2023

THE LEGISLATIVE ASSEMBLY FOR
THE AUSTRALIAN CAPITAL TERRITORY

TENTH ASSEMBLY

Urban tree canopy coverage - Annual Update (in response to Assembly Resolution of 31 March 2021)

Presented by
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November 2023

ACT Government

Urban Tree Canopy Coverage Report

Transport Canberra and City Services Directorate

November 2023

Table of Contents

Tables

Figures

1.0 Executive Summary

On 29 March 2021, Government agreed to the final Urban Forest Strategy and its public release. This report provides an update on the key actions undertaken in 2022-23 to meet the objectives of the Strategy, including:

- A total of 12,650 street trees and trees in open space were planted as part of the TCCS tree planting program in 2022-23. With an additional 1,909 planted on unleased land by other agencies, the total number of trees planted on unleased land was 14,559 or 80.88% of the 22/23 target. The target of 18,000 was achieved early in the 2023-24 FY.
- The Urban Forest Bill 2022 was passed in the legislative assembly on 30 March 2023 and will repeal and replace the *Tree Protection Act 2005* from 1 January 2024. The new Act will improve tree protection on both public and private land and encourage shared responsibility for the care of trees by the ACT Government, industry and the community.
- A successful nomination in April 2023 saw Canberra continue as an 'International Tree City of the World' as recognised by the United Nations Food and Agriculture Organisation and the Arbor Day Foundation.
- Collaboration on Water Sensitive Urban Design (WSUD) projects to help promote the health of our urban forest, support urban biodiversity and build liveability.
- Support for community programs including Urban Parks and Places volunteer groups, the Adopt-A-Park program, Tree Week 2023, the Blue Tree Project, the YourSay planting map, grants offered in collaboration with EPSDD, collaboration on Connecting Nature Connecting People projects and contributions to the EPSDD Biodiversity Sensitive Urban Design Guide.
- Collaboration with EPSDD and other organisations in policy development and restoration projects to ensure that species diversity is optimised for habitat and connectivity.
- Recycling of urban wood waste and replacement of degraded tree surround surfaces.

Transport Canberra and City Services continues to lead Government's effort to strive towards the Urban Forest Strategy target of a 30 per cent tree canopy cover in the ACT by the year 2045.

1.1 Definitions

The following terms used in this report have a specific, technical meaning:

Term/Acronym	Definition
GIS	Geographic Information Systems that create, store, manage, analyse, and map all types of data related to positions on the earth's surface.
LiDAR	Light Detection and Ranging. A remote sensing method using light to measure ranges to objects on the surface of the earth and accurately image the landscape in three dimensions.
TCC	Tree Canopy Cover. An estimate of tree canopy coverage as a percentage of total land area.
Urban footprint	This has been determined as the ACT Divisions area and includes all trees above three metres, on both public and leased land. Where data has referred to a District, these are only the Division areas within the District.

2.0 Background

2.1 Contribution of Actions in the Urban Forest Strategy

2.1.1 Community support for actions and objectives

The release of the Urban Forest Strategy 2021-2045 (the Strategy) followed community engagement undertaken in 2020 to seek feedback on the vision, objectives and actions of the draft Strategy. Over 240 people, including interested community groups, had their say by completing a survey or providing a written submission.

The community were very supportive of the vision, objectives and actions of the Strategy, with 92% of respondents supporting the vision, 97% either fully or generally supportive of the objectives and seven of the nine actions in the Strategy highlighted by respondents as a key priority.

2.1.2 Contribution of actions

The Strategy has six key objectives to support a healthy, resilient and sustainable urban forest and achieve the 30% tree canopy cover (or equivalent benefit) target by 2045. Each objective is broken down into actions that provide a road map to guide government activities. These actions have been allocated a rating to reflect their potential contribution towards achieving the tree canopy target (Table 1):

- Major – key contributor to on-ground outcomes
- Moderate – provides direct support for on-ground actions
- Minor – cumulative on-ground impact that supports or complements other actions

Activities that are underway in 2023 that will provide the largest contribution to achieve the canopy cover target are the;

- expanded planting program; and
- legislative reform to enhance the protection for the existing urban forest.

These major contributors will be supported by increasing community partnerships and education, and planning planting programs to promote equitable canopy cover, increase tree species diversity and promote biodiversity. These actions are designed to interact, complement and enhance each other to achieve a comprehensive outcome. A summary of progress against all Strategy actions listed in **Table 1** is summarised at Section 9.

Table 1 Contributions of Urban Forest Strategy actions towards the canopy cover target

Objective	Action		Contribution
Protect the urban forest	1.1.1	Maintain and promote the Tree Register (under the Tree Protection Act (TPA))	Minor
	1.2.1	Review and update the TPA to ensure the threshold for protecting trees is appropriate	Major
	1.2.2	Review and update the TPA criteria for removal of protected trees to ensure it aligns with community values and expectations	Major
	1.2.3	Review and update the TPA and Public Unleased Land Act (PULA) to ensure appropriate compliance mechanisms exist to deter illegal tree removals or damage to trees on leased and unleased land, and respond appropriately when they occur	Moderate
	1.3.1	Consider developing a program to ensure the health of mature and remnant trees on unleased land	Minor
	1.3.2	Review and update the PULA to require all developers to erect prescribed fencing to protect existing trees on public land from damage prior to demolition, excavation and/or construction on adjacent blocks	Moderate
	1.3.3	Investigate incentives and programs to better provide for maintenance and care of registered and remnant trees on leased land	Minor
	1.3.4	Program cultural site assessments with a view to developing cultural tree management plans	Minor
	1.4.1	Investigate and implement administrative and technological reforms to systems and processes for administration of the Tree Protection Act to ensure they are streamlined, transparent and efficient	Moderate
Grow a resilient forest	2.1.1	With reference to the 2010 audit, obtain updated data on the current canopy cover of the public urban forest to inform a replacement program	Moderate
	2.1.2	Develop a sustainable program of end-of-life tree removals and replacements for removed trees and existing planting gaps to maintain the urban forest, including best-practice after-care for new plantings	Major
	2.1.3	Develop a sustainable planting program to increase canopy cover equitably across the urban footprint by establishing sufficient additional trees to meet the canopy cover target over the life of the Strategy	Major
	2.2.1	Consider introducing a canopy contribution framework for trees on both public and private land that ensures that when trees must be removed and cannot be replaced on site, they are replaced elsewhere through a contribution based on the value of the tree at the time of assessment	Major

Objective	Action		Contribution
	2.2.2	Review PULA to consider a tree bond scheme for trees on public (unleased) land that discourages tree removal and damage through development	Moderate
	2.3.1	Promote and periodically update the preferred species planting guide to assist the community in understanding what trees to plant on leased land	Minor
	2.3.2	Publish and regularly review a list of climate resilient trees	Minor
Balance & diversify the urban forest	3.1.1	Direct initial prioritisation for new plantings to existing planting gaps and addressing the most vulnerable communities	Major
	3.1.2	Undertake regular LiDAR data capture and analysis every 5 years to enable effective monitoring and evaluation of canopy coverage and permeability across the urban footprint	Major
	3.1.3	Progressively map suburbs at risk of losing canopy due to ageing trees to inform a planned removal and replanting program	Major
	3.2.1	Consider use of spatial mapping and citizen science programs to help identify areas with low species diversity and inform future plantings	Moderate
	3.3.1	Plan planting programs to achieve a best practice age profile of the urban forest by 2045	Major
	3.3.2	Ensure yearly maintenance programs involve adequate removal and replacement of end of life trees to develop a balanced age distribution	Major
Take an ecological approach and support biodiversity	4.1.1	Map remnant trees in the urban area	Minor
	4.1.2	Assess senescent and ageing native trees for retention as habitat preferentially to being removed	Minor
	4.1.3	Collaborate with the Environment, Planning and Sustainable Development Directorate (EPSDD) to enhance and conserve biodiversity and eco-cultural values of urban areas (Nature Conservation Strategy – Strategy 4)	Minor
	4.1.4	Identify opportunities to protect young seedlings growing from mature remnant trees on unleased public land where it is appropriate	Major
	4.2.1	Implement strategic planting to support wildlife and enhance movement and foraging opportunities across the city and wider landscape	Major
	4.2.2	Collaborate with EPSDD to undertake fine scale planning for habitat connectivity (Nature Conservation Strategy - Action 1.2)	Moderate
	4.3.1	Develop an urban wood reuse plan for trees removed from public land	Minor
	4.3.2	Ensure by-product from maintenance of the urban forest is used to support tree health and biodiversity conservation including in habitat restoration programs and nature-based park features	Minor
Develop infrastructure to support the	5.1.1	Investigate and promote use of permeable infrastructure (e.g. shared and bike paths, paving and car parks) in target areas	Moderate
	5.1.2	Continue to promote positive community behaviour in relation to managing and protecting nature strips and other public areas	Minor

Objective	Action		Contribution
urban forest and liveability	5.2.1	Collaborate across ACT Government to increase tree numbers in priority areas (Action 11 of the Living Infrastructure Plan (LIP))	Major
	5.2.2	Focus public tree plantings to support summer shading along active travel routes (Action 12 of the LIP)	Major
	5.2.3	Where possible, seek to widen road verges in areas where densification is occurring and along key active travel routes to accommodate additional tree planting	Moderate
	5.2.4	Collaborate with EPSDD to amend planning regulations to ensure suitable protection of existing trees and the establishment of new trees when planning infrastructure in new suburbs and in urban densification areas	Major
	5.2.5	Collaborate with EPSDD on the Planning review and TPA review to ensure consistent and appropriate decision making for protected trees	Major
	5.2.6	Where appropriate, install and maintain rain gardens and swales for urban water run-off in tree and understorey planting areas in urban streetscape upgrades and new estate developments	Moderate
	5.2.7	Review municipal design standards to include specifications on urban rain gardens and/or urban stormwater swales as planting locations on verges and other locations	Minor
Partner with the community	6.1.1	Expand and support community / volunteer programs to encompass a wider range of contributions to grow and maintain the urban forest	Minor
	6.1.2	Develop and make available to volunteers a citizen science data collection program	Minor
	6.2.1	Investigate incentives for retention of trees on private land including through collaboration with planning authorities	Major
	6.3.1	Develop community education material to convey the benefits of trees	Minor
	6.3.2	Build indigenous engagement in caring for the urban forest	Minor
	6.3.3	Consider ways to educate young people and how they can contribute to the urban forest	Minor

3.0 Contribution of different regions to Canberra's canopy cover

3.1.1 District canopy cover

The reasons for differing levels of canopy cover vary by district or region. Newer suburbs like Wright, Coombs and Throsby have very low levels of canopy cover as the trees in this area are still young. Failed juvenile trees are replaced as required, and any additional available planting sites are being populated to ensure the maximum canopy potential is establishing. Alternative location-specific solutions such as living infrastructure (green roofs for example) will also help to contribute in newer suburbs where planting sites are limited, particularly on leased land.

Older suburbs are more likely to have higher canopy cover because the blocks and road verges are larger and the trees more established. Canberra's urban forest was established over many decades and a significant number of trees will reach the end of their useful life expectancy (ULE) in the coming decades. Canopy cover in these areas may also be significantly affected by planning decisions that enable urban infill, resulting in a loss of mature trees on leased land.

To develop a best-practice age class distribution essential for future tree population stability it is necessary to:

- Replace trees as they are removed- this will prevent rapid canopy loss due to the time taken by new plantings to reach their potential canopy size;
- enact renewal (removal and replacement of end of life trees) in a staged process to prevent the loss of an entire street's canopy at one time; and
- explore opportunities to increase canopy in parks and open spaces to offset predicted reduction in canopy due removal of ageing street trees and impacts of removals for infill development.

