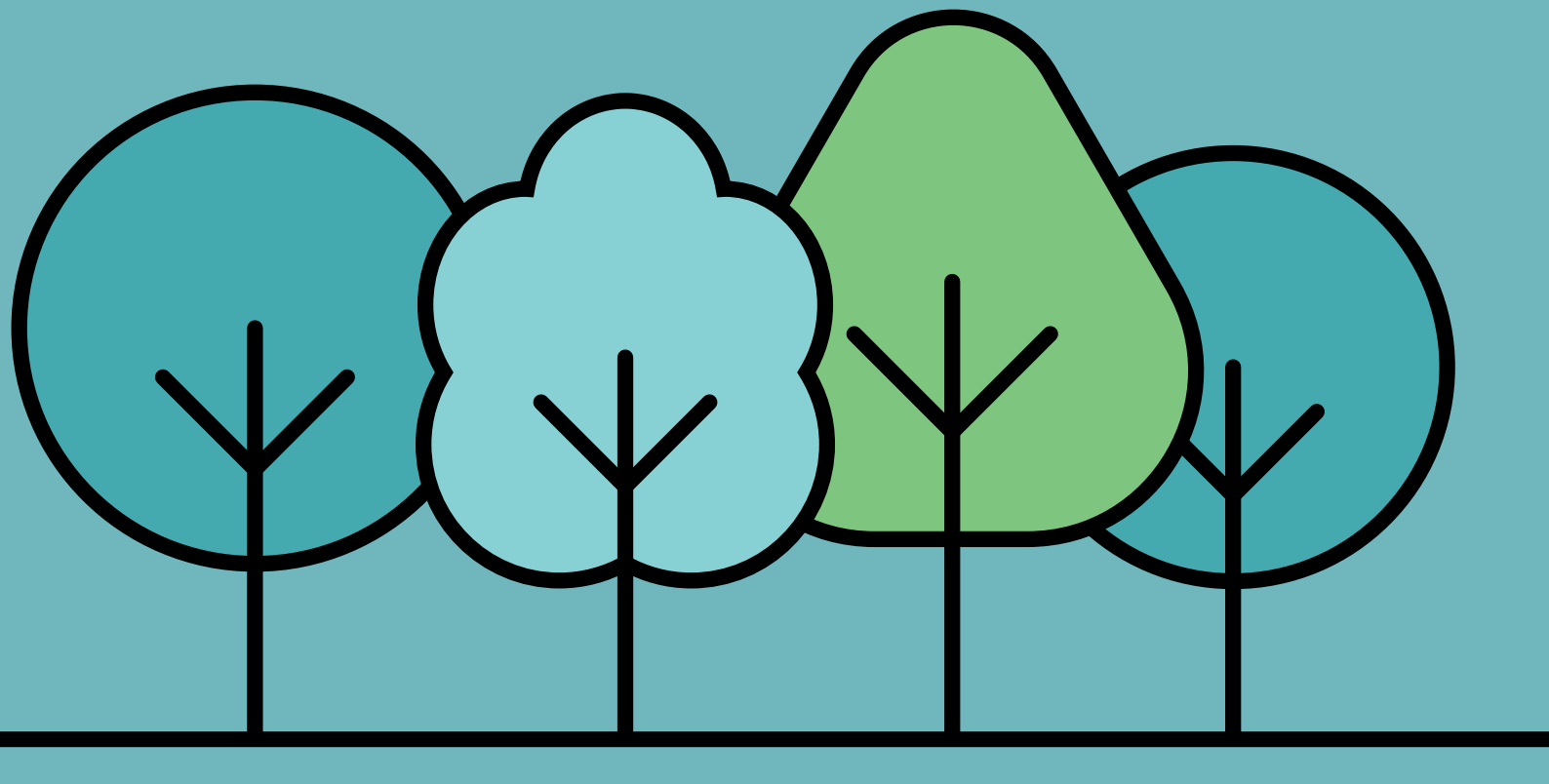
PART 3

3. EXISTING CONDITIONS

The four targets introduced in Part 2 have been used as a basis of measuring the health of Mildura's existing urban forest. This assessment was used to determine where there are future opportunities to enhance and improve urban greenery across the townships of Mildura, Irymple, Red Cliffs and Merbein.



3.1 TREE DISTRIBUTION

EXISTING CONDITIONS

There are a considerable number of homes across the settlements that do have the benefit of seeing 3 trees within 20m of their lot frontage (See Figure 4).

The following results apply in relation to the distribution target:

- In Irymple, 36% of lots can see 3 trees within 20 metres.
- In Merbein, 49% of lots can see 3 trees within 20 metres.
- In Mildura, 53% of lots can see 3 trees within 20 metres.
- In Red Cliffs, 46% of lots can see 3 trees within 20 metres.

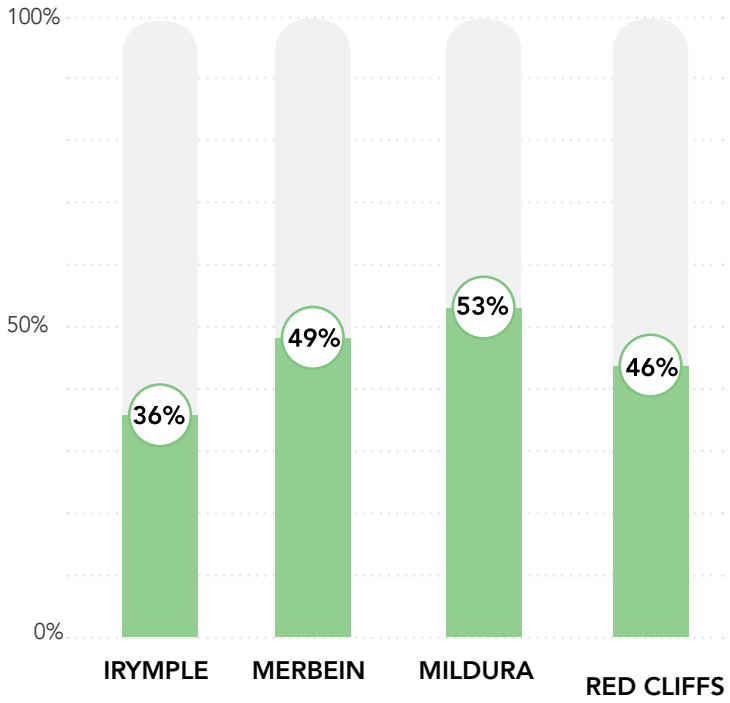
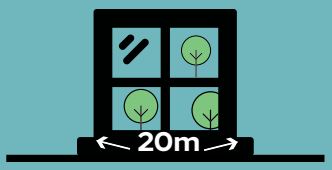


Figure 4: lots with 3 trees visible within 20 metres of the property.



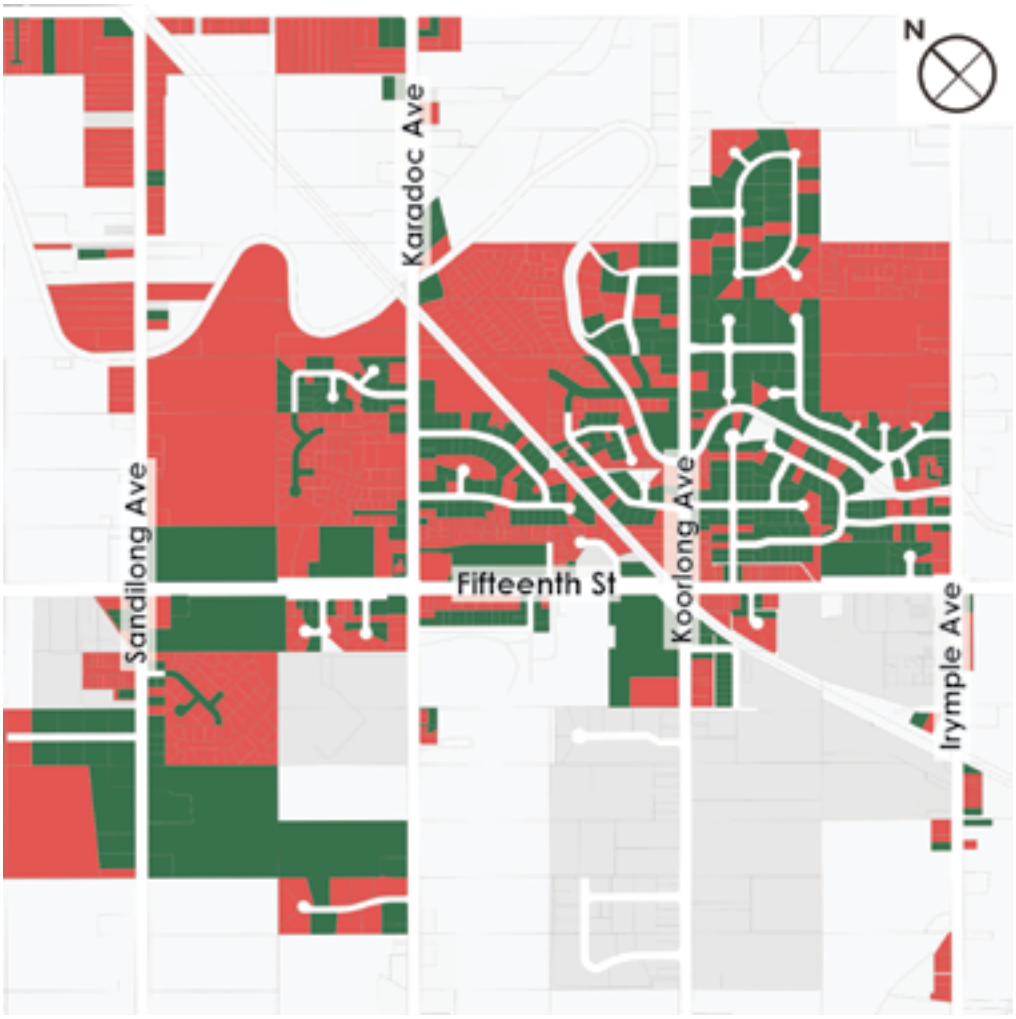
TARGET

Ensure lots have visibility to at least 3 trees within 20 metres from their lot frontage.

