



# URBAN FOREST STRATEGY

**Discussion Paper July 2016**

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This discussion paper has been produced by Urban Forest Consulting in conjunction with staff from City of Greater Shepparton.

Urban Forest Consulting provides strategic and technical urban forest advice helping to green cities across Australia.

## Introduction

The City of Greater Shepparton has a rich history of economic pursuits from being an early railway town to a thriving agricultural and manufacturing hub. Shepparton also has a rich multicultural history stemming from the movements of the traditional owners, the Yorta Yorta tribe, to a post-war immigration influx to the present day multicultural community. Shepparton is home to people from a broad range of countries such as Iraq, Albania and the Congo. Unfortunately, the manufacturing industry slow-down and fluctuating agricultural commodity prices has meant that Greater Shepparton has suffered various economic issues and this has had ongoing social consequences.

Shepparton's issues are not uncommon for regional Victoria, however, nor are the great wealth of opportunities. Regional Victorian cities harbour a strong sense of pride, of opportunity to make things better and Shepparton is no exception to this. Active community groups such as Making Shepparton Greater and the Committee for Greater Shepparton are helping Council to shape a brighter future for the region.

Greater Shepparton has a vast array of natural assets, including the Goulburn River and surrounding orchards and farms. These natural assets are a key reason why people come to live in Shepparton. Shepparton's urban forest is another valuable natural asset, one that isn't quite so well known. The urban forest is the sum of all urban trees: those in streets, parks and reserves, backyards and private gardens as well as those in other major landholdings e.g. carparks, dis-used industrial land, along railway lines. The City of Greater Shepparton manages around 37,000 urban street and park trees all of which contribute to the overall liveability, character and amenity of the City.

In order to help Shepparton become a greater place to live, there is a significant opportunity to realise the benefits these urban trees provide and manage the population accordingly. This means making our streetscapes greener and shadier, creating a unique character and sense of place by looking after our existing trees and planting healthy, long lived trees in those places where they are needed most. The CBD provides ample opportunity to improve the amenity of our streets making them more welcoming for people and to reflect Shepparton's role as a leading agricultural hub. All successful agricultural gateway cities and towns across Australia showcase tree lined boulevards, avenues of street trees, parks and gardens.

With this in mind, a clear opportunity exists for Greater Shepparton to think and plan more strategically for its natural assets in our urban areas i.e. our street and park trees. How can we improve and rejuvenate our CBD with trees? Where are the streets and suburbs most in need of natural shade, of improved amenity and attractiveness? Where are the places most in need of neighbourhood character, better streets for people to walk down, to get outside and feel connected to their community? Where are the places in need of urban renewal?

The development of Council's first Urban Forest Strategy will help us to identify the answers to these questions by setting a greener vision for Greater Shepparton, identifying the greatest opportunities and outlining a clear strategic framework to make better decisions regarding the future liveability of the City.

## What is an Urban Forest and why is it important?

Shepparton's Urban Forest is the sum of all urban vegetation. It is the Council owned street and park trees, it is the plants and trees in back and front yards, it is the vegetation along urban waterways, in reserves and on other major landholder's land.

The urban forest provides many benefits to people and the environment. Those of importance to Shepparton are:

### **Economic Values**

The urban forest:

- Improves commercial vitality: shoppers spend longer and more money in shopping areas that are well treed and landscaped. Tree can improve retail activity by up to 20%.
- increases house prices in Brisbane and Perth through the provision of healthy and well maintained street trees
- reduces energy use in buildings: A 10% increase in deciduous tree cover can reduce heating and cooling costs in houses by 5-10%
- greatly improves the brand and liveability of the City, especially along gateway roads into a town or City
- can provide a return on capital of up to five times e.g. New York's street trees
- is one of the most cost effective and efficient public assets for adapting urban areas to climate change through provision of shade, evapotranspiration and stormwater interception





## Health and Wellbeing

The urban forest:

- provides natural shade and shelter for pedestrians and cyclists: Shade trees reduce daytime temperatures between 5 – 20C
- Improves the desirability of a neighbourhood and encourage people to spend time outdoors and interact with their community, particularly in areas of socio-economic disadvantage
- improves amenity and aesthetic of public open space, particularly playgrounds, encouraging active play
- encourages motorists to drive more slowly through the provision of uniform, avenue like plantings along streets creating safer streets



