ACT Government

2024 Report to the Legislative Assembly of the Australian Capital Territory

Urban Tree Canopy Coverage

Assembly Resolution of Wednesday 31 March 2021

Update

TRANSPORT CANBERRA AND
CITY SERVICES DIRECTORATE

SEPTEMBER 2024

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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 2023-24 to meet the objectives of the Strategy, including:

- A total of 23,304 trees were planted in the urban environment in 2023-24, achieving 117% of the annual target of 20,000 tree plantings. This includes 15,232 trees planted in streets and open space as part of the City Services' tree planting program, 7,022 trees supplied by City Services in intergovernmental collaborations, and 1,050 trees gifted to residents to increase canopy cover on private land. An additional 958 trees were planted on unleased land by other agencies and gifted to City Services for ongoing management.
- The Urban Forest Bill 2022 was passed in the legislative assembly on 30 March 2023 and replaced the *Tree Protection Act 2005* from 1 January 2024. The new *Urban Forest Act 2023* 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 late 2023 saw Canberra continue to be recognised 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 the 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 2024, the Blue Tree Project, the YourSay planting map, collaboration with schools and sporting groups, collaboration with Environment Planning and Sustainable Development Directorate (EPSDD) and the community on environmental grants, and collaboration on Connecting Nature Connecting People projects.
- Collaboration with EPSDD and other organisations in policy development and implementation to ensure that urban biodiversity is optimised for habitat and connectivity.
- Recycling of urban wood waste and replacement of degraded tree surround surfaces.

Transport Canberra and City Services (TCCS) 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

Table 1 should be read in conjunction with the Strategy actions and status table (Appendix A) which outlines the progress made towards increased canopy cover in greater detail. 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. The actions are designed to interact with, complement, and enhance each other to achieve a comprehensive outcome.

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
	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

Objective	Action		Contribution
	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 urban forest and liveability	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
	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

Objective	Action		Contribution
	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

2.2 Contribution of different regions to Canberra's canopy cover

2.2.1 District canopy cover

The reasons for differing levels of canopy cover vary by district or region. Newer suburbs like Denman Prospect, Taylor 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 canopy reduction due to removal of ageing street trees and impacts of removals for infill development.

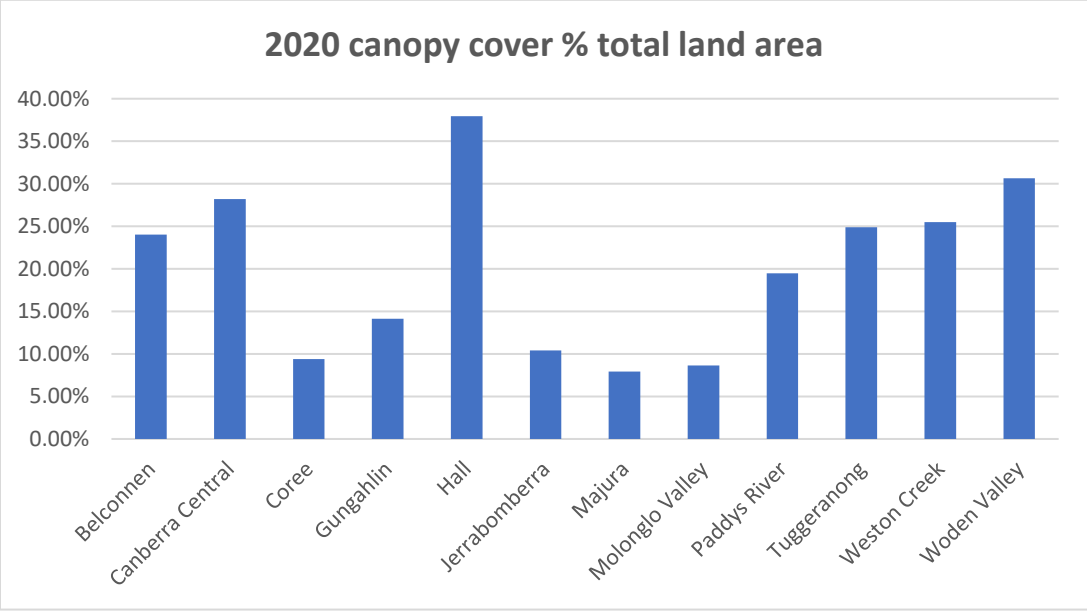
Tree canopy cover was measured in 2020 using the LiDAR remote sensing method. Table 2 shows the percentage of canopy coverage across each district as measured in 2020.

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



2.3 Suburbs/divisions identified for priority action

The Transport Canberra and City Services 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.

2.3.1 Existing suburb canopy cover

Twenty-six 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 suburbs 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)

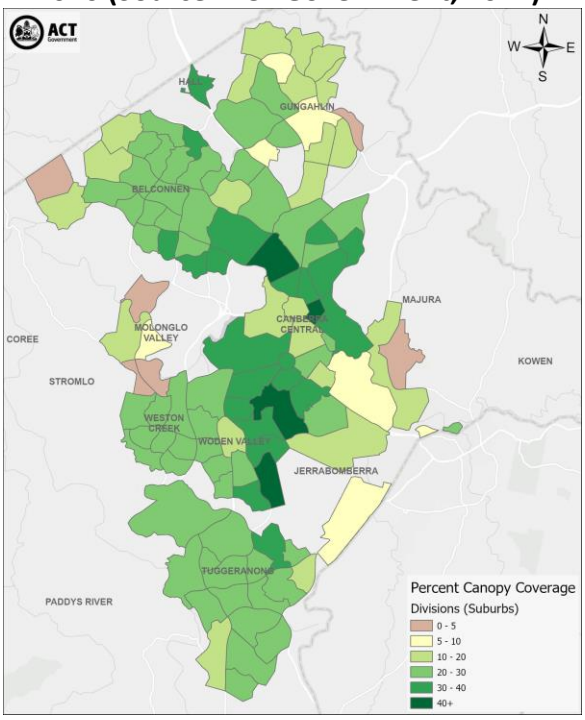
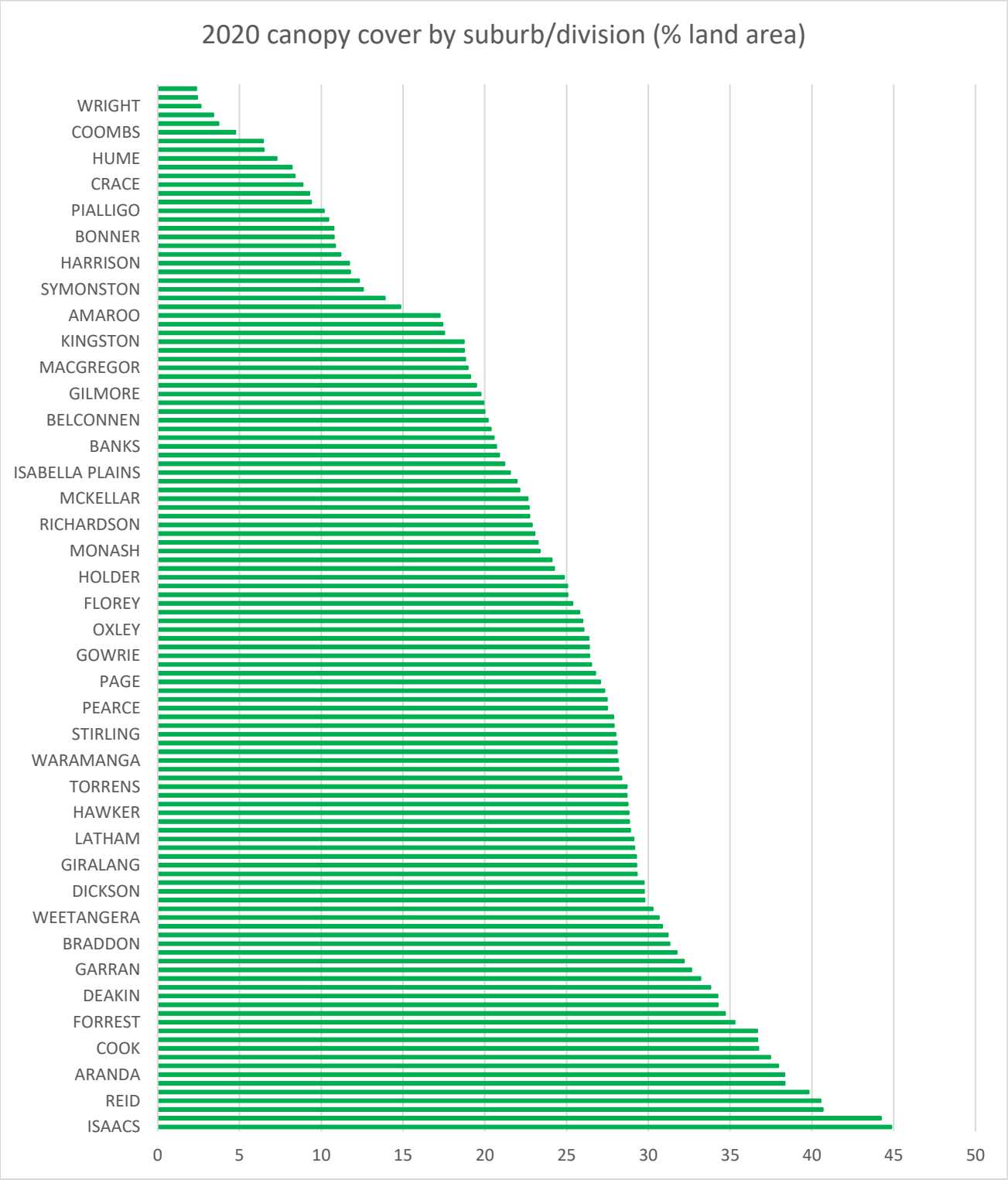


Figure 3 2020 Tree canopy cover for each suburb/division in urban Canberra



2.3.2 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.