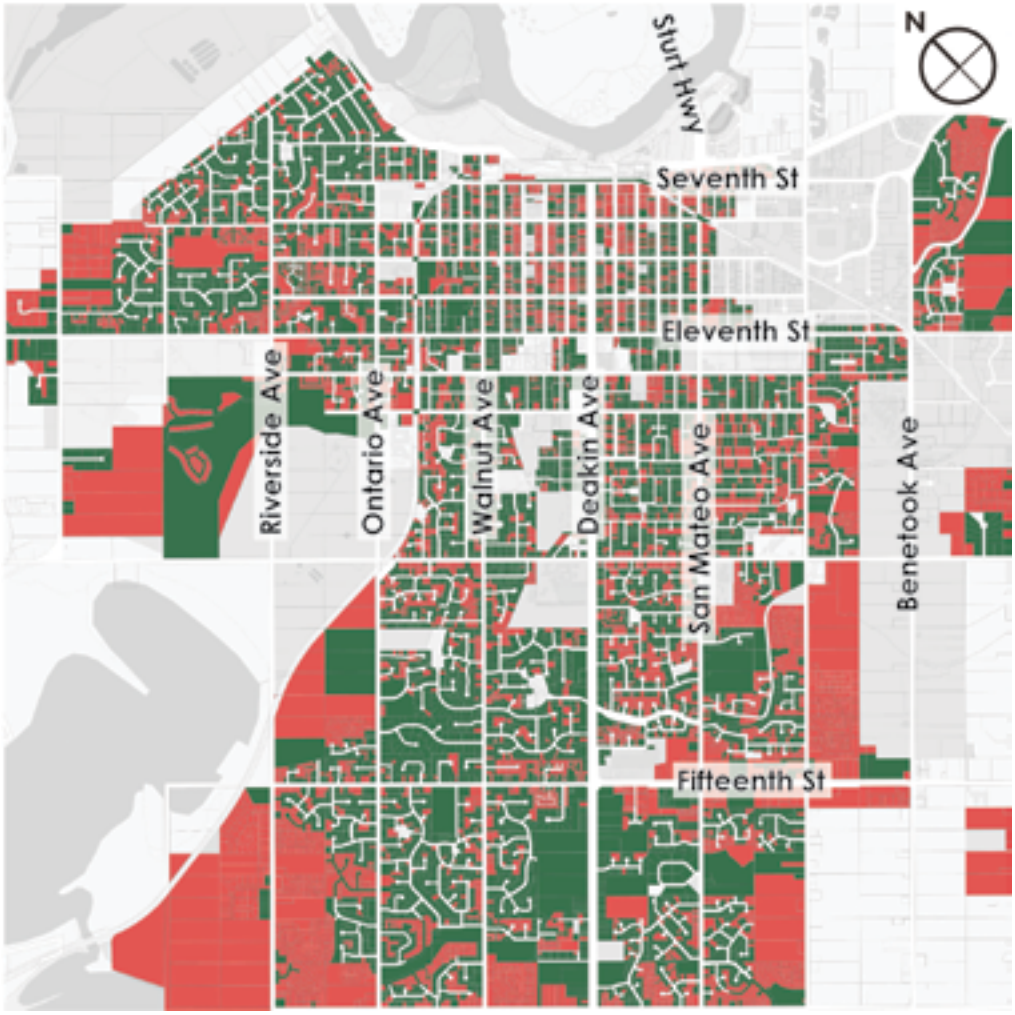
Figure 5 shows the tree distribution results spatially. The key findings from this spatial analysis are:

- **Many of the areas currently meeting the target (shown in green) are lots in smaller local streets where trees on both sides of the road may be providing benefit.**
- **Across all locations, there are opportunities to improve tree distribution on main thoroughfares to key points of interest.**
- **The areas not meeting the target are most apparent across newer subdivision areas as follows:**
  - Irymple – Milan Drive, Karadoc Avenue and Sandilong Avenue.
  - Merbein – Lots to the south of Whiting Avenue.
  - Mildura – Either side of Riverside Drive, east of Etiwanda Avenue.
  - Red Cliffs – North of Cocklin Avenue, either side of Calotis Street and either side of Indi Avenue.

IRYMPLE



MILDURA



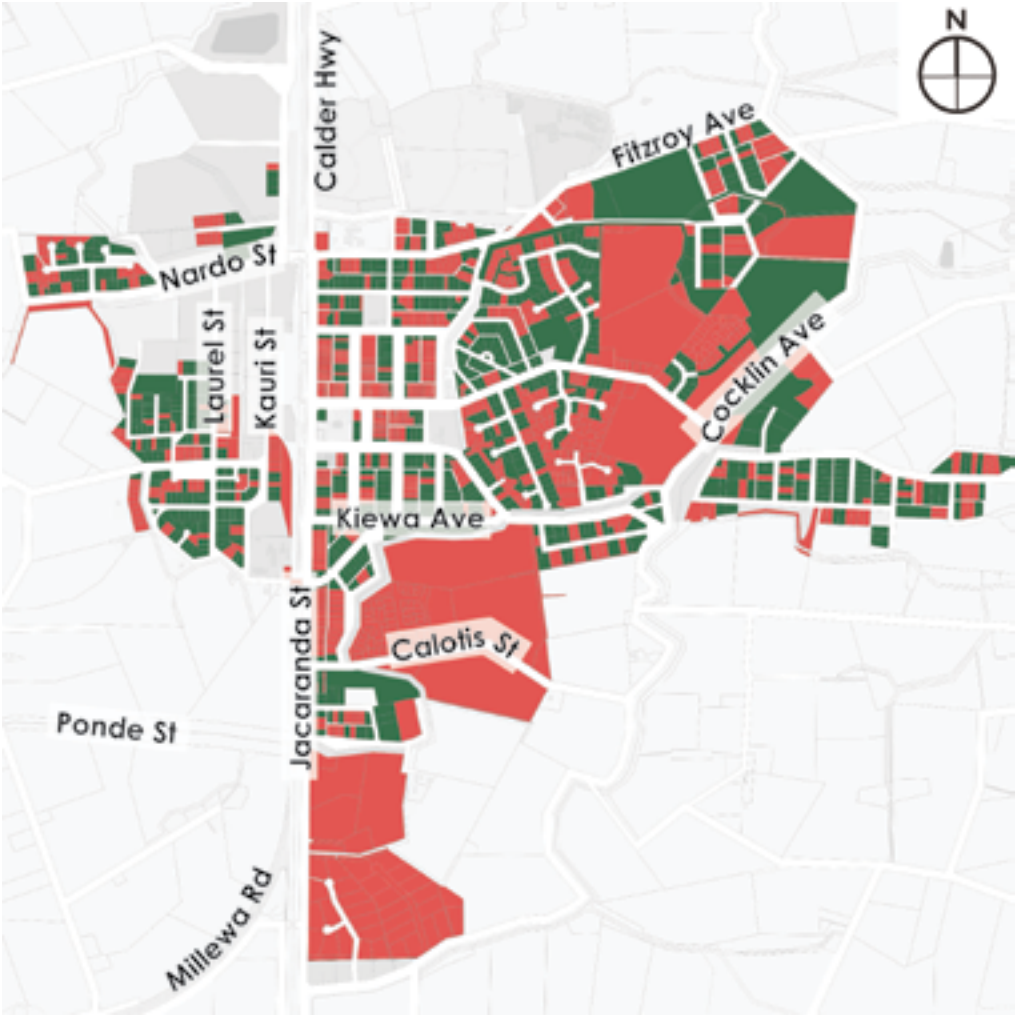
DOES NOT MEET TARGET

DOES MEET TARGET

Figure 5. Distribution results

MERBEIN

RED CLIFFS



DOES NOT MEET TARGET

DOES MEET TARGET

KEY OPPORTUNITIES

Improving on the distribution measures ensures communities across the municipality are benefiting from equal access to the many benefits of trees.

To assist in prioritising locations for new trees, the distribution results have been aggregated[1] to determine the areas of most need (see Figure 6).

The locations in Figure 6 represent the lowest performing clusters of lots and should be the first priority for Council when it comes to new plantings to address the distribution target.

[1] This aggregation process considered all the lots that did not achieve the measure of success, and clustered these results based on the severity of under performance.

When planting trees to address the distribution target, there are opportunities to:

Maximise use of Mildura's wide road reserve and plant trees in the central median area.

