GROWING GREEN: TREE CANOPY IMPROVEMENT STRATEGY 2021-2045

City of Charles Sturt

MEANS THE WORLD
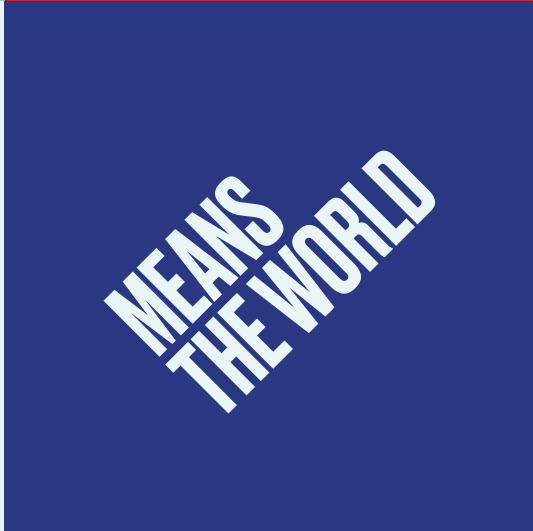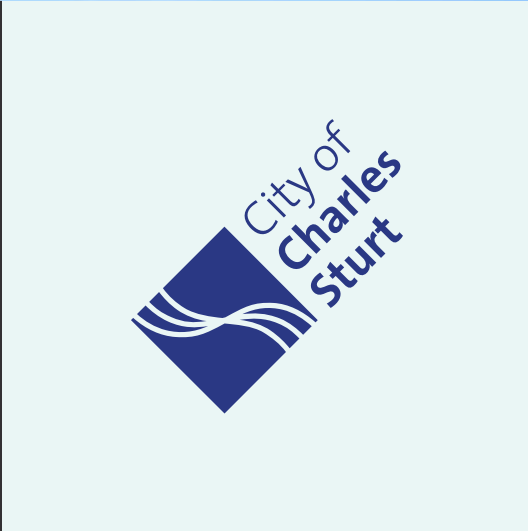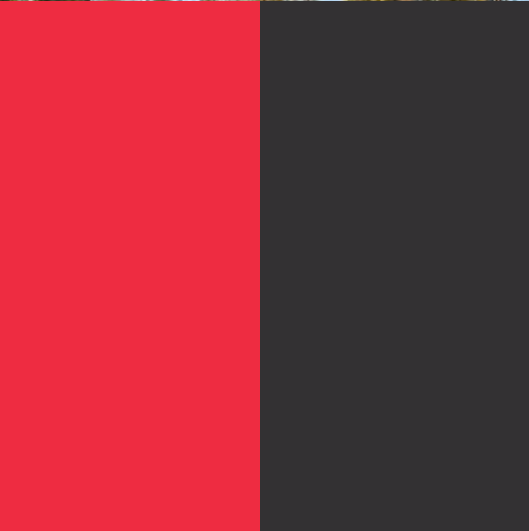
*Trees are essential to
the web of life – fungi, microbiota,
insects, reptiles, birds, bees and kids –
climbing is essential!*

PREAMBLE

The Tree Canopy Improvement Strategy builds upon the significant achievements and efforts undertaken by our organisation over many decades and provides a framework to deliver long-term, sustainable, and significant gains to our urban forest.

Our urban forest canopy covers about 14%[1] of the City (2020 measure) and has declined over the years due to urban development.

The scale and pace of this decline is not immediately apparent, being spread throughout the suburbs, often in backyards and away from view, yet has long-term implications on our liveability and resilience.

The reduction in canopy can be described as the 'slow emergency' as the incremental decline is diffuse in nature and not acutely visible yet has intergenerational impacts over multiple decades

The strategy aims to arrest this decline and generate a new mandate for tree planting, tree protection and resourcing directed to trees to improve the amount of tree canopy city wide for the benefit of our community and environment in the face of a changing climate.

MISSION

Growing Green: our plan for a greener, cooler City.

VISION

The City of Charles Sturt has an extensive, healthy, diverse and sustainable urban forest which grows to reach a City-wide canopy cover target of 25% by 2045.

[1] Tree Cover measured 13.84% of the City – report: Tree Canopy Cover in the City of Charles Sturt: 2020

OUR COMMITMENT

We will achieve this vision by increasing resources with a dedicated focus on planting more trees, whilst maintaining, protecting and retaining our existing trees, and engaging our community to enable action to protect and retain trees in both the public and private realm.

GUIDING PRINCIPLES

There are 6 overarching principles detailed in this plan that will drive action to achieve this vision. Each principle has an accordant series of actions that underpin the principle and can be achieved within the life of the plan.

1. Plant more trees (and continually review planting options)
2. Have a plan (and set a target)
3. Protect more trees (and commit to protect them)
4. More tree maintenance/management (and enhance our maintenance)
5. Appreciate trees more (and engage our community)
6. Monitor and evaluate our progress (and change course if we need to)

WHY PLANT MORE TREES (AND CONTINUALLY REVIEW PLANTING OPTIONS)?

Our tree cover has decreased from a peak of 15.51% in 2008 across the City since it was first measured in 1998 to 14.28% in 2014 and further again to 13.84% in 2020, primarily due to the loss of trees on private property from infill development.

14.81%	15.51%	14.28%	13.84%
1998	2008	2014	2020
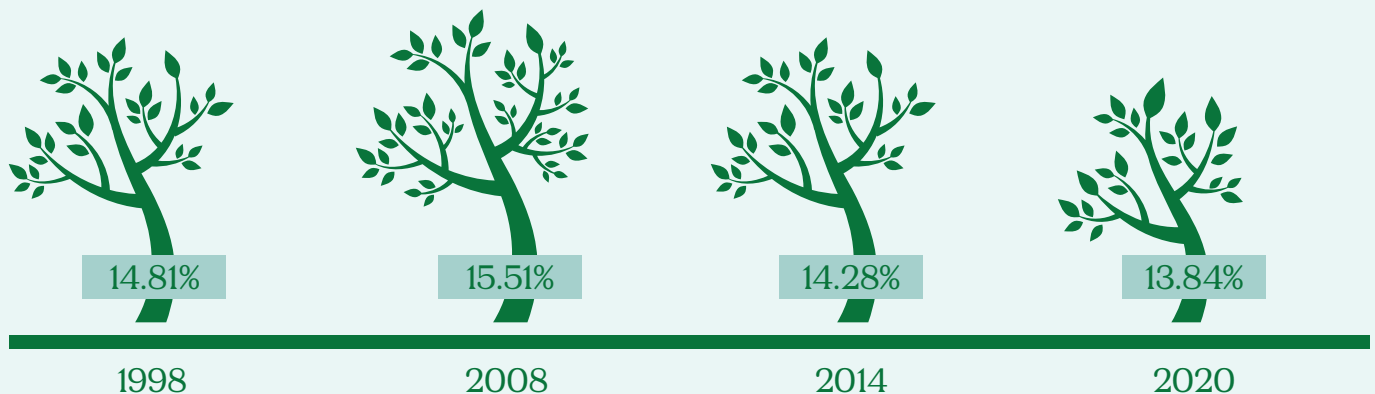
Percentage Canopy Cover Measure Across the City (public and private land)

Climate change is another critical factor. It is driven by increasing amounts of carbon dioxide in the atmosphere, which trees capture and store. In addition to the CO2 that trees capture, they also help soil capture significant amounts of carbon[2].