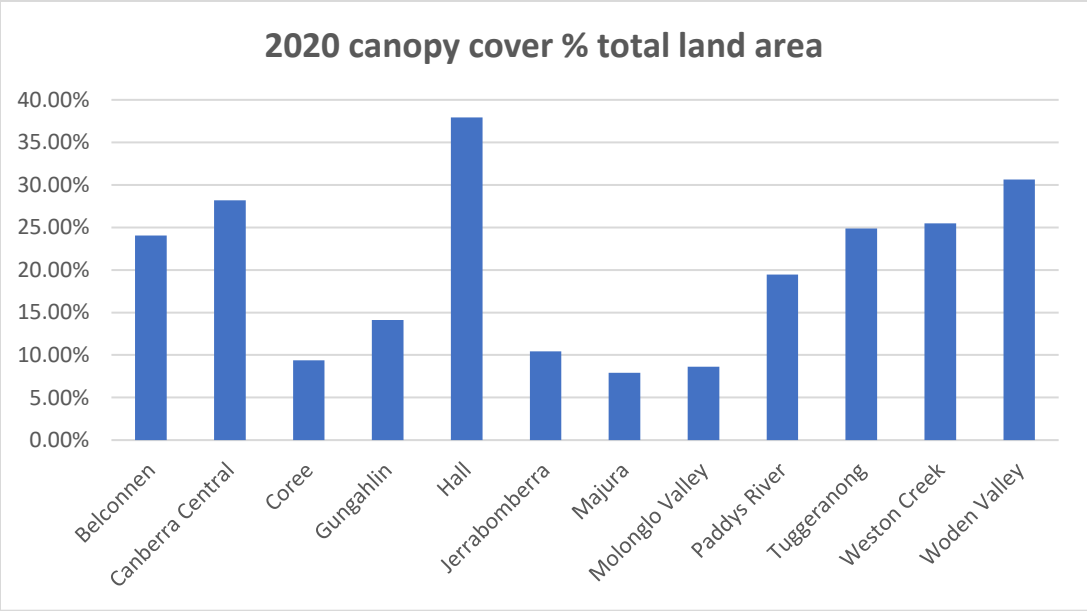
Tree canopy cover was measured in 2020 using the LiDAR remote sensing method. **Table 2** shows the percentage of canopy coverage across each district as measured in 2020.

The 2020 tree canopy cover estimates in **Figure 1** and **Table 2** are a reliable baseline for consideration of existing canopy cover in Canberra. The districts with the highest canopy cover are Hall Village (37.94%), Woden Valley (30.64%), Canberra Central (28.2%), Weston Creek (25.48%), Tuggeranong (24.88%) and Belconnen (24.04%). The districts with the lowest canopy cover are Majura (7.92%), Molonglo Valley (8.62%), and Coree (9.38%).

Table 2 District canopy cover % of total land area in 2020

District	2020 canopy cover % total land area
Belconnen	24.04%
Canberra Central	28.20%
Coree	9.38%
Gungahlin	14.13%
Hall	37.94%
Jerrabomberra	10.42%
Majura	7.92%
Molonglo Valley	8.62%
Paddys River	19.48%
Tuggeranong	24.88%
Weston Creek	25.48%
Woden Valley	30.64%
Overall canopy cover	**22.51%**

Figure 1 2020 canopy cover % of total land area



3.2 Suburbs/divisions identified for priority action

The Transport Canberra and City Services (TCCS) planting program is informed by data on canopy cover, the heat island effect and social vulnerability. As a result, planting focuses on filling gaps in residential streets in areas vulnerable to heat, with low levels of tree canopy cover and where canopy levels are decreasing due to trees reaching the end of their life. In these locations, priority will be given to public requests for new street trees and planting along active travel routes, consistent with actions in the Strategy.

3.2.1 Existing suburb canopy cover

Twenty-six suburbs of Canberra's 120 suburbs (also called divisions) have a tree canopy coverage higher than the 30% target and an additional 57 suburbs have a canopy cover between 20% and 30%. The suburbs with higher canopy coverage are generally found in Canberra's older regions developed prior to the 1990's. **Figure 2** maps tree canopy cover across Canberra's suburbs as measured in 2020.

Twenty-six suburbs have a canopy cover of less than 15% as shown in **Figure 3**. Over half of these suburbs were developed within the last 15 years and canopy cover is expected to increase as the trees planted at development reach maturity.

Figure 2 Percentage tree canopy cover for each suburb/division over urban Canberra in 2020 (Source: ACT Government, 2021)

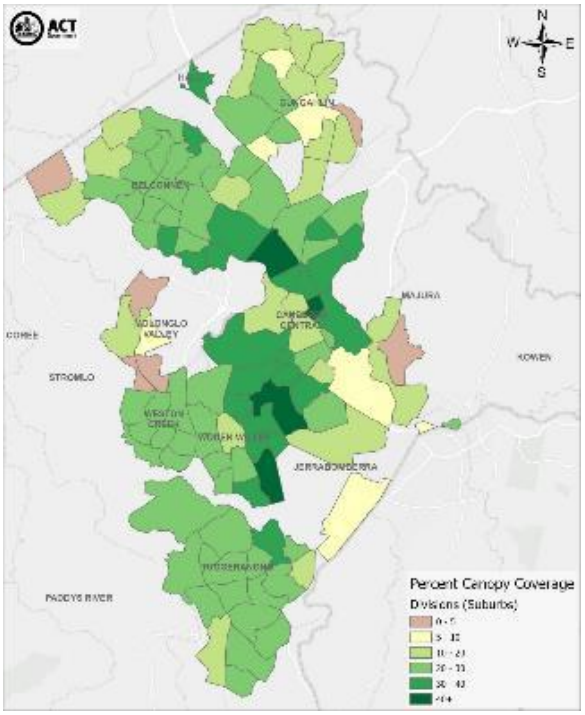
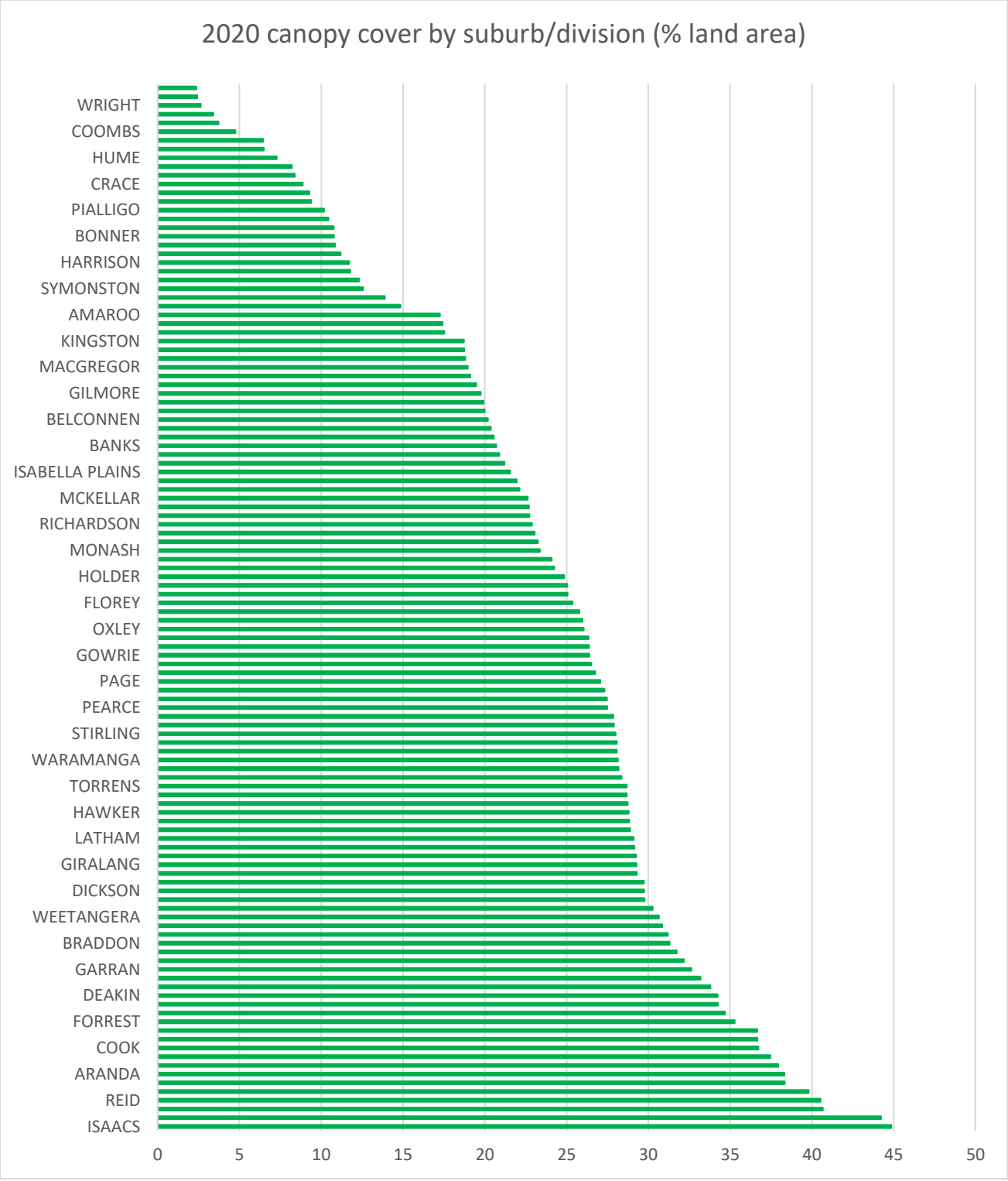


Figure 3 2020 Tree canopy cover for each suburb/division in urban Canberra



3.2.2 Identified suburbs affected by heat and vulnerability

Suburbs where residents are more vulnerable to heat have been identified using surface temperature and socio-economic and age data. The Strategy contains detailed maps that show the areas where heat impacts are likely to be highest.

As would be expected, there is an inverse correlation between the 2020 tree canopy coverage across suburbs and vulnerability to urban heat shown in **Figure 4** and **Table 3** below. The suburbs with the highest canopy coverage, such as Isaacs, O'Connor, Red Hill and Reid are cooler and have a lower vulnerability to urban heat, while suburbs such as Uriarra Village, Pialligo, Canberra Airport and Wright have very low canopy cover and high vulnerability to urban heat.

While priority is given to planting in locations with greater vulnerability to urban heat during the planning of the seasonal planting programs, the planting statistics for these locations are impacted by the way the vulnerability mapping has been carried out. The heat vulnerability mapping relates primarily to residential zoned land and the mapping extends only to the road centreline. This often results in the capture of one side of the road verge but excludes the opposite verge where there are no residential zones, or where the socio-economic and age demographic of residents is considered less vulnerable. As a result, areas such as adjacent parks, active travel routes and connections to local shops, schools and other community facilities are not captured in the heat vulnerability maps. Despite this, priority is given to planting in all suitable locations in and adjacent to vulnerable areas.