Continue initiatives such as the "Cool It Street Program" where community nominate a residential street that they believe could benefit from improved tree distribution.

Ensure tree planting is required as part of subdivisions early in the development process.

DID YOU KNOW?

COOL IT STREET PROGRAM

Did you know that Council runs a Cool It Street Program where streets from across the municipality are transformed with new tree plantings. In 2023, the community was encouraged to nominate streets for consideration, with 100 nominations received.

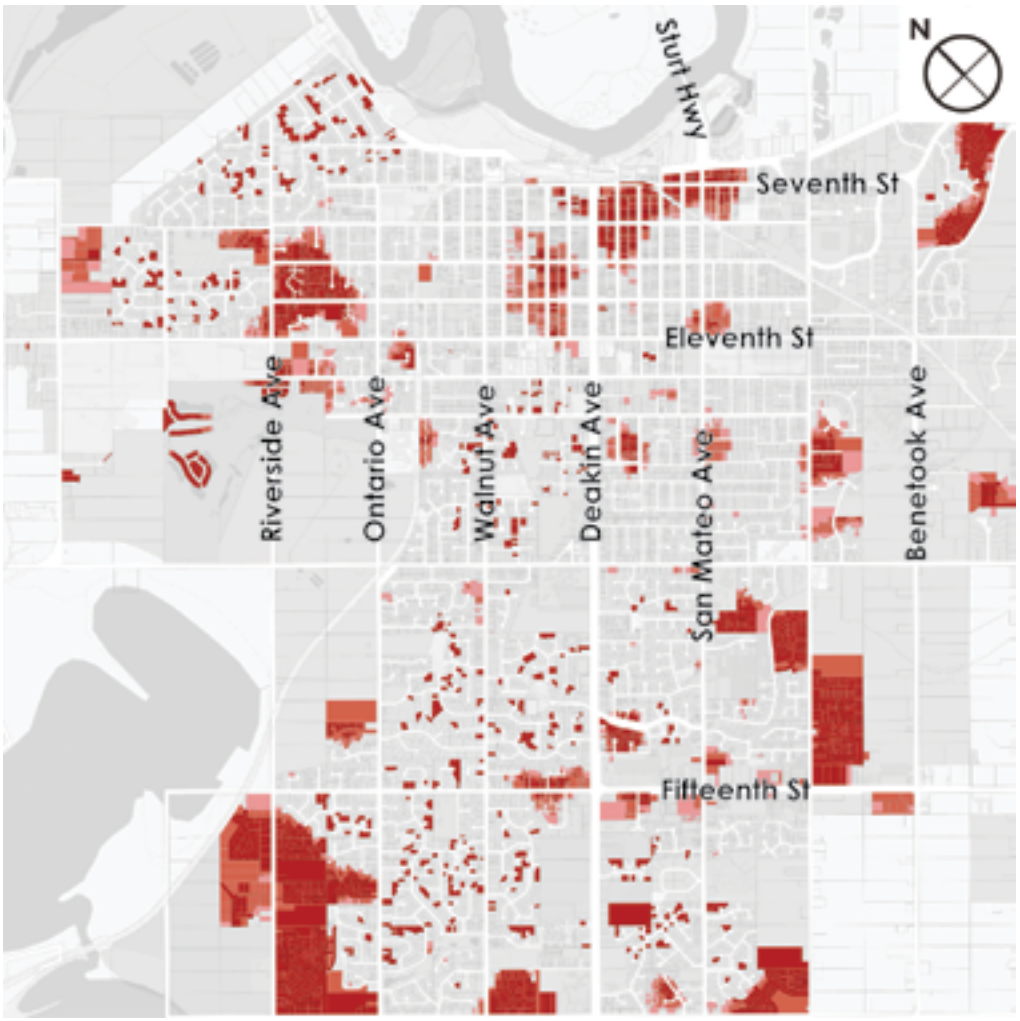
In 2023 the following streets in Mildura were selected to undergo a transformation:

- Wade Avenue
- Eastside Drive
- Hazeldene Street
- Eaglesham Street
- Ellswood Crescent
- Shiraz Couty

Tree planting has now taken place across these streets. The program aims to create healthier and greener neighbourhoods by providing quality tree canopy cover by planting semi-mature trees. The Cool It Street Program complements the CBD Urban Regerer8 project, which is another Council initiative aimed at providing more shade and improved amenity for the community by planting up to 500 trees in the CBD.

IRYMPLE

MILDURA



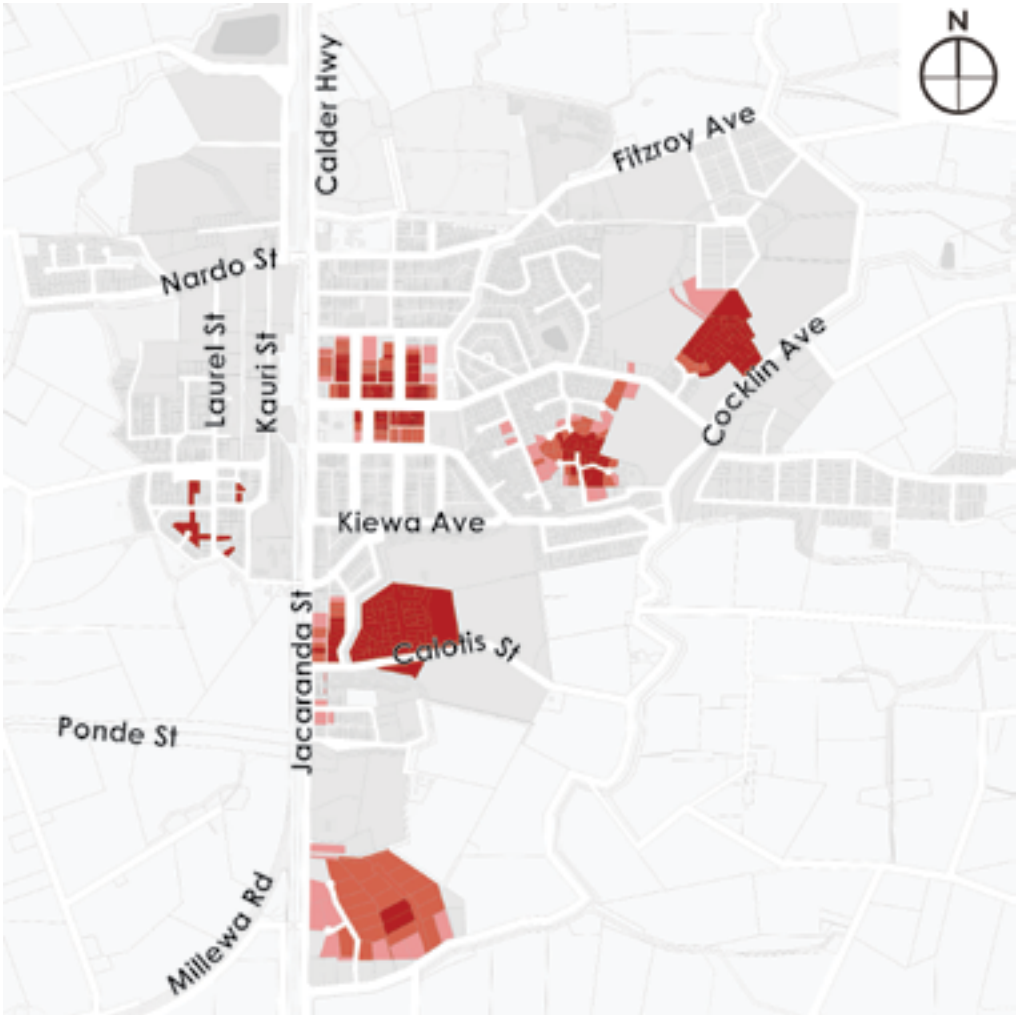
GREATEST PRIORITY FOR TREE REPLACEMENT

GREATEST OPPORTUNITY TO IMPROVE DISTRIBUTION

Figure 6. Distribution Opportunities

MERBEIN

RED CLIFFS



GREATEST PRIORITY FOR TREE REPLACEMENT

GREATEST OPPORTUNITY TO IMPROVE DISTRIBUTION

3.2 CANOPY COVERAGE

EXISTING CONDITIONS

At present, the private realm (such as trees in back yards) contribute more to the overall percentage of canopy cover (Figure 7). Areas of higher canopy cover can be seen around the river front area in Mildura. Areas of lower canopy cover are experienced in newer subdivision across all the townships (Figure 8).