Our city is getting hotter from the impacts of climate change and the urban heat island effect. Trees provide shade and cooling benefits, mitigating the impacts of heat, which reduces heat-related illness and death. Trees and vegetation reflect heat and actively cool and clean the air by evapotranspiration.

The City of Charles Sturt declared Climate Change Emergency in December 2019 to undertake action to prepare and mitigate the impacts within our community.

People need trees for their health and mental well-being. They provide a sense of place and liveability. Trees are valued for their inherent beauty and for the associated aesthetic benefits they provide to homes, streets and suburbs, and are critical for urban biodiversity.

Planting trees is an investment in the future of our City. The mature trees we enjoy and benefit from today, were planted by those generations before us, many decades ago.

By selecting the right tree for the right place and making sure the trees we plant now will establish well, and grow to maturity for future generations, ensures our investment is realised as planned and not vulnerable to failure. Species and site selection should focus on planting the largest-growing and longest-lived species suitable for each location.
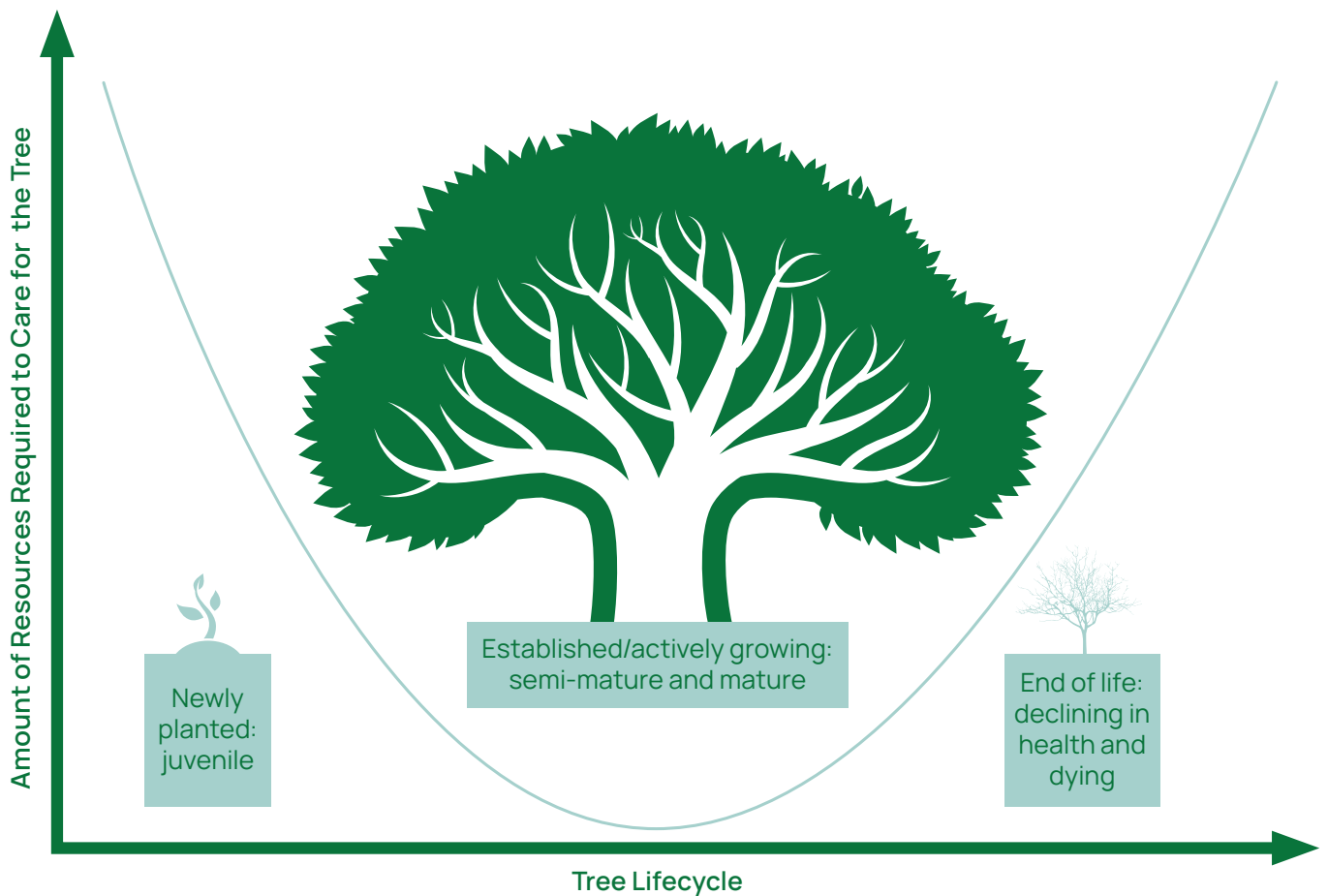
The species that we currently plant and maintain, may be vulnerable to a changing climate. New and different options for species should be considered which are better adapted for greater resilience. The role of water in urban greening is critical and opportunities to implement water sensitive urban design and other innovative solutions for passive watering (i.e. stormwater) are required.

To achieve our vision and increase canopy cover to 25% by 2045 we will undertake an extended and intensive tree planting programme over many decades and enable our community to work with Council to achieve this target. We will educate our community and enhance liveability whist reducing the urban heat island effect and mitigating the impacts of climate change across the city.[3]

In terms of tree life-cycle, the intensity of resources needed to care for a tree are at their highest when planting a tree and the first few years of establishment, followed by when a tree is at the end its life.

[2] https://www.agriculture.gov.au/ag-farm-food/climatechange/australias-farming-future/soil-carbon

[3] A planned project for the FY 21/22 is to model optimum locations for street tree planting based on urban heat island data and to model numbers of trees to reach canopy target and the budget required to do so.