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

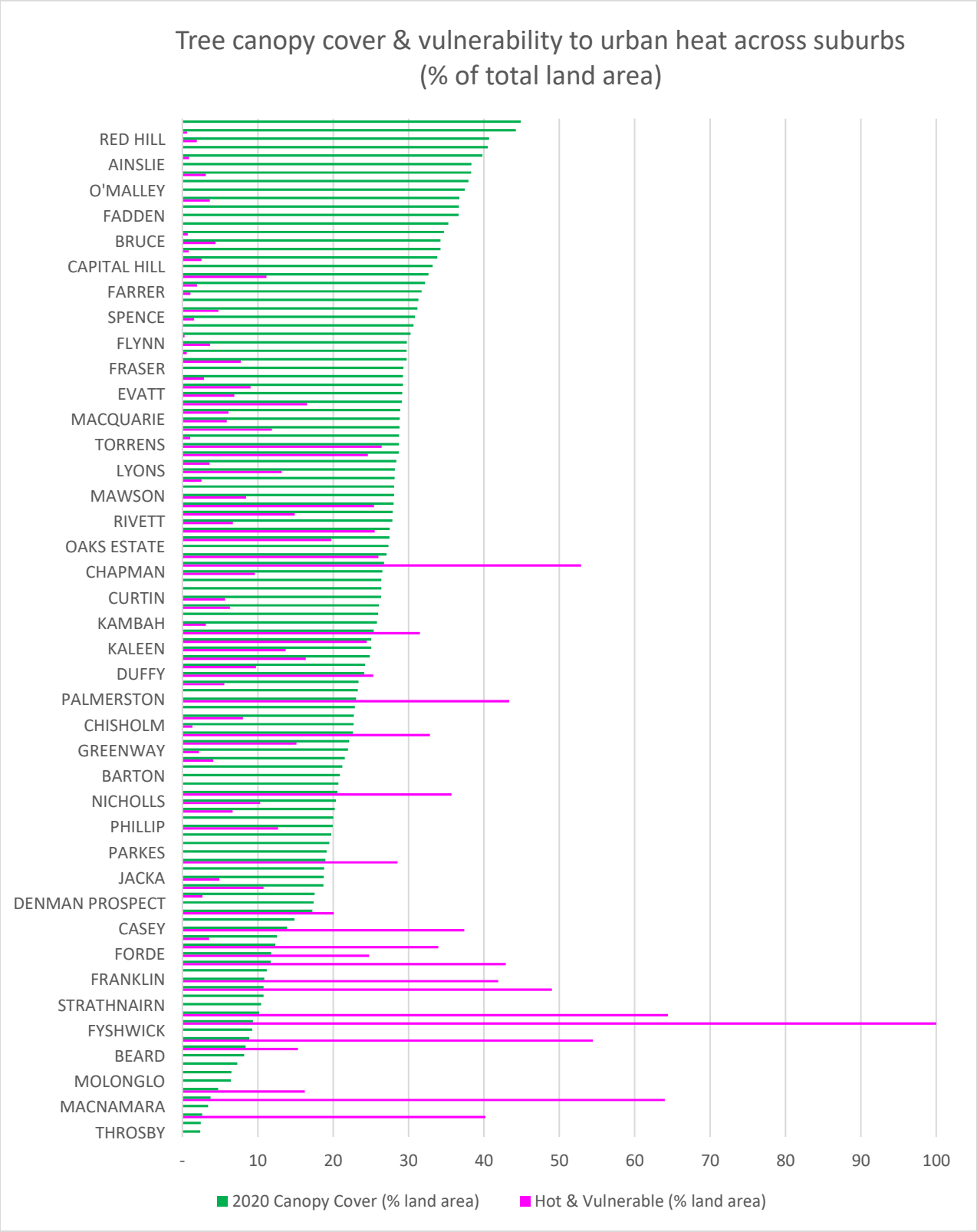


Table 3 2020 Canopy cover and vulnerability index

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
Tuggeranong	Conder	28.74	1.03

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
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
Tuggeranong	Isabella Plains	21.55	4.08
Canberra Central	Russell	21.2	0
Canberra Central	Barton	20.89	0

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
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
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

District name	Suburb (Division)	2020 canopy cover (% land area)	Hot & vulnerable (% land area)
Molonglo Valley	Whitlam	2.43	0
Gungahlin	Throsby	2.37	0

2.3.3 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. The next LiDAR capture is scheduled for early 2025.

A summary of progress against all Strategy actions is at Appendix A.

3.0 Protect the Urban Forest

3.1 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* repealed and replaced 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. The legislation came into effect on 1 January 2024 allowing time for the Government to work with the community and industry to raise awareness of what is changing under the new legislation and how it affects residents and businesses as well as building a new IT system to implement the reform.

The key changes introduced by this Act include:

- introducing new requirements to ensure that 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 trees in our city.
- 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 Strategy and Canberra's Living Infrastructure Plan. It will enhance the liveability of the ACT and protect the health of the community by preventing environmental degradation.

Transport Canberra and City Services Urban Treescapes team established an implementation taskforce to ensure the directorate was ready to administer the legislation on 1 January 2024, and to provide education and communication to the community, industry and other government agencies on their roles and responsibilities under the new legislation so we can all work together to protect, enhance and grow our urban forest now and for future generations.

3.2 New ACT Planning System

In November 2023, the ACT's new planning system commenced. This saw closure of the ACT Planning System Review and Reform Project which attracted a large volume of feedback from community councils, industry and professional associations, environmental organisations and the broader community.

The key elements of the new planning system include:

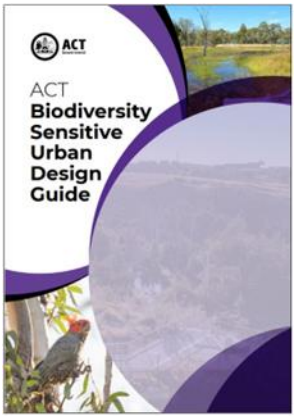
A new Planning Act: Sets the foundation of the new planning system and the legal framework.

A new Territory Plan: Outlines what developments can be built where, and the Assessment Outcomes and Assessment Requirements that need to be met. The Territory Plan is the primary planning policy document that guides the proposal and assessment of proposals through the planning system.

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.

Introducing Design Guides: There are currently four design guides – the Housing Design Guide, Urban Design Guide, Biodiversity Sensitive Urban Design Guide and the City Centre Urban Design Guide. They show developers what they need to consider and respond to when designing their developments. They show examples and methods of good design and list the considerations for developments across Canberra.

The Biodiversity Sensitive Urban Design (BSUD) Guide was developed and incorporated into the planning system to provide planners and development proponents with guidance and considerations on how to address biodiversity along with 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.



Introducing Technical Specifications: Technical specifications are documents that support the Assessment Outcomes in the Territory Plan. Technical specifications provide metrics that can help guide proponents and the Territory Planning Authority in meeting the Assessment Outcomes. Technical specifications are optional to apply.

Commencement of the new outcomes-focused planning system sees a shift away from the previous rules-based system. This means for development approval to be given, it needs to demonstrate that a development will deliver good outcomes rather than ticking a series of boxes.

Living infrastructure provisions have been included in the new planning system. Now, developments in most zones, including in residential and commercial zones, are

required to provide sufficient planting areas and canopy trees to reduce the urban heat island effect, provide deep soil zones to support healthy tree growth, and to ensure threats to biodiversity (such as noise, light and site disturbance) is limited.