Figure 4 2020 Canopy cover and hot & vulnerability index

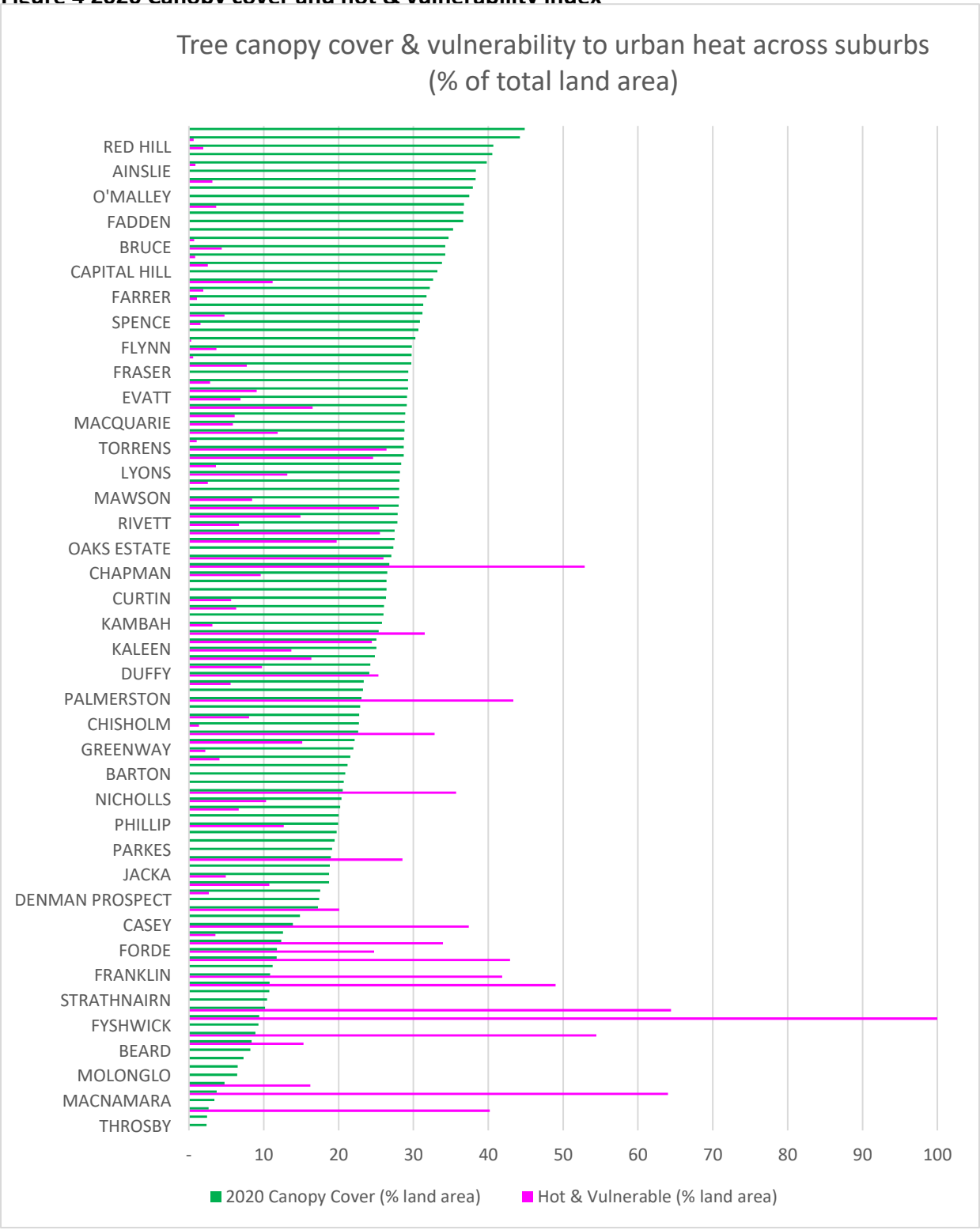


Table 3 2020 Canopy cover and vulnerability index

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
Woden Valley	Isaacs	44.87	0
Canberra Central	O'Connor	44.23	0.62
Canberra Central	Red Hill	40.67	1.9
Canberra Central	Reid	40.53	0
Canberra Central	Hackett	39.81	0.87
Canberra Central	Ainslie	38.34	0
Belconnen	Aranda	38.32	3.12
Hall	Hall	37.94	0
Woden Valley	O'Malley	37.46	0
Belconnen	Cook	36.74	3.64
Canberra Central	Turner	36.68	0
Tuggeranong	Fadden	36.66	0
Canberra Central	Forrest	35.29	0
Canberra Central	Campbell	34.69	0.7
Belconnen	Bruce	34.25	4.38
Canberra Central	Deakin	34.24	0.82
Canberra Central	Downer	33.8	2.52
Canberra Central	Capital Hill	33.19	0
Woden Valley	Garran	32.63	11.17
Woden Valley	Hughes	32.18	1.93
Woden Valley	Farrer	31.74	1.06
Canberra Central	Braddon	31.3	0
Canberra Central	Griffith	31.19	4.77
Belconnen	Spence	30.85	1.55
Belconnen	Weetangera	30.65	0
Canberra Central	Yarralumla	30.27	0.29
Belconnen	Flynn	29.78	3.67
Canberra Central	Dickson	29.74	0.57
Belconnen	Melba	29.73	7.73
Belconnen	Fraser	29.31	0
Belconnen	Giralang	29.27	2.84
Canberra Central	Narrabundah	29.26	9.04
Belconnen	Evatt	29.15	6.88
Belconnen	Latham	29.11	16.52
Canberra Central	Watson	28.9	6.1
Belconnen	Macquarie	28.84	5.88
Belconnen	Hawker	28.81	11.87

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
Tuggeranong	Conder	28.74	1.03
Belconnen	Scullin	28.69	24.61
Woden Valley	Torrens	28.69	26.41
Belconnen	Charnwood	28.36	3.61
Woden Valley	Lyons	28.19	13.16
Weston Creek	Waramanga	28.14	2.53
Woden Valley	Mawson	28.08	8.46
Tuggeranong	Theodore	28.08	0
Weston Creek	Stirling	28.01	25.4
Weston Creek	Fisher	27.9	14.89
Weston Creek	Rivett	27.87	6.7
Woden Valley	Pearce	27.49	25.52
Woden Valley	Chifley	27.47	19.74
Jerrabomberra	Oaks Estate	27.32	0
Belconnen	Page	27.06	26.01
Belconnen	Higgins	26.76	52.89
Weston Creek	Chapman	26.52	9.6
Tuggeranong	Gowrie	26.4	0
Tuggeranong	Wanniassa	26.39	0
Woden Valley	Curtin	26.35	5.65
Tuggeranong	Oxley	26.05	6.3
Tuggeranong	Calwell	25.98	0
Tuggeranong	Kambah	25.8	3.12
Belconnen	Florey	25.37	31.51
Belconnen	Holt	25.06	24.44
Belconnen	Kaleen	25.05	13.7
Weston Creek	Holder	24.86	16.35
Tuggeranong	Bonython	24.25	9.75
Weston Creek	Duffy	24.1	25.33
Tuggeranong	Monash	23.37	5.57
Tuggeranong	Macarthur	23.25	0
Gungahlin	Palmerston	23.05	43.36
Tuggeranong	Richardson	22.89	0
Canberra Central	Lyneham	22.74	8.03
Tuggeranong	Chisholm	22.71	1.33
Belconnen	McKellar	22.63	32.82
Weston Creek	Weston	22.13	15.13
Tuggeranong	Greenway	21.96	2.19

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
Tuggeranong	Isabella Plains	21.55	4.08
Canberra Central	Russell	21.2	0
Canberra Central	Barton	20.89	0
Tuggeranong	Banks	20.7	0
Gungahlin	Ngunnawal	20.56	35.7
Gungahlin	Nicholls	20.38	10.31
Belconnen	Belconnen	20.2	6.66
Canberra Central	Acton	20	0
Woden Valley	Phillip	19.94	12.67
Tuggeranong	Gilmore	19.75	0
Paddys River	Tharwa	19.48	0
Canberra Central	Parkes	19.12	0
Belconnen	Macgregor	18.96	28.53
Tuggeranong	Gordon	18.82	0
Gungahlin	Jacka	18.74	4.91
Canberra Central	Kingston	18.72	10.76
Canberra Central	City	17.53	2.67
Molonglo Valley	Denman Prospect	17.42	0
Gungahlin	Amaroo	17.25	20.08
Gungahlin	Mitchell	14.85	0
Gungahlin	Casey	13.9	37.4
Jerrabomberra	Symonston	12.56	3.53
Belconnen	Dunlop	12.32	33.94
Gungahlin	Forde	11.77	24.76
Gungahlin	Harrison	11.71	42.9
Belconnen	Lawson	11.18	0
Gungahlin	Franklin	10.86	41.87
Gungahlin	Bonner	10.78	49.01
Gungahlin	Taylor	10.76	0
Belconnen	Strathnairn	10.44	0
Majura	Pialligo	10.18	64.42
Coree	Uriarra Village	9.38	99.99
Canberra Central	Fyshwick	9.28	0
Gungahlin	Crace	8.87	54.44
Gungahlin	Gungahlin	8.38	15.32
Jerrabomberra	Beard	8.2	0
Jerrabomberra	Hume	7.28	0
Gungahlin	Moncrieff	6.5	0

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
Molonglo Valley	Molonglo	6.45	0
Molonglo Valley	Coombs	4.75	16.22
Majura	Canberra Airport	3.72	64
Belconnen	Macnamara	3.41	0
Molonglo Valley	Wright	2.63	40.2
Molonglo Valley	Whitlam	2.43	0
Gungahlin	Throsby	2.37	0

3.2.3 Updated LiDAR information

The monitoring of tree canopy cover (TCC) to achieve the 30% canopy cover by 2045 target is being carried out through a Geographic Information System (GIS) analysis of LiDAR imagery.

Analysis of TCC was undertaken in 2015 and 2020 however the two datasets are not directly comparable because the 2015 dataset has been shown to be less reliable than recent data. The accuracy of the 2015 analysis is compromised by a low LiDAR point density per m^2 (compared to 2020 LiDAR data), a misclassification of non-vegetative structures and the time of year the 2015 measurements were taken (being captured in late May when many deciduous trees had begun to lose leaves).

Using methodologies developed in-house by ACT Government staff, the TCC for 2020 is estimated to be 22.5% of Canberra's urban footprint. There is substantially higher confidence in the 2020 data as a baseline estimate of TCC and moving forward, the result from the 2020 LiDAR data should be referred to and used instead of any of the previous 2015 estimates.

The 2020 estimates will now provide a baseline from which to measure tree canopy cover into the future towards the 2045 target. These estimates will also enable identification of areas where tree canopy cover is low and prioritisation of planting in these areas to ensure equitable tree canopy cover across Canberra.

4.0 Protect the urban forest

4.1 Urban Forest Act 2023

Following an extensive review of the Tree Protection Act 2005 and introduction of the ACT Urban Forest Strategy, the ACT Government introduced new legislation to further strengthen and improve how we manage trees. The Urban Forest Act 2023 will repeal and replace the Tree Protection Act 2005 to improve tree protection on both public and private land and encourage shared care of trees by the ACT Government, industry and the community and was passed in the legislative assembly on 30 March 2023.

An Implementation Taskforce has been formed within TCCS to commence the considerable task of preparing and transitioning operational capacity to administering the new Act which will come into effect on 1 January 2024. Work is ongoing to;

- complete recruitment of new staff that will be needed to manage a substantial increase in operational requirements required to administer the new provisions of the new Act (such as an expected increase in Tree Damaging Activities applications, and administration of the new Canopy Contribution Fund);
- develop new operational practices, and train new and existing staff so that they are prepared for the new Act requirements;
- deliver industry information sessions to ensure industry partners are aware of their new responsibilities;
- prepare online resource material about all facets of the new Act for the public and industry partners; and;
- design, construction, testing and final rollout of a new, comprehensive IT business solution that will provide a public facing portal for users to lodge applications under the Act and a back end capability to support operational staff in the management of the Canopy Contribution Fund and other functions required to the administration of the Act.

The key changes introduced by this Bill include:

- introducing new requirements to ensure when trees are approved for removal, they are replaced through new planting. Where new planting is not possible, a financial contribution will be required which will go towards growing, supporting, and maintaining the urban forest.
- reducing the size requirements for protected trees on leased land, protecting dead native trees to retain significant habitat elements and protecting trees of any size located on public land.
- introducing a tree bond system to ensure trees are not damaged during construction work as our city continues to grow.

- expanding the ACT Tree Register which celebrates and protects our most significant trees.
- improving the compliance provisions including introduction of penalties for people caught damaging a tree or breaching a tree protection plan or direction.

The Act provides a significant step forward in environmental management and climate change adaptation in the ACT and supports the 30% canopy cover target under the ACT Climate Change Plan and Canberra's Living Infrastructure Plan. It will enhance the liveability of the ACT by protecting the health of the community by preventing environmental degradation.

4.2 Loss of Mature Native Trees Key Threatening Process Draft Action Plan

The provision of habitat and resources for wildlife including threatened species and ecosystems, mature native trees and culturally significant trees is addressed in the Strategy. The loss of mature native trees (including hollow-bearing trees) and a lack of recruitment was added to the List of Key Threatening Processes under section 87 of the Nature Conservation Act 2014 (NC Act) in September 2018 (*Notifiable Instrument—Nature Conservation Key Threatening Processes List 2018 (No 1) NI2018-538*). The associated Conservation Advice is Notifiable Instrument NI2018–536.

While the ACT has a significant proportion of its land in reserves, there remains an imperative to protect existing trees and enhance recruitment in the urban environment. TCCS has supported EPSDD in the development of The Loss of Mature Native Trees Key Threatening Process Draft Action Plan, which outlines a series of actions to protect and conserve and extend the standing life of mature native trees, particularly through to hollow development and beyond. Actions also include increasing the ecological importance within the Tree Protection Act.

4.3 Territory Plan – Variation 369

New rules in the Territory Plan will strengthen our 'living infrastructure' provisions to help future development adapt and mitigate the effects of climate change. This change means that both single residential and multi-unit developments need to have a certain level of canopy cover. This will help to increase tree canopy coverage across the city and provide more natural space for Canberran's to enjoy.

The new provisions were introduced into the Territory Plan through Variation 369 which commenced on 1 September 2022. The provisions were further clarified through Technical Amendment 2022-07 that also commenced on 1 September 2022. The amendment clarifies the original intent regarding the application of the living infrastructure provisions in Variation 369.

The new provisions introduce rules that require at least a 15% tree canopy coverage for multi-unit development in RZ1-2 zones, and a minimum 20% canopy cover for multi-unit development in RZ3-5 zones.

There are also requirements for tree canopy coverage on single dwelling blocks. The changes add new requirements that development provides a minimum level of tree planting, with associated requirements for canopy trees on compact, mid-sized and large residential blocks.

4.4 ACT Planning System Review and Reform

The ACT Planning System Review and Reform Project attracted feedback from community councils, industry and professional associations, environmental organisations and the broader community during the consultation period of 1 November 2022 to 3 March 2023. Consultation during this period focused on the draft District Strategies, the draft new Territory Plan and the proposed Design Guides

These key elements include:

A new Planning Act: Legislation enacted in June that sets the foundation of the new system and the legal framework.

A new Territory Plan: Outlines what developments can be built where. It guides developers through the planning process and give the Territory Planning Authority the tools to access and consider development applications.

Introducing District Strategies: There are nine districts within Canberra and each one has their own strategy. The strategies help direct forecasted growth to areas of Canberra that are best suited for it. They also outline what future services, transport and infrastructure is needed in those areas.