Amount of Resources Required to Care for the Tree (y-axis)

Newly planted: juvenile

Established/actively growing: semi-mature and mature

End of life: declining in health and dying

Tree Lifecycle (x-axis)

For an intensive tree planting programme to be successful, careful consideration of resources required throughout the lifecycle is necessary.

To achieve a significant gain to the urban forest, planting in a staged approach, over a successive number of years, is economically sustainable and makes optimum use of available resources.

Understanding that some parts of our city have lower levels of tree cover and are hotter than others gives a method of prioritising and focussing efforts.

While City wide-benefits are derived from trees, inequity in current tree cover means a "catch-up" provision will change the focus to have an equal spread of tree planting programs across each ward and will be focussed in areas of greatest need. This shift from equality of planting across wards to equity[4] allows for a new strategic driver to mandate this approach to greening to be realised.

Equality is different to equity – equity of canopy cover is the driver to focus our planting efforts

Equality

Equity
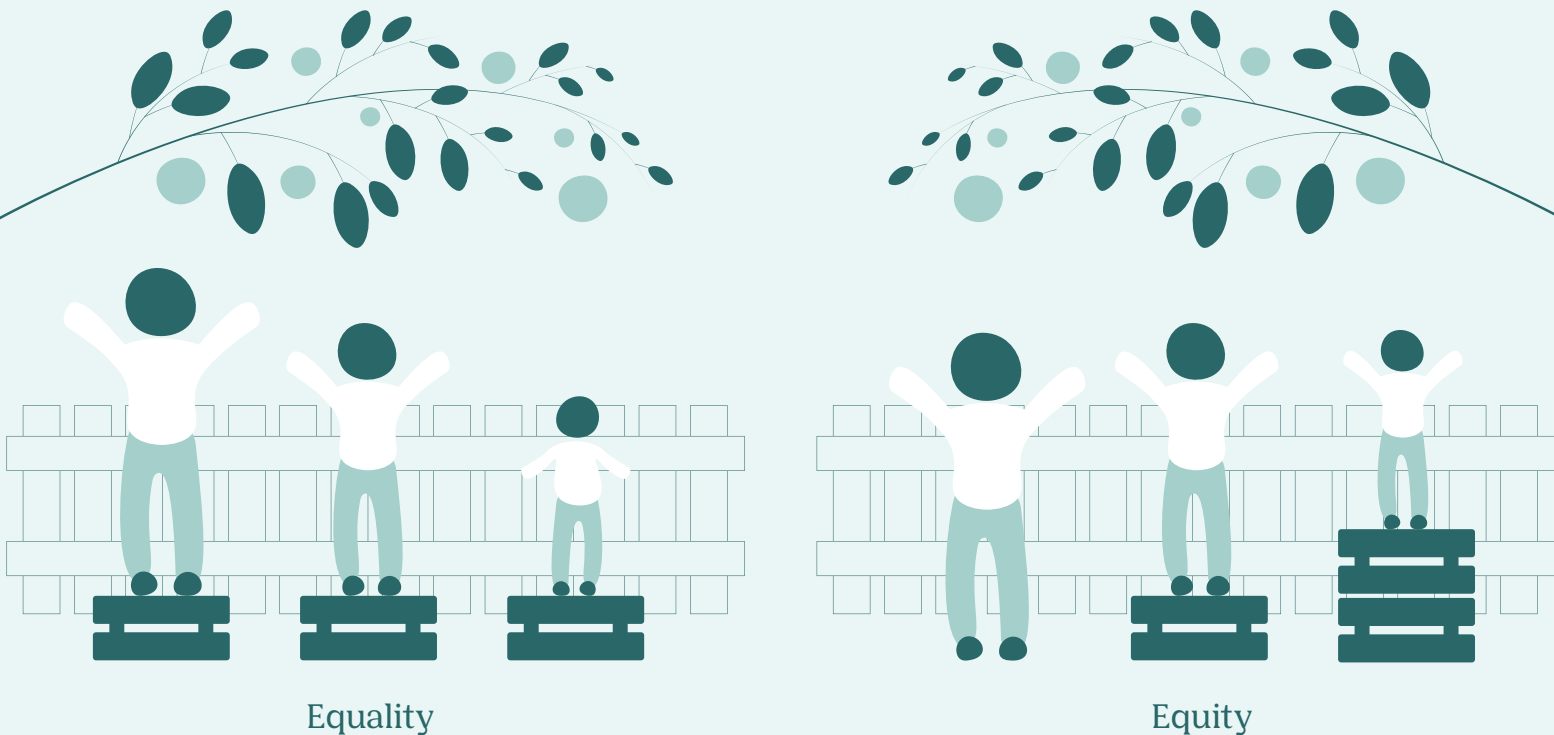
WHY HAVE A PLAN (AND SET A TARGET)?

The 'business as usual' approach is currently leading to overall declines in the numbers of trees across the City and the percentage of urban tree canopy cover since 1998. At current rates, targets will not be reached.

To counter this decline a planned approach to increase canopy cover is necessary and vital.

Having a plan is the 'roadmap' from where we are, to where we want to be, and spells out how we are going to get there.

A national canopy cover benchmarking study identified that in metropolitan Adelaide, the City of Charles Sturt was the second lowest in terms of % canopy cover in Council areas.

[5] 1998, being the first year of measuring cover
https://www.itreetools.org/documents/294/2016_SeedConsultingServices_TreeCanopyCoverInTheCityOfCharlesSturt-BenchmarkingAssessment.pdf

[6] Jacobs, B., Mikhailovich, N., and Delaney, C. (2014) Benchmarking Australia's Urban Tree Canopy: An i-Tree Assessment, prepared for Horticulture Australia Limited by the Institute for Sustainable Futures, University of Technology Sydney https://202020vision.com.au/media/7141/final-report_140930.pdf

Trees add monetary value to a suburb. Important for wildlife, and cooling the environment.

The 30 Year Plan for Greater Adelaide (2017) outlines key directions to create a greener city through an increase in green cover by 20% across metropolitan Adelaide by 2045.

For Charles Sturt an increase of 20% on the 2014 baseline measure of 14.28% will provide a City-wide canopy target of 17.14% by 2045. This should be considered a minimum target increase and recognised as not adequate to achieve our ambitious target of 25% cover by 2045.