In achieving these Assessment Outcomes, development proponents and assessors may choose to apply the metrics outlined in the Technical Specifications. This is where measures, such as a minimum 15% tree canopy coverage for multi-unit development in RZ1-2 zones, and a minimum 25% canopy cover for multi-unit development in RZ3-5 zones are held.

Another key inclusion in the new planning system is an additional trigger for developments likely to result in a Key Threatening Process requiring an Environmental Impact Assessment. In this instance, the development will be subject to increased scrutiny by the Conservator of Flora and Fauna prior to a development application being lodged.

Overall, the new planning system places greater consider on the surrounding area and the impact developments may have on wellbeing, health, recreation and the environment while supporting the neighbourhoods they are in.

3.3 Loss of Mature Native Trees Key Threatening Process 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.

TCCS has supported EPSDD in the development of the Nature Conservation (Loss of Mature Native Trees Key Threatening Process) Action Plan 2023 (Disallowable Instrument DI2023-230). This Action Plan identifies many actions to protect and enhance the ecological context of existing mature native trees as well protect and increase recruitment and survival of young native trees. While many of these actions relate to the significant proportion of ACT land in formal reserves there remains an imperative to address native trees in the urban environment under management by TCCS.

TCCS continues to support EPSDD in developing and facilitating the Implementation Plan to achieve the identified Action Plan objectives. Relevant actions for TCCS include:

- Regulated tree criteria amended to increase ecological importance, including for dead standing trees with habitat value. *This was addressed in the new Urban Forest Act 2023.*
- Increased monitoring and compliance efforts for breaches of the Act. *TCCS continue to monitor, record and address breaches, however increased compliance activities require funding to implement.*
- Native tree retention policy including incorporating ecological values into tree (and tree risk) assessments. *Currently being investigated and incorporated into directorate activities.*
- Identify and map remnant and mature native trees. *Captured LiDAR, and multispectral and thermal aerial imagery and related Urban Forest Condition report will contribute to this.*
- Retain higher proportions of mature native trees in new developments. *TCCS and EPSDD currently incorporating this into business activities, supported by the Urban Forest Act 2023.*
- Plant more trees in urban open spaces, reserves, and greenfield development. *TCCS undertaking significant planting programs to address this*.
- Facilitate artificial hollow creation in/on existing trees. *Urban Treescapes have the tools and training to undertake this work and continue to collaborate with EPSDD on best-practice application.*
- Update the Municipal Infrastructure Standards (MIS) and other planning documents to encourage planting of local native tree species. *MIS currently being reviewed.*
- Undertake complementary understorey landscaping to protect existing mature and young native trees. *Identified as an action for use through the Canopy Contribution Framework.*
- Improve conditions for mature and young native trees through additional watering in extended dry periods. *Identified as an action for use through the Canopy Contribution Framework.*

3.4 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, skate parks, outdoor exercise equipment, street and park furniture, paths, and green infrastructure such as trees, shrubs, and grasses.

The Urban Open Space Land Management Plan (LMP) was approved by the Minister for City Services in June 2024, incorporating community feedback provided on the draft during 2023.

The Urban Open Space LMP replaces five outdated district level plans issued between 1998 to 2007, bringing renewed direction to enable positive environmental gains in addition to traditional public amenity and asset maintenance focus. It will shape the future management and use of our public open spaces to ensure the plan reflects the needs of a growing and diverse community.

An Implementation Plan (in preparation in 2024) will activate the vision of the Urban Open Space LMP to provide greater detail of how strategic objectives will be delivered and to optimise collaborative community and stakeholder engagement pathways during the next ten years. Examples of priority projects include supporting the Urban Forest Strategy with opportunities to improve green-blue corridor connectivity and ecological restoration.

The ACT Government will report on the implementation of the Urban Open Space LMP at least every five years. The Plan will also be reviewed every 10 years from commencement.

4.0 Grow a resilient forest

4.1 Tree planting

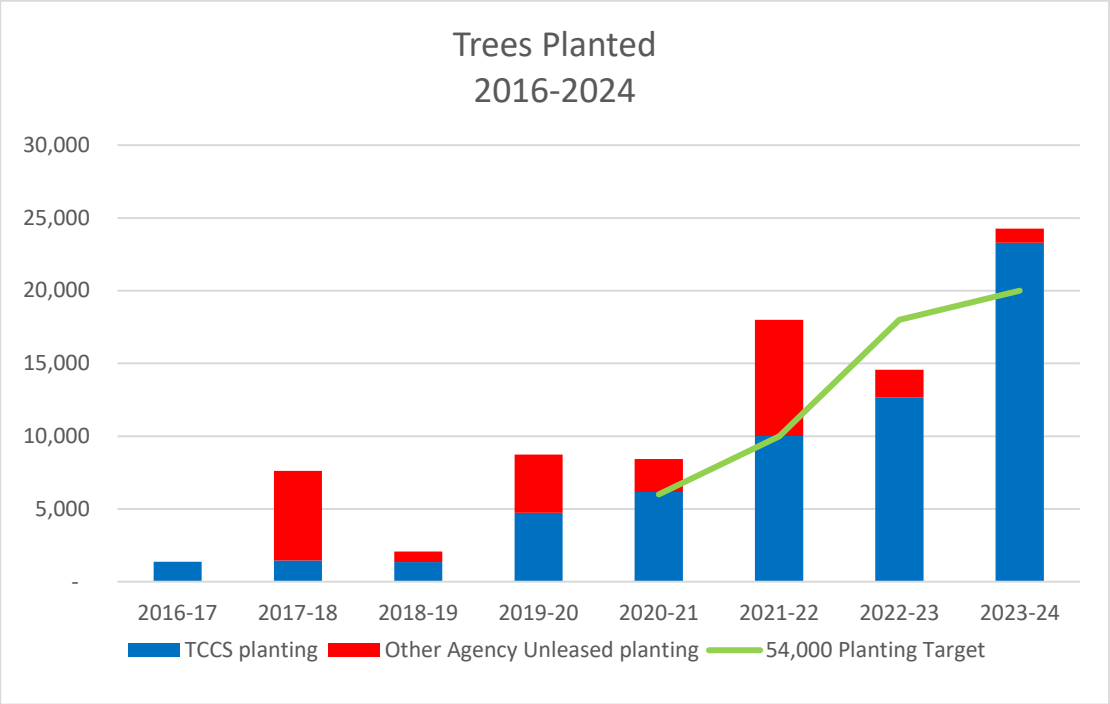
City Services continues to strive towards the Urban Forest Strategy Target of a 30 per cent tree canopy cover in the ACT by the year 2045. To help grow canopy across the city, City Services committed to planting 54,000 trees between July 2020 and June 2024 (Figure 5). The Urban Treescapes tree planting program has planted or directed the planting of 52,130 trees to meet this target during this period. With 13,110 trees also planted on unleased land as part of the development of new suburbs and urban infill upgrades which were handed over to TCCS for ongoing management, this brings the total to 65,240 trees planted from June 2020.

It should also be noted that an additional 4,000 trees were planted between May and June 2020 as part of the COVID-19 stimulus plan in the lead up to the 54,000 tree target.

In 2023-24 a total of 23,304 trees were planted in the urban environment including 15,232 trees planted in street verges and in open space as part of Urban Treescapes' planting program, 7,022 trees supplied by Urban Treescapes in intergovernmental collaborations, and 1,050 trees gifted to ACT residents to increase canopy cover on private land. Together these planting initiatives achieved 117% of the annual target of 20,000 tree plantings.

2023-2024 also saw 958 young trees planted as part of the development of new suburbs and urban infill upgrades which were handed over to TCCS for ongoing management. This increased the number of trees planted on unleased land to 24,262 within the 2023-24 financial year.

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



Recent and projected plantings are shown in Figure 5, including planting on unleased land undertaken by other ACT Government agencies.

A continued focus has been placed on planting in residential areas with low canopy cover and areas vulnerable to urban heat continued, with 1,692 trees planted in 2023-2024 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.

429 public suggestions for tree planting locations were received through the YourSay interactive map in 2023-24 and 882 trees were planted on suitable sites. Since the YourSay interactive map was launched in late 2019, a total of 5,468 tree planting location requests have been received and 5,314 trees have been planted in response to YourSay requests.

Since the new *Urban Forest Act 2023* came into effect on 1 January 2024, a total of 478 trees have been agreed to be planted as on-site canopy contributions. Applicants have 18 months from the date of the canopy contribution agreement to plant trees made under these agreements on the leased land where the initial tree was removed from.

More than 42,400 young trees were watered throughout the warmer months from October 2023 to April 2024.

Intergovernmental collaboration

City Services collaborated with Environment, Planning and Sustainable Development Directorate (EPSDD), Department of Housing, and the Department of Education to increase canopy cover across the city through the supply of 7,022 trees in 2023-2024. Projects included supplying 3,652 trees to EPSDD to support native planting projects aimed at increasing canopy and biodiversity in riparian zones and suburban bushland across the city, and 1,040 trees to provide shade and canopy to the North Wright Community Housing initiative, which had a limited budget for the pilot project.

