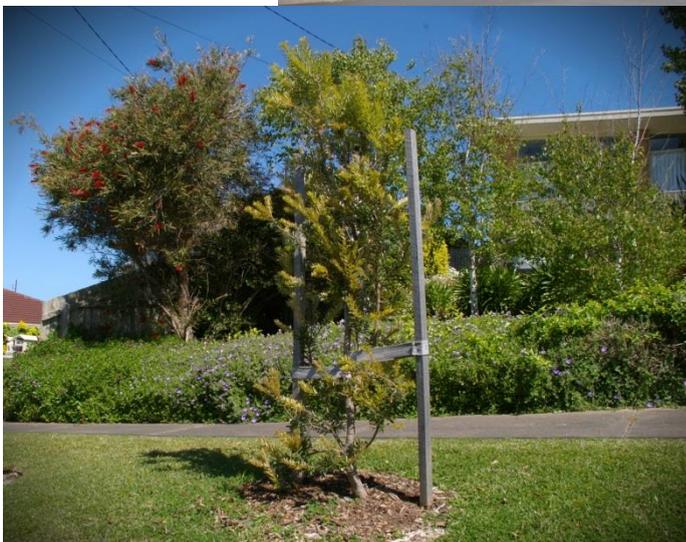




WARRNAMBOOL
CITY COUNCIL

Street Tree Planting and Management Guidelines



DOCUMENT CONTROL

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1. INTRODUCTION

1.1. Purpose

To implement the Warrnambool City Council's Street Tree Policy by introducing a consistent, adopted approach to street tree planting and ongoing management of street trees within the Municipality.

To provide information and direction for Council Officers, developers, consultants and the broader community in relation to Council owned street trees.

1.2. Scope

Warrnambool's trees are one of its greatest assets and the aim of these Guidelines is to provide good planning and appropriate maintenance which is vital for safe and manageable street, roadside, park and reserve trees that will provide aesthetic, material, environmental and ecological benefits to the community.

The aim of the Guidelines is to provide a framework for making structured, consistent and environmentally sound management decisions for all trees on land owned by Council or under Council's control.

1.3. Vision

The aim of is to plant, preserve and maintain, in a safe and healthy condition, those trees which are currently or which will become visually, historically, horticulturally or environmentally valuable to the Community of Warrnambool. Trees help to create softness and beauty in otherwise harsh urban streetscapes. Trees also have roles in ecology, microclimate modification and traffic control. As such they add significantly to the enjoyment of our City and to the value of properties.

By applying appropriate levels of resources and best practice management, Warrnambool City will develop streetscapes of attractive, healthy and safe trees for the benefit of the entire community, both now and in the future.

This Guidelines aims to ensure that all trees are contributing to the function and amenity of the city whilst also ensuring that any risks associated with them are managed or controlled in accordance with industry best practice and available resources.

The vision of the Guidelines is to:

- To guide new street tree planting, species and themes.
- To ensure consistency in tree management across the organisation and across the Council.
- To define Councils responsibilities and requirements with respect to the protection, retention and replacement of trees.
- To ensure that proper consideration is given to trees in planning, designing and constructing development.

- To facilitate the removal of undesirable species, noxious weeds, dangerous trees and any other inappropriate plantings and replace these with well selected new trees that will positively contribute to visual and environmental amenity.
- To retain healthy individual trees of local amenity and aesthetic value

1.4. Benefits

The social, environmental and economic benefits of street trees are wide and varied. Tree-lined streets contribute to aesthetic improvements, climatic modifications, a healthy environment and social wellbeing.

Research indicates the benefits include:

HEALTH

- Views of nature can relate to feelings of satisfaction, wellbeing, coping, personal effectiveness and optimism.
- Green surroundings reduce mental tiredness while enhancing concentration and attention, leading to an improved ability to cope and make positive decisions.
- Creating positive psychological benefits, including lower rates of anxiety, violence and crime.
- Trees reduce exposure to ultraviolet light, lessening risk of associated health problems such as skin cancer and cataracts.

SOCIAL

- Residents walk more on streets that are lined with trees.
- Greenery helps people to relax and renew, reducing aggression leading to less violence.
- The proximity of trees to dwellings has an effect on residents' use of outdoor space - the closer the trees, the higher the usage.
- Many more people are involved in social activities in green environs than in areas that have few or no trees and shrubs.
- Gardens and other plantings contribute to residents feeling safer, more supported and satisfied with their surroundings.
- Green spaces bring residents together more often, promoting chance meetings and encounters. Residents get to know one another, producing stronger, more cohesive neighbourhoods.
- Public safety - areas with higher levels of planting experience lower levels of crime because it creates pride and care of place which results in ownership.
- Road safety – tree-lined streets are perceived as narrower, resulting in reduced speeds. Trees along streets provide a buffer between pedestrians and vehicles.
- Surveys of landscaped and non-landscaped community areas have shown that the incidence of crime, vandalism and graffiti is many times lower in areas planted out with greenery.

AESTHETIC

- Beautifying and softening streetscapes, the appearance and general environment of many streets is improved considerably by the presence of trees.
- Trees soften harsh lines of paving, kerbs and other assorted infrastructure
- Frame good views and vistas.

- Trees provide seasonal interest and natural beauty through foliage and their interesting leaf patterns, flowers, bark, fruit and canopy.
- Provide a welcome contrast and relief to the appearance of long stretches of asphalt road.
- Play a significant role in determining the urban character of the townships and a sense of place.
- They enhance architecture; there are few buildings which do not look better in the company of suitable trees.

ECONOMIC

- Research indicates an increase in property values from high amenity, well treed areas. A garden adds to the aesthetic appeal of your home and neighbourhood, and it adds real monetary value to your home. It is estimated that property value can increase between 5% and 20%.
- Roads and footpaths with good tree canopy cover are protected from the sun and last longer.
- Attractive tree lined areas are popular with visitors who spend money during their stay.