Percentage Canopy Cover

14.28%	17.14%	25%
Baseline	30 Year Plan Minimum Target	Goal

2014	2045	2045	Year
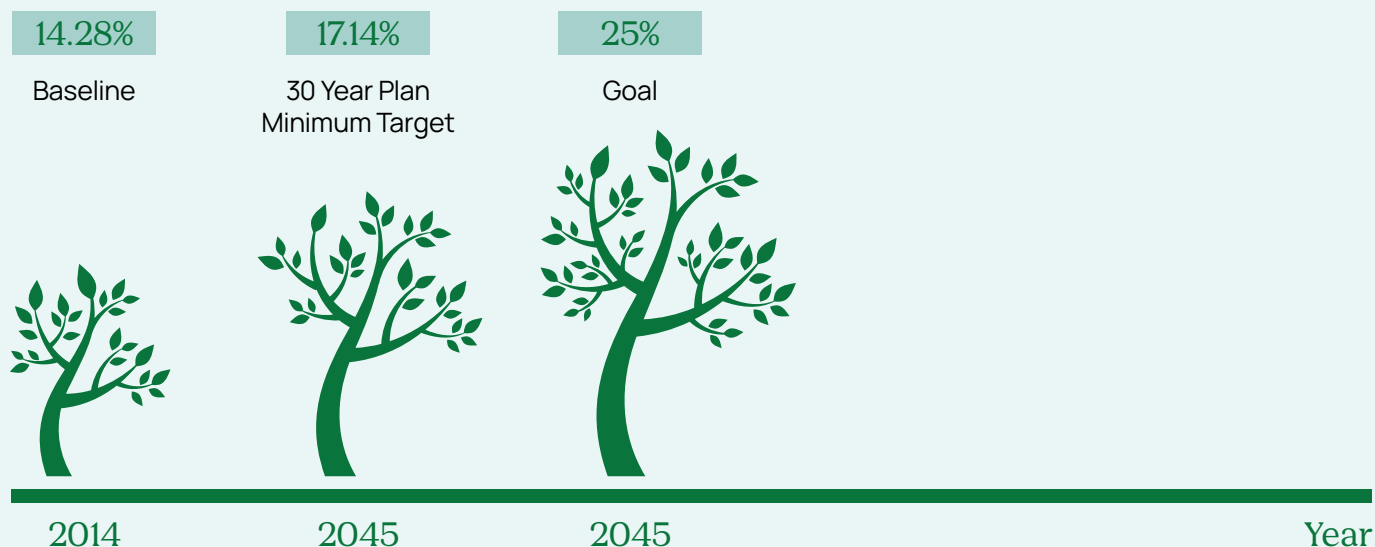
Research has shown increasing canopy cover can increase property values. One study demonstrated that a 10 per cent increase in street tree canopy can increase the value of properties by an average of $50,000

Another study identified a 10 per cent increase in tree canopy cover can reduce land surface temperatures by 1.13 degrees Celsius[8].

Planning to increase canopy cover in the hotter parts of the City as a priority helps mitigate the impacts of urban heat island effects [9],[10] and will create urban cool islands[11] – places of refuge and considered desirable places to live and recreate.

[7]THE 30-YEAR PLAN FOR GREATER ADELAIDE - 2017 UPDATE https://livingadelaide.sa.gov.au/__data/assets/pdf_file/0003/278265/Target-5.pdf

[8]From ‹https://www.greater.sydney/metropolis-of-three-cities/sustainability/city-its-landscape/urban-tree-canopy-cover-increased›

[9]Bhargava A, Lakmini S, Bhargava S (2017) Urban Heat Island Effect: It's Relevance in Urban Planning. Journal of Biodiversity & Endangered Species 5: 187. https://www.hilarispublisher.com/open-access/urban-heat-island-effect-its-relevance-in-urban-planning-2332-2543-1000187.pdf

[10]Ali Soltani, Ehsan Sharifi, Daily variation of urban heat island effect and its correlations to urban greenery: A case study of Adelaide, Frontiers of Architectural Research, Volume 6, Issue 4, 2017, Pages 529-538, https://www.sciencedirect.com/science/article/pii/S2095263517300432

[11]Tathiane A.L. Martins, Luc Adolphe, Marion Bonhomme, Frédéric Bonneaud, Serge Faraut, Stéphane Ginestet, Charlotte Michel, William Guyard, Impact of Urban Cool Island measures on outdoor climate and pedestrian comfort: Simulations for a new district of Toulouse, France, Sustainable Cities and Society,

An example of an urban cool island provided by Sam Johnson Reserve in Renown Park, demonstrates the cooling impact provided by green cover – grass – in the light-blue coloured areas and the greater cooling effect provided by canopy cover – trees – in the darker blue coloured areas. The red shaded areas are hotter and comprise homes and other hard surfaces such as car parks and roadways.
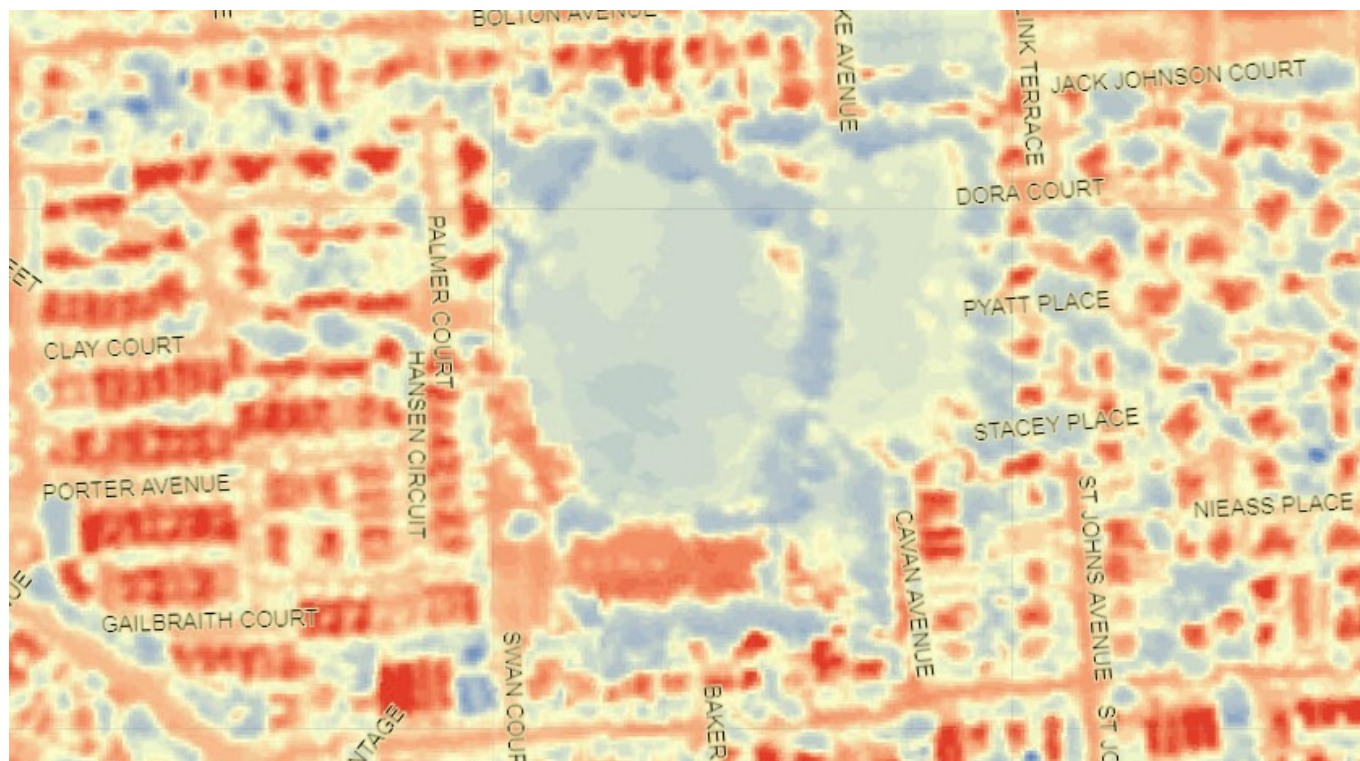
This street in Allenby Gardens demonstrates the visual and cooling benefits of trees.