Three design guides for proponents and assessors: These guides (Housing Design, Urban Design, Biodiversity Sensitive Urban Design) show developers what they need to

consider and respond to when designing their buildings. They show examples and methods of good design and list the considerations for developments across Canberra.

ACT Legislative Assembly passed the Planning Bill 2022 on 6 June 2023, laying the foundation for the ACT's new planning system and Canberra's future. New buildings and developments across Canberra will be required to consider the surrounding area and the impact they will have on wellbeing, health, recreation and the environment while supporting the neighbourhoods they are in. Key Threatening Processes have been included as a trigger, under the Planning Act 2023, for developments that require an Environmental Impact Statement and are therefore subject to increased scrutiny by the Conservator of Flora and Fauna prior to DA assessment.

Biodiversity Sensitive Urban Design (BSUD) Guidelines have been developed and incorporated into the Territory Plan reforms. BSUD is a framework that supports planners and development proponents to consider and address biodiversity alongside other socio-economic drivers early in the design process. It aims to maintain and enhance native habitat and biodiversity connectivity while minimising threats and impacts from urban development.

4.5 Urban Open Space Land Management Plan

The ACT Government is responsible for managing and maintaining over 6,800 hectares of public urban open space and adjoining facilities. This includes urban parks, sportsgrounds, public cemeteries, dog parks, play spaces, skateparks, outdoor exercise equipment, street and park furniture, paths and green infrastructure such as trees, shrubs and grasses. The draft Urban Open Space Land Management Plan was prepared to help shape the future management and use of our public open spaces and ensure the plan reflects the needs of a growing and diverse community. The plan was released on the YourSay website on 24 May 2023 for community groups and local residents to have their say, with feedback invited until 15 August 2023.

Feedback was received via an online survey, email submissions and five face-to-face drop-in sessions held in June and July 2023 at local parks and shopping centres across the ACT.

Community feedback will be used to finalise the Urban Open Space Land Management Plan, guiding the continuous improvement and shared management of our public open spaces for all Canberrans. Once finalised, the ACT Government will report on the implementation of the Plan at least every five years. The Plan will also be reviewed every 10 years from commencement.

5.0 Grow a resilient forest

5.1 Tree Planting

City Services continues to strive towards the Urban Forest Strategy Target of a 30 per cent tree canopy cover in the ACT by the year 2045. In total, 14,559 trees were sourced and planted on unleased land by Urban Treescapes or in partnership with Urban Treescapes (12,650) and by other ACT Government agencies (1,909) , achieving 81% of the annual target of 18,000 tree plantings by 30 June 2023. The 2022/23 target of 18,000 was surpassed in August 2023.

The number of trees planted in the 2022-2023 financial year are a strong result, particularly in light of the prevailing very wet conditions of that years' planting season. Trees do not survive when planted into saturated soils and other factors including procurement delays, and limited contractor availability further tempered the pace of planting. As conditions moderated early in 2023/24, teams were able to increase the rate of plantings and the 18,000 was reached two months later.

Urban Treescapes have increased the size of the inhouse planting team in 2023 to provide additional staff to plan and undertake tree planting and help make the tree planting target less susceptible to gaps in market capacity.

The 2022-23 plantings completed by TCCS and its contractors by 30 June 2023 (12,650) included:

- 5,211 trees in street verges and laneways;
- 6,469 trees in parks and urban open space; and
- 970 trees provided to and planted by the community, including 400 trees gifted to the Woden 60th birthday celebration in 2022.

Plantings completed subsequent to June 2023 included:

- 4,679 trees planted on unleased land;
- 550 trees provided for the Landcare for Singles event (see section 8.3); and
- A further 843 trees were donated to schools early in 23-24, including 649 wattles to celebrate the 35th anniversary of our national floral emblem.

There was a particular focus on planting in residential areas with low canopy cover and areas vulnerable to urban heat, with 1,364 trees in residential neighbourhoods identified as having high heat exposure and high vulnerability to heat as a population. This figure excludes a significant number of trees planted adjacent to the mapped vulnerable areas that provide cooling benefits and sheltered passages connecting residences to community services.

Over 910 public suggestions for tree planting locations were received through the YourSay interactive map in 2022-23 and 1,704 trees were planted on suitable sites.

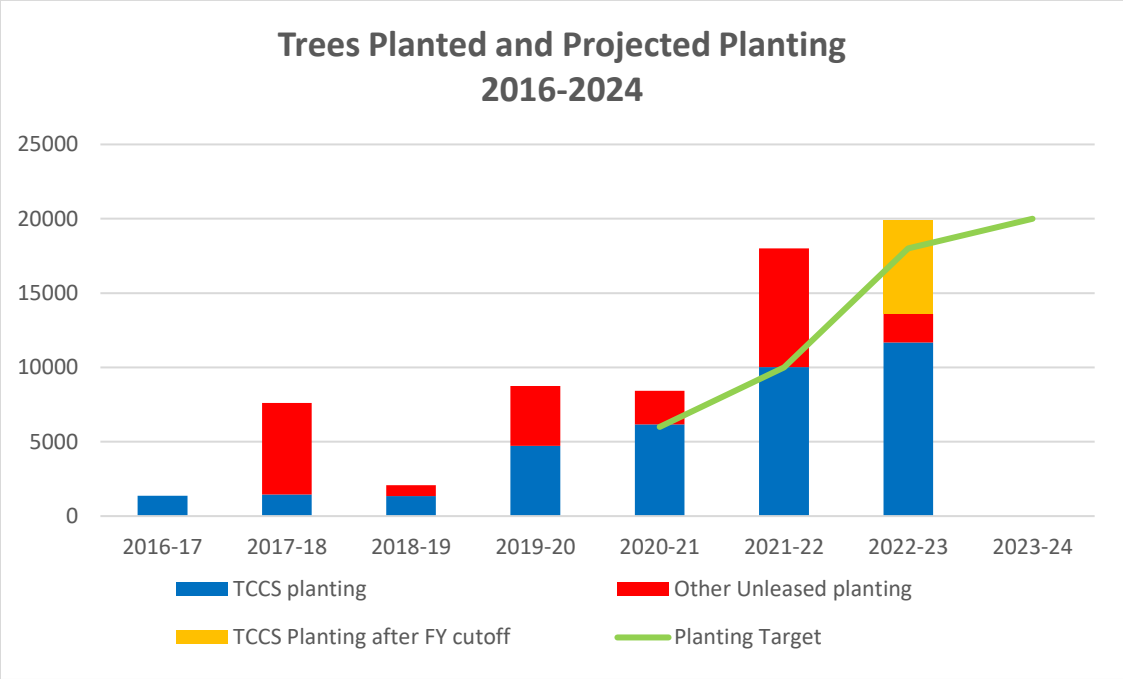
Since the YourSay interactive map was launched in 2020, a total of 4,606 tree planting location requests have been received and 4,150 trees have been planted in response to YourSay requests.

In addition, 654 trees were planted in response to Ministerial requests and others received through the Fix My Street online form.

More than 23,910 young trees were watered throughout the warmer months from October 2022 to April 2023.

Recent and projected plantings are shown in **Figure 5**, including planting on unleased land undertaken by other agencies, with the predicted annual planting numbers required to achieve 30% canopy cover by 2045 reached in 2023-24. This is based on modelling undertaken by the CSIRO in 2019 described in the Urban Forest Strategy. The progressive increase in planting numbers provides the necessary time to plan and develop propagation programs with Yarralumla Nursery to ensure ongoing stock supply.

Figure 5 Trees planted from 2016-17 and projected to 2023-24



5.2 Rejections of street tree planting

Routine consultation with residents about proposed street tree plantings has revealed a significant rate of refusal from residents, particularly in suburbs with low canopy cover and increased areas of vulnerability to urban heat. Proposed plantings that are not supported by the adjacent resident are not progressed and this decreases the number of trees that can be planted in areas with the greatest need.

5.3 Tree City of the World

In 2023, Canberra had its status re-affirmed as an 'International Tree City of the World' by the United Nations Food and Agriculture Organisation and the Arbor Day Foundation.

Canberra was originally granted membership in April 2022 after the ACT Government demonstrated that the city was meeting core standards for caring for trees and the urban forest.

The Canberra community's shared commitment to maintaining our extensive tree canopy has been recognised by our acceptance into the Tree Cities of the World network, which celebrates global leadership in urban forestry.

The Tree Cities of the World program is a network of 170 cities in 21 countries which are dedicated to sharing successful approaches to managing greener, preserving our trees and creating successful policies and initiatives that celebrate the benefits trees provide.

12

RECOGNISED CITIES

Auckland • Bendigo • Burnside • Canberra • Canning
Charles Sturt • Greater Geelong • Mitcham
Queenstown • Unley • Victoria Park • Wellington

6.0 Balance and diversify the urban forest

6.1 Plantings across districts

At the end of the 2022-2023 financial year, City Services was responsible for the management and maintenance of over 823,500 street and parkland trees in urban areas of Canberra. Tree planting in the ACT is prioritised in vacant street tree locations and in areas where residents have been identified as having an increased vulnerability to urban heat. The availability of tree stock also plays a role in selected street tree planting locations due to the need to maintain established species themes where appropriate.

Since the commencement of the expanded planting program in 2019-20, the focus has moved from responding to public planting requests to the provision of an equitable distribution of new trees across Canberra's districts. Tree planting is allocated within each program on a district basis. In selecting planting sites within each district, consideration is given to maximising efficiency of ongoing care and watering during establishment. **Table 4** shows the distribution of tree planting across Canberra during 2022-23.

As stated in section 2.2, it is anticipated that future plantings will increasingly focus on renewal of end-of-life trees as they are removed, rather than filling existing planting gaps. This will result in a shift in the allocation of future planting towards districts with the oldest age cohorts of trees.

Table 4 2022-23 Urban Treescapes planting program across districts

Districts	# Trees	# Trees planted after 30 June 2023	Combined # Trees planted
Belconnen	2,445	1,785	4,230
Canberra Central	1,143	473	1,616
Gungahlin	2,040	605	2,645
Hall	4	0	4
Jerrabomberra	26	0	26
Majura	29	0	29
Molonglo Valley	175	57	232
Tuggeranong	2,477	981	3,458
Weston Creek	1,355	592	1,947
Woden Valley	1,890	186	2,076
Grand Total	**11,584***	**4,679**	**16,263**

**The discrepancy of 96 trees compared to total number of trees planted reported in the annual report (11,680) is due to changes in the data schema.*

7.0 Take an ecological approach and support biodiversity

As the major land custodian for urban open space, TCCS has an important role to play in the operationalisation of this shared vision. This includes works delivered in alignment with the Urban Forest Strategy. As such, EPSDD is committed to working closely with TCCS to develop best-practice restoration guidelines and identify priority areas for the restoration of wildlife habitat and movement corridors within Canberra's urban space.

Species will be selected for their suitability in an increasingly hotter and drier climate and with an aim of increasing the diversity of Canberra's urban forest.

TCCS is collaborating with EPSDD and other organisations to ensure that species diversity is optimised for habitat and connectivity, particularly on main and arterial roads and connecting urban open space.

7.1 Sustainable Urban Green Space

Transport Canberra and City Services (TCCS) was involved in grassy box woodland restoration projects in collaboration with community and catchment groups and the Sustainable Urban Green Space project with ACT Natural Resource Management.

Twelve urban open spaces in the Belconnen/Gungahlin areas (**Table 5**) were identified as suitable for an urban green space 'refresh' strategy. This alternative management approach will trial the establishment of native 'garden-bed' style enhancement work, including mulching, placement of logs and boulders and understory planting, using remnant mature trees as focal points. It aims to increase the health and retention of remnant trees, as well as increasing biodiversity and social values at these sites, and thereby also reducing long-term maintenance costs. Lessons learned from this project will feed into the Connecting Nature Connecting People Budget initiative.