## Environment

The urban forest:

- significantly reduces stormwater flows and improves stormwater quality
- Absorbs air pollution e.g. carbon dioxide and particulate matter (dust). Large healthy trees absorb 60-70 times more air pollution than smaller trees
- connects biodiverse locations by creating a green corridor
- Is one of the most effective mechanisms for reducing the Urban Heat Island Effect (i.e. the build-up of heat in hard surfaces during periods of hot weather)



Figure 1: The urban forest provides many benefits important to the overall wellbeing of the City of Greater Shepparton







## Greater Shepparton's Urban Forest

Greater Shepparton is home to around 37,000 public urban trees in streets, parks and reserves. Approximately 19,000 of these are in Shepparton, 6,000 are in Mooroopna, 4,000 in Tatura and 8,000 in other towns and locations. A recent tree audit, conducted by an independent qualified arborist surveyed around 24,000 of these trees to provide a clearer picture about the health and longevity of the population. Data collected included attributes such as species, age, structure, height.

### Species Diversity

Top 10 Tree Species		
Scientific Name	Common Name	% of Population
Pyrus Calleryana	Ornamental Pear	7%
Eucalyptus Camaldulensis	River Red Gum	6%
Melaleuca Styphelioides	Prickly Paperbark	5%
Callistemon Viminalis	Weeping Bottlebrush	4%
Lophostemon Confertus	Queensland Brushbox	4%
Corymbia Citriodora	Lemon-scented Gum	4%
Corymbia Maculata	Spotted Gum	4%
Melaleuca Linariifolia	Narrow leaved Paperbark	3%
Callistemon Salignus	White bottlebrush	3%
Platanus X Acerifolia	Plane Tree	3%

Figure 2: List of the top ten most common public urban tree species in Greater Shepparton

The most common species found in urban Greater Shepparton is the Ornamental Pear. This tree has been planted frequently across cities and towns in Victoria for its hardiness, resistance to extreme heat, as well as its beautiful autumnal colours. It is a small to medium sized tree that can be easily planted in many urban locations that are not appropriate for larger trees.

The second most populous tree is the River Red Gum, which is to be expected given the proximity of the urban areas to the Goulburn River and associated river flats, where River Red Gum is the dominant species. Many of these are in fact located in parkland as opposed to being street trees.

Eight of the top 10 species are native with only the River Red Gum endemic to the region. The two others, the Ornamental Pear and the Plane Tree are exotic deciduous species. Like the Ornamental Pear, the Plane Tree is a favoured urban tree due to its capacity to grow in harsh urban conditions.

Finally, any urban tree population should contain enough species diversity to minimise the risk of mass tree loss in the event of a fatal pest or disease attack. Best practice dictates that no one species should be more than 10% of the population and Greater Shepparton's tree population meets this benchmark.