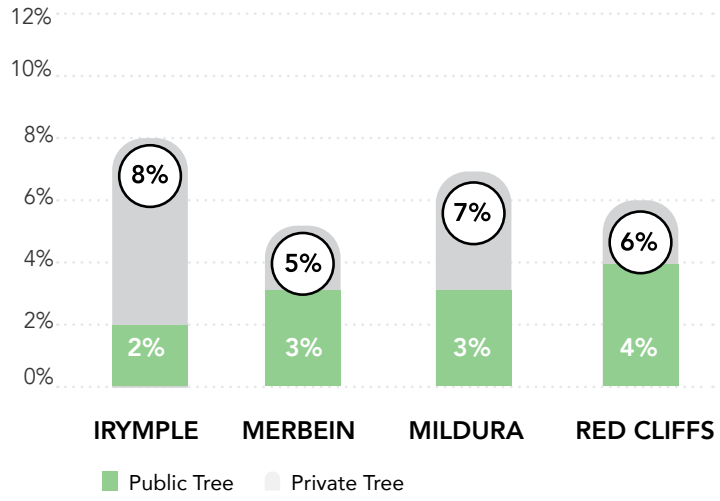


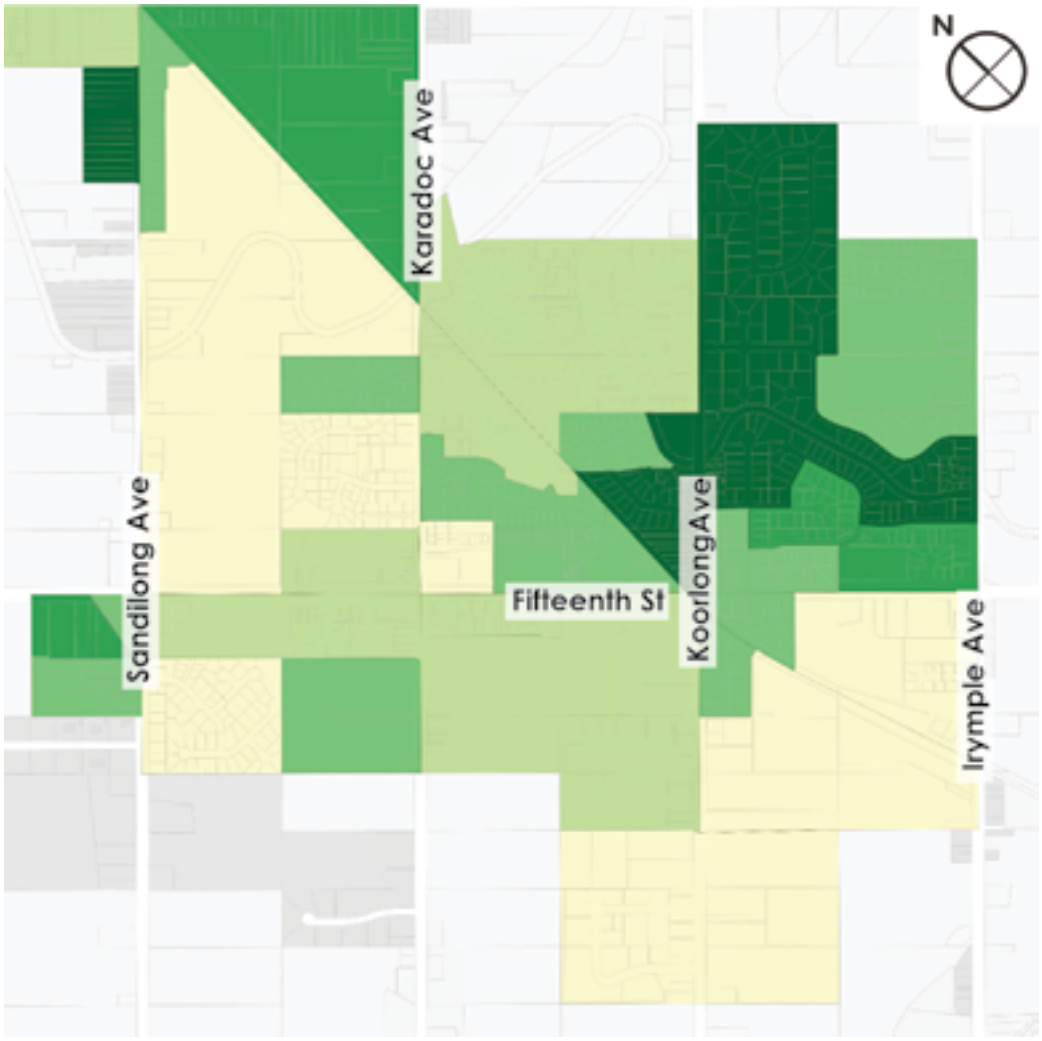
Figure 7. Public and Private Tree Canopy Coverage %

TARGET

Achieve a 30% net canopy coverage.

THE ANALYSIS IN FIGURE 8 SHOWS:

- The CBD of Mildura has a particularly low canopy coverage.
- The commercial / shopping areas all have relatively low canopy cover outcomes.
- Older established areas of all settlements have better canopy cover outcomes.
- Newer subdivision areas have poor canopy cover outcomes.