Table 5 Sustainable urban green space sites

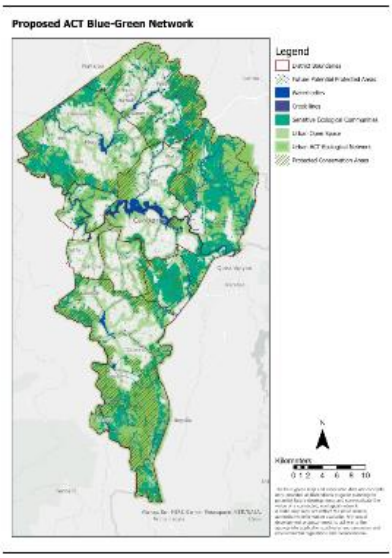
Site name	Division	Suburb	Location
Mullion Park	Gungahlin	Harrison	Mullion Park, Harrison
Durong Street Neighbourhood Park	Gungahlin	Crace	Durong Street, Crace
Frances Burke St Pedestrian Parkland	Gungahlin	Gungahlin	Frances Burke Street and Helen Turner Street, Gungahlin (near Yerrabi Pond)
Tea Gardens Neighbourhood Park	Gungahlin	Gungahlin	Tea Gardens Court
Proud Street	Gungahlin	Forde	Proud Street and Hibberd Crescent
Umbagai Street	Gungahlin	Bonner	Umbagai Street and Bieundurry Street
Lycos Street Pedestrian Parkland	Belconnen	Bruce	Kinlock Circuit and Lycos Street
Murranji Street	Belconnen	Hawker	Tanumbirini Street
Holtze Close Neighbourhood Park	Inner North	Hackett	Maitland Street
Arndell Street Pedestrian Parkland	Belconnen	Macquarie	Arndell Street
Mathieson Crescent Neighbourhood Park	Belconnen	Weetangera	Mathieson Crescent and Kilby Crescent
Mag Place Neighbourhood Park	Belconnen	Dunlop	Polilight Street and Mag Place

7.2 Connecting Nature, Connecting People

EPSDD were successful in securing funding in the 2022-23 budget cycle to support the Connecting Nature, Connecting People (CNCP) initiative. This work will build on previous efforts undertaken as part of the ACT Urban Habitat and Connectivity Project to deliver improved outcomes for biodiversity and community wellbeing based on the enhancement of urban open space. The initiative represents a cross-Government collaboration between EPSDD, TCCS, SLA, MPC and CRA.

Spatial mapping for urban habitat and connectivity continued with the maps being further refined. The ACT Ecological Network has been mapped which identifies locations, where maintaining or creating ecological connectivity is important. These maps have been included in the District Strategies planning reforms thereby increasing the importance of biodiversity and habitat in development application assessments against the Territory Plan. The Act Ecological Network Dashboard is a new, publicly available, spatial tool that displays core and corridor habitat and fragmentation for seven groups of native fauna based on structural components of the landscape e.g. presence of trees ACT Ecological Network Dashboard (arcgis.com). This tool can be used

by Government, development proponents and the community to identify important wildlife habitats and corridors and guide suitable outcomes in these areas. This spatial mapping has informed other projects undertaken b CNCP including the provision of Urban Forest Ecological Advice.



EPSDD will also partner with TCCS and the broader community to deliver 20 demonstration sites funded under the bid to restore habitat and connectivity across grasslands, woodlands and aquatic-riparian ecosystems.

These sites will form part of a broader connected network or urban wildlife habitat and connectivity corridors across urban Canberra to support biodiversity and community wellbeing outcomes. Site selection will be based on habitat modelling and community consultation, including consideration of Ngunnawal cultural values within the landscape. The final conservation network will strive to build on previous government and community investment and provide a framework for collaborative work in this space into the future.

Two urban connectivity projects were undertaken in 2022-23 in urban open spaces including in the Hughes corridor. These projects worked with community volunteer groups, ACT catchment groups and across ACT government agencies, to deliver three community planting events, successfully connecting people to nature. The focus of the plantings were native species aimed at improving habitat and connectivity for small woodland birds. Community nominations were also sought for future areas for connectivity projects in 2023-24.

7.3 Urban Forest Ecological Advice

This project is looking for opportunities to align strategic objectives from the Urban Forest Strategy and the Nature Conservation Strategy, specifically in relation to areas of the urban landscape prioritised for ecological restoration through planting or other means (as shown in the ACT Ecological Network).

The project is undertaken as part of the Connecting Nature, Connecting People initiative, and involves three main components:

- Identify areas of the landscape in which additional planting of trees and large shrubs would contribute to habitat condition or ecological connectivity. Areas falling within the spatial extent relevant to the Urban Forest Strategy were prioritised in this step.
- Identify areas of the landscape in which additional planting of trees and large shrubs would detract from habitat condition or ecological connectivity (based on existing ecological values, including those associated with grasslands).

- Identify areas of the landscape which are important ecologically, but for which specific planting advice has not yet been developed.

The first stage for finding priority areas for the addition of trees and shrubs as structural habitat elements looked at areas identified as being functionally isolated on the map of ecological connectivity modelling for small to medium terrestrial mammals in the urban ACT (developed as part of the ACT Urban Habitat and Connectivity Project).

The second stage followed the priority 'initiatives' proposed for inclusion in the District Strategies, under the Blue-Green Network Driver. This analysis looked within mapped potential habitats and corridors within the Urban ACT Ecological Network to identify areas where the addition of native trees and shrubs would improve habitat value. For each priority 'initiative' within the District Strategies:

- Identify ecosystem type (woodland, riparian or woodland/riparian).
- Provide an overview of which large habitat patches (usually nature reserves) will be better connected as a result of planting in this area.
- Identify any threatened ecosystems which occur in the corridor (natural temperate grassland, potential threatened woodland).
- Identify constraints within the corridor (mowing, fire, development, or grassland/open woodland where further plantings are inappropriate).

Additional input has also been sought from the three ACT Catchment Groups and from other stakeholders within Environment, Heritage and Water, including staff from the Parks and Conservation Service and from Resilient Landscapes. To capture this information a spatial layer is being developed outlining spatially explicit recommendations.

7.4 Citizen Science

The Community Urban Biodiversity Surveys (CUBS) program was initiated by EPSDD. This project has identified 60 monitoring sites throughout grassland, woodland and riparian/aquatic habitat within Canberra's urban landscape where citizen science is being utilised to undertake species occurrence surveys, vegetation assessments, data analysis and monitor changes in biodiversity, habitat condition and connectivity in urban green spaces.

7.5 Distribution of urban wood by-product

Urban wood waste was extensively recycled to produce mulch during 2022-23, through general in-house tree maintenance activities, contractor tree removals and the Belconnen storm clean-up. This mulch was used by City Services on the urban estate for garden beds, tree wells and weed management and by volunteer groups and community organisations in planting and restoration projects.

Large logs were salvaged for use as coarse woody debris in nature reserves and in urban green space and both mulch and logs were used to support the creation of nature play in schools and on unleased land, e.g., Haig Park in Braddon (re-activation project), Florey Primary School (nature play pictured) and Orana Steiner School (bush playground). Salvaged logs were also provided to be milled for school woodwork projects at Orana Steiner School in Weston and Harrison Public School in Gungahlin.

Salvaged logs were also provided to be milled for school woodwork projects and to support the Strathnairn Gallery and the Hall Axeman's Club.

City Services also trialled processing old stockpiles of composted mulch into good quality topsoil. This product was then tested and will be useful for planting operations, topdressing, repairing wheel ruts in grass areas or filling holes where stumps have been removed.

8.0 Develop infrastructure to support the urban forest and liveability

8.1 Tree surround repair

City Presentation has begun replacing degraded tree surround surfaces with a flexible porous pavement product (Root Pave™). Such products utilise coarse martials and binding agents to maintain porosity while providing a level surface that is suitable for pedestrian traffic. The function of the tree surround is to allow water, nutrients and oxygen to penetrate into the root system in order to maintain tree health. Effective tree surround materials are porous, resistant to water and wind erosion, do not degrade, crack or break up and are resistant to compaction.

In 2022/23 a total of 340 square metres of flexible porous pavement was repaired and/or installed around trees in five locations across urban public space in Canberra, including Gungahlin Town Centre, Alinga Street, London Circuit and Bunda Street. In many cases, the size of the original tree pits was enlarged by removing impervious paved surfaces and replacing with porous pavement. Urban Treescapes adopted a holistic approach and collaborated with Road Maintenance to lift and relay uplifted segmented pavement beyond the tree pit. This work addresses trip hazards while improving growing conditions for trees while also reducing surface run-off into stormwater drains. Additionally, the use of flexible pavement greatly reduces the frequency by which Road Maintenance have to return to a particular site to undertake pavement repairs.

Glebe Park - *Root Pave product finished level with surrounding pavement. Root Pave product has a high porosity rate, is flexible and trafficable.*

Manuka shopping centre - *New Root Pave product has been contoured over existing structural tree roots and trip hazards have been eliminated.*

8.2 Water Sensitive Urban Design (WSUD) Projects

TCCS provided advice to protect existing trees and guide new tree planting across a number of Water Sensitive Urban Design (WSUD) projects to help promote the health of urban forest, support urban biodiversity and enhance liveability. This includes the review and input on eight ACT Healthy Waterways projects across north and south Canberra to capture and remediate stormwater to improve long term water quality in the ACT.

As part of the Healthy Waterways Project, TCCS has reviewed detailed design documentation at numerous sites across the ACT, which aim to manage peak water flows in major storm events, improve storm water quality by reducing nitrogen, phosphorus and sediments, improve public amenity, and gain knowledge to inform future water management design, e.g.:

- Treatment trains (detain and release basins) which are being incorporated into open space in Kambah, Fadden, and Isabella Plains.
- Naturalisation of Tuggeranong Creek (the channel) at Calwell Playing fields and Tuggeranong Homestead, Richardson.
- 36 kerb outlets to swales and infiltration outlets within Kambah to direct overland flow currently captured by underground pipes to open space areas.
- Subsurface wetland at Belconnen oval.
- Bioretention basin in Higgins.

TCCS also reviewed plans for a bioretention ponds in Narrabundah, stormwater management and place making improvements in Mawson, and passive irrigation measures in Lawson, McNamara, Phillip and the City as well as many other urban sites across Canberra.

In 2022-2023 Urban Treescapes were closely involved in the Next Practice in Living Infrastructure project delivered by the Suburban Land Agency. The purpose of this project was to review the effectiveness of water sensitive urban design (WSUD) and living infrastructure measures installed in Canberra to recommend which measures should be included in future greenfield suburbs, local centres and major sites, to contribute towards the ACT Government's targets of 30% tree canopy and 30% permeable surface across Canberra's urban area by 2045.

Urban Treescapes assisted SLA in this project by reviewing the Statement of Requirements and sitting on the procurement evaluation panel, providing details on the WSUD and living infrastructure measures that have been installed on unleased Territory land over the last decade, and feedback on their maintenance requirements and effectiveness.

The Jamison WSUD tree pit trial was designed to monitor the benefits of providing improved growing conditions for shade trees in car parks. Monitoring of this trial has been extended to July 2024 to test the benefits of providing improved growing conditions to shade trees in car parks over the 2023-2024 summer season, which is expected to be hotter and drier than recent summers. Stormwater is sampled as it exits the tree pit and the differences in microclimate and tree growth between the trial site and control locations is being captured to provide data on the value of investing in best practice planting conditions in paved urban environments that tend to be unfavourable for tree health and growth. Early monitoring results indicate that more time is needed to establish phytoremediation services and gather meaningful data, but the remote sensing infrastructure, soil analysis, stormwater sampling, and photosynthesis sampling hold promise for obtaining meaningful data.

Monitoring infrastructure can be accessed via the https://jamisontrees.com dashboard.

8.3 Cooler, greener infrastructure

In 2023, Environment, Planning, and Sustainable Development Directorate (EPSDD) completed a focused review of the Municipal Infrastructure Standards (MIS) and Municipal Infrastructure Technical Standards (MITS) and made evidence-based recommendations for changes to support living infrastructure objectives including the 30% tree canopy and permeability targets, and a reduction in urban heat.

The review relied on stakeholder consultation to identify issues with living infrastructure in the MIS, and opportunities for improvement. This resulted in a long list of opportunities including some related to improving specific elements of the MIS, some related to its overall structure and content, and some which went beyond the MIS.

Opportunities were narrowed down to a shortlist by considering their potential impact on living infrastructure outcomes, and their likelihood of being accepted by ACT's Transport Canberra and City Services (TCCS) Directorate, who manage the assets in the public realm and are the owner of the MIS. Impact was explored via analysis of existing development outcomes and a review of relevant literature. Likelihood of acceptance was understood via targeted meetings with TCCS on specific topics.

This process resulted in twelve actionable opportunities identified for further investigation, including assessment of costs, benefits and risks.

9.0 Partner with the community to grow and maintain the urban forest

The Strategy identified the need to partner with the community to grow and maintain the urban forest and recognised the important role that community and volunteer groups have in growing and maintaining our urban forest.

Additionally, TCCS has provided support to community groups who are working to achieve environmental outcomes by providing specialised tree knowledge. Outcomes have included providing improved habitat and breeding sites for iconic local and vulnerable bird species including Superb Parrots and Gang-gang cockatoos and restoring and revegetating urban waterways.

TCCS has collaborated with the Environment, Planning and Sustainable Development Directorate since 2019-20 to deliver the ACT Environment and Nature in the City Grants.