Lewanick Street, Allenby Gardens
portion south of Brand Avenue

Lewanick Street, Allenby Gardens
portion north of Brand Avenue
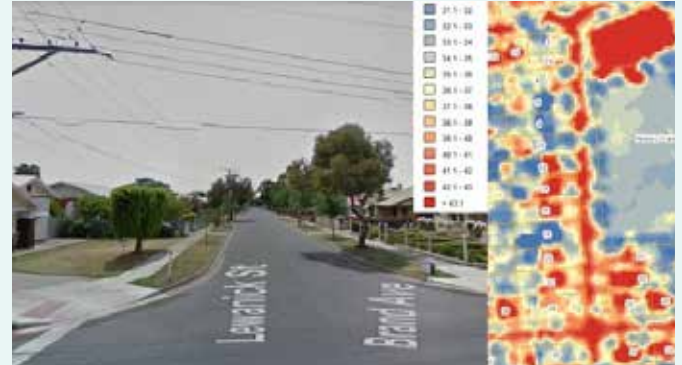
WHY PROTECT MORE TREES (AND COMMIT TO PROTECT THEM)?

A mature tree provides a far greater number of benefits than a newly planted one. Trees take decades (sometimes centuries) to reach maturity, making the need for protection and retention of existing trees in the landscape of great importance.

Our urban forest population is declining in size, primarily due to the number of trees being removed to allow for urban densification / infill development.

Infill development causes significant changes in tree cover and impervious cover

Findon 1998

Findon 2014
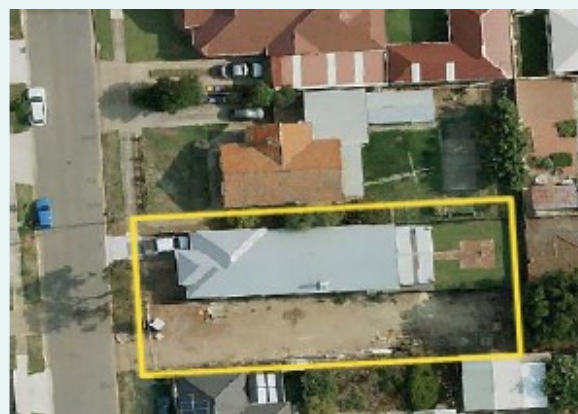
More than 63% of tree canopy cover across the City is on privately owned land. Infill development in the City of Charles Sturt has seen the percentage cover of trees on private lands reduce from 15.06% in 1998 to 12.79% in 2020, a difference of -2.27% and represents a -15.07 % change.

Decline in Percentage Tree Canopy Cover on Private Lands

1998   -15.07% change   2020

15.06%

12.79%
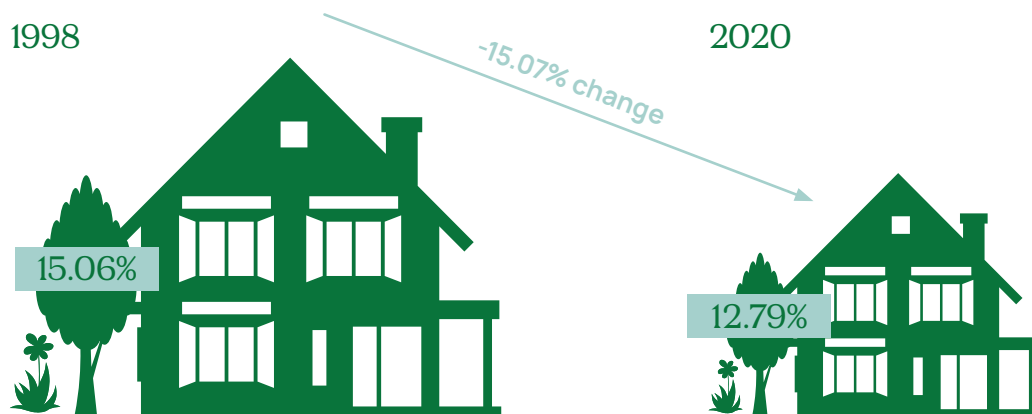
It is recognised in order to strike a balance between economic and environmental values, urban development does result in some trees being removed and new trees planted.

Well-considered and thoughtful design choices allow for existing trees to be retained as part of development.

Unnecessary removal of trees to allow for infill development, through whole of lot clearing and an increase in cross-overs (driveways) has been identified as a key driver in the decline of the urban forest City-wide and despite Council planting programs, the number of tree removals on private land in particular, outstrips the numbers of new trees being planted.

Planning and development legislation allows for the removal of trees other than those defined as "significant" or "regulated". This poses an exceptional challenge to maintaining and increasing canopy cover across the City on lands that are privately owned.

The introduction and application of the Planning and Design Code from 19 March 2021 under the Planning, Development and Infrastructure Act 2016 is a major reform of the planning system and many planning provisions, some of which pertain to trees.

The intent, application, and effect of these provisions will be closely monitored to determine the "on-ground" effects of these on trees planted, retained or removed, particularly on privately owned lands. The Code introduces requirements for developers to make provision for the planting of trees in sites of increasing density. The success of this will need to be closely monitored and enforced for there to be any significant improvement in private plantable space.

In the absence of legislative instruments, education, encouragement and other mechanisms (such as policy change and financial incentives) need to be explored and implemented to ensure greater protection (leading to increased retention) is given to privately owned trees.