ENVIRONMENTAL

- Provide wildlife habitat and food sources and preserve biodiversity.
- Trees are critical in the maintenance of a healthy environment as they produce oxygen, trap airborne pollutants in their leaves (such as nitrous oxide and ozone) and absorb carbon dioxide.
- Large trees have a greater benefit in terms of reducing pollution than small trees.
- Trees have a positive effect on the environment by the transpiration of water and the emission of oxygen by photosynthesis.
- Tree roots keep the soil porous which allows the stormwater to be absorbed rather than flow into the drain and sea.
- Plantings around buildings are a proven method of reducing the demand for artificial heating and cooling with a resultant, and important, lower use of fossil fuels.
- They provide shade in summer. Trees can reduce asphalt temperatures of carparks by as much as 13°C, and vehicle cabin temperatures by 17°C.
- Provide buffers/wind breaks from strong winds.

1.5. Definitions

Term	Definition
Tree	A woody plant that can be expected to exceed five (5) metres in height under normal growth conditions, typically with a single, dominant stem (trunk).
Shrub	A woody plant that would not be expected to exceed five (5) metres in height under normal growth conditions.
Pruning	The intentional removal of parts of a plant to improve its form or function.
Street tree	A tree or shrub growing within the road reserve, including nature strips, separators and medians.
Environmental Weed	Plants that invade native vegetation, usually adversely affecting regeneration and survival of the indigenous flora and fauna. They can be exotic plants, or plants that do not naturally grow in the area.

1.6. References

- Warrnambool Planning Scheme

- Electricity Safety (Electric Line Clearance) Regulations 2015
- Councils Electric Line Clearance Management Plan.

2. GUIDELINES

Trees have a finite life. Their genetic potential and the external factors that impact on them determine how well they perform. In the case of street trees, the growing conditions are usually significantly altered from those encountered in their natural growing environment.

Street trees also grow amongst people and property and as such pose management challenges as a result of community expectations for amenity, functionality and safety. The impact of the artificial growing environment and the community requirements of street trees is that street trees require ongoing management

2.1. Areas of Responsibility

Council is responsible for the trees on land owned by Council or under Council's control with the following exceptions:

2.1.1. Electric Line Clearance (Electric line clearance regulations 2015)

In some isolated areas within the City, line clearance is the responsibility of the local electrical power distribution company. Authorities and contractors should check with Council before starting work verify if trimming works are in a declared area.

2.1.2. Speed Restricted Zones

Trees on declared Vic-Roads, roads and highways, outside of speed restricted zones tree maintenance is the responsibility of Vic-Roads.

2.2. Staff

Warrnambool City Council officers and parks and gardens staff shall carry out all assessments of trees under these Guidelines. Services of an arborist may be required in these assessments.

All planning done for new planting, tree replacement programs and other tree related programs or works which impact on Council trees shall be done in consultation with Infrastructure Services.

2.3. Town planning approvals, capital and other works

The street tree is considered by Council as a permanent fixture and a valued asset, consequently the tree will not be considered for removal until all options have been explored by an architect/developer and Council.

Planning approval may be required where trees are heritage listed.

2.4. Liability

All claims for damages against Council trees shall be referred to Councils Infrastructure Services Branch.

2.5. Pest and Disease Management

Council will intervene in pest and disease outbreaks where the immediate or long term survival of the tree or trees is compromised or property is substantially affected. In these circumstances the efficiency and cost effectiveness of available treatments will be assessed and, if justified, the appropriate integrated pest management techniques may be applied as required.

2.6. Infectious Material

Chipped material, logwood, stump grinding and other debris from trees infected with or that may be infected with a pathogenic organism shall be disposed of in a manner to prevent spreading the infection. All equipment, vehicles and personal items that come in contact with infected or potentially infected material must be disinfected by approved methods before being returned to service.

2.7. Tree Valuation

Council adopts the Revised Burnley Method (Moore) as a basis for determining economic values for Council's tree assets. Council will use this method for accurate tree evaluation assessment to achieve an average figure. Valuations will be carried out by Council staff or consultants as required or determined by vandalism, vehicle damage, building development, road construction or other works which would require compensation for replacement damage and tree maintenance or tree removal.

2.8. Unauthorized Actions

2.8.1 Pruning or removal of Council owned or managed trees by anyone other than Council staff or contractors engaged by Council shall not be permitted. Affixing of signage or other infrastructure on Council owned or managed trees shall not be permitted.

2.8.2 Council will prosecute persons who prune, disfigure, damage, kill or remove Council trees without explicit authorisation from the Council's relevant manager or delegated officer, under the Summary Offences Act or other appropriate Local Laws. Council may also recover costs and compensation from the perpetrator for replacement, loss of amenity value and remedial works required as a result of unauthorised actions. Council may recover costs and compensation for replacement, loss of amenity value and remedial works required from authorised persons and contractors, who prune, remove or cause damage to Council trees by failing to comply with these Guidelines, contract document conditions and other relevant policies and guidelines.

2.9. Education

A part of Council's community responsibility is to educate the community in responsible tree care and management. Education and community awareness programs will be undertaken subject to funding and resource constraints.

2.10. Street Tree Removal

Removal of trees from nature strips and parks is potentially the greatest cause of conflict in the management of the Council's trees. Prudent tree management requires Council to assume that every tree, no matter how insignificant it may appear, has some value to someone.

It sometimes becomes necessary to remove trees, either because of a problem with the tree itself, or to facilitate development or installation of infrastructure.

The concern associated with the removal of trees can be minimised through proper consultation with the community and a demonstration of the importance of trees by Council and the communication of these views to the community. Decisions regarding tree removal become necessary in response to applications by customers, developers and external authorities or through observation of problem trees by Council staff.