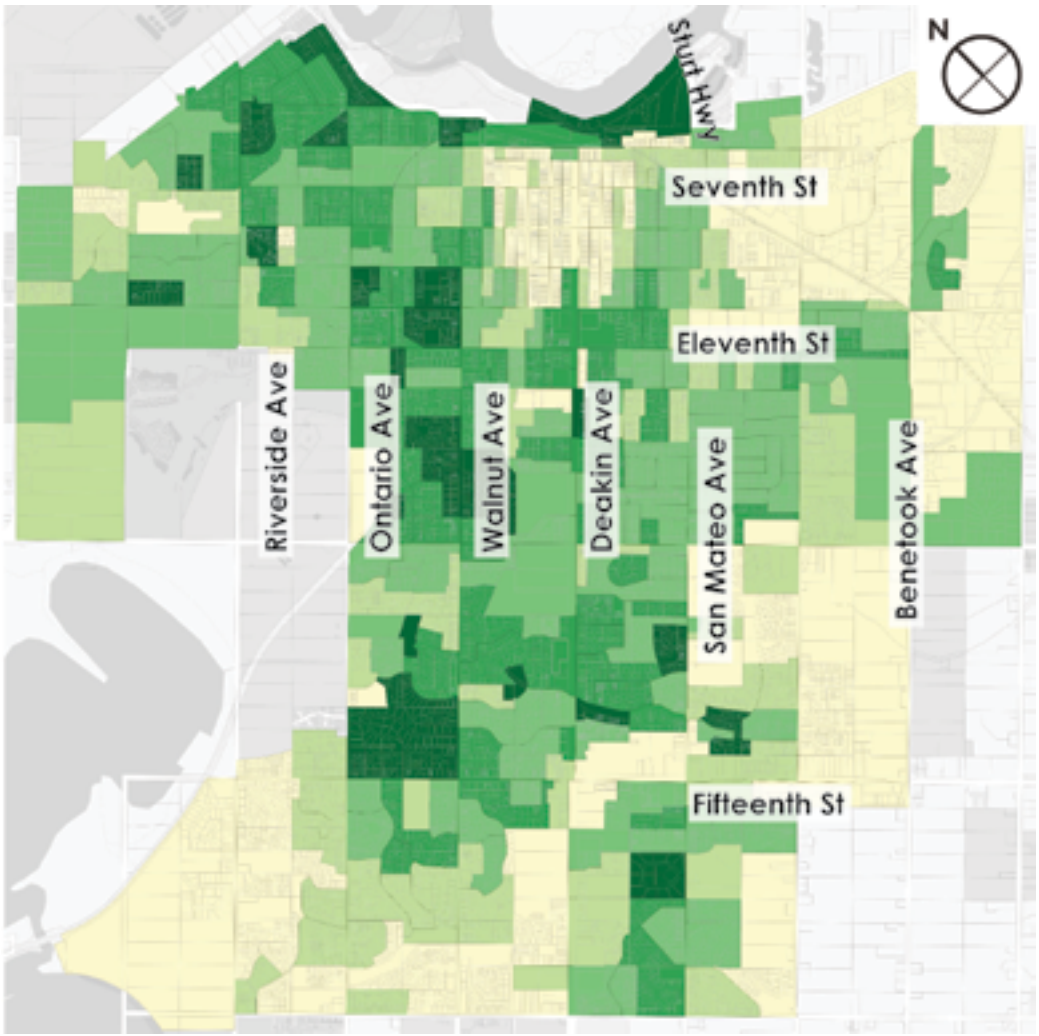
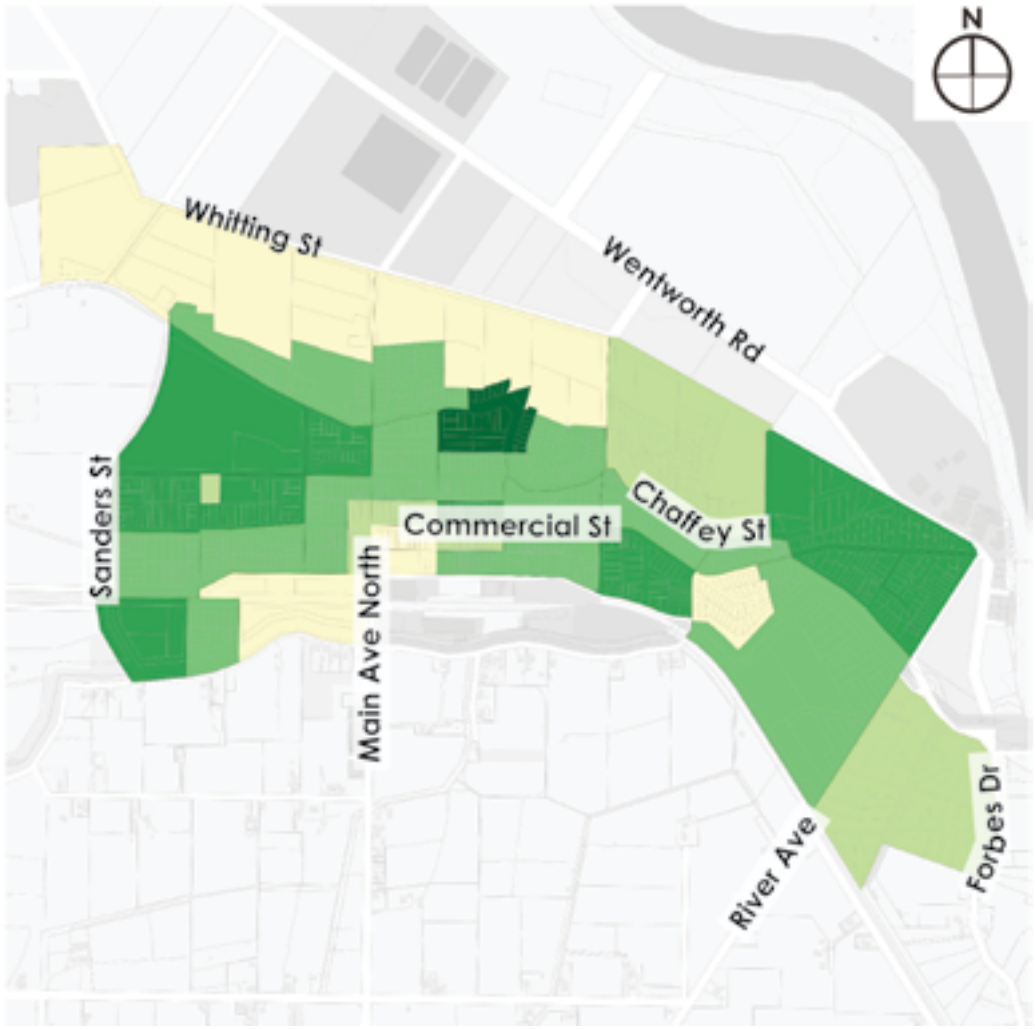
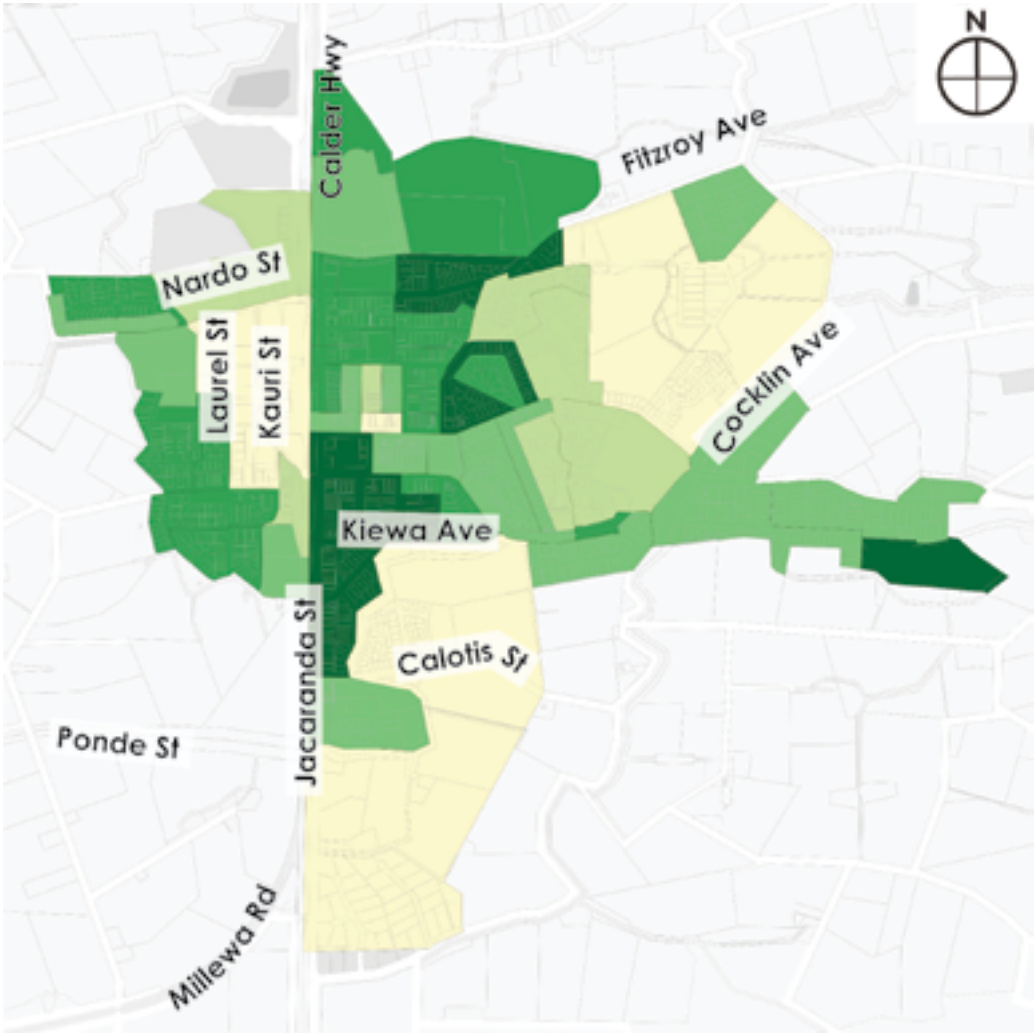


Figure 8. Canopy Cover results

MERBEIN



RED CLIFFS



- < 5%
- 5 - 10%
- 10 - 15%
- 15 - 20%
- > 20%

KEY OPPORTUNITIES

Canopy cover is a key tool in addressing extreme heat, a priority for the Mildura region as it is susceptible to prolonged periods of high temperatures. Improved canopy cover will provide shaded streets for the community to enjoy comfortably. Canopy trees also make a street more appealing and evoke civic pride.

Achieving improved canopy cover is expected to be a long-term goal. Trees need time to reach maturity, at which point they provide the most shade.

To achieve the target, there are opportunities to:

Prioritise effective planting and watering practices that ensure trees live long and healthy lives and grow to a size where they contribute shade.

Prioritise planting canopy trees in unconstrained sites such as central medians, open space and nature strip locations where overhead power lines aren't a barrier.

Continue to select species well suited to their location to ensure they reach their maximum canopy size.

Ensure planting in heavily concreted areas such as central medians is via a grassed or mulched nature strip rather than planting in bitumen.

In areas where tree canopy outcomes are particularly low, prioritise planting more mature trees to enable canopy outcomes to be achieved quicker.

Consider innovative ways to plant trees in heavily concreted areas such as the Mildura CBD and commercial precincts within townships.

3.3 USEFUL LIFE EXPECTANCY

EXISTING CONDITIONS

When considering performance against the ULE target, the current tree population is generally in good health, 55% of all trees have a ULE of greater than 20 years and the current tree population across the municipality is 30% have a ULE of between 10 and 20 years (Figure 9). The current survival rate for new trees is about 85%.

Irymple meets the target, and Mildura, Merbein and Red Cliffs are close to meeting it (See Figure 9).

Areas where trees have a ULE above 50 years tend to be in newer development areas on the edge of the settlements. As many of these trees are likely new plantings, tree maintenance and watering will be required to maximise tree health as they are being established (Figure 10).