North Wright Housing Project- Suburban Land Agency

The Suburban Land Agency consulted with Urban Treescapes to provide trees to Community Housing development in Wright, Weston Creek. A mix of exotic and native trees were supplied to increase shade and amenity on public land adjacent to the new development. Urban Treescapes worked with the project team and Yarralumla Nursery to provide the most suitable species for the development, to increase canopy and maximise solar access to the dwellings.

4.1.1 TCCS inhouse tree planting

Over 9,000 trees were planted across Canberra by Urban Treescapes' inhouse planting team in 2023-2024, including approximately 2,500 new trees in the Belconnen district, 1,500 in the Gungahlin district, 3,000 in the Tuggeranong district, and 2,000 in the Central and Weston districts.

The inhouse planting team was significantly increased in 2023 to provide greater flexibility and capacity to meet planting targets and in response to growing young tree maintenance needs. The expanded in-house team ensures that Urban Treescapes can provide a broader program of tree care to increase the health and vitality of both the existing and projected tree canopy across the city.

The inhouse team prioritised planting in locations with the greatest impact for the community and to support biodiversity. This includes targeting planting at playgrounds, along walking and cycling paths, in roadside shelterbelts and road medians where tree cover has declined, and to create 'stepping stones' to connect wildlife corridors and provide essential habitat for native wildlife. Example projects include the Mulligans Flat Road bike path, Erindale Drive and Ashley Drive foot paths, Kaleen and MacGregor playing fields pathways, Drakeford Drive and Tuggeranong Parkway, Barton Highway, Erindale Drive and Coulter Drive. Sites selected to strengthen biodiversity included Falconer St Park in Monash, MacGregor Hill and Crackajack Way Hill in Moncrieff.

Additional work was also undertaken at the Curtin woodyard to create a fit-for-purpose solar-powered depot for the increased planting team. The includes site staff amenities and office building shown in Image 1, storage for maintenance equipment and vehicles, and space to maintain tree stock.

Image 1 Installation of demountable buildings at Curtin works depot

4.1.2 Watering and young tree care

Thousands of trees across Canberra were watered, re-mulched, weeded, formatively pruned, and tree stakes and guards were re-installed or removed through the inhouse watering and young tree care programs in 2023-2024.

Priority was placed on caring for recently planted trees and targeted maintenance of trees along walking and cycling paths and in public parks, including maintenance of high value trees such as the those in City Hill, Nara Park, and Telopea Park. Particular attention was also given to supporting young trees in the Mitchell and Fyshwick industrial estates. Such industrial locations are a major source of urban heat due to low canopy cover and extensive impermeable surfaces and are challenging environments in which to successfully establish new trees.

4.1.3 Rejections of street tree planting

Street tree planting rejections continue to challenge the delivery of City Services' tree planting program. The program 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. This also doubles the efforts of the City Services team, as an alternative location must be programmed to enable the planting to still occur, including all of the pre-planting checks that must be undertaken. Resident feedback occurs after planting notification letters are received and later at the time of planting, with the primary reason for refusing a planting being parking concerns. Recent refusal patterns have not shown any trends associated with exotic or native tree species.

4.2 Tree care and maintenance

Soil compaction in the urban environment is a widespread problem which can significantly reduce the health and life expectancy of urban trees. City Services are undertaking a 12-month trial to measure the efficacy of treatment measures designed to boost the health of mature street trees adversely impacted by soil compaction.

Six Algerian oaks (*Quercus canariensis*) on the nature strip adjacent to the Mount Majura Primary School in Watson (shown in Image 2) were identified as being in poorer health than other trees within the street; showing signs of significant tip dieback and reduced canopy density detailed in Image 3. It was observed that the soil surrounding the stressed trees was highly compacted due to frequent foot traffic and a history of unauthorised verge parking.

An innovative method to address soil compaction and improve soil health is being trialled to prevent water shedding away from tree root zones, and improve tree's access to water, oxygen and nutrients. The treatment being trialled is the *VOGT Geo Injector* which uses regulated air pressure to create horizontal and vertical fissures outside the structural root zone to loosen and aerate soil and create space for soil improvement additives. The treatment is designed to improve soil structure and help increase production of fine tree roots and has been combined with a thick layer of aged mulch to add more organic matter and help cool root systems and preserve soil moisture (Image 4).

A detailed soil analysis was undertaken to measure soil characteristics and compaction levels prior to treatment and soil conditions will be retested 12 months after treatment measures were carried out.

Image 2 Treated trees on Irvine Street, Watson

Image 3 Tip dieback on the Algerian oaks (Quercus canariensis)

Image 4 Treatment of compacted soil surrounding the subject street trees

4.2.1 Urban tree data management

City Services have undertaken a review of the spatial data management system which underpins the management of the tree planting, removal, watering, and maintenance programs. As an analytical tool, the mapping system provides valuable insights into City Services' tree management programs, and ongoing refinement of the data management system and data capture protocols ensure that reporting outputs are accurate, complete and replicable.

4.3 Tree City of the World

Canberra successfully continued its status 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 forests.

The Tree Cities of the World program is a network of 200 cities in 54 countries, including 13 Australian cities shown in Figure 6, 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.

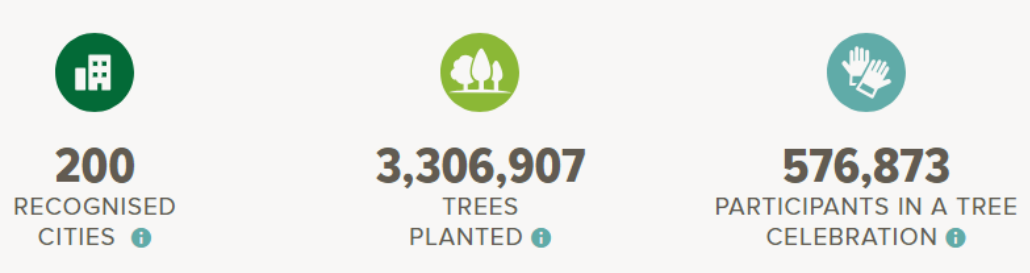
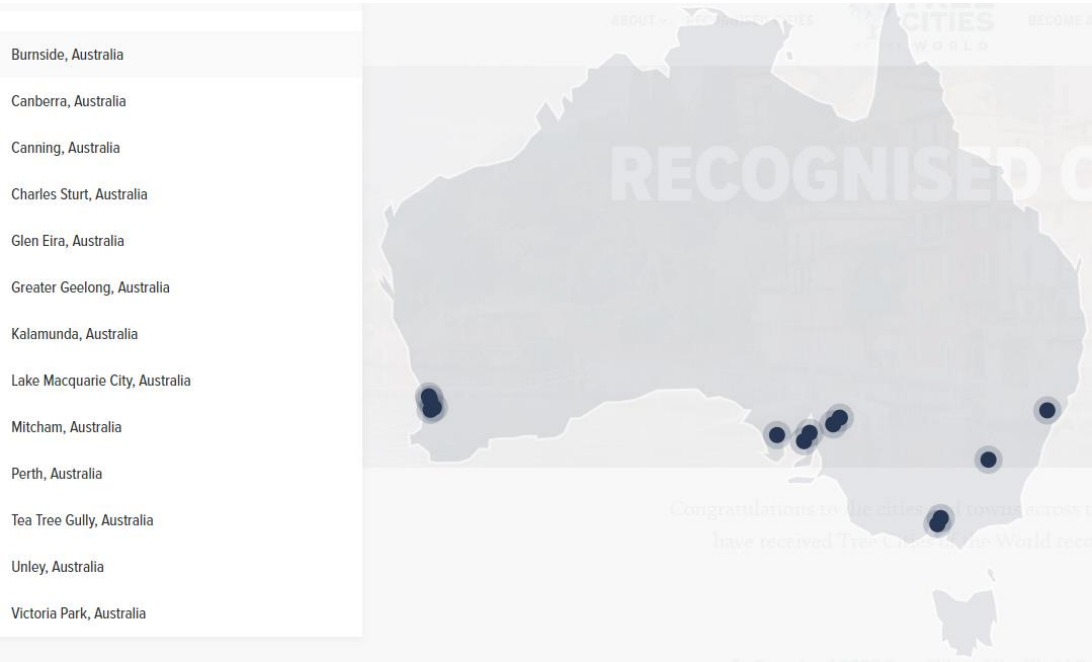


Figure 6 Australian Tree Cities of the World



5.0 Balance and diversify the urban forest

5.1 Plantings across districts

At the end of the 2023-2024 financial year, City Services was responsible for the management and maintenance of over 833,700, 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 2023-24.

