriodora* (Bci)  
Common Name: Lemon Myrtle
- ⑤ *Brachychiton acerifolius* (Ba)  
Common Name: Illawarra Flame Tree
- ⑥ *Buckinghamia celesissima* (Bce)  
Common Name: Ivory Curl Flower
- ⑦ *Cupaniopsis anacardioides* (Ca)  
Common Name: Tuckeroo
- ⑧ *Eleocarpus eumundii* (Ee)  
Common Name: Eumundi Quandong
- ⑨ *Eucalyptus cinerera* (Ec)  
Common Name: Argyle Apple
- ⑩ *Eucalyptus sclerophylla* (Es)  
Common Name: Hard-leaved Scribbly Gum
- ⑪ *Flindersia australis* (Fa)  
Common Name: Crow's Ash
- ⑫ *Lagerstroemia indica* x *L. fauriei* 'Natchez' (Li)  
Common Name: Crepe Myrtle
- ⑬ *Stenocarpus sinuatus* (Ss)  
Common Name: Firewheel Tree
- ⑭ *Tristaniaopsis laurina* (TI)  
Common Name: Water Gum
- ⑮ *Melaleuca decora* (Md)  
Common Name: White Feather Honeymyrtle