2.10.1. Cost

The cost for general tree removal under this Guidelines will be borne by Council through the budget. Tree removals to facilitate Council infrastructure upgrade or repair shall be borne by Council through the budget of that infrastructure project. Tree removals to facilitate private works shall be borne by the person carrying out those private works. New subdivision will require approved street tree species to be provided by the developer.

2.10.2. Removal

Consideration for and consultation regarding removal of street, roadside and parkland trees will be in conformance with Council's Community Consultation and Engagement Guidelines.

2.11. Pruning

Trees are living mechanical structures that have evolved to cope with the conditions under which they grow. Intervening in the tree's self-management should be done as a last resort as such intervention has ramifications for the tree's ability to regulate its own systems.

Street trees grow in contrived conditions and therefore the trees own self-regulatory systems are often compromised. In these situations intervention may be required. The most common intervention is pruning. Pruning is also done to try to make trees conform to spaces around other structures. Ideally these structures should be located so that minimal pruning is required.

The extent of any pruning undertaken must take into account the condition and significance of the tree and the effect of the pruning on the tree. Pruning should also take into account the location of the tree and its potential impact on traffic and pedestrians. Pruning will not be undertaken to accommodate scenic views or to clear for commercial advertising signage.

Council will undertake the pruning of street trees to achieve the following:

- To a high standard of arboriculture practice in accordance with Australian Standard AS 4373/2007.
- To provide safe access to both pedestrians and vehicles.

- To ensure safe visibility to both pedestrians and vehicles.
- To ensure that suitable clearances are maintained under Powercor services and aesthetics of the tree, street and surrounding area.
- To ensure healthy tree growth by the use of skilled tree surgery methods and formative pruning to repair physical damage and maintain shape.
- To avoid pollarding trees in streets.
- To avoid intrusion of roots and branches onto public and private property.

2.12. Root Pruning

Root pruning is generally to be discouraged as the long term results cannot be fully known. This section applies only to Council owned and controlled trees.

2.13. Root Intrusion onto Private Property

Council will take all reasonable action which resources will permit to prevent roots from street trees from causing damage to Council assets and private property. Council will ensure that it is kept up to date with current trends in the development of root barriers and their installation.

2.14. Tree Roots Affecting Private Sewers or Drains

In the event of tree roots entering a sewer service line or storm water drain claims for compensation or removal of a tree due to roots in the sewer drain will be assessed on an individual basis by Council's risk officer in consultation with the Council Infrastructure Services branch.

2.15. Electric Lines

Energy Safe Victoria is responsible for ensuring electrical safety. The office produces the Electricity Safety (Electric Line Clearance) Regulations 2015 with which Council is obliged to comply with.

2.15.1. Electricity Safety (Electric Line Clearance) Regulations 2015

The cost for general tree removal under these Guidelines will be borne by Council through the budget. Tree removals to facilitate Council infrastructure upgrade or repair shall be borne by Council through the budget of that infrastructure project. Tree removals to facilitate private works shall be borne by the person carrying out those private works.

Council believes that safe and reliable supply of electricity to the community is a vital service. Whilst agreeing with the necessity for safety and continuity of supply, Council believes the allocation of resources by power companies to relocating power lines underground should reflect the value of the Council's tree assets to the community. Council shall encourage underground power where ever possible.

2.15.2. Declared Areas

The Council is responsible under the Regulations for Electric Line Clearance for Declared Areas within the municipality. For further information, refer to the Electricity Safety (Electric Line Clearance) Regulations 2015 and Councils Electric Line Clearance Management Plan. Council shall carry out works in accordance with these provisions as required.

2.15.3. Plans of Action for Non-Compliant Trees

For further information, refer to the Electricity Safety (Electric Line Clearance) Regulations 2015 and Councils Electric Line Clearance Management Plan.

2.15.4. Electricity Distribution Company

Powercor Australia maintains the electricity supply network within the City.

2.15.5. Underground Electric Lines

Underground electric lines are Council's preferred method of supplying the community with electricity. Council strongly encourages electricity supply companies, telecommunication companies and other related bodies to replace overhead cables with underground cables.

2.15.6. Aerial Bundled Conductors (ABC)

Council encourages electricity supply companies to replace bare conductors with ABC where under grounding is not being considered. Installation of ABC and relocation of electric lines significantly reduces the need for intervention in the growth of Council's trees.

2.16. Tree Preservation

2.16.1. Indigenous/Remnant Vegetation

Where indigenous / remnant vegetation exists on road reserves, efforts should be made to preserve and maintain it, however safety must be the overriding factor in management of such areas.

2.16.2. Heritage Trees Precinct/Significant Trees

The Warrnambool Planning Scheme includes a Heritage Overlay Schedule, Heritage Trees Precinct 7.

The objectives of Heritage Trees Precinct are:

- To conserve and enhance significant trees, and rows of trees which are of aesthetic, historic or cultural value.
- To discourage the erection of advertising signs and other similar devices that will detract from the character of the area; and
- To protect and enhance the character and appearance which generally consists of rows of mature Norfolk Island pine trees".

By including the street trees within Heritage Overlay Schedules and Planning Scheme, this provides clear information to service authorities and other contractors regarding the heritage status of these important trees, requires a planning permit to be obtained to destroy, prune or lop the trees.

Council Officers taking into account the following criteria, may deem a street or roadside tree as significant if the tree –

1. Has significant cultural value (eg. trees in an Avenue of Honour), or
2. Has significant historical value (eg. planted by a dignitary), or
3. Is an indigenous species, or
4. Has significant value to the community through its contribution to the streetscape, or
5. Is an outstanding specimen of its species as a result of its size or another growth
6. characteristic, or
7. Is an endangered species, or
8. Is a habitat tree for an endangered species.