9.1 Urban Parks and Places volunteering

The Urban Parks and Places volunteering is a community partnership between the local community and the ACT Government through TCCS. The program allows the community to get involved in a hands-on way to contribute to the conservation, presentation and maintenance of Canberra's many public urban open space areas. TCCS works with the three ACT Catchment Groups (Ginninderra, Southern and Molonglo) to support over 86 volunteer groups that undertake works on TCCS-managed land.

Urban Parks and Places volunteers make improvements to local urban open space areas and are involved in the following activities:

- weed control and removal programs
- horticultural maintenance
- litter collection
- monitoring and reporting issues
- park restoration projects
- minor tree maintenance activities
- habitat restoration
- planting and maintaining plants
- community education and social events
- citizen science
- training and workshops
- conservation projects

TCCS has continued to support community groups from across all five primary regions in Canberra to enhance the urban forest with several significant planting events occurring across parks and wetlands throughout the ACT. **Figure 6** shows the locations of registered community groups and **Figure 7** displays the locations of community tree planting events in spring 2022, autumn 2023.

Figure 6 Registered community groups

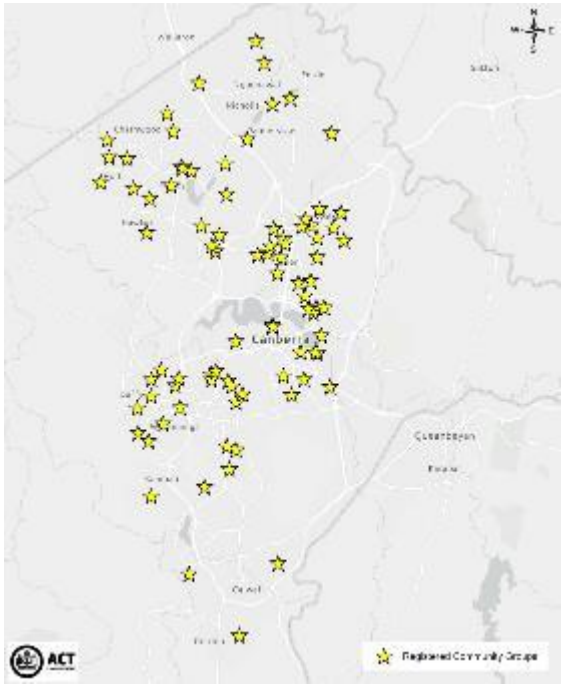
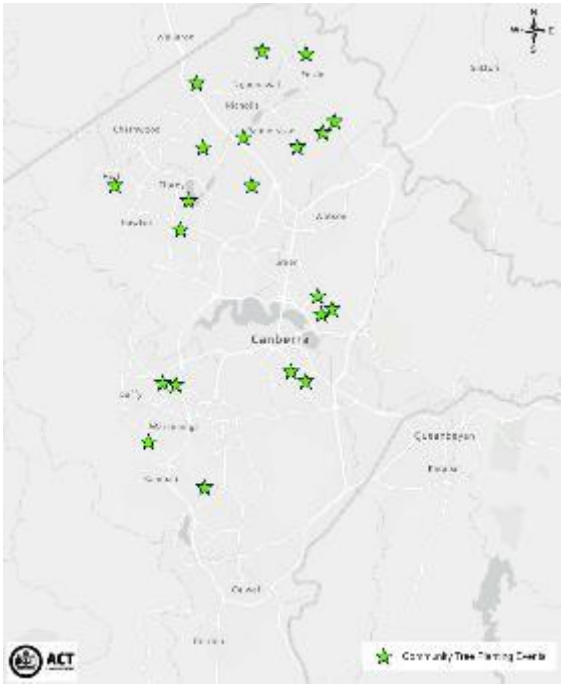


Figure 7 Community tree planting events 2022-2023



The support available to community groups help improve amenity in local parks and strengthens neighbourhood bonds, while growing and maintaining our urban forest. Featherstone Gardens and Throsby Park had successful planting events with 92 native species planted throughout the parks. The Western Valley Archery Club further enhanced the function, screening and amenity of the park, planting 104 native species including a 70-metre screen hedge.

Community groups also undertook species selection and planting design, data collection for mapping, young tree maintenance, formative pruning, and habitat restoration weed management, adding value to the regular maintenance activities of registered urban landcare volunteer groups currently supported by City Services.

The community program has also contributed to growing a resilient urban forest by engaging with schools and helping to promote canopy cover while educating students about the importance of the urban forest, wildlife corridors, and the Urban Forest Strategy's target of 30% canopy cover by 2045.

Urban Treescapes committed both native and exotic species to the Sustainable Schools Program, donating free trees to plant on their school properties. As this program commenced

late in 2022-23, only 20 trees were provided by 30 June 2023, however, ten schools were involved with a total of 214 trees donated in the autumn program. The spring program has been advertised and over 8 schools are already registered to receive free trees.


National Wattle Day celebrated its 35th anniversary of *Acacia pycnantha* (Golden wattle) officially becoming the National floral emblem. Urban Treescapes donated 649 Acacia plants to 49 schools across the ACT. The schools involved were very appreciative, with many stories and pictures shared about the enjoyment the children expressed by planting trees.



9.2 In-house planting team to support community groups

The City Services In-house planting team planted 4,384 trees in 2022-23 and supported the planting of 612 trees in parks and other open spaces in partnership with community volunteer groups.




This team also undertook planting and maintenance of young trees (formative pruning, watering, repair and weeding of mulched watering basins), significant tree care (weeding and

mulching beneath remnant native trees and significant mature trees), transplanting of trees planted in inappropriate locations and to facilitate road upgrades, and preparation of future planting sites through weeding and mulching.

9.3 Landcare for Singles

After a short hiatus due to Drought, COVID and extraordinary wet seasons ACT Natural Resource Management (NRM) and partners were finally able to facilitate another successful Landcare4Singles - Speed Planting community event on Saturday 3 June planting over 600 native trees and shrubs by 55 volunteers.

The Landcare for Singles program was first run through the Landcare network in Victoria in 2011 and later rolled out across Australia as a strategy to engage youth and new participation into Landcare. Landcare for Singles – Speed Planting events have been run in the ACT by ACT NRM facilitators since 2012 with now 8 successful events bringing together approximately 750 participants from the ACT community that may not have already been engaged in Landcare activities.

Whilst traditionally the event provides a unique opportunity for people to meet a potential partner this year the event had a strong focus on bring the community together to enjoy the company of likeminded people and to connect with nature. We do know from previous events there have been three marriages with the most recent being Rafe and Lee from the 2021 event getting married in March 2023 in South Australia with family and friends.

Landcare4Singles 2023 event was a collaboration between ACT NRM, TCCS Urban Treescapes and Parks and Conservation Service Parkcare.



9.4 Tree Week 2023

TCCS organised and facilitated Canberra Tree Week 2023 from 29 April to 7 May. The successful event included 48 diverse and engaging activities such guided walks, talks, children's tree climb, themed story time at ACT Libraries, exhibitions and poetry readings. Events were hosted by 19 organisations and individuals across Canberra.

Canberra Tree Week 2023 was launched by Minister Chris Steel MLA in Glebe Park on Friday 28 April. The launch included a new Gingko planting, which formed part of the inaugural Trees of the City Trail, a curated tree trail through Canberra City which ran for the duration of Tree Week and extended through the month of May.

Tree Week was full of fun and informative events and exhibitions, including the return of 'Our Forest in Focus' - a photography exhibition showcasing some of the region's most spectacular creatures living in and around our trees. This exhibition is a collaboration between; ACT Government and Government House, Canberra Institute of Technology, Yarralumla Nursery, Australian National Botanic Gardens, Queanbeyan-Palerang Regional Council, the National Arboretum Canberra, ANU, and ACT Parks and Conservation Service; and was commissioned to celebrate Canberra Tree Week 2023. The stunning photos were taken by local photographer Graham Gall and were displayed at the National Arboretum during Tree Week. The exhibition will continue to move around local venues throughout 2023.

Organisations that hosted events included:

- ACT Libraries
- National Arboretum, Canberra
- Government House
- Friends of ACT Trees
- Sarah St Vincent Welsh (Kindred Trees)
- Cool Country Natives
- Australian National Botanic Gardens
- City Renewal Authority Haig Park CBR
- Urambi Hills & Mt Taylor ParkCare
- Friends of Mt Maujra, Black Mountain and Aranda Bushland
- Red Hill Regenerators
- Tidbinbilla Nature Reserve
- Namadgi Visitor Centre
- Australian National University
- Urban Treescapes, Transport Canberra and City Services

As part of Canberra Tree Week 2023, TCCS and the Australian National Botanic Gardens again held an art competition for children (aged 5-12 years). The art competition asked children to illustrate their connection with trees through the theme 'Trees and Me' and over 100 entries

were received. The artworks included drawings and paintings with the top 20 finalists work printed on corflute for display at the Australian National Botanic Gardens and Tuggeranong Library.

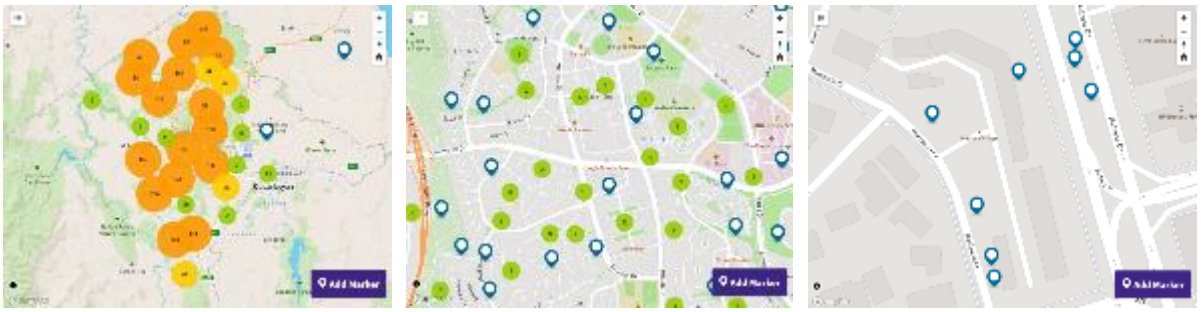
9.5 Your Say planting map

The community were also able to suggest planting locations via YourSay on the interactive map (Figure 8) and there have been over 4,606 planting locations recommended by the community since the map launched in 2020.

These suggestions have been utilised to guide the planting locations of 4,150 trees in recent programs. Over 910 public suggestions for tree planting locations were received through the YourSay interactive map in 2022-23 and 1,704 trees planted in suitable sites.

https://yoursayconversations.act.gov.au/trees-act/tree-planting-across-cbr

Figure 8 Your Say planting map



9.6 Adopt-a-Park program

The Adopt-a-Park program is a grants program for community groups to support their work in caring for local parks and open spaces. It supports existing volunteer groups and encourages the establishment of new ones. Projects funded under the grant in the past include ecological restoration projects, local garden projects, revegetation projects to increase shade and canopy cover and educational and training workshops to give the volunteers the skills they need to undertake this work. Volunteers are supported by an ACT Government place coordinator and is a great way to enhance our open spaces, foster community engagement and ownership and to bring people together into the outdoors.

The intended outcomes of the Adopt-a-Park program are to:

- Foster environmental resilience in neighbourhood public spaces through community stewardship;
- increase community use of Canberra's urban parks and places and instil further pride in neighbourhood public spaces;
- create and promote opportunities for existing dynamic volunteering groups to support and care for urban parks and places in the ACT; and
- recognise and enhance the efforts of existing volunteer groups already actively caring for Canberra's urban parks and places.

With three years funding provided in the 2021-22 ACT Budget, the Adopt-a-Park program will continue until 2023-24. This year's program will provide support and funding to 26 projects (**Table 6**).

Table 6 2022-23 Adopt-a-Park grants

Applicant	Location	Brief Description of grant request
Ginninderra Catchment Group	Fraser	Weed control, erosion control and app development.
Emu Creek Landcare (Ginninderra Catchment Group)	Belconnen	Weed control and understorey planting.
Crace Landcare Group (Ginninderra Catchment Group)	Crace	Weed control, understorey planting and landscape plan development.
Ginninderra Catchment Group	Lawson	Weed control, mulch, understorey planting and sign.
Ginninderra Catchment Group	Fraser	Weed control.
Ginninderra Catchment Group	Hawker	Landscaping improvements.
Southern ACT Catchment Group	Hughes/Garran	Spread/compact path gravel and understorey planting.
Units Plan 4323	Campbell	Mulch.
Woden Valley Community Council	Hughes	Weed control, understorey planting, habitat log and bush tucker plants.
Bragg Street Park Volunteers Group, Hackett (auspiced by Molonglo Conservation Group)	Hackett	Understorey planting.
Southern ACT Catchment Group	Chapman	Understorey planting, mulch and rocks.
Croke Place Landcare Group (Ginninderra Catchment Group)	McKellar	Cool burn education, understorey planting, mulch, planning document and education facility on site.
Ginninderra Catchment Group	Belconnen/Gungahlin	Various training courses for volunteer groups.
Weston Creek Community Council	Weston	Landscaping improvements.
Southern ACT Catchment Group	Kambah	Understorey planting, rocks and mulch.
Ginninderra Catchment Group	Various	Various training courses for volunteer groups.
Woden Valley Community Council (WVCC)	Mawson	Weed control and understorey planting.
O'Connor Community Incorporated	O'Connor	Maintain hedges and weed control.