## Tree Age

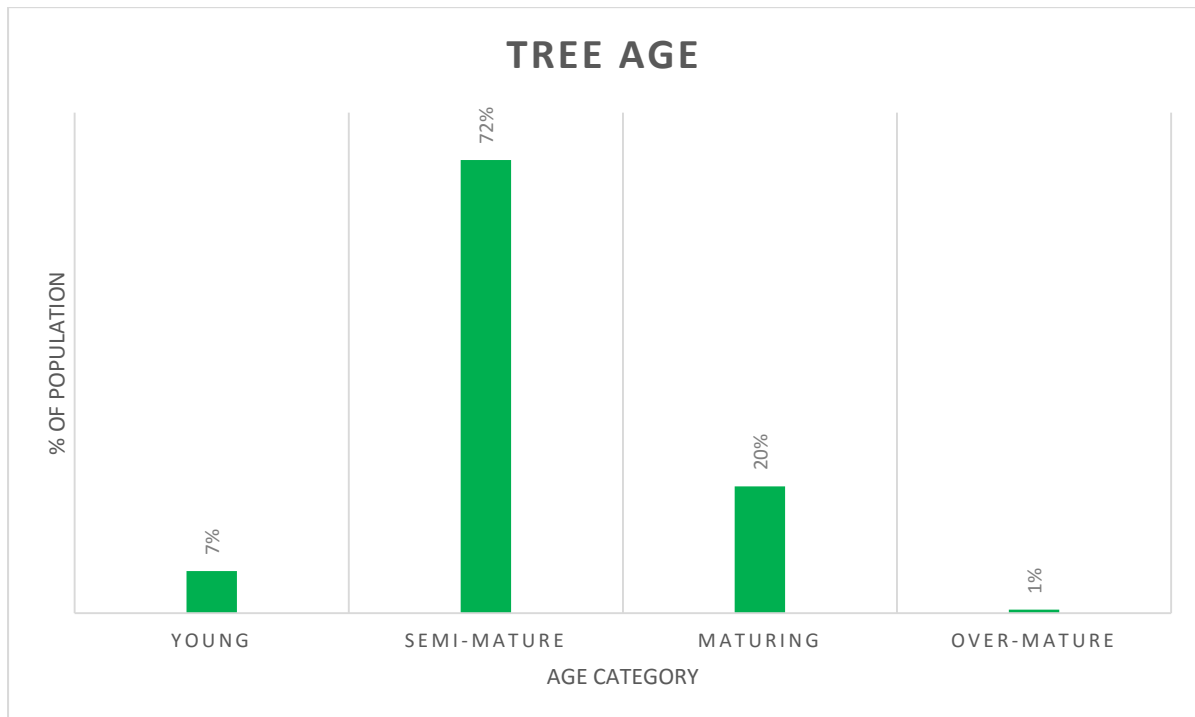


Figure 3: Age distribution of Greater Shepparton's urban tree population

Trees, like people have a limited life span and once they become over mature require close monitoring and maintenance before their eventual removal. Urban trees tend to have a smaller life span than those within a forest due to the adverse conditions in which they grow: smaller root growing space, conflict with overhead surfaces and people movement, lower levels of soil moisture and more pollution.

Like species diversity, it is good management practice to ensure that there is a good mix of young, semi mature and maturing trees within the tree population. This ensures that tree removal and tree renewal programs are more evenly spaced across the years.

The overly high representation of trees that are semi-mature, that is those that have almost reached their growing potential presents a possible future management concern. When all of those trees progress in decades to come to an over mature state and require removal, the impact on the landscape would be significant.

The best way to overcome this potential loss, is to conduct a consistent and progressive tree planting program over the two decades to ensure a better spread of age diversity.