2.16.3. Street Tree Management

Renewal programs and streetscape works will take steps to protect the health of proposed and existing trees to ensure their health is protected, particularly in car parking areas.

Council and its various communities have the opportunity to make a real statement with the careful selection and planting of trees within its streetscapes. The character of an area can be enhanced for residents and visitors alike providing a visually pleasing and lasting impression for all to experience.

Community consultation will ensure that the individual characteristics and requirements of an area are maintained and enhanced whilst at the same time meeting Council's objectives to produce streetscapes that provide a lasting impression for residents and visitors alike, and meet Councils risk management requirements.

Council has a dedicated "tree team" made up of qualified and experienced staff, who provide advice and make decisions and recommendations, in relation to street tree planting and management within the City.

2.17. Tree Planting

2.17.1. Street Tree Planting

Many streets and parklands contain fewer trees than they have capacity for or is desired by the community. Street, parkland and roadside tree planting will be undertaken in a programmed and sustainable manner. This approach is sound both environmentally and economically. It is essential to pre-plan what tree stock will be needed to be assured of obtaining the right species and quality at the right time of year.

In some cases, as requested by Council, a landscape plan will be requested for street tree plantings in high profile areas such as the CBD, and other broad acre areas at Council's discretion. The landscape plan must be prepared by a suitably qualified practitioner and must be sufficiently detailed to show the tree species, method of planting and staking, the rationale behind why the particular species has been selected and any associated urban design treatments required to maintain and manage the trees. Plantings in these instances must not proceed until the landscape plan has been approved by Councils Infrastructure services branch.

The right mix of species and age diversity are vital components of a sustainable tree population. A generally accepted rule for achieving this is for particular genera to not make up any more than ten percent of the whole tree population. The age of tree should also be spread evenly between young and old trees to lessen the impact of, or need, to remove whole blocks of trees.

Prior to the commencement of planting, the stock must be inspected and approved by Council's Parks, Gardens and Environment staff.

When selecting species for street, parkland and roadside tree planting the following decision making framework will be applied:

- Preferred Landscape Character;
- Nature strip width and road reserve requirements;
- Existing services and surrounding infrastructure
- Adopted master plans, strategies and development plans;
- The significance of previous history of tree planting;
- Drought tolerance/low water usage;
- Longevity;
- Growth habit, size and structural integrity;
- Tolerance to harsh urban environments;
- Soil type and structure;
- Root growth characteristics and tolerances;
- Pruning requirements;
- Amount and type of debris shed;
- Pest and disease susceptibility;
- Habitat value;
- Optimum time of year for planting specified species.
- Net community benefit

New tree planting should reinforce the existing character of areas.

The tree planting in Warrnambool has a long history. Some of our street trees are over 100 years old.

Council must be consulted and give approval for any tree planting within streets, parklands and roadsides it manages as Council will ultimately become responsible for the management and maintenance of the planting.

Only high quality tree stock will be used and planted correctly as substandard trees or planting can increase maintenance costs significantly and conversely quality stock and planting technique dramatically increases establishment rates, reduces future costs and increases the community's appreciation of trees.

Large growing trees provide the maximum environmental benefits and create the greatest visual impact. The ability to maintain or establish large growing species is becoming limited on both private and public land. The protection of existing large trees and utilising or creating appropriate spaces to plant new large growing trees will be a priority.

Tree planting by developers in land that will become the responsibility of Council must be done in consultation with and to the satisfaction of Council to ensure compliance with the principles listed in this Guidelines.

Council prefers to collect the prescribed sum from developers or individuals as set out in the annual fees and charges register, and plant and maintain the tree.

2.17.2. Customer Planting Requests

Individual trees requested by customers shall be assessed on a case by case basis.

Requests for block or whole street planting shall be considered as part of the overall street tree-planting program dependent on allocation of funding.

2.17.3. Consultation

The establishment or maintenance of an avenue of trees or a consistent planting theme can sometimes require Council to plant a tree in a nature strip against the wishes of the customer immediately adjacent. This is a difficult situation that calls for Council staff to make a judgment regarding the wishes of the wider community over the individual resident. When making such a decision, it should be borne in mind that a major factor in the survival of a newly planted street tree is the cooperation of the nearest resident.

In streetscapes, trees may be planted to fill gaps despite opposition from adjacent residents.

In all other instances, the relevant Council officer overseeing the project shall make a decision regarding planting in consultation with Infrastructure Services.

Prior to significant tree planting taking place (or removal), consultation shall take place with residents and affected landowners, in accordance with Councils Communication and Consultation Guidelines.

2.17.4. Unauthorised Nature Strip Planting

Unauthorised planting of street trees/garden beds by residents shall be discouraged and potentially removed and costs associated may be charged to the landowner. Recently planted trees may be allowed to remain provided they are of a suitable species

which is compatible with the surrounding streetscape, good quality specimens, in a suitable location, planted to Council standards.

2.18. Unsuitable Street Trees and Shrubs

Tree species that have a large canopy or a vigorous root system should be thoroughly examined prior to recommending in all future plantings.

Street trees can be of a suitable species, but some have been planted in an inappropriate location eg. narrow footpath or under Powerlines.

Other streets also have been planted with a mixture of species; age & shape do not tend to provide an attractive or unified streetscape. A street tree removal program should be in place to gradually

remove unsuitable species replacing them with more appropriate plantings that tend to be uniform and also to reduce long term maintenance costs.

Before planting any street trees research must be conducted to ensure the most suitable tree is planted in the most suitable location in accordance with the list of suitable species for street tree planting.

2.19. Inspection Process

Inspection processes are required for competent management of all trees on land owned by Council or under Council's control. Ongoing inspections will be conducted covering defects, risk and condition, and action plans prepared on an annual basis.