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 2023-24 TCCS Planting Program across districts

Districts	# Trees
Belconnen	4,595
Canberra Central	929
Gungahlin	1,993
Hall	51
Jerrabomberra	5
Majura	0
Molonglo Valley	307
Tuggeranong	4,906
Weston Creek	1,155
Woden Valley	1,271
Grand Total	**15,232**

6.0 Take an ecological approach and support biodiversity

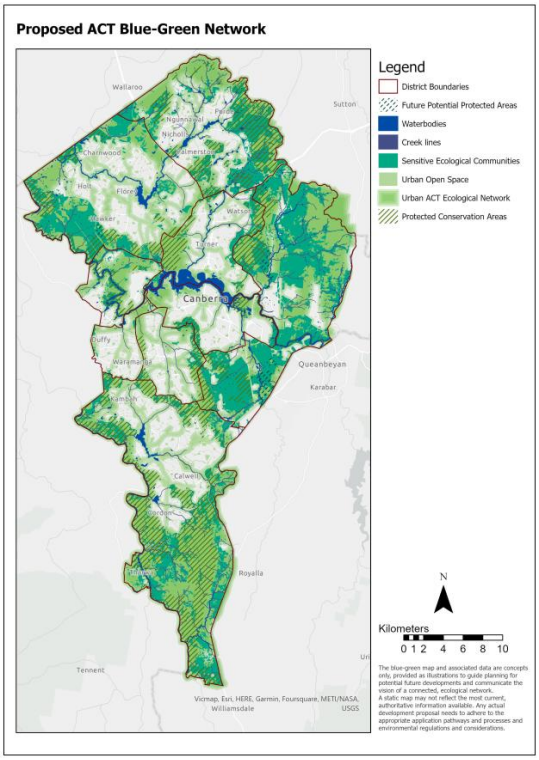
As the major land custodian for urban open space, TCCS has an important role to play in the operationalisation of this shared vision. This includes works delivered in alignment with the Urban Forest Strategy. As such, EPSDD is committed to working closely with TCCS to develop best-practice restoration 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.

6.1 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. The funding for this initiative ceased on 30 June 2024, however, components of this program will continue to influence work in the ACT urban space in coming years.



EPSDD and TCCS in partnership with urban community volunteers have delivered 20 demonstration sites funded under the bid to restore habitat and connectivity across grasslands and woodlands. Some of these sites were delivered directly by the EPSDD project team and others are being delivered by community. Three of the sites are being delivered in partnership with the Ngunnawal community. Some community work on the project is still ongoing.

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

A Renaturalisation Opportunities Plan project for Sullivans Creek also forms part of the CNCP initiative. The conceptual landscape plans aim to create an aspirational vision to renaturalise Sullivans Creek, from Goorooyarroo Nature Reserve in the north, to Barry Drive in Turner. The plan will look at strategic opportunities to restore natural elements along the creek, improve amenity and wellbeing and enhance cultural connections to the landscape.

A wide selection of stakeholders from the government and the community were involved in consultation that informed the plan. The plan is currently in draft form and due to be released early in the 2024-25 financial year.

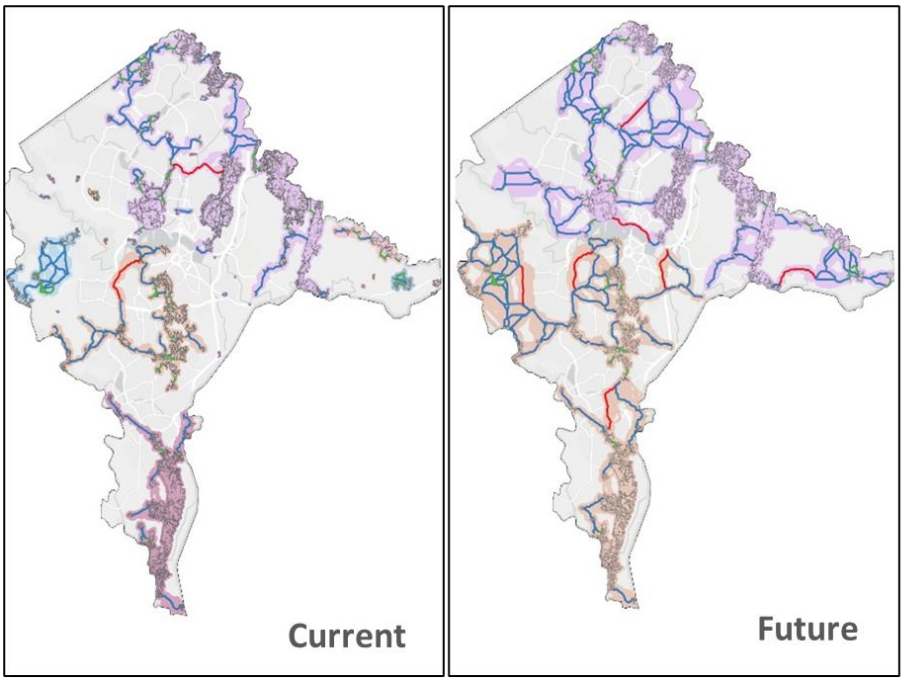
Ecological Network Dashboard

The ACT Urban Habitat and Connectivity Project continued through 2023-24, being led by the Office of Nature Conservation within EPSDD. Core habitat and fragmentation maps produced for seven representative fauna groups, published in the Ecological Network Dashboard, were embedded as part of the ACT Planning System requirements around Biodiversity Sensitive Urban Design in November 2023. In addition to guiding built infrastructure projects, this dashboard also provides an ongoing resource to guide habitat and connectivity restoration efforts by other parts of Government and the community.

Identification of priority corridors

Additional research was undertaken in 2023-2024 with a focus on identifying priority corridors for restoring ecological connectivity across urban Canberra as mapped in Figure 7. This work uses 'least cost pathway' models to find optimal connections between areas of habitat which are currently considered to be functionally isolated. The outputs of this work will inform ongoing discussions with land managers across Government and the community such that priority areas for ecological restoration can be refined into the future.

Figure 7 Priority corridors for ecological connectivity in the ACT (current and future)



Canberra Urban Biodiversity Surveys (CUBS)

The Canberra Urban Biodiversity Survey program engaged citizen scientists and tertiary students from across Canberra in the 2023-2024 financial year, with assessments made of urban grassland, woodland and aquatic-riparian habitats and their resident plant and animal species. Data collected during these surveys describe habitat values across the urban landscape, as well as threats such as invasive plants and animals, and areas which support exceptional biodiversity values. This work seeks to validate and refine spatial mapping tools developed as part of the ACT Urban Habitat and Connectivity Project, to help guide collaborative restoration of ecosystems and native habitats across the urban space.

Plant community type zone mapping in urban open space

The Office of Nature Conservation within EPSDD undertook Plant Community Zone mapping across priority areas of Urban Open Space throughout the 2023-2024 financial year. This detailed and ground-truthed survey has identified various ecological communities within urban open space areas forming part of the ACT Ecological Network and provided information on their current ecological condition relative to baseline levels. Combined with equivalent mapping undertaken within Canberra Nature Park nature reserves, this information will be used in 2024-2025 to further refine and expand the ecological planting and management advice provided by EPSDD to land managers both within and external to Government. In this context, it seeks to expand and refine the advice made available to TCCS in 2023 via the Urban Forest Ecological Advice web map.

6.2 Citizen science

The Community Urban Biodiversity Surveys (CUBS) program was initiated by EPSDD in 2023. The project surveyed ~60 monitoring sites in each of grassland, woodland, and riparian/aquatic habitat within Canberra's urban landscape throughout 2023-24. Monitoring included species occurrence surveys and vegetation assessments and engaged hundreds of citizen scientists and tertiary students. This program is set to continue into 2024-25, providing an evidence base for the protection and restoration of habitat condition and ecological connectivity in urban green spaces.

6.3 Distribution of urban wood by-product

Urban wood waste, produced as a result of tree maintenance activities, contractor tree removals and storm damaged trees, was extensively recycled to produce mulch during 2023-24. 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 (which improves habitat value in these areas) 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. Image 5 shows habitat creation at Namadgi National Park and Image 6 the nature play elements installed in Haig Park in Braddon and O'Connor. Other examples include Watson green space, Franklin dog park, and Watson and Hughes primary schools.

Salvaged logs were also provided to be milled for school woodwork projects at Orana Steiner School in Weston, Harrison Public School, and Bruce CIT.

Image 5 Namadgi National Park

Image 6 Haig Park nature play in Braddon and O'Connor

City Services continued to use topsoil processed from old stockpiles of composted mulch at the Curtin wood yard as shown in Image 7. The soil is used in planting operations, top dressing, repairing wheel ruts in grass areas or filling holes where stumps have been removed.