Applicant	Location	Brief Description of grant request
Canberra Environment Centre	Downer	Community workshops, understorey and tree planting and sign.
Friends of Wangara Parks (Ginninderra Catchment Group)	Aranda	Erosion control and signs.
Southern ACT Catchment Group	Bonython	Understorey planting and brochure.
Southern ACT Catchment Group	Chapman	Understorey planting.
Ginninderra Catchment Group Incorporated	Various	Develop and install awareness/educational signs.
Ginninderra Catchment Group Incorporated	Various	Supply and spread mulch.
Higgins Landcare Group (Ginninderra Catchment Group)	Higgins	Engage landscaper design.
Dawson St Gardens	Curtin	Engage landscaper design.

9.7 ACT Environment and Nature in the City Grants

Since 2019-20, TCCS has collaborated with EPSDD to deliver the ACT Environment and Nature in the City Grants. The program has been funded annually by the ACT Government since 1997.

With three funding streams available, the 2023-2024 ACT Environmental Grants Program funded community projects to a value of $496,235:

- $386,488 of funding made available for the Environment Grants, to support community projects that assist with the delivery of the ACT Nature Conservation Strategy 2013–23.
- $99,790 of funding made available for the Nature in the City Grants, to enhance and improve the liveability of our urban open spaces.
- $10,000 of funding made available for the new Environmental Volunteer Group Assistance Grants, to support environmental volunteer groups in improving their capabilities and capacity to engage in environmental stewardship.

Applications for the 2023-2024 ACT Environmental Grants Program Round closed on 18 April 2022 with 45 applications received across the 3 streams to a total value of $816,129.

2022-2023 ACT Environment Grants

In the 2023-2024 round, 16 projects to the value of $386,488 were successful (**Table 7**) and will contribute to the improvement of the ACT's ecosystem health and conservation outcomes.

Project activities included weed control, habitat rehabilitation and site revegetation, diversification of Landcare groups, and replacement of interpretive signage. The successful project proponents and projects were:

Table 7 2023-24 ACT environment grant recipients

Project	Recipient	Funding amount
Improving Urban Landscape Health in Hall	Hall Landcare & Ginninderra Catchment Group	$27,940
Invasive Species Weed Warriors: Restoring our Parkcare reserves through targeted weed control	Ginninderra Catchment Group	$20,790
Protecting Pink Tailed worm Lizard habitat on Mt Taylor	Mt Taylor ParkCare Group & Southern ACT Catchment Group	$29,570
Diversifying Landcare: LGBTQIA+ Roving Landcare Group	Landcare ACT	$33,750
Oaks Estate Riparian Improvement	Molonglo Conservation Group	$22,750
Movement and Management of Latham's Snipe	Woodlands and Wetlands Trust	$22,825
Controlling vinca, the scourge of ACT Conservation Reserves	Mt Pleasant Parkcare Group	$14,556
Diversifying Landcare: Roving Youth Landcare Group	Landcare ACT	$34,930
Reducing the human-snake conflict in the urban environment	A/Prof Gavin Smith & Ginninderry Conservation Trust	$35,000
Blue Gum Point woodland restoration, Yarralumla (year 4)	Friends of Grasslands	$29,185
Journeying Ginninderra, Listening to Country: Exploring the Indigenous History and Changing Landscapes of Ginninderra Creek through Time	Ginninderra Catchment Group	$34,623
A comprehensive Ecological resource for Hughes Garran Woodland to improve environmental outcomes.	Hughes Garran Woodland Group and Southern ACT Catchment Group	$5,000
Ainslie Volcanics	Ainslie Volcanic Volunteer group & Molonglo Conservation Group	$14,288
Red Hill Nature Reserve Regeneration	Red Hill Bush Regenerators	$29,400
Reprinting Interpretive signs at Black Mountain Forest Loop Walk	Friends of Black Mountain	$5,192
Ecology services and ecological advice for Landcarers within Southern ACT Catchment zone	Southern ACT Catchment Group	$26,650
	Total Grants	**$386,488**

2023-2024 ACT Nature in the City & Environmental Volunteer Assistance Grants

In the 2023-2024 round, ten projects to the value of $99,790 were successful (**Table 8**) and will contribute to the improvement of the ACT's urban open spaces liveability, ecosystem health and conservation outcomes. **Table 9** shows the two successful groups receiving Environmental Volunteer Assistance Grants

Table 8 2023-24 ACT nature in the city grant recipients

Project	Recipient	Funding amount
Restoring Woodlands on Oakey Hill	Oakey Hill Parkcare Group & Southern ACT Catchment Group	$6,961
Taylor Primary Community Garden	Taylor Primary School Parent and Citizens Association (P&C)	$16,796
Revegetation of Curtin Parkland: Applying Woody Meadow principles to Curtin	Curtin Native Plant Gardeners & Woden Valley Community Council	$15,216
Yarning Circle Planting	Giralang Primary School P&C	$7,500
Native Flora, Birds & Bees Regeneration Project @ Margaret Hendry School	Margaret Hendry Parents & Citizens Association Incorporated	$8,900
Creating frog-friendly habitat (in Canberra) Brochure	ACT and Region Frog Watch Program, Ginninderra Catchment Group	$11,300
ACT Rescue and Foster Land Revegetation	ACT Rescue and Foster	$3,250
Extending the Mawson Ponds Wildlife Corridor	Friends of Mawson Ponds & Woden Valley Community Council	$6,207
Land and Water: The Yerrabi Pond Restoration Project	Friends of Yerrabi Pond Landcare Group & Ginninderra Catchment Group	$11,000
Frog-friendly habitat workshops	Ginninderra Catchment Group	$12,660
	Total Grants	**$99,790**

Table 9 2023-24 Environmental volunteer assistance grants

Project	Recipient	Funding amount
ParkCare Groups Training Program	Ginninderra Catchment Group	$5,000
Signs at Mawson Ponds	Friends of Mawson Ponds & Woden Valley Community Council	$5,000
	Total Grants	**$10,000**

9.8 Special Projects

Shinzo Abe Memorial in Nara Park

In 2022, Urban Treescapes worked with the National Capital Authority, the Commissioner for International Engagement, and the Friends of Nara Park to assist with the site selection and planting of commemorative trees for the Shinzo Abe Memorial in Nara Park, unveiled by Deputy Head of Mission, Embassy of Japan to Australia, Mr Tadaatsu Mori, on 15 December 2022. The event was attended by the Assistant Minister for Foreign Affairs, the Hon Tim Wats MP, The Speaker of the ACT Legislative Assembly, Ms Joy Burch and other dignitaries.

Children's Wellbeing Tree

Urban Treescapes also assisted the ACT Human Rights Children's Safety Commissioner's office with the selection and siting of a Children's Wellbeing Tree presented to Ms Rachel Stephen-Smith MLA, Minister for Families and Community Services, by Ms Jodie Griffiths-Cook, ACT Children and Young People Commissioner, on behalf of the children and young people of the ACT as part of Children's Week 2022. The tree was planted in Glebe Park.

Albert Hall

Urban Treescapes planned and facilitated the removal of the dead Pinus radiata and other pest species and aged trees in front of the Albert Hall during March and April 2023. The belt of Monterey pine, Canary Island pine and other trees were planted in the 1960s and did not reflect the original landscape design for Albert Hall. Subsequent growth of the trees has effectively formed a visual barrier between Albert Hall and the lake and they had reached a senescent stage requiring removal.

The planning of Albert Hall was strongly based on the context of its surrounds, and views and vistas to the building – specifically from Lake Burley Griffin, the former Hotel Canberra and Commonwealth Avenue – were a crucial element of its design. A more sympathetic landscape plan is being developed that meets this heritage requirement.

The project required significant community and stakeholder engagement and forward planning as the opportunities to undertake the work were very limited. Grass seed was sown in early June and replacement trees will be replanted between Spring 2023 and Autumn 2024 after the spring weed regrowth has been cleared, and the landscape plan has been presented and agreed to by all stakeholders, including ACT Heritage, the National Capital Authority, TCCS Place Management, the Yarralumla Residents Association and the Friends of the Albert Hall.

Blue Tree Project

In 2023, the ACT Government launched the Blue Tree Project in the ACT by painting our first blue tree along Hindmarsh Drive in Lyons. The ACT Government's Urban Treescapes team and the ACT Office of Mental Health partnered with the Blue Tree Project to reduce the stigma around mental health and spark important conversations about mental health and suicide prevention.

By spreading the paint and spreading the message 'it's OK to not be OK', we can help break down the stigma that's still largely attached to mental health. The Blue Tree's ethos aligns with the ACT Government's vision for a kind, connected and informed community working together to promote and protect the mental health and wellbeing of all. Painting a tree blue is a positive, non-confrontational conversation starter around the issues of mental health and suicide prevention.

Any tree that has been painted are not living and do not contain significant habitat elements. The paint is non-toxic and an ecological survey of the tree was undertaken to ensure wildlife and any nesting birds were not disturbed.

10.0 Progress against Strategy Actions

Immediate actions (within 2 years)

Objective	No.	Actions	Timeframe	Status Year 3 2023
Protect the urban forest	1.2.1	Review and update the *Tree Protection Act 2005* (TPA) to ensure the threshold for protecting trees is appropriate	Immediate	• *Urban Forest Act 2023* passed in the legislative assembly on 30 March 2023 and coming into effect on 1 Jan 2024.
	1.2.2	Review and update the TPA criteria for removal of protected trees to ensure it aligns with community values and expectations	Immediate	• Criteria updated in Urban Forest Act 2023.
	1.2.3	Review and update the TPA and *Public Unleased Land Act 2013* (PULA) to ensure appropriate compliance mechanisms exist to deter illegal tree removals or damage to trees on leased and unleased land, and respond appropriately when they occur	Immediate	• *Urban Forest Act 2023* provides better protection for trees on both unleased and leased land.
	1.3.1	Consider developing a program to ensure the health of mature and remnant trees on unleased land	Immediate	• Community engagement to increase active care of trees adjacent to residences and businesses incl. factsheet, social media posts and City Services website. • Collaborating with ACT Natural Resource Management (ACT NRM) on Sustainable Urban Green Spaces project and Connecting Nature Connecting People. • Loss of Mature Native Trees Threatening Process Draft Action Plan agreement between EPSDD and TCCS.
	1.3.2	Review and update the PULA to require all developers to erect prescribed fencing to protect existing trees on public land from damage prior to	Immediate	• *Urban Forest Act 2023* provides better protection during development for trees on both unleased and leased land. • Standardised Land Management and Protection

		demolition, excavation and/or construction on adjacent block/s		Plan (LMPP) notes to be released by TCCS to assist in the protection of existing trees during development.
	1.4.1	Investigate and implement administrative and technological reforms to systems and processes for administration of the Tree Protection Act to ensure they are streamlined, transparent and efficient	Immediate	• *Urban Forest Act 2023* passed in the legislative assembly on 30 March 2023 and coming into effect on 1 Jan 2024.
Grow a resilient forest	2.1.1	With reference to the 2010 audit, obtain updated data on the current canopy cover of the public urban forest to inform a replacement program.	Immediate	• Analysis of LiDAR measurements to inform analysis of canopy coverage completed. • Canopy cover percentages across suburbs used to identify priority suburbs for planting. • Established a Technical Working group composed of specialists from EPSDD and TCCS to assess boundary options for the analysis of urban tree canopy cover.
	2.1.2	Develop a sustainable program of end-of-life tree removals and replacements for removed trees and existing planting gaps to maintain the urban forest, including best-practice after-care for new plantings	Immediate	• Over 12,650 trees planted in vacant street, park and open space locations in 2022-2023 with 18,000 target met in early 23-24. • Urban tree planting target increased to 54,000 trees by 2024.
	2.2.1	Consider introducing a canopy contribution framework for trees on both public and private land that ensures that when trees must be removed and cannot be replaced on site, they are replaced elsewhere through a contribution based on the value of the tree at the time of assessment	Immediate	• *Urban Forest Act 2023* includes canopy contribution scheme.
	2.2.2	Review PULA to consider a tree bond scheme for trees on public (unleased) land that discourages tree removal and damage through development	Immediate	• *Urban Forest Act 2023* includes bond scheme to protect trees during development on both leased and unleased land.
	2.3.1	Promote and periodically update the preferred species planting guide to assist the community in understanding what trees to plant on leased land	Immediate	• Municipal Infrastructure Standards (MIS) 25 updated in 2021 and will continue to be reviewed. • 'Tree Selector' online tool to help inform the community of appropriate tree species selection is

				under development. • ACT pollination calendar released in partnership with ACT for Bees. • Collaboration with Suburban Land Authority (SLA) on Plant a Tree in Your Canberra Garden.
	2.3.2	Publish and regularly review a list of climate resilient trees	Immediate	• A Living Labs trial to assess the performance of new 'climate-ready' tree species in Canberra is underway. Information from the trial will inform the update of the preferred tree species list. • Collaboration with EPSDD on the Microclimate guide, Climate wise landscape guide, Climate wise planning report and Tree canopy cover equivalence tool. • Collaboration with SLA on Plant a Tree in Your Canberra Garden.
Balance and diversify the urban forest	3.1.1	Direct initial prioritisation for new plantings to existing planting gaps and addressing the most vulnerable communities	Immediate/ Ongoing	• Tree planting is prioritised in vacant planting gaps and in areas that have been identified as being more vulnerable to urban heat.
Develop infrastructure to support the urban forest & liveability	5.2.4	Collaborate with EPSDD to amend planning regulations to ensure suitable protection of existing trees and the establishment of new trees when planning infrastructure in new suburbs and in urban densification areas	Immediate	• Collaboration with EPSDD on Variation 369 (minimum tree planting requirements on leased land at development). • Collaboration with EPSDD on the ACT Planning System Review and Reform. • Release of Urban Open Space Land Management Plan
	5.2.5	Collaborate with EPSDD on the Planning review and TPA review to ensure consistent and appropriate decision making for protected trees	Immediate	• *Urban Forest Act 2023* passed in the legislative assembly on 30 March 2023 and coming into effect on 1 Jan 2024. • Collaboration with EPSDD on the ACT Planning System Review and Reform.