2.19.1. Defect Inspections

Determine if the asset has any immediate hazard or defects that are likely to create a danger or serious inconvenience to users of the areas or the wider community.

2.19.2. Condition Inspections

Identify deficiencies in the structural integrity of assets which if untreated, is likely to affect the life of the asset. Inspection takes into account but not limited to the trees current health, significance, stability, of the tree, vigour of the tree.

Safety issues may be detected either as the result of the defect inspection or by observation followed by notification to council by members of the community or council employees while undertaking their normal work duties. A subsequent safety inspection may then be conducted by an appropriate Council officer.

2.19.3. Ad Hoc Reactive / Safety Inspections

Identify defects outside the tolerable level and likely to create danger or serious inconvenience to users of the network or the wider community.

They are ad hoc by nature and may be undertaken following notification to council by members of the community through the Customer Request System or by council employees while undertaking their normal work duties. These notifications are of defects and safety deficiencies with any subsequent inspection conducted by an appropriate Council officer.

2.19.4. Incident Inspections

An incident report should to be prepared for use in potential legal proceedings and the gathering of information for the analysis of the causes of accidents relating to trees.

2.19.5. Risk Assessment and Prioritisation Remedial Works

The assessment of the level of safety risk associated with a defect outside the level that is considered 'tolerable' enables remedial work to be programmed on a risk prioritisation basis.

3. GUIDELINES REVIEW

As with all policies, there is a need for periodic review. Factors which must be considered include:

- 4.1.1 Tree plantings and the selected roads will be developed based on the road hierarchy in the Road Management Plan to achieve plantings in areas with a lack of trees, high profile areas, where trees have been removed and not replanted.
 - 4.1.2 An analysis of available and suitable street tree species has been developed and a "Recommended Street Tree Species" developed and reviewed regularly. Appropriate street trees are to be selected from that list (APPENDIX B).
 - 4.1.3 No more than two different species to be used in any one street or specific and definable sections of the street.
 - 4.1.4 All trees that become the management responsibility of Council be planted in conformance with Councils Standard drawings for tree planting (APPENDIX A).
 - 4.1.5 The species selected for planting should have as large a mature size as possible within the constraints of the site to create a definite visual impact on the site and provide for the necessary physical clearances.
 - 4.1.6 All new development sites incorporate new tree planting within the adjoining street frontages and any open space areas where appropriate to the approval of Council. The provision of trees, planting and establishment for a minimum period of two years at the developers cost or by an alternative arrangement to the satisfaction of Council.
 - 4.1.7 Any trees or shrubs planted without Council permission and not in conformance with this strategy may be removed by Council.
- All tree planting within a Vic Roads controlled road to be undertaken after consultation with Vic Roads and as far as is practicable comply with their planting procedures and the Road Management Act 2004.
 - Electric line clearance 2015 regulations.

4. AIMS AND ACTIONS

4.1. Delegated Authority

Manager Infrastructure Services has the delegated authority to remove any street, roadside or parkland tree:

- Assessed as being an "immediate risk";
- Assessed as being "Dead" or in "Poor" health and/or structure;
- Where its removal is essential for the construction of an approved development.
- Not in conformance with the preferred species for that street, or
- Recommended for removal in an adopted master plan or development plan.

4.2. Removal Consideration

Council will not remove a tree or undertake any formal removal consideration process based purely on the following reasons:

- Falling leaves, bark, twigs, fruit or flowers;
- Failure to establish grass under the tree;
- Obscuring vistas;
- Perceived aesthetic concerns; and
- Perceived allergies.

4.3. Cost of Removal

The cost of removal and replacement of street, roadside and parkland trees to facilitate private development works including driveways and service connections, is to be at the cost of the requestor unless otherwise determined by Council's Infrastructure Services Branch.

4.4. Revised Burnley Method

The recognised "Revised Burnley Method" (Moore) method for determining the monetary value of amenity trees be adopted and used as required to determine an appropriate level of compensation for trees removed illegally for developments or poisoned.

4.5. Removal of Trees on Council Owned/Managed Land

No person is allowed to remove any tree on land owned or managed by council without written permission from Council. Council will take enforcement proceedings including potential fines through the relevant Local Laws. The contractor or person performing the work must also be approved in writing. Tree removal on Council land is only to be done by people with appropriate qualifications, experience and insurances.

5. GOVERNANCE

5.1. Owner

The Director City Infrastructure is responsible for monitoring the currency and viability of this policy and updating it when required.

5.2. Review

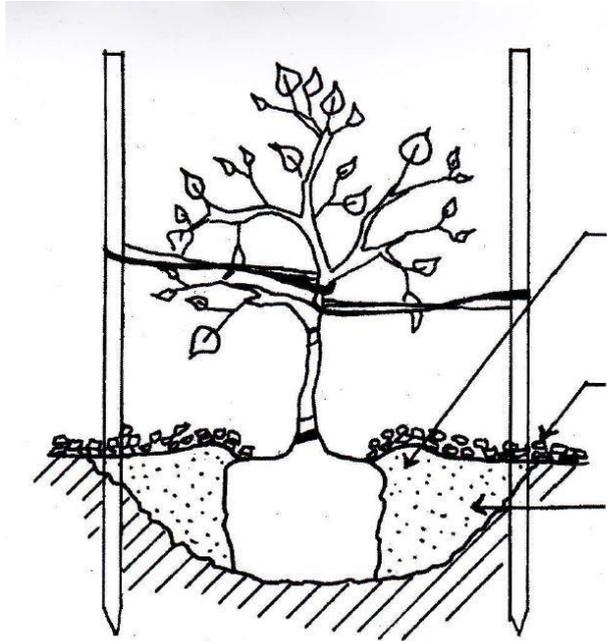
The Director City Infrastructure will review the document for any necessary amendments no later than three (3) years after its formulation or after the last review.