Image 7 Processing of decomposed mulch

7.0 Develop infrastructure to support the urban forest and liveability

7.1 Tree surround repairs

City Presentation are replacing degraded tree surround surfaces with a highly flexible porous pavement product (Root Pave™). Such products utilise coarse materials, including recycled rubber 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.

A total of 500 square metres of flexible porous pavement was repaired and/or installed around trees in locations across urban public space in Canberra, including London Circuit and East Row in the City (Image 8), Woden and the Woden Police Station, Weston Creek, Kaleen, and the Belconnen, O'Connor, and Watson shopping centres (Image 9).

In many cases, the size of the original tree pits was enlarged by removing impervious paved surfaces and replacing with porous pavement. Urban Treescapes adopt a holistic approach, collaborating with Roads ACT maintenance teams to lift and relay uplifted segmented pavement beyond the tree pit. This work addresses trip hazards while improving growing conditions for trees and also reducing surface run-off into stormwater drains. Additionally, the use of flexible pavement greatly reduces the frequency in which Roads ACT Road Maintenance must return to a site to undertake pavement repairs.

Image 8 City Bus Interchange before and after permeable paving repairs

Image 9 Watson shopping centre before and after permeable paving repairs

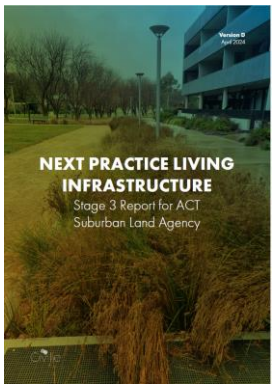
7.2 Water Sensitive Urban Design (WSUD) Projects

TCCS provided advice to guide new tree planting and landscape design and protect existing trees across a number of Water Sensitive Urban Design (WSUD) projects to help promote the health of urban trees, support urban ecology and biodiversity, and enhance liveability within our city.

TCCS reviewed landscape design documentation for numerous projects across the ACT which aim to manage peak water flows in major storm events, improve storm water quality by reducing nitrogen, phosphorus, and sediments, increase stormwater infiltration, improve public amenity, and gain knowledge to inform future water management design, e.g.:

- Taylor Billabongs, a series of ponds, floodways, and wetlands in Taylor and Jacka.
- Bioretention sediment basins to collect and clean overland flow in Macnamara and Strathnairn.
- Deep Creek recirculation pond system in Whitlam, designed to improve water quality and reduce blue-green algae.
- Denman Prospect bioretention basin, water distribution troughs and an overflow outlet basin.
- Narrabundah bioretention system and retarding basin to mitigate flooding and remove pollutants and suspended solids.
- Kippax Community Hub including a permeability strategy to reduce existing hardstand areas and maximise stormwater infiltration through rain gardens, permeable paving, soil cells and structural soils.
- Kippax Skate Park integrating stormwater management to direct overland flow into permeable slots, trench systems and detention tanks to slow down and harvest rainwater.
- Conceptual landscape plans for the renaturalisation of Sullivans Creek and the Dickson creek corridor.

TCCS also reviewed and provided input on ACT Healthy Waterways projects in Kambah and Belconnen to capture and remediate stormwater and improve long term water quality in the ACT, and provided feedback on passive irrigation measures in Ginninderry, Lawson, Whitlam, Denman Prospect, Molonglo, Tuggeranong, and the City as well as many other urban sites across Canberra.



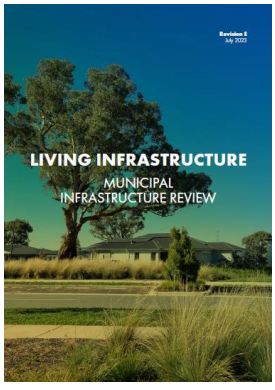
Urban Treescapes were closely involved in the Next Practice Living Infrastructure project delivered by the Suburban Land Agency. The purpose of this project was to review the effectiveness of water sensitive urban design (WSUD) and living infrastructure measures installed in Canberra to recommend which 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.

The final Next Practice Living Infrastructure report was delivered in 2024 and includes a review of best practice WSUD measures, the results of living infrastructure audits, and recommendations to trial new and modified options to improve living infrastructure outcomes.

The Jamison WSUD tree pit trial in Macquarie was designed to monitor the benefits of providing improved growing conditions for shade trees in car parks. Monitoring of this trial began in 2022 and was 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. The extended monitoring builds upon data collected during a period of unusually wet and cool weather in the ACT. Stormwater was sampled as it exited the tree pit and the differences in microclimate and tree growth between the trial site and control locations were 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 (soil microbes that reduce the concentrations or toxic effects of contaminants in the soil profile) services and observe potential microclimate effects, but the remote sensing infrastructure, soil analysis, stormwater sampling, and photosynthesis sampling have provided preliminary data that can be used to inform the design of future similar projects. The final analysis of monitoring data collected during the pilot program will be available in August 2024, with measurement of tree growth to continue moving forward.

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

7.3 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. TCCS, EPSDD and SLA are working together to implement recommendations to update standards for measures which support living infrastructure.

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

The Urban Forest Strategy identifies the need to partner with the community to grow and maintain the urban forest, and recognises the important role that community and volunteer groups have in growing and maintaining our urban forest.

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.

8.1 Urban Parks and Places volunteering

The Urban Parks and Places volunteering program 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 95 active urban 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 8 shows the locations of registered community groups and Figure 9 displays the locations of community tree planting events from spring 2023 to autumn 2024.

Figure 8 Registered community groups

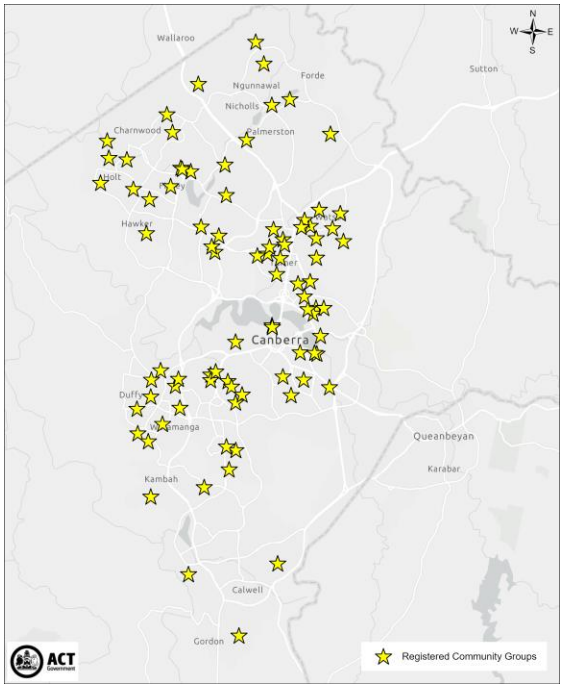
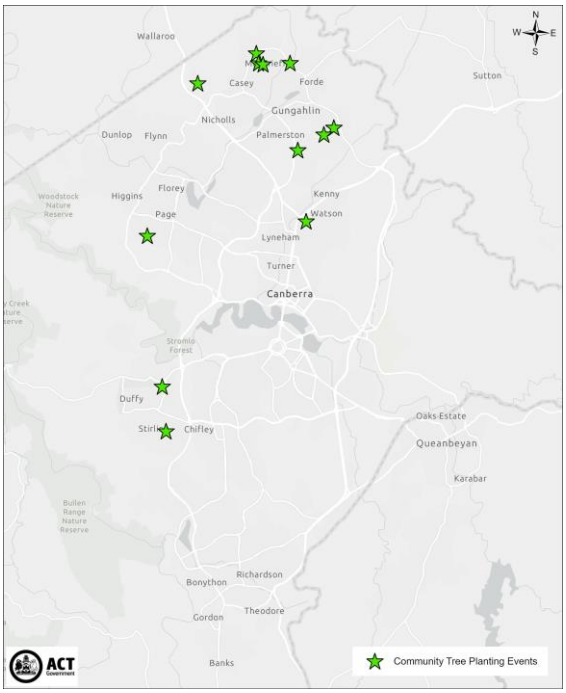


Figure 9 Community tree planting events 2023-2024



The support of community groups helps improve amenity in local parks and strengthens neighbourhood bonds, while growing and maintaining our urban tree canopy. Community groups undertook species selection and planting design, data collection for mapping, planting 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.

8.2 Community engagement and support

City Services' support for volunteer community groups continued in 2023-24, with 21 groups involved in tree planting activities in parkland planting events across all districts of Canberra. This included working with the Moncrieff Landcare Group to plant 51 trees to provide much needed shade along the National Bicentennial Trail in Ngunnawal, planting 104 trees at the

Harrison wetlands, and planting 104 native trees with the Weston Valley Archery Club, including a 70-metre native hedge to screen the firing range from neighbouring views and to enhance the function and amenity of adjacent parkland (Image 10). City Services also partnered with nine local park groups to collectively plant 167 trees, strengthening neighbourhood bonds while growing and maintaining tree canopy for local communities.