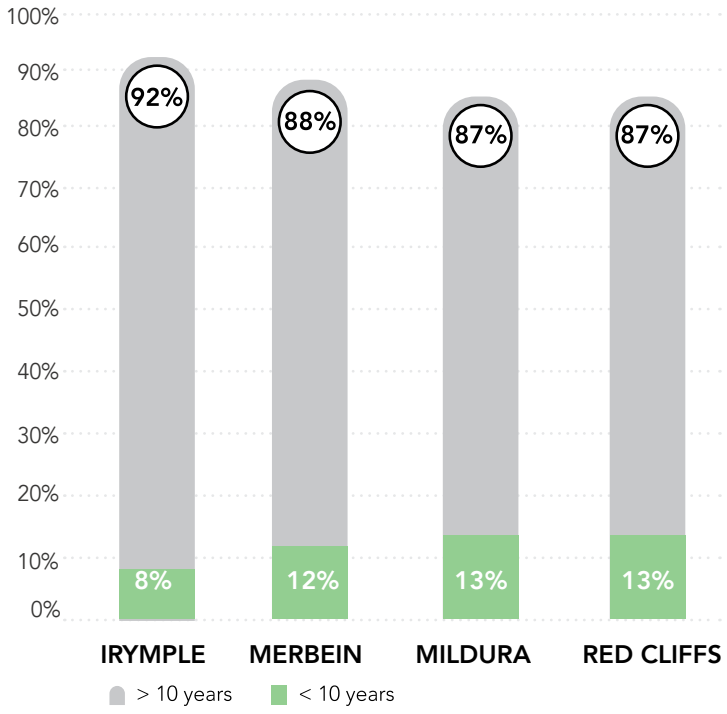
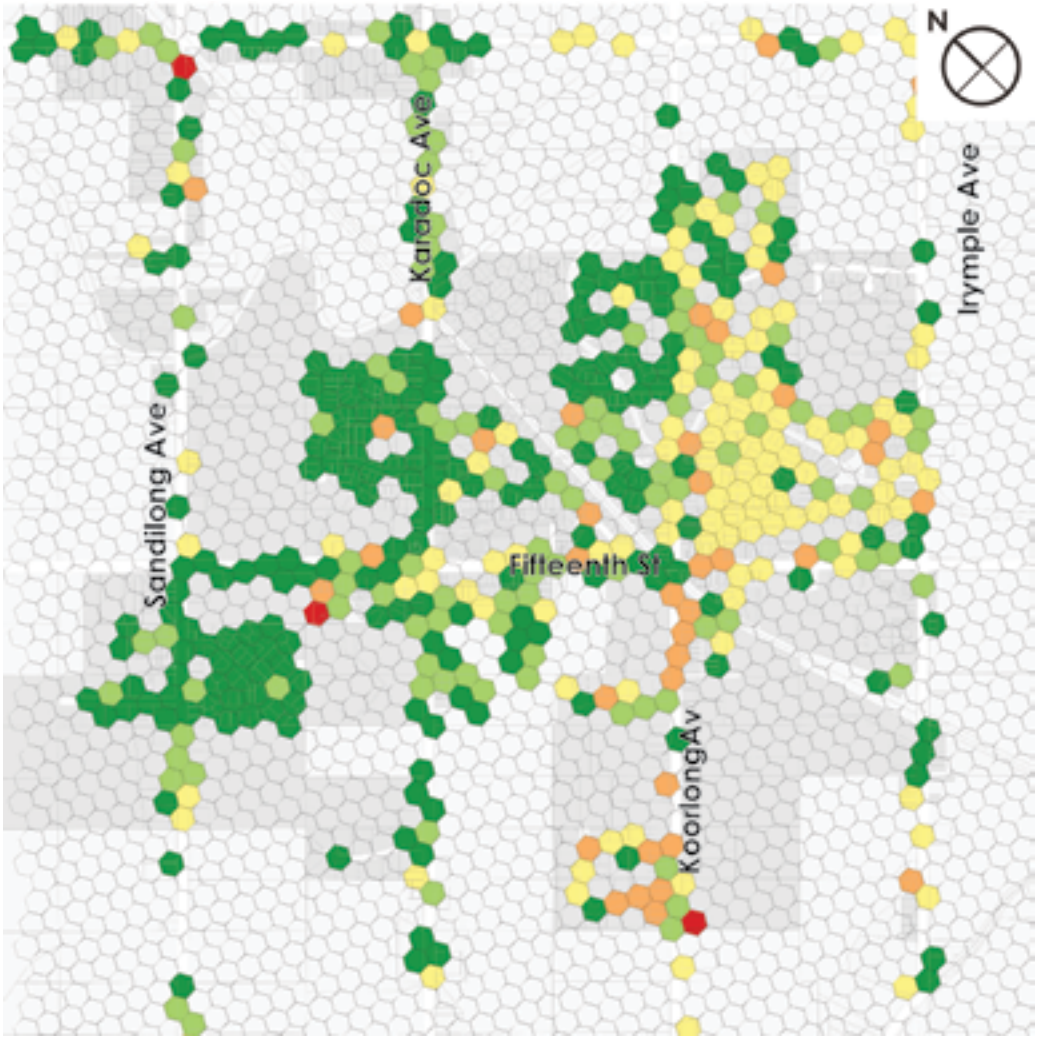


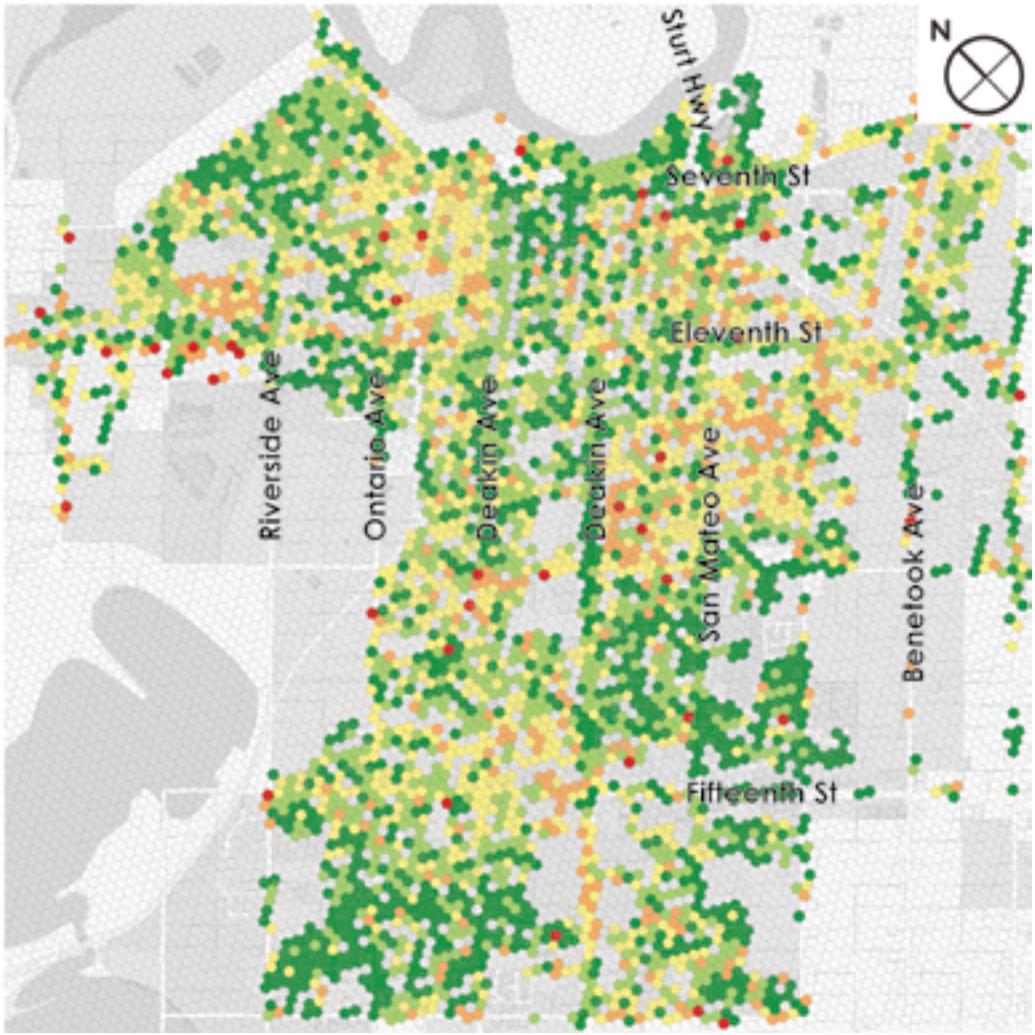
Figure 9. Tree ULE performance against target

TARGET

Ensure no more than 10% of the tree population has a ULE under 10 years.



IRYMPLE



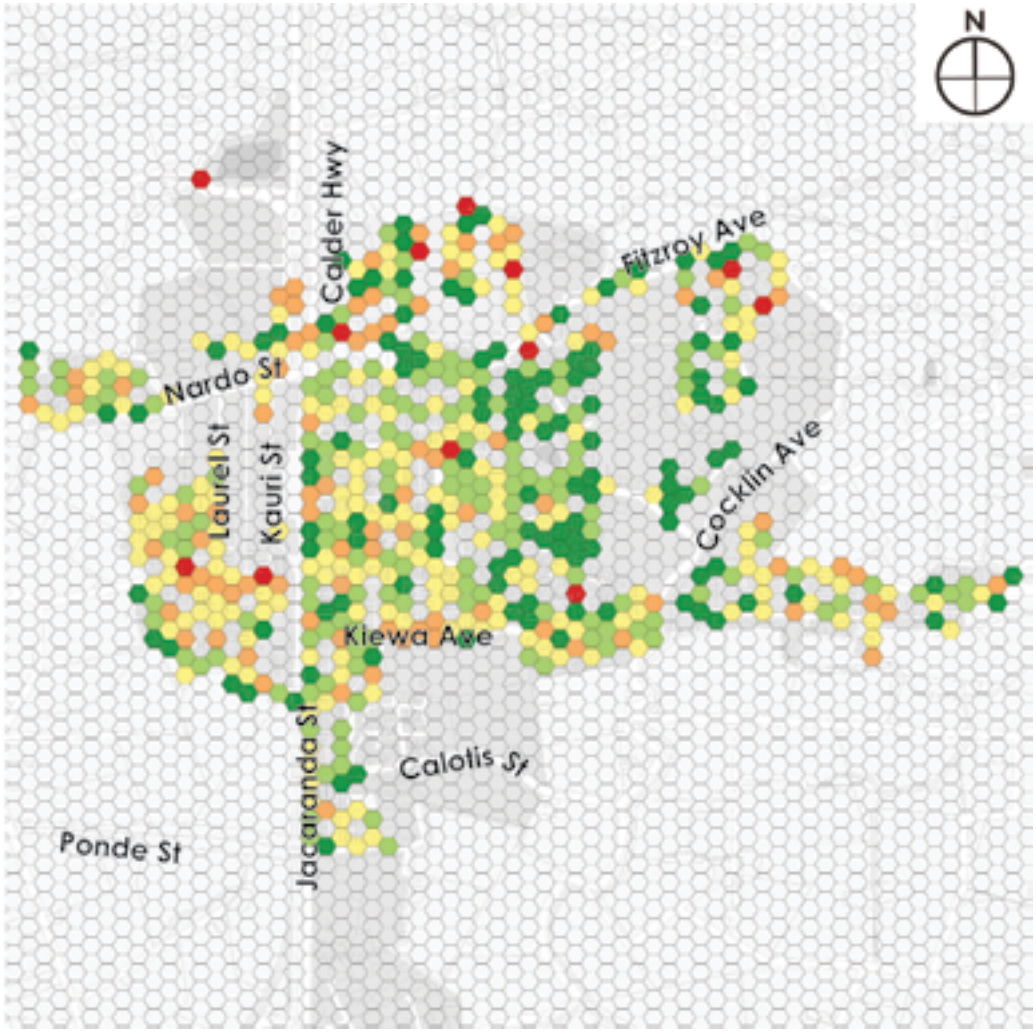
MILDURA

- 0 - 5 YEARS
- 5 - 10 YEARS
- 10 - 20 YEARS
- 20 - 50 YEARS
- > 50 YEARS

Figure 10. ULE results

MERBEIN

RED CLIFFS



- 0 - 5 YEARS
- 5 - 10 YEARS
- 10 - 20 YEARS
- 20 - 50 YEARS
- > 50 YEARS

KEY OPPORTUNITIES

ULE is an indicator of the tree health of the population and provides guidance on when trees will need to be removed and replaced. Understanding and responding to ULE ensures the existing tree population is being cared for.