Council will continue to advocate for improved tree planting and retention settings in the planning system to support expansion of urban tree canopy and green cover.

In cases where private development will impact on public trees, particularly in the case of cross-overs, mechanisms to influence the retention of these trees need to be introduced , such as incentivising (or mandating) shared cross-overs on subdivided lots and designs that work to retain existing landscape features, or allowing design outcomes which accommodate the long term health of the tree. Once the carrying capacity for trees in a streetscape is reduced by the proliferation of cross-overs, it can never be recovered.

EXAMPLES OF CROSSOVER TREATMENTS AND OPPORTUNITY FOR PLANTING

This example below of two double garages and double width crossovers on a subdivided block has eliminated any opportunity for tree planting or any soft landscape treatment on the verge streetscape.

In this example below, a double garage, with single width crossover and splayed driveway, allows for the same undercover car storage capacity as the above example, while retaining the existing street tree and soft landscape on the verge streetscape.

More than 60% of the entire City is covered with impervious surfaces – buildings, roads, footpaths, paved surfaces and the like.

Creating more space for planting trees will be required to achieve the vision of 25% tree canopy cover by 2045. This is necessary in a streetscape to increase the number and size of trees that can be planted and is needed to counter the impacts on city wide tree canopy cover from private realm tree removals due to densification.

Streetscape changes, as in this road re-construction at Burleigh Avenue Pennington, provide more space - and is an opportunity to increase the number and size of trees that can be planted.

Implementing a long-term communications strategy to educate and engage our residents about tree protection and planting goals will garner greater civic pride and "ownership", as well as advocacy and support for better greening outcomes and recognition and appreciation about the benefits trees provide.

WHY MORE TREE MAINTENANCE/MANAGEMENT (AND ENHANCE OUR MAINTENANCE)?

Growing trees to maturity, is a decades-long process.

Well-maintained trees that are subject to regular inspection to detect any threats, are pruned when necessary, and afforded good growing conditions, will continue to grow in a healthy state that leads to a long and full life-span and provide ongoing benefits to people and the environment in the City of Charles Sturt.

Conversely, poorly maintained trees, planted in sub-optimal growing conditions can be vulnerable to a range of threats such as drought, pest and disease attacks. This can lead to poor tree health, structural failure and shorten tree life spans, or cause tree death.

By investing in getting growing conditions right, and planting good quality stock, during a climatically appropriate planting season, allows for the best chance of successfully growing a tree to maturity.

Encouragement of community support to better care for public and private trees by understanding and responding to signs of tree stress such as pest or disease attack, providing supplementary watering during times of drought, and reporting of tree issues, will result in a healthier urban forest.

Ensuring that water sensitive urban design practices are implemented where possible to increase the passive irrigation provided to trees will enhance the resilience of the urban forest in a changing climate.

Reducing tree mortality to help extend the average life span of trees, provides for the greatest realisation of benefits to be derived from each tree and each budgetary cycle.

As a tree reaches the end of its life, it is necessary to plan and consider carefully how to manage the potential impact on the landscape and the succession of removed trees.

Current   If no action is taken

Succession planning is necessary to ensure as trees reach the end of their life, our urban forest is renewed. (Sourced from City of Melbourne)

Ensuring a diversity of age spread by maintain appropriately to gain the full asset life of a tree, means Council avoids a significant spike of resource burdens and spreads end of life management and replacement costs in an equitable and sustainable manner.

APPRECIATE TREES MORE (AND ENGAGE OUR COMMUNITY)

The more we all understand more about the benefits of trees and appreciate and value these living assets the more we will care for trees and advocate and support their retention in private and public landscapes

Understanding the asset value of our public realm tree population will raise the profile of green assets and put them on par with grey assets in terms of asset management planning principles.

While no accepted nation-wide or state-based valuation of trees method is used by Council, identifying an asset worth should be equivalent to the value of having to replace the urban forest

to a similar state inclusive of planning, planting, establishment and ongoing maintenance.

Educating our community about the work we do to maintain and enhance the urban forest is a cornerstone of increased visibility of the efforts being made and appreciation of the long-term goals and aspirations we have as a Council on behalf of our community.

Seeing the big picture helps us imagine a future where we all appreciate and value trees and fight for their retention and make smart decisions about designing for the inclusion of trees in our backyards and front yards and expect the same of Council.

The lungs of life, a canopy to cool the planet, a habitat for birds and animals

MONITOR AND EVALUATE OUR PROGRESS (AND CHANGE COURSE IF WE NEED TO)

Our corporate and community planning structure uses indicators to measure and track our success. Our Community Plan 2020-2027 identifies that:

> *Our City will become greener with increasing tree canopy cover spaces and green infrastructure. Through improved biodiversity, we will achieve a better living environment for people.*

The outcome being pursued is that: **Our city is greener to reduce heat island effects and enhance our biodiversity,** with the relevant success measure being that: **Our biodiversity and tree canopy cover are consistently increasing**.

This Tree Canopy Improvement Strategy is our overarching approach to achieving these community plan aspirations, outcomes and measures.

Understanding the impact and effectiveness of this strategy relies on effective monitoring and evaluation. This information will help us to understand emerging issues, improve our performance and ensure we are accountable to our community.

By planning from the start about what will be measured, how it will be measured, for what purpose, and for what audience, the information gathered will lead us to know whether we are doing the right thing and in the right way.

If we learn that we are deviating from our vision, we need to modify the strategy to achieve the desired goal.

This strategy will be a living document and allow for further reviews every 5 years over the life of the plan 2021-2045. As part of reviews, the target will be assessed to ensure it remains appropriate and responsive to conditions.

Tree Tags help educate the community about the value and benefits of trees

ACTION PLAN

Principle		1. Plant more trees (and co

			Resourcing	
Number	Action	Priority H - higher M - medium L - lower	Within existing resources	Additional resources required
1.1	Plant more trees in a programmed and strategic manner to achieve the endorsed target of 25% cover by 2045.	H	✔	✔
1.2	Undertake work to identify the number of trees required to be planted across the City to achieve this target (using existing LiDAR data, i-tree canopy measurements, tree inventory)	H		✔
1.3	Once the number of trees is identified, develop a (whole street) planting program that provides a roadmap to achieving this increase by 2045 with annual targets in place.	H	✔	✔
1.4	Identify the physical, financial and human resources required to achieve this target, including understanding and programming for up front and ongoing maintenance costs and reviewing service levels and budget allocations and obtain Council support to secure recurrent funding to achieve this.	H	✔	✔
1.5	Prioritise planting in areas using the following factors: • lower canopy coverage • higher urban heat • greater social vulnerability • consideration to establishing green linkages and wildlife corridors.	H	✔	✔
1.6	Before planting, getting growing conditions right, and ensure we are planting good quality stock, during a climatically appropriate planting season, including that water sensitive urban design practices and other innovative solutions for passive watering using stormwater are considered and implemented for plantings where possible.	H	✔	
1.7	Undertake a review of existing tree species diversity and success across the City (including identifying species that are failing)	L		✔
1.8	Review species being planted to ensure species diversity targets of no more than 30% per family, 20% per genus and 10% per species thereby increasing resilience are achieved and maintained.	L		✔
1.9	In making species selection, ensure trees being planted are viable in a changing climate (hotter, drier, stormier).	H	✔	
1.10	Implement trials of new species (including consideration of allergen potential & plant gender diversity issues) and planting practices with monitoring and evaluation for a minimum of 5 years.	L		✔