Image 10 Weston Valley Archery Club planting

Image 11 Mount Stromlo High School planting

In total, community volunteer groups planted 602 trees and also assisted with planting design and species selection, young tree maintenance, formative pruning, and habitat restoration and weed management, adding value to the regular maintenance activities of 95 active urban landcare volunteer groups currently supported by City Services.

School collaboration

City Services established a program in 2023 to assist schools to add to their canopy cover and educate students on the value of urban trees with 1,575 trees gifted to schools through the Sustainable Schools, and the Shade our Play programs in 2023-2024. A further 755 trees wattles were donated to schools to celebrate the 35th anniversary of our national floral emblem.

Eleven schools participated in the Sustainable Schools Program in 2023, increasing their canopy cover by planting 298 trees. Throughout 2023-24, City Services engaged with schools on 48 occasions to plant 1,277 trees through the Shade our Play program. Ongoing consultation with Urban Treescapes, Yarralumla Nursery and Shade our Play participants enhanced the delivery of the program, ensuring appropriate collection timeframes and the provision of horticultural planting advice during collection to ensure best practices to establish and encourage the healthy growth and vigour of the trees. The program has seen huge success and continues to spread.

Image 12 The Inhouse team after a planting event at Isabella Plains Primary School

Residential Tree Giveaway

To encourage additional canopy cover on private land and raise awareness of the benefits of trees, 1,050 trees were provided to residents through two resident giveaway events held in May and June 2024, with tree pick-up bookings selling out for each event within 30 minutes of the program release. The tree giveaways were extremely popular with ACT property owners, suggesting that this form of engagement could be a valuable mechanism to help spread the word of the value of nurturing Canberra's canopy coverage.

Image 13 The residential tree giveaway event in Weston Park

8.3 Tree Week 2024

TCCS organised and facilitated Canberra Tree Week 2024 from 4-12 May 2024. The successful event included 31 diverse and engaging activities such as guided walks, talks, a children's drawing competition and exhibition, a 'Treevia' quiz night, tree themed story time and poetry readings. Events were hosted by 17 organisations and individuals across Canberra.

Canberra Tree Week 2024 was launched by Minister Tara Cheyne MLA in Weston Park on Friday 3 May 2024. The launch was held at the ACT Tree Climbing Championships 'Come and try' day to support ACT arborists considering registering for the event on 18-19 May 2024.

Tree Week was full of incredible events and exhibitions, including the return of the children's drawing competition and exhibition. The exhibition allowed children to use their imagination and creativity to express their connection to trees under the theme 'Trees are Key'. Over 150 entries were received, with the top 20 entries displayed at the Australian National Botanic Gardens.

Organisations that hosted events included:

- ACT Libraries
- National Arboretum, Canberra
- Government House
- Friends of ACT Trees
- Sarah St Vincent Welsh (Kindred Trees)
- Australian National Botanic Gardens
- City Renewal Authority Haig Park CBR
- Urban Treescapes, Transport Canberra and City Services

Image 14 Children's Tree Week artwork displayed at the Australian National Botanic Gardens

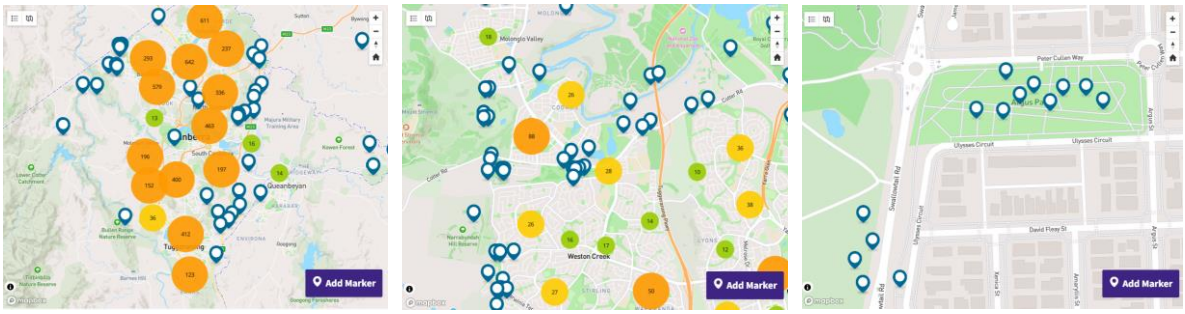
8.4 Your Say planting map

The community were also able to suggest planting locations via YourSay on the interactive map (Figure 10) and there have been over 5,468 planting locations recommended by the community since the map launched in late 2019.

These suggestions have been utilised to guide the planting locations of 5,314 trees in recent programs. 429 public suggestions for tree planting locations were received through the YourSay interactive map in 2023-24 and 882 trees planted in suitable sites.

The Your Say tree planting map is available at https://yoursayconversations.act.gov.au/trees-act/tree-planting-across-cbr

Figure 10 Your Say tree planting map



8.5 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 grant program continued through until 2023-24 with program delivery continuing into 2024-2025. The ongoing program is providing support and funding to nine groups across 17 projects (Table 5).

Table 5 2023-24 Adopt-a-Park Grants

Applicant	Project title	Location	Brief description of grant request
Woden Valley Community Council Inc.	Allan Gillies Park Phase 2	Curtin	Planting, rocks and logs in existing shrub beds
Friends of Light Street Park Inc	Light St Park initial Rejuvenation	Griffith	Woody weed control
Canberra Punjabi Sports and Cultural Association	Guru Ka Baag	JKP Belconnen	Planting in existing beds
Ginninderra Catchment Group	Wildlife Ways: Enhancing Jarramlee's Biodiversity	Dunlop	Pruning casuarinas, woody weed control and mulch
Ginninderra Catchment Group	Gundara Green Trails: Embracing Ngunnawal Wisdom	Aranda	Weed control, shrub bed construction with rocks, logs plants and community engagement
Southern ACT Catchment Group Inc	Hughes Friends of Nature Planting and Bushtucker Garden	Hughes	Planting, water for establishing plants, bush tucker beds, weed control, and mulch
Molonglo Conservation Group	Ainslie Volcanics Ongoing Conservation Restoration	Ainslie	Fence removal, watering to support previous plantings
RSL Australia ACT Branch Inc	A more resilient RSL Park	Campbell	Planting and woody weed removal
Southern ACT Catchment Group	Weed Control on Simpsons Hill	Chisholm	Planting and woody weed control
Southern ACT Catchment Group	Yate Gardens Habitat Restoration	Rivett	Planting, rocks and mulch
Southern ACT Catchment Group	Mulch and Water for Urban Open Space Groups	Various	Mulch and watering to support existing planting
Molonglo Conservation Group	Magpie Hill Park Restoration	Lyneham	Path upgrade and erosion remediation, planting, watering and mulch
Molonglo Conservation Group	Fisher Place Grassy Woodland Restoration	Ainslie	Planting and weed control
Molonglo Conservation Group	Honeysett Park Native Bee Conservation	Kingston	Planting and woody weed removal
Molonglo Conservation Group Incorporated.	Re-wilding Narrabundah Wetlands	Narrabundah	Planting, weed control, watering to support plantings, and mulch
Southern ACT Catchment Group	Establishment of Water harvesting through swales and leaky weirs	Weston	Swales for water capture to support existing trees
O'Connor Community Inc (OCI)	Tocumwal Park Photinia Hedge Restoration	O'Connor	Continue hedge maintenance project

8.6 ACT Environment 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 two funding streams available, the 2024-2025 ACT Environmental Grants Program funded community projects to a value of $351,633:

- $302,498 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.
- $49,135 of funding made available for the 2024-2025 Environmental Volunteer Group Assistance Grants, to support environmental volunteer groups in improving their capabilities and capacity to engage in environmental stewardship.

Applications for the 2024-2025 ACT Environmental Grants Program Round closed with 45 applications received across two streams to a total value of $816,129.

