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THE LEGISLATIVE ASSEMBLY FOR THE

AUSTRALIAN CAPITAL TERRITORY

TENTH ASSEMBLY

Auditor-General Report No. 1 of 2024 - Urban Tree Management

Government Response

Presented by
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Introduction

The ACT Government welcomes the Auditor-General's performance audit report No. 1 of 2024 on Urban Tree Management. The Report was provided to the Speaker for out of session circulation to Members of the Legislative Assembly on 23 February 2024.

- The ACT Audit Office undertook a performance audit on Urban Tree Management as part of their 2023-24 performance audit program.
- The audit assessed the effectiveness of TCCS' management of urban trees to support the ACT Government's goal of achieving 30 percent tree canopy cover by 2045.
- The key findings of the audit were related to the following:
    - planning for urban tree management;
    - tree planting, maintenance and management activities; and
    - monitoring and reporting.
- The audit found that TCCS has undertaken a range of activities to plan for a significant increase in tree plantings, but that there are significant challenges to the successful implementation of the planting program.
- The audit identified challenges including difficulties in securing in-house and contractor resources, an appropriate supply of stock, and a lack of available planting locations, and the management of community expectations for the planting of trees, including resident opposition to tree plantings that impacts program achievements.
- A total of eleven recommendations were made in the final report, relating to policy (4), contract management (2), reporting (2), and other administrative (3) all of which the Government agrees.
- Government agrees to each of the eleven recommendations and a program of implementation has commenced, with each of the recommendations to be monitored over time to ensure compliance.

Government Position on Recommendations

RECOMMENDATION 1 – REVIEWING THE PREFERRED TREE SPECIES LIST

TCCS should:

a) *finalise the 'Living Labs' trial, which seeks to assess the performance of new 'climate-ready' tree species in Canberra; and*
b) *update Municipal Infrastructure Standard 25: Plant species for urban landscapes based on the results of the trial.*

Government Position

AGREED

RESPONSE

The focus in the past four years of a rapid increase of tree planting numbers on public land has been to prioritise planting of species known to perform well in the Canberra environment.

The most recent update to MIS25 occurred in January 2022 to update the structure of the standard and revise the species list to remove newly declared pest species and add additional information such as flowering times, foraging information and Ngunnawal Cultural notes.

In 2023, the Environment, Planning and Sustainable Development Directorate (EPSDD) completed the Cooler Greener Municipal Infrastructure Standards Review, a focused review of the Municipal Infrastructure Standards (MIS) and Municipal Infrastructure Technical Standards (MITS) which 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.

This Review, the ANU Fenner School of Environment and Society research report, the ACT Ecological Network Dashboard (arcgis.com) and the Urban Forest Ecological Advice Planting Map, the Living Labs Trial and other trials, evidence and research will inform amendments and improvements to the MIS25 and the Urban Open Space Management Plan in the short- and medium-terms.

a) The Living Labs Trial

The ACT *Which Plant Where Living Lab* plantings were established in 2020 and are due to be assessed by the end of 2025.

The *Which Plant Where Living Lab*, is a nationwide network of urban planting sites and forms part of the *Which Plant Where* research program, funded by Hort Innovation Australia and managed by Macquarie University and Western Sydney University. The program looks to establish a standardised set of tree and shrub plantings suitable for significant urban areas throughout Australia.

The program is designed to: 1) test the performance of species with different morphologies and growth forms under a wide range of environmental conditions; and 2) evaluate the co-benefits of urban greening (e.g. heat mitigation, enhanced biodiversity) by examining the role of vegetation diversity and structure. By establishing a network of "Living Labs" in cities across Australia, the program will enable comparison of the performance of, and benefits associated with, standardised tree and shrub plantings in a variety of different climates, soils and landscape contexts.

Each trial is designed over a five year monitoring period and the ACT plantings were established in spring 2020. Species were selected from a standard national list, with those selected considered the most robust to withstand the growing conditions in the ACT, and were then sourced, planted and maintained by the Urban Treescapes team in TCCS.

While the Living Labs trial remains ongoing and has not been finalised, the results of the trial planting continue to be regularly monitored and audited. A seasonal audit of the Living Labs trial in the ACT has been completed and replanting of failed specimens is planned for spring 2024, with monitoring to continue for another 18 months. These long-term Living Lab trials are designed to determine species performance, focussing on heat and water availability in the medium term over several seasons and climatic conditions. Given the extended wet conditions and mild winter temperatures over the length of the trial period to date, an extension of the trial may be considered necessary to continue monitoring performance through hotter, colder and drier conditions to determine true suitability. This trial and other ongoing trials, including species suggested in the ANU Fenner School of Environment & Society research report, will continue as new potential species are identified.