5.3. Charter of Human Rights Compliance

It is considered that this policy does not impact negatively on any rights identified in the Charter of Human Rights Act (2007).

Warrnambool City Council is committed to consultation and cooperation between management and employees. The Council will formally involve elected employee health and safety representatives in any workplace change that may affect the health and safety of any of its employees.

APPENDIX A - RECOMMENDED TREE PLANTING DETAIL



- Excavate a sloping, shallow planting hole, 2 to 3 times the width of root the root ball
- Leave a space between mulch and trunk
- 75 mm high berm to form a watering basin
- Top of the root ball flush with finished level of the planting hole
- 75 mm depth mulch, beyond the edge of the hole, overlapping undisturbed soil
- Backfill with site soil, firming progressively
- Depth of planting hole no deeper than the height of the root ball

RECOMMENDED TREE PLANTING DETAIL

APPENDIX B - RECOMMENDED STREET TREE SPECIES LIST

Note: Other Species may be considered subject to Council approval.

Acacia melanoxylon (*Blackwood*)

Acacia melanoxylon is a tree up to 20 m high, with a bole of about 150 cm in diameter. The pale yellow, cream or whitish coloured flowers are fluffy in appearance. Flowering can occur throughout the year.

Acmena smithii (*Lilly Pilly*)

Acmena smithii is a small too tall tree that grows up to 15 metres in height. Fragrant flowers are produced in spring and grow best in full sun to light shade.

Agonis flexuosa (*Willow Myrtle*)

Agonis flexuosa is a species of tree that grows in the south west of Western Australia. They are commonly grown in parks and on road verges. *Agonis flexuosa* occurs mainly as a small and bushy tree, usually less than 10 metres tall, it flowers between August and December.

Angophora costata (*Smooth Bark Apple*)

Smooth Bark Apple is a common woodland and forest tree of Eastern Australia. It grows primarily on sandstone soils, usually on headlands, plateaus or other elevated areas. Smooth Bark Apple is a large, wide, spreading tree, usually seen of a height between 15 and 25 metres.

Allocasaurina verticillata (*Drooping She Oak*)

Allocasuarina verticillata is a tree up to 10 metres tall with pendulous foliage. It grows on a wide range of habitats extending from coastal headlands and plains to rocky outcrops on inland ranges.

Araucaria heterophylla (*Norfolk Island Pine*)

Norfolk Island Pine is a distinctive conifer; it grows to a height of 50–65 metres, with straight vertical trunks and symmetrical branches. They are an integral part of beachfront landscapes as well as esplanade plantings; these trees can be used in parks and streetscapes.

Banksia ericifolia (*Heath Banksia*)

Banksia ericifolia, the Heath Banksia, is a species of woody shrub of the Proteaceae family native to Australia. It's a medium to large shrub that can reach 6 metres high and wide, usually flowering occurs in autumn or winter.

Banksia integrifolia (*Coastal Banksia*)

Banksia integrifolia, commonly known as Coastal Banksia, is a species of tree that grows along the east coast of Australia. It is highly variable in form, but is most often encountered as a tree up to 25 metres in height; it's a popular choice for parks and streetscapes.

Banksia marginata (*Silver Banksia*)

Banksia marginata, commonly known as the Silver Banksia, is a species of tree or woody shrub in the plant genus *Banksia* found throughout much of southeastern Australia. *Banksia marginata* usually range from a small shrub around 1 metre tall to a 12-20 metre high tree.

Banksia praemorsa (*Cut Leaf-banksia*) The Cut-leaf Banksia (*Banksia praemorsa*) is a species of shrub or tree in the plant genus *Banksia* growing to 4m tall. Leaves are broad with toothed margins. Win red cylindrical flower spikes up to 300mm long and 100mm wide in Spring and Summer.

Betula pendula (*Silver Birch*)

Betula pendula is a widespread European birch; it is a medium-sized deciduous tree, typically reaching 15–25 metres tall. Silver birch is often planted in parks and gardens, grown for its white bark and gracefully drooping shoots.

Callistemon Citrinus (*Crimson Bottlebrush*)

Callistemon citrinus, also known as Crimson Bottlebrush are found wild only on the Australian continent and is a very hardy plant accepting of wet conditions and preferring an open sunny position. It grows between 1-3 metres in height with flowers appearing in late spring to early summer.

Callistemon 'Kings Park Special' (*Kings Park Special*)

Kings Park Special are wonderful plants for the garden. They are long-lived, require little maintenance; they make good screens, hedges, feature plants and street trees is a tall-growing bottlebrush to around 5 metres high.

Callistemon pallidus (*Lemon Bottlebrush*)

The Callistemon pallidus is an upright, hardy shrub growing to 3 metres high by 2 metres wide with slender spreading branches. This plant will grow in moist soils in full-sun or part-shade.

Callistemon salignus (*Willow Bottlebrush*)

Callistemon salignus, commonly known as Willow Bottlebrush, the species usually grows to between 4 and 10 metres in height and has narrow foliage. The bottlebrush flower-spikes appear during spring, they are generally creamy white to yellow.

Callistemon viminalis (*Weeping Bottlebrush*)

Callistemon viminalis, also known as the Weeping Bottlebrush, is a shrub or small tree in the family Myrtaceae. Weeping Bottlebrushes are native in New South Wales and Queensland where they often occur along watercourses which grow quite quickly up to 8 metres in height.

Corymbia eximia (*Yellow Bloodwood*)

Corymbia eximia, commonly known as the Yellow Bloodwood, grows as an attractive gnarled tree, up to 20 metres in height. The cream flower heads grow in panicles in groups of seven and appear in spring.

Corymbia ficifolia (*Red Flowering Gum*)

Corymbia ficifolia or the red flowering gum is one of the most commonly planted ornamental trees in the broader eucalyptus family. It is an ideal street tree as it is hardy, moderately fast growing, to a height of anything between 2-8metres, and rarely grows large enough to require pruning.