Partner with the community	6.1.2	Develop and make available to volunteers a citizen science data collection program	Immediate	• A Citizen Science program to capture data on the condition of urban trees is under development. • Planning underway for small citizen science trials at Telopea Park, Curtin, Fetherston Gardens and Yarralumla. • Community Urban Biodiversity Surveys (CUBS) program initiated by EPSDD.

Short term actions (within 5 years)

Objective	No.	Actions	Timeframe	Status Year 3 2023
Protect the urban forest	1.3.3	Investigate incentives and programs to better provide for the protection, maintenance and care of registered and remnant trees on leased land	Short	• *Urban Forest Act 2023* passed in the legislative assembly on 30 March 2023 and coming into effect on 1 Jan 2024. • Discussions underway with Master Builders Association (MBA) regarding an annual Tree Protection industry award.
	1.3.4	Program cultural site assessments with a view to developing cultural tree management plans	Short	• TCCS cultural site assessments are underway, with results informing the design and selection of tree planting in urban open space. • Planning underway to develop a process to seek advice from Indigenous cultural representatives prior to planting in urban open space. • TCCS installing an Indigenous Garden & interpretive signage for the Wanniassa Scarred tree, following community engagement on the design & signage.
Grow a resilient forest	2.1.3	Develop a sustainable planting program to increase canopy cover equitably across the urban footprint by establishing sufficient additional trees to meet the canopy cover target over the life of the Strategy	Short/ Ongoing	• As per 2.1.1, 2.1.2 and 3.1.1
Balance and diversify the urban forest	3.1.3	Progressively map suburbs at risk of losing canopy due to ageing trees to inform a planned removal and replanting program	Short/ Ongoing	• Urban Forest Condition report to inform urban forest renewal planned for 2023-24.
Take an ecological approach and support biodiversity	4.1.1	Map remnant trees in the urban area	Short	• LiDAR capture and Urban Forest Condition report will assist as a starting point for field assessments to accurately map remnant trees.
	4.3.1	Develop an urban wood reuse plan for trees removed from public land	Short	• Commenced development in 2022-23.

Develop infrastructure to support the urban forest & liability	5.1.1	Investigate and promote use of permeable infrastructure (e.g. shared and bike paths, paving and car parks) in target areas	Short/ Ongoing	• Jamison Shopping Centre Water Sensitive Urban Design (WSUD) tree pit trial constructed in August 2020. Monitoring underway. • Ongoing repair and installation of flexible permeable tree surrounds is underway. • Provided input on MIS 24 with car park tree ratio and WSUD for passive watering which is known to relieve pressure on the Storm water system (Kenny Park and Ride). • Promoted passive watering of trees in hostile conditions like car parks with technologies like kerb inlets (Kaleen Shops) and regrading towards tree pits in estate development. • Working with Heathy Waterways, Emergency Services Authority (ESA) and Parks to promote non-deciduous trees over swales in high fire zones (Well Station Dr). • Next Practice in Living Infrastructure project delivered by the Suburban Land Agency.
	5.2.2	Focus public tree plantings to support summer shading along active travel routes (Action 12 of the LIP)	Short	• Tree planting alongside active travel routes prioritised during planning of open space and roadside planting programs.
	5.2.7	Review municipal design standards to include specifications on urban rain gardens and/or urban stormwater swales as planting locations on verges and other locations	Short	• The MIS suite will continue to be reviewed and updated periodically. • Cooler, greener infrastructure review of MIS and MITS.
Partner with the community	6.3.1	Develop community education material to convey the benefits of trees	Short	• Canberra re-affirmed an 'International Tree City of the World' by the United Nations Food and Agriculture Organisation and the Arbor Day Foundation in 2023. • Social, Economic and Environmental Values of Street Trees report commissioned and made publicly available. • Brochure created on the benefits of street trees

			and how residents can help care for them. • Development of short videos on the benefits of trees and how to care for them under development. • Release of 'Plant a Tree in Your Canberra Garden', the 'Climate Wise Garden Designs booklet' and '*Gawari Ngilanmanyin—Remembering the Bush: A Climate-wise Landscape Guide for the ACT*'.
6.3.3	Consider ways to educate young people and how they can contribute to the urban forest	Short	• Tree planting events held with primary schools and sporting groups. • Trees provided to schools for landscape projects. • Encourage schools and youth groups to hold Tree Week activities. Children's colouring competition held in 2023. • Coordinate celebrations for National Tree Day, World Forestry Day, World Environment Day and Arbor Day. • Investigate collaboration with Greening Australia for educational program.

Medium term actions (within 10 years)

Objective	No.	Actions	Timeframe	Status Year 3 2023
Balance and diversity the urban forest	3.2.1	Consider use of spatial mapping and citizen science programs to help identify areas with low species diversity and inform future plantings	Medium	• As per 6.1.2
Take an ecological approach and support biodiversity	4.1.3	Collaborate with EPSDD to enhance and conserve biodiversity and eco-cultural values of urban areas (Nature Conservation Strategy – Strategy 4)	Medium	• Collaborating with ACT NRM on Sustainable Urban Green Spaces project. • EPSDD 'Connecting Nature Connecting People' initiative. • Loss of Mature Native Trees Threatening Process Draft Action Plan agreement between EPSDD and TCCS. • Biodiversity mapping by EPSDD to inform TCCS planting programs - ACT Urban Habitat and Connectivity Tool and Act Ecological Network Dashboard. • Urban Forest Ecological Advice project informing planting to connect urban habitat.
	4.2.1	Implement strategic planting to support wildlife and enhance movement and foraging opportunities across the city and wider landscape	Medium	• As per 4.1.3 • Replacement planting program of main and arterial road verges and connecting open space.
	4.2.2	Collaborate with EPSDD to undertake fine scale planning for habitat connectivity (Nature Conservation Strategy - Action 1.2)	Medium	• As per 4.1.3
Develop infrastructure to support the urban forest & liability	5.2.6	Where appropriate, install and maintain rain gardens and swales for urban water run-off in tree and understorey planting areas in urban streetscape upgrades and new estate developments	Medium/ Ongoing	• Collaborated on ACT Healthy Waterways projects. • Jamison Shopping Centre WSUD tree pit trial constructed in August 2020. Monitoring underway. • Infrastructure installed in upgrade and greenfields developments such as Anketell St, Tuggeranong and Whitlam.

				• Collaborated with EPSDD on the Whitlam Living Infrastructure pilot. • Next Practice in Living Infrastructure project delivered by the Suburban Land Agency.
Partner with the community	6.2.1	Investigate incentives for retention of trees on private land including through collaboration with planning authorities	Medium	• Collaboration with EPSDD on Variation 369 (minimum tree planting requirements on leased land at development). • Ongoing investigation of options. • Collaboration with EPSDD on the ACT Planning System Review and Reform. • Collaboration on Biodiversity Sensitive Urban Design (BSUD) Guidelines.
	6.3.2	Build indigenous engagement in caring for the urban forest	Medium	• As per 1.3.4 • Investigating engagement opportunities. • Ensuring all procurement opportunities shared with indigenous organisations.

Long term (20 years) and ongoing actions

Objective	No.	Actions	Timeframe	Status Year 3 2023
Protect the urban forest	1.1.1	Maintain and promote the Tree Register (under the TPA)	Ongoing	• City Services website. • Promotion with implementation of Urban Forest Act 2023.
Balance and diversity the urban forest	3.1.2	Consider undertaking regular LiDAR data capture and analysis to enable effective monitoring and evaluation of canopy coverage and permeability across the urban footprint	Ongoing	• LiDAR capture in 2020 to be repeated every 5 years. • Urban Forest Condition report to inform Urban forest renewal planned for 2023-24 using High-resolution, multi-spectral, and thermal imagery capture and analysis for ACT urban areas.
	3.3.1	Plan planting programs to achieve a best practice age profile of the urban forest by 2045	Ongoing	• Infill planting in ageing suburbs to offset future removal of ageing trees. • Urban Forest Condition report to inform Urban forest renewal planned for 2023-24.
	3.3.2	Ensure yearly maintenance programs involve adequate removal and replacement of end-of-life trees to develop a balanced age distribution	Ongoing	• Expansion of maintenance team in 2020. • Further expansion of capacity to be sought in future budgets.
Take an ecological approach and support biodiversity	4.1.2	Assess senescent and ageing native trees for retention as habitat in preference to being removed	Ongoing	• Trees marked for removal reviewed by second arborist prior to program. • Open space trees retained as habitat if structurally sound.
	4.1.4	Identify opportunities to protect young seedlings growing from mature remnant trees on unleased public land where it is appropriate	Ongoing	• Collaborating with EPSDD to identify sites. • EPSDD 'Connecting Nature and People' initiative. • ACT NRM Sustainable Urban Green Spaces project. • Mowers installed with GPS to alert to no mow zones.
	4.3.2	Ensure by-product from maintenance of the urban forest is used to support tree health and biodiversity conservation including in habitat restoration programs and nature-based park features	Ongoing	• Wood by-product continues to be directed to habitat restoration projects, nature-based park features and mulch for reuse across the ACT.

	5.1.2	Continue to promote positive community behaviour in relation to managing and protecting nature strips and other public areas	Ongoing	• Canberra re-affirmed an 'International Tree City of the World' by the United Nations Food and Agriculture Organisation and the Arbor Day Foundation in 2023. • Brochure developed on the value of street trees and ways in which residents can help care for their street tree. • Social media campaigns utilised periodically. • Short videos under development.
Develop infrastructure to support the urban forest and liveability	5.2.1	Collaborate across ACT Government to increase tree numbers in priority areas (Action 11 of the LIP)	Ongoing	• Increased planting in priority areas is underway. • Collaboration with EPSDD to plan for habitat connectivity & active travel and negotiate tree retention in development projects. • Collaboration with ACT Education and ACT Property Group to build spatial tree asset layer. • Collaboration with ACT Education, Parks and Conservation Service and CMTEDD Sport and Rec for planting opportunities. • Collaboration with ACT NRM on Sustainable Urban Green Spaces project. • Collaboration with EPSDD on the Microclimate guide, Climate wise landscape guide, Climate wise planning report and Tree canopy cover equivalence tool. • Collaboration with SLA on Plant a Tree in Your Canberra Garden. • EPSDD report on Cooling benefits of living infrastructure.
	5.2.3	Where possible, seek to widen road verges in areas where densification is occurring and along key active travel routes to accommodate additional tree planting	Long	
Partner with the community	6.1.1	Expand and support community / volunteer programs to encompass a wider range of contributions to maintenance of the urban forest	Ongoing	• Rapid expansion of community volunteer programs is underway. • Implementation of in-house planting team to support community planting. • Adopt a park funding continued until 2023-24.

	• Collaboration with EPSDD to deliver ACT Nature in the City grants program. • Community groups assisted to develop programs to promote cultural awareness, restore and revegetate waterways, and deliver environmental outcomes for improved habitat.