...ontinually review planting options)

Delivery Method/Provider		Implementation Horizon (years from 2021)			
In-house	External	1-2 years	3-5 years	5+ years	ongoing
✔	✔				✔
✔	✔	✔			
✔					✔
✔	✔	✔			
	✔	✔			
✔		✔			
	✔			✔	
	✔			✔	
✔					✔
✔	✔			✔	

Principle		1. Plant more trees (and c		
			Resourcing	
Number	**Action**	**Priority** **H - higher** **M - medium** **L - lower**	**Within existing resources**	**Additional resources required**
1.11	Implement trials of different planting and establishment practices such as: Pre-planting soil ameloriation - test soil and correct any nutrient deficiencies, assess permeability and apply wetting agents, apply soil microbiological stimulants, decompaction of planting area (eg deep ripping) increases to frequency and duration of establishment watering.	L		🍃
1.12	Adopt principle of "Size Matters" when choosing species, noting that large trees provide far more benefits than smaller trees. While it's not always possible to plant large trees, we should aim to plant the largest size (at maturity) trees for the space available and aim to follow the principle of the right trees in the right places.	H	🍃	
1.13	Review existing planting typologies - uniform avenue / mix of species, optimise tree size to available planting size, "green tunnel", trees in the carriageway, and explore other typologies mix of all depending on area. Using these findings to modify, maintain, refine practices.	H	🍃	🍃
1.14	Review existing street tree policy and trial new approaches and practices to encourage greater plantings of street trees.	H	🍃	

continually review planting options)

Delivery Method/Provider		Implementation Horizon (years from 2021)			
In-house	External	1-2 years	3-5 years	5+ years	ongoing
🌿					
🌿		🌿			
🌿	🌿	🌿			
🌿		🌿			

Principle			2. Have a p	
			Resourcing	
Number	Action	Priority H - higher M - medium L - lower	Within existing resources	Additional resources required
2.1	Council to endorse this plan and the ambitious target to achieve 25% tree canopy cover by 2045.	H		
2.2	Acknowledge that a change to "business as usual" is required and commit to provision of adequate resources to achieve the target.	H		
2.3	Undertake modelling to identify the numbers of trees that a required to be planted annually to achieve the target and translate this into short-term plans.	H		
2.4	Identify locations where trees are to be planted – both on public and private land, targeting the hotter parts of the city as a priority and make this information available to the community.	H		

plan (and set a target)

Delivery Method/Provider		Implementation Horizon (years from 2021)			
In-house	External	1-2 years	3-5 years	5+ years	ongoing
🌿		🌿			
🌿		🌿			
	🌿	🌿			
	🌿	🌿			

Principle			3. Protect more trees	
			Resourcing	
Number	Action	Priority H - higher M - medium L - lower	Within existing resources	Additional resources required
3.1	Adopt and promote the concept that we are custodians of trees for current and future generations.	H	✔	✔
3.2	Advocate for, and demonstrate well-considered and thoughtful design choices that allow for existing trees to be retained as part of development.	M	✔	
3.3	The intent, application, and effect of the provisions of the Planning and Design Code to be closely monitored to determine the "on-ground" effects of these on trees planted, retained or removed, particularly on privately owned lands and help the community understand the planning system as it relates to tree retention and removals.	H	✔	✔
3.4	In the absence of legislative instruments, education, encouragement and other mechanisms (such as policy change and financial incentives) need to be explored and implemented to ensure greater protection (leading to increased retention) is given to privately owned trees.	H	✔	
3.5	In cases where private development will impact on public trees, particularly in the case of cross-overs, mechanisms to influence the retention of these trees need to be introduced.	H	✔	
3.6	Continue to advocate for improved tree planting and retention settings in the planning system to support expansion of urban tree canopy and green cover.	H	✔	
3.7	Where possible and appropriate, create more space for planting trees such as in road reconstructions, new developments and within the changing urban form.	H	✔	✔
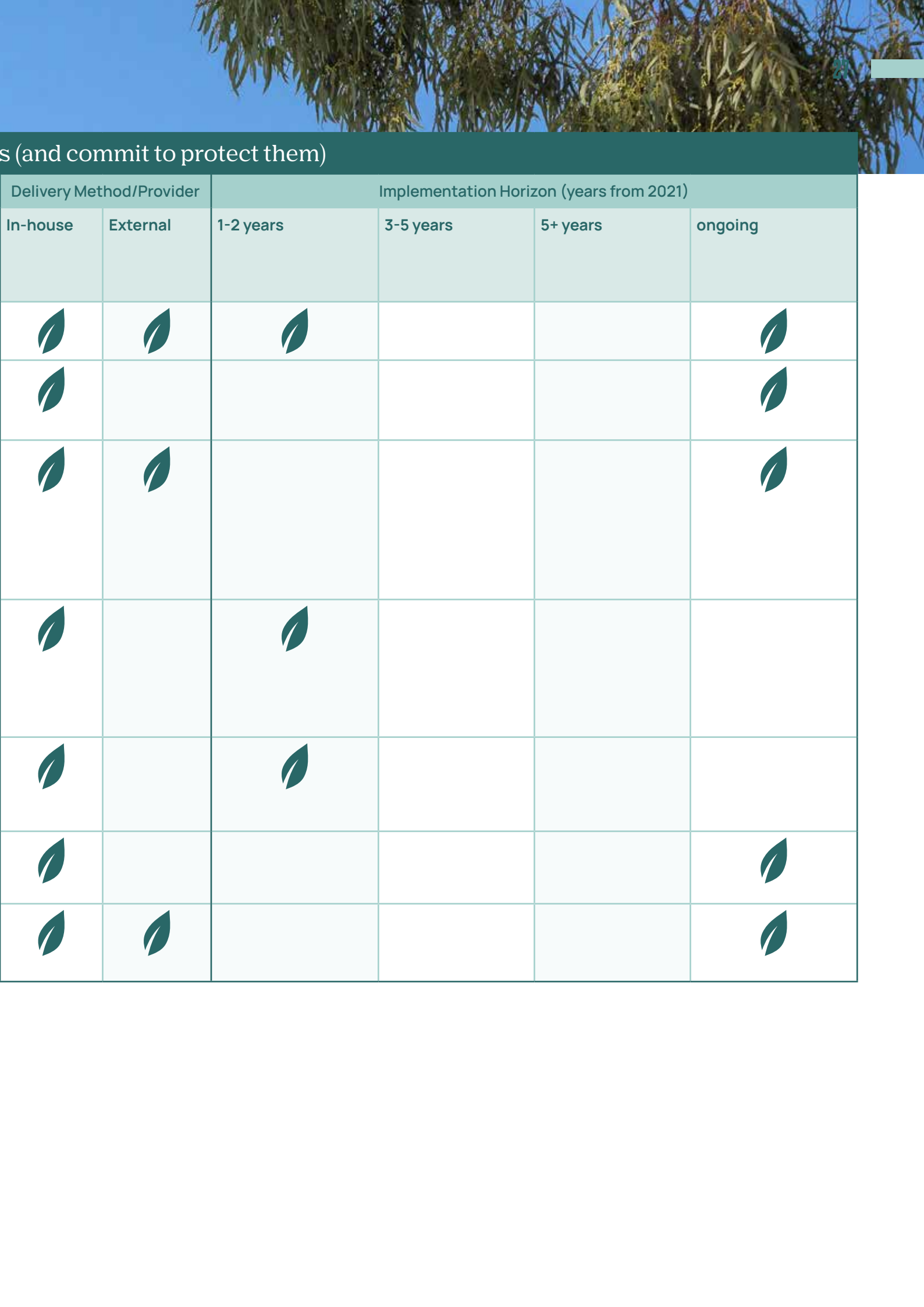
s (and commit to protect them)