A program of removing and replacing dying trees will be a key component of successful implementation of the Strategy. To assist with the prioritisation of the removal and replacement of trees, the data has been aggregated to identify the clusters of the lowest ULE (Figure 11).

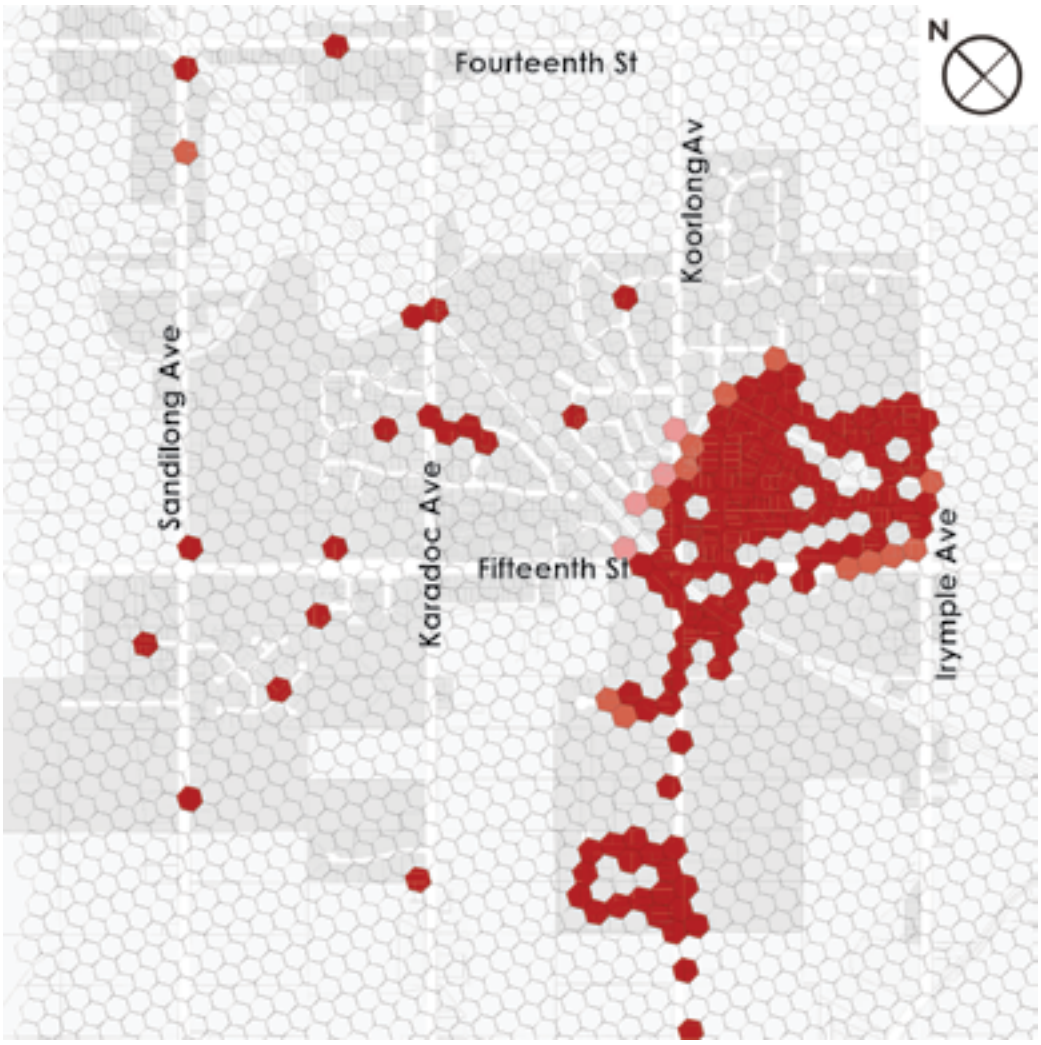
In relation to achieving the ULE target there are opportunities to:

Develop a tree replacement program, guided by the areas identified in Figure 10 and 11.

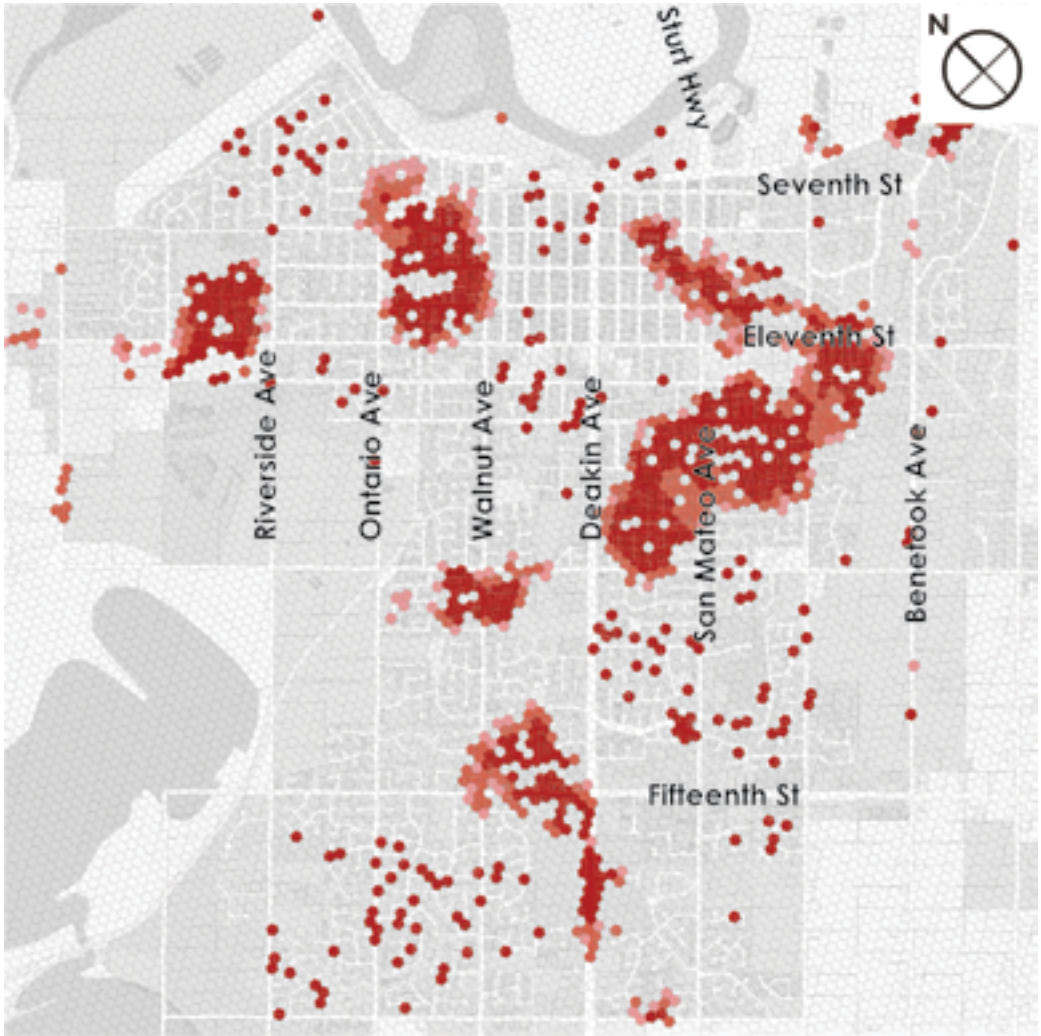
Ensure tree maintenance focuses on maintaining the health of the current tree population.

Monitor new tree plantings for 12 months after they are planted and record any concerns with the trees health and note any trees that died and why this occurred (if known) for continuous improvement.

IRYMPLE



MILDURA



GREATEST PRIORITY FOR TREE REPLACEMENT

PRIORITY FOR TREE REPLACEMENT

Figure 11. Priority for tree replacement

MERBEIN

RED CLIFFS

GREATEST PRIORITY FOR TREE REPLACEMENT

PRIORITY FOR TREE REPLACEMENT

3.4 SPECIES DIVERSITY

EXISTING CONDITIONS

The Weeping Bottle Brush is currently the main species found across the settlements, with Eucalyptus the dominant genus and the Myrtaceae the dominant family (Figure 12, 13 and 14). The species mix meets the target, but future tree planting should look to diversify away from the Weeping Bottle Brush and Callery Pear to ensure the target continues to be met.