While Canberra's climate is forecast by the Fenner School to move closer to that experienced further west and similar to that of Wagga Wagga or Dubbo through 2050 to 2090, current cold winter conditions will influence the success of many of the suggested species for some time due to frost sensitivities of those species.

b) Update of Municipal Infrastructure Standard 25

The *Municipal Infrastructure Standard 25: Plant species for urban landscapes* (MIS25) *will be updated in the first quarter of 2024-25 ahead of a more comprehensive update in 2025-26.*

To maximise opportunities to increase canopy cover and permeable surfaces on public urban land in the ACT, an interim update of MIS25 will occur in the first quarter of 2024-25 to reflect the most up to date evidence available. This will include:

- incorporating Cooler Greener Municipal Infrastructure Standards Review recommendations;
- including any species deemed suitable through the interim results of the Living Labs trial;
- reviewing species information available in the Fenner research report and incorporating updates where the suitability is relevant to the current climatic conditions; and
- removing species if they are no longer suitable.

Management and siting notes in the MIS25 species tables will provide details of any concerns or special considerations.

The results of the Living Labs trial, together with the maturation of the ACT Ecological Network Dashboard (arcgis.com) and the Urban Forest Ecological Advice Planting Map, and the Urban Forest Condition Report will inform a more detailed and refined update to MIS25 in 2025-26. This will be incorporated into the Urban Open Space Management Plan implementation and work that progresses with the district strategies. As reflected in the Government response to Recommendation 2, in drawing on all of this information in a holistic way, the refined MIS25 will include:

- greater site-specific information on existing and possible habitat, biodiversity, sub-climate and other ecological values;
- clear information on what is intended to be achieved with planting at specific sites, in addition to greater canopy cover, and why;

- detailed information on the most appropriate canopy, understory, shrub and ground layer species to be planted at specific sites that will achieve the intended aims.

RECOMMENDATION 2 – CROSS DIRECTORATE COLLABORATION ON BIODIVERSITY AND CANOPY COVER GOALS

TCCS and EPSDD should work collaboratively to review the Territory's biodiversity goals and canopy cover goals with a view to identifying opportunities to manage competing priorities and reduce limitations on locations for urban tree plantings.

Government Position

AGREED

RESPONSE

TCCS will continue to liaise with EPSDD on biodiversity issues, including collaboration on the recent ACT Urban Habitat and Connectivity Project which resulted in the ACT Ecological Network Dashboard (arcgis.com) and the Urban Forest Ecological Advice Planting Map. This project is looking for opportunities to align strategic objectives from the Urban Forest Strategy and the Nature Conservation Strategy, specifically in relation to areas of the urban landscape prioritised for ecological restoration through planting or other means (as shown in the ACT Ecological Network).

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

- Identify areas of the landscape in which additional planting of trees and large shrubs would contribute to habitat condition or ecological connectivity. Areas falling within the spatial extent relevant to the Urban Forest Strategy were prioritised in this step.
- Identify areas of the landscape in which additional planting of trees and large shrubs would detract from habitat condition or ecological connectivity (based on existing ecological values, including those associated with grasslands).
- Identify areas of the landscape which are important ecologically, but for which specific planting advice has not yet been developed.

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

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

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

- Identify constraints within the corridor (mowing, fire, development, or grassland/open woodland where further plantings are inappropriate).

Additional input has also been sought from the three ACT Catchment Groups, stakeholders within Environment, Heritage and Water, including staff from the Parks and Conservation Service and from Resilient Landscapes, and community organisations such as Friends of Grasslands.

This work has now progressed to operational planning, with planting principles developed for planting near grasslands.

TCCS and EPSDD will also continue to engage on canopy cover related initiatives which can help to reduce limitations on locations for urban tree plantings and work collaboratively to ensure planting opportunities are capitalised to remain on track to achieve the 30% tree canopy cover goal. Current initiatives include:

- the measurement of the ACT's performance against the tree canopy cover target using Light Detection and Ranging imagery, with the next survey taking place in summer 2024/2025;
- recent reforms as part of the new ACT planning system which have created new tree canopy cover requirements for commercial and community facility zones and new estate subdivisions; and
- the evaluation of options to improve heat resilience in areas where it may be harder to increase tree canopy cover, including by utilising tree canopy-equivalent infrastructure such as shrub beds or wetlands.

RECOMMENDATION 3 – MOU WITH YARRALUMLA NURSERY

TCCS should finalise the Memorandum of Understanding (MOU) between the Urban Treescapes unit and the Yarralumla Nursery for the production and delivery of tree seedlings for the planting programs. The MOU should clearly document expectations for the production and supply of seedlings for future planting programs.

Government Position

AGREED

RESPONSE

Urban Treescapes (TCCS) has commenced development of an MOU with Yarralumla Nursery. The MOU will formalise the current arrangement of sourcing all plant stock from Yarralumla Nursery, either through propagation or supply from external stock and provides an understanding between the parties in relation to the supply of a range of trees required for tree planting and urban forest renewal related projects as part of delivering against the Urban Forest Strategy. The MOU is expected to be finalised by 30 June 2024.

RECOMMENDATION 4 – TREE MANAGEMENT AND PLANTING POLICIES

TCCS should:

a) finalise the Tree Management Policy and Tree Planting Policy; and in doing so

b) articulate how its urban tree management activities (including its urban tree planting activities) will contribute to the achievement of the 30 percent canopy cover goal.