2024-2025 ACT Environment Grants

In the 2024-2025 round, 13 projects to the value of $302,498 were successful (Table 6) 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 6 2024-2025 ACT Environment Grant recipients

Project	Recipient	Funding amount
Landscape Restoration Weed Management at The Fair Watson	Friends of Mount Majura ParkCare Group and Molonglo Conservation Group	$32,750
Red Hill Nature Reserve Blackberry Eradication	Red Hill Bush Regenerators	$27,700
Leap to Learn: A journey through Canberra's waterways children's book	FrogWatch, Ginninderra Catchment Group and Molonglo Conservation Group	$30,670
Biodiversity Restoration Project	Merici College	$23,800
Gang-gang Nest Protection Hughes	Hughes Friends of Nature, Hughes Friends of Grassy Woodlands and Southern ACT Catchment Group	$17,270
2024 Festival of Nature - Glorious Grasslands	Landcare ACT	$34,500
Dryandra Woodland O'Connor - restoration stage 4	Friends of Dryandra Woodlands and Molonglo Conservation Group	$12,124
Blue Gum Point Woodland Yarralumla - restoration year 5	Friends of Grasslands	$28,887
Latham's Snipe - habitat guidelines and community engagement activities	Capital Woodlands and Wetlands Trust	$24,330
Wombat Conservation - mange treatment program Point Hut to Red Rocks, Murrumbidgee River	Wombat Rescue	$24,328
Cultivation and Community - Ginninderra Native Nursery	Ginninderra Catchment Group	$15,566
Revitalising Mount Painter's Slopes.	Friends of Mount Painter and Ginninderra Catchment Group	$7,913
Turtlewatch ACT - monitoring and conservation of the Eastern Long-necked turtle	Ginninderra Catchment Group	$22,660
	Total Grants	**$302,498**

2024-2025 Environmental Volunteer Assistance Grants

In the 2024-2025 round, ten projects to the value of $49,135 were successful (Table 7) in receiving Environmental Volunteer Assistance Grants and will contribute to the improvement of the ACT's urban open spaces liveability, ecosystem health and conservation outcomes.

Table 7 2024-2025 Environmental Volunteer Assistance Grants

Project	Recipient	Funding amount
Celebrate Namadgi 2024!	National Parks Association ACT	$5,000
Friends of Molonglo Green Spaces – training and recruiting new volunteers	Friends of Molonglo Green Spaces and Molonglo Conservation Group	$4,840
Plant Identification Training for Landcarers	Southern ACT Catchment Group	$5,000
Growing River Stewardship in the ACT	OzFish Unlimited	$5,000
Grevillea Park Environment, Meditation and Healing Garden	Grevillea Park Garden Volunteer Group and Molonglo Conservation Group	$4,895
Promotional materials for the Cooleman Ridge and Mount Taylor Parkcare Groups	Cooleman Ridge Parkcare, Mount Taylor Parkcare Group and Southern ACT Catchment Group	$5,000
Promotional materials for the Friends of Urambi Hills and Friends of Wanniassa Hills	Friends of Urambi Hills, the Friends of Wanniassa Hills and Southern ACT Catchment Group	$5,000
Friends of Magpie Hill Park Group plant and bird identification training	Friends of Magpie Hill and Molonglo Conservation Group	$4,400
EcoMap: Site planning and community engagement mapping for volunteer groups	Ginninderra Catchment Group	$5,000
Orana School Bush Regeneration Project	Orana Parents and Friends Association Incorporated	$5,000
	Total Grants	**$49,135**

Blue Tree Project

In October 2023, the ACT Government continued the Blue Tree Project in the ACT by painting our second blue tree along Drake-Brockman Drive, Holt (Image 15). 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 trees that have 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 first undertaken to ensure wildlife and any nesting birds were not disturbed.

Image 15 Painting the new blue tree in Holt

9.0 Appendix A Progress against Strategy Actions

Immediate actions (within 2 years)

Objective	No.	Actions	Timeframe	Status Year 4 2024
	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* came 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.
Protect the urban forest	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) and Urban Biodiversity team on Connecting Nature Connecting People project. • Loss of Mature Native Trees Threatening Process Action Plan implementation agreement between EPSDD and TCCS. • Mature tree crowns, and mature tree loss (2015-2020) in the ACT urban area mapped by EPSDD. • Developing Tree Heath and Biodiversity Restoration project guidelines to identify, prioritise

				and direct actions to support tree health and canopy growth. • Urban Forest Condition Report to inform urban tree renewal using high-resolution, multi-spectral, and thermal imagery captured across ACT urban areas in 2024.
	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 block/s	Immediate	• *Urban Forest Act 2023* provides better protection during development for trees on both unleased and leased land. • Standardised Land Management and Protection Plan (LMPP) notes 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* came 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 2020 LiDAR measurements to inform analysis of canopy coverage completed. • Next LiDAR capture planned for 2025. • 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 15,200 trees planted in vacant street, park and open space locations in 2023-2024, and 20,000 tree planting target exceeded through intergovernmental partnerships and residential tree giveaways. • Urban tree planting target of 54,000 trees by 2024 met with over 65,000 trees planted in the urban environment since 2020.

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 be reviewed in 2024-2025. • '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. • TCCS expanding climate-resilient species trial to include additional species from warmer climates. • 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. • EPSDD report on measuring the cooling benefits of living infrastructure.
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) now incorporated into the new ACT Planning System. • 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* came 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. • Community Urban Biodiversity Surveys (CUBS) program initiated by EPSDD.

Short term actions (within 5 years)

Objective	No.	Actions	Timeframe	Status Year 4 2024
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* came into effect on 1 Jan 2024. • Discussions undertaken 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 undertaken, 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 installed an Indigenous Garden and interpretive signage for the Wanniassa Scarred tree, following community engagement on the design and 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	• Remote imagery to inform an Urban Forest Condition report undertaken in 2024 to guide urban tree renewal.
Take an ecological approach and support biodiversity	4.1.1	Map remnant trees in the urban area	Short	• LiDAR capture and mature tree mapping analysis, 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	• Urban wood reuse plan developed in 2024.

Develop infrastructure to support the urban forest & liveability	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 finalised in July 2024. • 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. • Worked 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. • Ongoing permeable tree surrounds repair and installation program to promote tree health, increase stormwater infiltration and address paving and tree root conflicts.
	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. • EPSDD report on measuring the cooling benefits of living infrastructure.
	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 delivered and implementation of review recommendations underway. • Next Practice in Living Infrastructure project delivered by the Suburban Land Agency.

Partner with the community	6.3.1	Develop community education material to convey the benefits of trees	Short	• Canberra continues to be recognised as an 'International Tree City of the World' by the United Nations Food and Agriculture Organisation and the Arbor Day Foundation. • 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. • 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, high schools and sporting groups. • Trees provided to schools for landscape projects through the 'Shade our Play' program. • Encourage schools and youth groups to hold Tree Week activities. Children's colouring competition held in 2023 and 2024. • Coordinate celebrations for National Tree Day, World Forestry Day, World Environment Day and Arbor Day. • Investigating collaboration with Greening Australia for educational program.

Medium term actions (within 10 years)

Objective	No.	Actions	Timeframe	Status Year 4 2024
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 Action Plan agreement between EPSDD and TCCS. • Biodiversity and connectivity 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. • Development of Tree Health and Biodiversity Restoration project guidelines to identify, prioritise and direct actions to support tree health and canopy growth, and restore local native understorey to support urban biodiversity.
	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 & liveability	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	Medium/ Ongoing	• Collaborated on ACT Healthy Waterways projects. • Jamison Shopping Centre WSUD tree pit trial constructed in August 2020. Intensive monitoring completed in 2024, with annual monitoring of tree

		streetscape upgrades and new estate developments		growth ongoing. • Infrastructure installed in upgrade and greenfields developments such as Anketell St, Tuggeranong and Whitlam. • Collaborated with EPSDD on the Whitlam Living Infrastructure demonstration 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) incorporated into the Planning System review. • Ongoing investigation of options. • Collaboration with EPSDD on the ACT Planning System Review and Reform. • Collaboration on Biodiversity Sensitive Urban Design (BSUD) Guidelines. • *Urban Forest Act 2023*.
	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 4 2024
Protect the urban forest	1.1.1	Maintain and promote the Tree Register (under the TPA)	Ongoing	• City Services website and online Actmapi spatial data applications. • 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 tree renewal using high-resolution, multi-spectral, and thermal imagery captured across ACT urban areas in 2024.
	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 tree renewal.
	3.3.2	Ensure yearly maintenance programs involve adequate removal and replacement of end-of-life trees to develop a balanced age distribution	Ongoing	• Continued expansion of maintenance team and inhouse planting team since 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. • Urban wood reuse plan developed in 2024.

	5.1.2	Continue to promote positive community behaviour in relation to managing and protecting nature strips and other public areas	Ongoing	• Canberra continues to be recognised as an 'International Tree City of the World' by the United Nations Food and Agriculture Organisation and the Arbor Day Foundation. • 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.
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 Recreation 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 measuring the 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 with

project delivery ongoing in 2024-2025.
• Collaboration with EPSDD to deliver ACT Nature in the City and Environment grants programs.
• Community groups assisted to develop programs to promote cultural awareness, restore and revegetate waterways, and deliver environmental outcomes for improved habitat.