	Delivery Method/Provider		Implementation Horizon (years from 2021)			
	In-house	External	1-2 years	3-5 years	5+ years	ongoing
	✓	✓	✓			✓
	✓					✓
	✓	✓				✓
	✓		✓			
	✓		✓			
	✓					✓
	✓	✓				✓

Principle			4. More tree maintenance/man		
				Resourcing	
Number	Action	Priority H - higher M - medium L - lower	Within existing resources	Additional resources required	
4.1	Ensure the current practice of inspecting and pruning all Council trees across the City at least once every three years is maintained.	H	✔		
4.2	Undertake analysis to ensure that we are maintaining our existing tree stock in the best way we can.	L	✔		
4.3	Investigate / develop business intelligence tools for better urban forest management, so that we know more about what we are managing, noting that data is helpful but can be costly to collect.	L	✔	✔	
4.4	Investigate what data sets already exist and where are our critical information gaps - identify how much new data we really need. Consider the following data: Where are the trees located? What species are they? How old are they? What is the turn-over rate? What is the tree health like? How are the trees distributed across the landscape? Number of trees by suburb? Number of trees per capita? Number of species of trees?	L	✔	✔	
4.5	Identify what are the triggers for intervention when tree health is declining and what are the responses and determine whether intervention occurring at the right time.	L	✔	✔	
4.6	Encouragement of community support to better care for public and private trees by understanding and responding to signs of tree stress such as pest or disease attack, providing supplementary watering during times of drought, and reporting of tree issues, allows for the best chance of successfully growing a tree to maturity.	L	✔	✔	
4.7	Adopt a succession planning approach for when trees reach the end of its life plan and consider carefully how to manage the potential impact on the landscape and the succession of removed trees.	L	✔		
4.8	Ensure a diversity of age spread by maintaining appropriately to gain the full asset life of a tree.	H	✔		

…nagement (and enhance our maintenance)

Delivery Method/Provider		Implementation Horizon (years from 2021)			
In-house	External	1-2 years	3-5 years	5+ years	ongoing
🌿					🌿
				🌿	
🌿	🌿			🌿	
	🌿			🌿	
🌿	🌿			🌿	
🌿	🌿			🌿	
🌿					🌿
🌿					🌿

Principle			5. Appreciate trees m[...]	
			Resourcing	
Number	Action	Priority H - higher M - medium L - lower	Within existing resources	Additional resources required
5.1	Develop and implement a range of engagement tools so that the community understand how urban heat islands relate to their place of residence and how we are working to create urban cool islands as places of refuge.	H	✔	✔
5.2	Educate our community about the work we do to maintain and enhance the urban forest to increase visibility of the efforts being made and appreciation of the long-term goals and aspirations we have as a Council on behalf of our community	H	✔	
5.3	Develop and implement a long-term communications strategy to educate and engage our residents about tree protection and planting goals to garner greater civic pride and "ownership", as well as advocacy and support for better greening outcomes.	H	✔	
5.4	Consider methods to understand the asset value of our public realm tree population to raise the profile of green assets and put them on par with grey assets in terms of asset management planning principles.	M	✔	✔
5.5	Educate our colleagues & internal stakeholders so that they understand that urban forest management is highly complex and requires specialist skills and adequate resourcing to achieve targets (and that these skills and resources are made available for urban forest management).	H	✔	

ore (and engage our community)

Delivery Method/Provider		Implementation Horizon (years from 2021)			
In-house	External	1-2 years	3-5 years	5+ years	ongoing
🌿	🌿	🌿			
🌿		🌿			
🌿		🌿			🌿
🌿	🌿			🌿	
🌿		🌿			

Principle			6. Monitor and evaluate our pr	
			Resourcing	
Number	Action	Priority H - higher M - medium L - lower	Within existing resources	Additional resources required
6.1	Develop a monitoring and evaluation plan including suite of indicators and parameters to understand the impact and effectiveness of this strategy, ensuring the plan contains information about of trees planted within the last quarter and cumulative total for that year, and reporting via social media and our website.	H	🍃	
6.2	Measure progress against these indicators and parameters to understand emerging issues, improve our performance and ensure we are accountable to our community.	M	🍃	
6.3	Every five years measure the amount of tree canopy cover (and other cover types) across the city on public and private lands	M		🍃
6.4	Review and update this plan every five years.	M	🍃	

rogress (and change course if we need to)

| Delivery Method/Provider | | Implementation Horizon (years from 2021) | | | |
In-house	External	1-2 years	3-5 years	5+ years	ongoing
🍃		🍃			
🍃	🍃		🍃		
	🍃		🍃		
			🍃		

City of Charles
Sturt

MEANS
THE WORLD