Corymbia maculata (*Spotted Gum*)

Spotted Gum is a tall tree with a straight trunk, growing up to 45 metres in height (sometimes taller). Spotted Gum has smooth powdery bark which is white, grey or pink; often with characteristic patches.

Elaeocarpus reticulatus (*Blueberry Ash*)

Elaeocarpus reticulatus, the Blueberry Ash, is a large shrub or tree which can grow to a height of 15 metres. This is a hardy plant, and grows natively in eastern Australia under many conditions such as gullies, droughts and sandy coastal scrubs.

Eremophila santalina

Large shrub up to 4m. White flowers late Winter and Spring

Eucalyptus forresiana (*Fuchsia Gum*)

Eucalyptus forrestiana, commonly known as Fuchsia Gum, Forrest's Mallee or Forrest's Marlock, is a small tree which occurs in an area near Esperance in Western Australia. It is a Mallee Eucalyptus with smooth bark and grows to between 1.5 and to 6 metres in height. It has bright red buds and yellow flowers which appear between summer and winter.

Eucalyptus leucoxylon 'rosea' (Yellow Gum)

Eucalyptus leucoxylon grows approximately 30 metres in height and is known to be found from southern NSW through Victoria into most of South Australia. They're very useful for most locations including streetscapes and parks.

Eucalyptus pulchella (White Peppermint)

Eucalyptus pulchella is a medium to large evergreen tree reaching a height of 1-20 metres. Small white flowers are produced from June to October.

Eucalyptus sideroxylon 'Rosea' (Red Ironbark)

Red Ironbark is a highly valuable tree because of its adaptation to many sites, strong wood and ability to grow well in smog. It originates in Queensland, grows through NSW and into the north-eastern areas of Victoria. 'Rosea' Red Ironbark is a seed selection that is red flowering. Typically will grow to 20m

Eucalyptus viminalis Cygnetensis (Manna Gum)

Eucalyptus viminalis, Manna Gum, also known as White Gum, Ribbon Gum or Viminalis is an Australian eucalypt. It is a straight erect tree, often around 40 metres tall, with rough bark on the trunk and base of larger branches, its upper bark peels away in long "ribbons" which can collect on the branches and surrounding ground. It's widely distributed in the cooler areas of Australia where the leaves are the favoured food of Koalas.

Eucalyptus willisii West Coast (West Coast Shining Peppermint)

Evergreen tree. Common name Shining Peppermint with a height of 15m and a spread of 10m

Ficus macrophylla (Moreton Bay Fig)

Ficus macrophylla, commonly known as the Moreton Bay Fig, is a large evergreen banyan tree of the Moraceae family that is a native of most of the eastern coast of Australia. Individuals may reach 60 metres in height.

Ficus platypoda (Rock Fig)

Ficus platypoda, commonly known as the desert fig or rock fig, is a fig that is endemic to central and northern Australia, and Indonesia. Ficus platypoda is known for its growth in rocky, dry, exposed areas and normally grows to 8 metres tall.

Ficus rubiginosa (Port Jackson Fig)

Ficus rubiginosa is a species of flowering plant in the family Moraceae. Ficus rubiginosa forms a spreading densely shading tree when mature, and may reach 30 metres in height.

Flindersia australis (Australian Teak)

Flindersia australis is a rainforest tree from New South Wales and Queensland that grows up to 40 metres high. It is an evergreen tree that is very hardy and ideal as a shade tree for uses such as a street tree, wind break or simply used as a feature specimen.

Fraxinus 'Raywood' (Claret Ash)

The Claret Ash or Raywood Ash is a cultivar of ash tree, a seedling variant of the Caucasian Ash. The tree grows to around 15-20 metres and has dark green leaves that turn to a dark claret red in the autumn.

Glochidion ferdinandi (Cheese Tree)

Glochidion ferdinandi is native to eastern Australia, where it grows in rainforests and wetter forests. It grows as a woody shrub or small tree to 8 metres, although occasionally reaching 30 metres, with flaky brownish-

grey bark; the species may be partly deciduous in winter. Flowering may occur at any time of year; the cheese tree grows in both clay and sandy soils.

Grevillea Banksii (*Banks Grevillea*)

Grevillea Banksii is a popular garden plant; it's a tall, slender or spreading shrub, or small tree up to 7 metres high. It grows on headlands, ridges and forests that flowers for most of the year, however mainly in winter and spring.

Grevillea 'Honey Gem' (*Honey Gem Grevillea*)

Honey Gem is a tall, quick growing plant between 3-5 metres with golden yellow flowers that are extremely bird attracting

Grevillea 'Misty Pink' (*Misty Pink Grevillea*)

Grevillea Misty Pink is native to Queensland; it grows to about 3 metres in height. This cultivar is quick growing and performs best in warmer climates.

Hakea laurina (*Pincushion Hakea*)

Hakea laurina is a plant of Southwest Australia that is widely cultivated and admired. The habit of this plant is an upright shrub or tree, reaching a height between 2.5 and 6 metres.

Hymenosporum flavum (*Native Frangipani*)

The native Frangipani is a rainforest tree hailing from more tropical forests of the east coast, it has been well utilised in gardens and landscapes in the west. Native Frangipani is widely cultivated and usually grows to around 8 metres in height, although it can grow to over 20 metres tall in the rainforest.

Koelreuteria bipinnata (*Pride Of China*)

Koelreuteria bipinnata is a small to medium-sized deciduous tree that grows moderate to fast reaching a height between 10–20 metres tall. They bloom in the summer and can tolerate wind, air pollution, salt, heat, and drought.