## Useful Life Expectancy

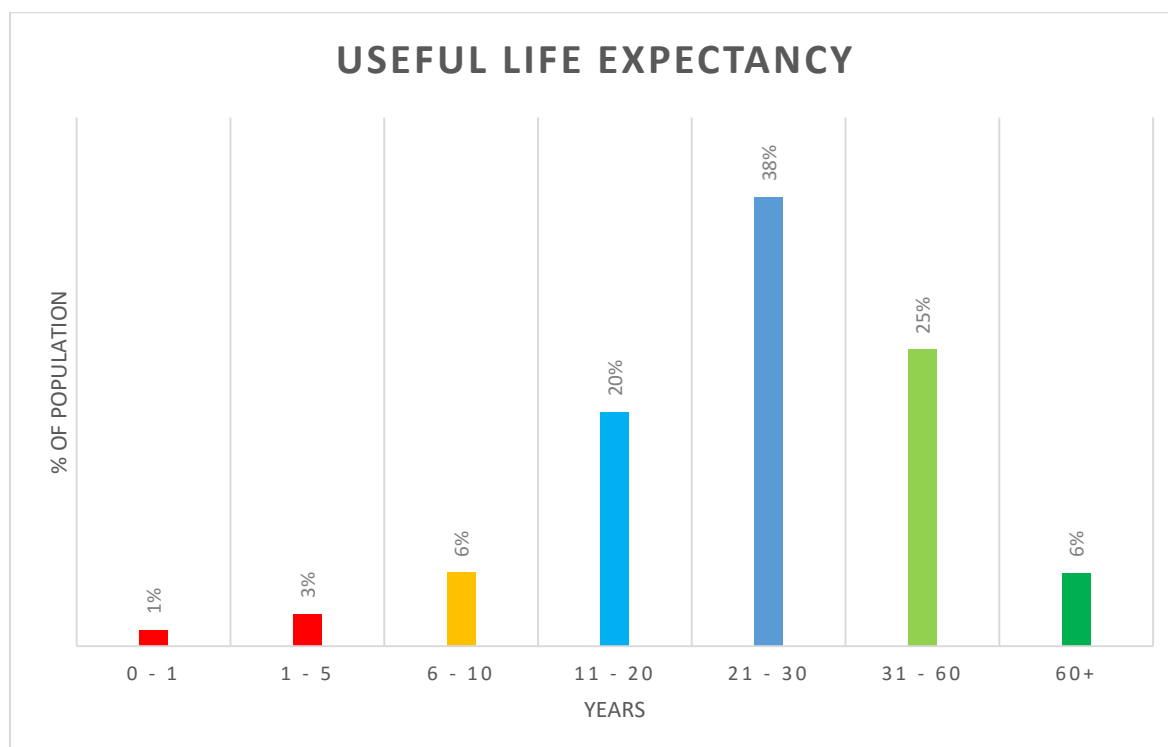


Figure 4: Useful life expectancy of Greater Shepparton's urban tree population

Useful life expectancy (ULE) is a measure of how long a tree will remain in the landscape before it is required to be removed. ULE considers a tree's age, its health, structure and appropriateness for its location and allocates a period of time in which it will continue to provide benefits to the landscape. ULE values can change over time depending on climatic conditions, in particular drought which can hasten a tree's useful life.

Like age and species, a healthy tree population should have a good spread of trees with different ULE's to ensure that there is no significant loss of the tree population in a condensed period of time.

Ideally, an urban tree population would look to be renewing 10% of its population every decade and the results of the Greater Shepparton tree audit show that this will be the case for the next two decades. However, after a thirty year time period a significant number of trees are going to require removal (around 70%).

A consistent and wide spread tree planting program over the next ten to twenty years will ensure a greater number of trees are within the 60+ ULE bracket.

## Tree Heights



Figure 5: Tree heights of the Greater Shepparton urban tree population

A tree below 5m in height is considered a small tree, between 10 and 20m is a medium tree and over 20 metres in height is a large tree. This doesn't consider tree canopy spread which can differ from species to species.

Interestingly, 80% of Greater Shepparton's urban tree population would be considered small and small to medium. Only 4% of tree population are large trees and 16% are medium. Given that large trees provide much greater environmental and health and wellbeing benefits, there is a clear opportunity to seek out appropriate locations to plant larger trees for the future.



## Issues and Opportunities for the Urban Forest

There a raft of potential issues and opportunities for setting both an Urban Forest vision for Greater Shepparton and a consequential management program. Some have been discussed below, however ongoing consultation is aiming to seek out more localised issues and opportunities presented by both the community and Council staff.

### Issues

1. Shepparton's CBD needs to be more liveable, more inviting for visitors, reflective of a prospering and innovative city.
2. There is great social inequity and disadvantage across the region. Need greater education and advocacy for greener streetscapes.
3. The current tree planting program only sees a net gain of approximately 200 advanced street and park trees each year. Council removes around 400 trees and plants around 600 advance trees per year.
4. Shepparton is currently made up of dispersed landscapes: not much shade, not enough footpaths to connect landscapes. A vision is needed to bring these all together.
5. Urban development is happening very fast and some of the resulting public realm landscapes delivered by the developers aren't of a high enough quality: not enough natural shade, trees not planted, not enough space to plant a tree.
6. Current urban tree programming requires updating to reflect best practice.

### Opportunities

1. Diversity is a unique brand for Shepparton. The indigenous community is a wonderful asset which should be recognised and Shepparton is a safe, peaceful and quiet home for refugees and migrants. This has the potential to filter down into its streetscapes: diversity of species and connecting into the broader natural environment.
2. There are around 6,000 vacant street tree sites across urban Greater Shepparton that are ready now to plant trees in.
3. Council already has a tree planting program, which could be easily enhanced to create better outcomes.
4. Council already has a CBD Activation Strategy including trees, some of which has already been actioned
5. There is an Infrastructure Design Manual which could be made broader and include trees to create better places for trees to grow.
6. The urban forest is a low risk investment, it provides multiple benefits and is a legacy that will be enjoyed by future generations.
7. Council already enjoys a positive relationship with developers so there is scope for improving the streetscape outcomes on private developments.
8. The City has the opportunity to connect more with the Goulburn River. An urban forest has the capacity to do this through street tree planting within the City and out towards the river.
9. The urban forest is a critical component of Council's Movement and Place Strategy as it can encourage people to walk and cycle by providing natural shade along the pathways.