At the genus level, the target is close to being met. 21% of the Eucalyptus genus apparent in the tree population. The family target is not met, with 41% of the tree population from the Myrtacae family. Genus target is close to being met.

TARGET

Achieve a 10/20/30 mix, a tree population should not be comprised by more than 10% of any one species, 20% of any one genus and 30% of any one family.

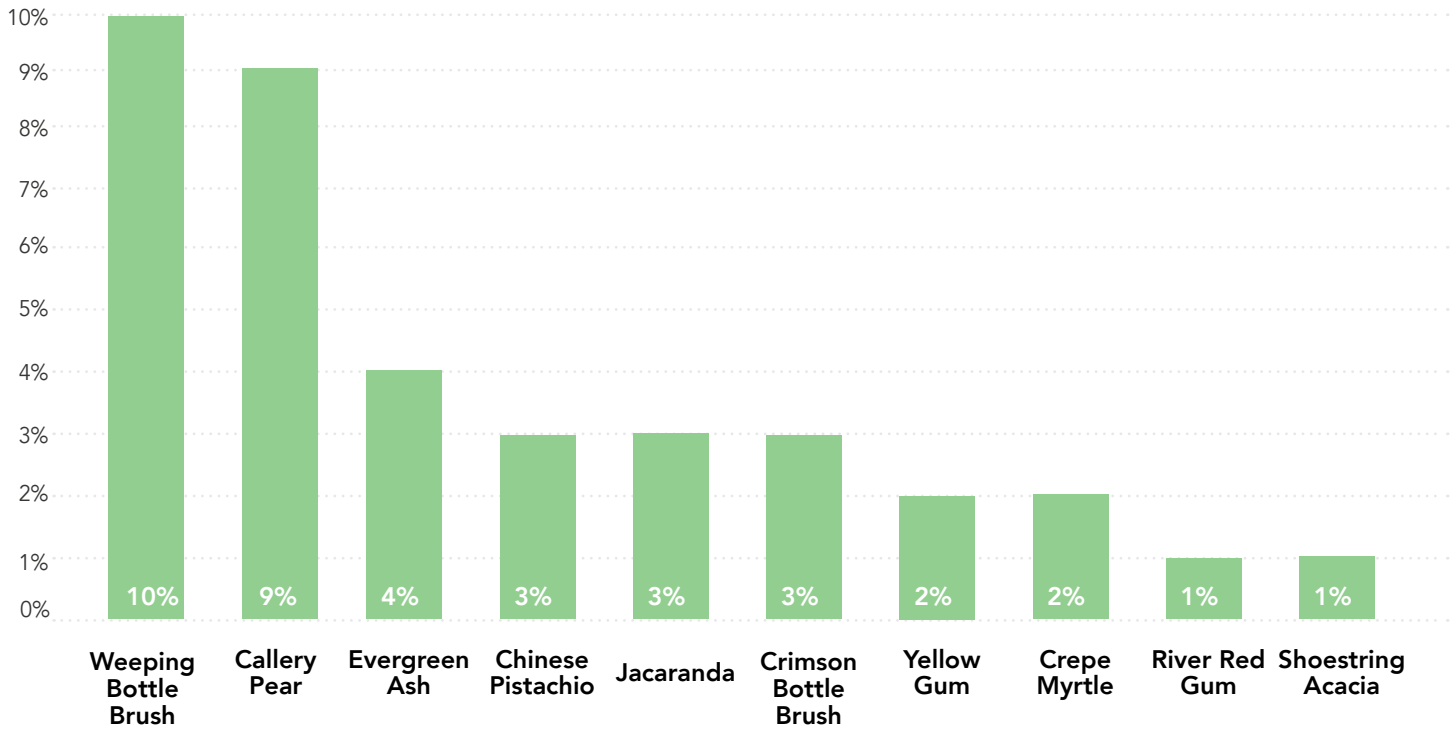
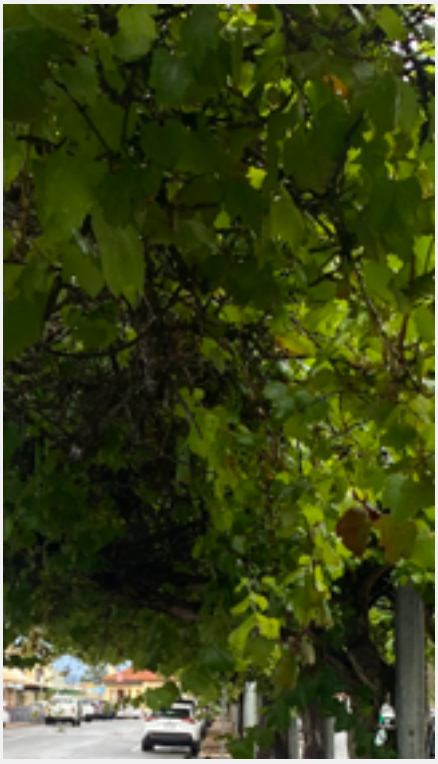


Figure 12. Top 10 species



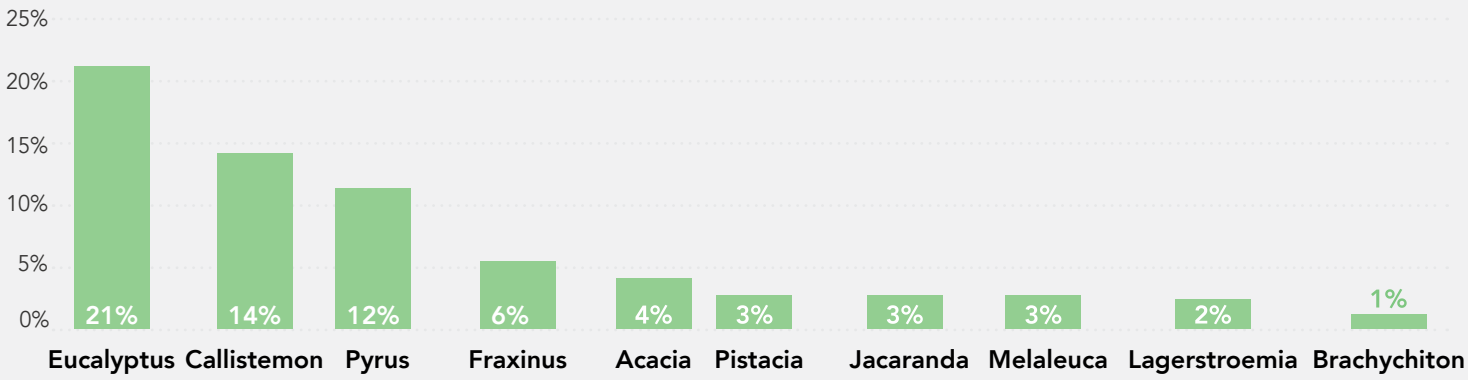


Figure 13. Top 10 genus

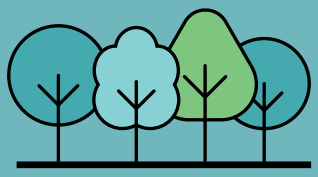
Figure 14. Top 10 family in tree population

KEY OPPORTUNITIES

There is an opportunity to diversify the tree population at a family level to ensure compliance with the 10/20/30 target. There should also a focus on diversifying at the genus and species level, as the current mix is only just complying with the 10/20/30 measure. Family target is a guide only as the Myrtaceae family contains a large number of species most suited to local conditions.

There several considerations that go into selecting an appropriate tree species. A key priority for this Strategy is ensuring that species selection aligns with what the community hopes to see for their neighbourhood, while planting trees that are best suitable for Mildura's climate. We have heard from the community that many residents would like to see more native trees planted in their streets. Future tree selection will need to balance the need for native tree species, with the advantages of exotics, which often provide benefits regarding shade provision and seasonal colour.

At present, the Weeping Bottle Brush is a prominent species due to its climate suitability, and limited stature, which works well with overhead powerlines. It is also well-suited to Mildura's climate for its water efficiency and carbon sink efficiency. However, the community expressed that this species is not well-liked due to concerns regarding mess and lack of canopy cover. To balance community interests with climate suitability, future planting decisions should consider the existing species distribution in a given area, to ensure that the prevalence of the Weeping Bottle Brush does not create a species imbalance within the area.



Within this diversification initiative, there is also opportunity to increase seasonal shade in select precincts such as the Mildura CBD, using exotic tree species that are suitable to Mildura's climate and are well-liked by residents.

DID YOU KNOW?

WEEPING BOTTLE BRUSH

The Weeping Bottle Brush is the most prominent tree species across Mildura, although we heard from the Mildura community this is the least preferred tree species! We the know that Callistemons are ideally suited to the Mildura context due to their water efficiency and tolerance to being pruned and therefore providing canopy without interfering with overhead powerlines. The existing conditions analysis demonstrates there is an opportunity to diversify the tree population to reduce the proportion of the Weeping Bottle Brush, however there will still be a role for this species into the future to meet certain planting conditions.