Koelreuteria paniculata (*Golden Rain Tree*)

Koelreuteria paniculata is a species of flowering plant in the family Sapindaceae, It is a small to medium-sized deciduous tree growing to 7 metres tall. Several cultivars have been selected for garden planting, flowers in late summer.

Lagerstroemia indica x L. fauriei 'Acoma' (*Crepe Myrtle*)

Lagerstroemia grow to 3 metres tall and are a tough, powdery mildew resistant cultivar, though excellent as a specimen for small gardens or for growing in containers.

Lophostemon confertus (*Brushbox*)

Lophostemon confertus is a tree native to Australia, though it can be found elsewhere and is commonly found as a street tree in Sydney and Melbourne. It has high tolerance for smog, drought and poor drainage. It also has denser foliage and hence provides more shade than eucalypts; it can reach heights of 40 metres or more.

Magnolia grandiflora Greenback (*Magnolia*)

Magnolia grandiflora Greenback reaches a height of 27.5 metres; it is a large striking evergreen tree with timber that is hard and heavy, and has been used commercially to make furniture, pallets, and veneer.

Melaleuca lanceolata (*Moonah*)

Melaleuca lanceolata is a small tree or shrub in the genus Melaleuca, native to Australia. The species grows up to 10 metres in height and has rough bark. Leaves are linear to narrow elliptic, 5-15mm long and 1-3mm wide with and arranged alternately on the stem. The white or cream flower spikes are 2–4 cm in length and appear mainly in the summer, but may also appear randomly through the year.

Parrotia persica (*Persian Witch Hazel*)

Parrotia persica grows to 30 metres tall and 8–15 metres broad. The flowers are somewhat similar to witch-hazel flowers but dark red; they are likewise produced in late winter on bare stems.

Phoenix canariensis (*Canary Island Date Palm*)

Phoenix canariensis is a palm tree native and endemic to the Canary Islands. It is very hardy and can establish in a variety of soil conditions. Phoenix canariensis is a large, stately palm but is very slow-growing and will take a considerable amount of time to reach its 15 to 18 metre height.

Pistacia chinensis (*Chinese Pistachio*)

Pistacia chinensis is a small to medium-sized tree in the genus Pistacia in the cashew family. Very horticultural, because it's drought tolerant and can survive harsh environments, it is a popular choice for street tree in urban settings and grows up to 20 metres.

Platanus orientalis (*Oriental Plane Tree*)

Platanus orientalis, or oriental plane, is a large, deciduous tree, growing to 30 metres or more, and known for its longevity and spreading crown. It is quite capable of survival and success in dry soils once it is established.

Prunus cerasifera 'Nigra' (*Purple Leaved Cherry Plum*)

Prunus cerasifera is an excellent urban tree, its hardy and adaptable mature makes it an ideal garden, screening and street tree. Its growth rate is moderate reaching its height rate of 6metres tall.

Prunus x blireana (*Purple Leafed Plum*)

Prunus x blireana is a deciduous tree growing in Australia with a height of around 5 metres tall. It has slender, arching branches and flowering time is from mid-August to mid-September.

Pyrus sp(*Named variety Pear*)

Pyrus are well-known medium-sized trees which grow in many landscapes including parks, streetscapes and large gardens.

Quercus Acutissima (*Sawtooth Oak*)

Quercus Acutissima, a section of the genus characterised by shoot buds surrounded by soft bristles, bristle-tipped leaf lobes, and acorns that mature in about 18 months. It is a medium-sized deciduous tree growing to 25–30 metres tall.

Quercus Canariensis (*Algerian Oak*)

Quercus canariensis is a slow growing medium-large sized deciduous to semi-evergreen tree. They grow to 20-30 metres tall which grow well in semi-shade and direct sunlight.

Quercus palustris (*Pin Oak*)

Quercus palustris, the Pin oak is native to North America, mainly in the eastern United States. The Pin Oak is also well adapted to life in Australia and is a medium-sized deciduous tree growing to 18-22 metres tall.

Quercus rubra (*Red Oak*)

Quercus rubra commonly called northern red oak; this deciduous tree grows straight and tall, to 28 metres, exceptionally to 43 metres tall. It grows rapidly and is tolerant of many soils and varied situations.

Syzygium luehmannii (*Small-leafed Lilly Pilly*)

Syzygium luehmannii is a medium sized coastal rainforest tree native to Australia. *Syzygium luehmannii* reach 30 metres in height. A popular tree in cultivation, it has a dense crown and produces beautiful flushes of new growth and small red fruits.

Tristaniopsis laurina (*Water Gum*)

Tristaniopsis laurina, the Water Gum is a tree native to Australia, where it usually grows near the eastern coastline. *Tristaniopsis laurina* has a slow rate of growth, and usually reaches 4.6–9.1 metres tall.

Ulmus glabra Lutescens (*Golden Elm*)

The Golden Elm is a medium-sized, fast-growing deciduous tree that reaches a height of approximately 15 metres with a spread of about 20 metres. They are sensational large golden yellow tree ideal for streets, large gardens and parks.

Ulmus × hollandica (*Dutch Elm*)

Ulmus × hollandica, often known simply as Dutch Elm, is a natural hybrid between Golden Elm *Ulmus glabra* and Field Elm *Ulmus minor* which commonly occurs across Europe wherever the ranges of the two parent species overlap. They grow to a height of 40 metres.

Zelkova serrata (*Zelkova*)

Zelkova serrata is a medium sized deciduous tree usually growing to 30 meters tall. The tree grows rapidly when young though the growth rate slows to medium upon middle age and maturity. *Zelkova serrata* develops monoecious flowers in spring with the leaves.

References:

- Warrnambool Local Plant Guide.
- Plants of the Great South West Indigenous Plant Guide for Warrnambool.
- Botanica's Trees and Shrubs.
- Indigenous plants Moyne Shire.
- Environmental weeds of Warrnambool.