## Council's Strategic Context



Figure 6: Greater Shepparton's urban forest contributes directly to many of Council's existing priorities.

The City of Greater Shepparton is striving to make the City and its regions a better place to live. The urban forest provides a significant opportunity to enhance public spaces and streets to increase natural shade and the general attractiveness of the City thereby improving community health and wellbeing, economic outcomes for the City and building a resilient and liveable City.

Support for the urban forest needs to come from everyone: Council, the community and all relevant landholders in the urban area. By working together, Greater Shepparton has the opportunity to become greener, cooler and more liveable.



## Developing an Urban Forest Strategy for Greater Shepparton

The next phase of the project is to develop an Urban Forest Strategy. The Strategy will set:

1. a clear vision
2. guiding principles and key objectives
3. targets so Council can measure the success of its urban forest management and
4. a series of actions that are to be implemented over the years following the Strategy's adoption.

### Visioning

Given that urban forests contribute a wide range of benefits, Council need to consider which of these is most important for Greater Shepparton. By setting a clear vision for the urban forest and identifying what it needs to achieve for the region, a transparent process of decision making, funding and operational works for urban forest management can be developed. An Internal consultation session was held with the leadership team within Council to highlight key aspects of the urban forest that will be important for Shepparton. These are (but are not limited to):

- Creating an attractive, liveable city
- Helping our city adapt to Climate change
- Improving the vibrancy of our City
- Connecting the community to nature
- Improving community health and wellbeing
- Feeling good about our city and having a sense of pride
- Helping to attract investment in Shepparton by making it visually appealing
- Contributing to our economic prosperity
- Improving the walkability of our streets: encouraging people to get out and walk
- Building upon the culturally and environmentally significant aspects of our City
- Helping Shepparton towards a path of growth and economic maturity
- Helping Shepparton to compete with other regional cities
- Recognising that trees are a key piece of civic green infrastructure that must be planned for and well-managed
- Helping provide a better future for Shepparton

As a result, some visionary words that are linked to Shepparton's urban forest were articulated:

**Attractive, value, vibrant, wellbeing, green, appealing, liveability,  
connected, natural, green and sense of pride.**

## Draft Key Objectives

1. Improving community health and wellbeing
2. Enhancing economic growth and prosperity
3. Improving the City's brand
4. Adapting the City to climate change
5. Connecting the City with natural areas and improving biodiversity
6. Demonstrate best practice urban tree management

## Draft Targets

1. Increase canopy cover (baseline yet to be calculated)
2. Reduce the number of vacant street tree sites
3. Improve urban forest diversity, particularly age, height and ULE
4. Develop partnerships to enhance the urban forest on private land

## Draft Actions

1. Update Council's technical tree management guidelines to reflect best practice and latest research
2. Develop tree planting Masterplans or Precinct Plans to determine what types of trees should be planted where and when
3. Develop interactive and engaging community urban forest programs to increase awareness and sense of pride in the City's urban forest. Examples are community planting days, community orchards, precinct planning workshops etc.



Figure 7: Transitioning streetscapes from this to.....this

## Seeking Feedback

In order to develop the Urban Forest Strategy, Council is now seeking ideas and input from the community. Please complete the on-line survey.

### Questions:

1. Why do you think the urban forest is important for Greater Shepparton:  
Tick on a scale of high importance to low importance:  
Building healthy communities  
Adapting the city to climate change  
Enhancing the city brand  
Improving the City's economic prosperity  
Enhancing the environment  
Other: please list?
2. What element of the Urban Forest should Council invest in as a priority?  
Tick on a scale of high importance to low importance:  
CBD  
Road entrances and Gateways to each town and City  
Neighbourhood streets  
Playgrounds  
Footpaths  
Corridors linking areas of natural value  
Parks  
Others: please list
3. Are there any issues regarding urban trees that you feel Council should consider as part of this Strategy?
4. What opportunities do you feel exist for Greater Shepparton in relation to the Urban Forest?
5. How can the community be involved in planning and managing our Urban Forest?
6. Do you have any big ideas for the Greater Shepparton's urban forest?
7. Any other comments



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