Government Position

AGREED

RESPONSE

Development of the Tree Management Policy and Tree Planting Policy is underway and additional resources will be allocated to prioritise both documents' completion. These policies will provide more detail on the methods outlined in the Urban Forest Strategy. 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.

A reduction in the number of plantings in the next two years will allow additional resources to be invested in strategic planning of planting locations and a focus on replacement of ageing trees planning in areas most influenced by urban heat, such as carparks. This takes more time and planning but ultimately has a much higher impact on addressing urban heat and will allow time to assess the new data in the Urban Forest Condition Report and carefully plan the staged renewal of trees reaching end of life. This investment in strategic planning, and the more sophisticated MIS25 which will follow in 2025-26 is intended to result in an enhanced capability to deliver higher planting targets and optimal ecological outcomes in the years to come. The required per year planting estimates will need to be reviewed several times up to 2045.

The Urban Forest Condition report discussed in Recommendation 9 will provide an update on the urban forest and revision of the estimated tree replacements necessary, enabling new modelling to be undertaken to update calculations. This report is anticipated to be delivered in August 2024.

RECOMMENDATION 5 – POLICY AND PROCEDURAL GUIDANCE
TCCS should review and finalise its policy and procedural guidance for urban tree management.

Government Position

AGREED

RESPONSE

Development of the policy and procedural guidance for urban tree management is underway. Additional resources will be allocated to the development and completion of a service handbook to include an overview of the team including structure, roles and responsibilities, document team processes and include reference to all other supporting material including policy, registers and forms. This service handbook, incorporating existing policy and procedures, will be compiled by 30 June 2024. A detailed list of required policies and procedures has been developed, with the priority documents to be developed during 2024-25. To support cross-referencing, individual policy and procedural documents will be entered into the comprehensive Tree Management Policy as they are completed.

RECOMMENDATION 6 – ALLOCATION OF TREE PLANTING RESPONSIBILITIES
As part of the implementation of Recommendations 3 and 4, TCCS should develop guidance for the allocation of tree planting responsibilities between the in-house planting team, contractors and volunteers. The guidance should document the factors to be considered when allocating tree planting sites.

Government Position

AGREED

RESPONSE

The rapid increase to tree planting targets over the past four years has required careful planning to allocate planting sites to the most appropriate resource. The inclusion and subsequent expansion of an in-house team in 2023 increased the complexity of delivery of the planting program.

Development of a strategic plan for future planting programs is underway to ensure smooth allocation of planting sites and responsibilities. This will be completed prior to the commencement of the spring planting season in September 2024.

RECOMMENDATION 7 – CONTRACT MANAGEMENT PLANS
TCCS should develop and finalise contract management plans for its Tree Watering Trucks and Other Related Services Panel and Urban Seasonal Tree Planting Services Panel.

Government Position

AGREED

RESPONSE

TCCS will develop and finalise contract management plans for its Tree Watering Trucks and Other Related Services Panel and Urban Seasonal Tree Planting Services Panel by 30 June 2024. Procurement and contract management reporting is already maintained on a monthly basis.

RECOMMENDATION 8 – REPORTING OF TREE PLANTINGS IN LOW CANOPY SUBURBS
TCCS should improve its public reporting of achievements against the Urban Forest Strategy 2021-2045 by reporting on cumulative tree plantings in hot or vulnerable and low canopy coverage suburbs since the commencement of the expanded planting program in 2019-20.

Government Position

AGREED

RESPONSE

TCCS will continue to improve the urban tree planting reporting capability to include trees planted in hot or vulnerable areas. This will include adjoining trees planted in close-proximity (e.g. 15m) to a hot and vulnerable area where the tree will positively impact that location. TCCS will provide the number of trees planted on a suburb by suburb basis in the Urban Tree Canopy Coverage annual update. As the information and data matures, together with a more sophisticated MIS25, more detail will be provided about what has been planted where and why.

RECOMMENDATION 9 – STRATEGIC TREE REPLACEMENT PROGRAM

TCCS should develop and implement a strategic tree replacement program that focuses on:

a) identifying mature trees at risk; and

b) planning for the end-of-life removal and replacement of those trees.

Government Position

AGREED

RESPONSE

A contract to deliver an Urban Forest Condition Report through Remote Imagery Capture and Analysis has been awarded and data was captured in early February 2024. Anticipated to be delivered in August 2024, this report will provide a quantitative analysis of the current state of the urban forest and enable the development of a Mature Tree Replacement Plan. A Senior Arborist (Tree Inspector) TO4 position has been recruited to develop and implement the Mature Tree Replacement Plan based on the Urban Forest Condition Report. However, this Plan will need to be re-assessed again in years to come, as environmental factors and maintenance interventions influence the health and condition of the urban forest. The development of the Mature Tree Replacement Plan will involve two stages. A project plan based on the findings in the Urban Forest Condition Report will be developed by the end of 2024-25. This plan will guide the prioritisation of engagement with the community in areas established to require renewal in the short term. District based renewal plans will then be developed in collaboration with the community, and informed by the more sophisticated MIS25.

RECOMMENDATION 10 – DATA QUALITY CONTROLS

TCCS should strengthen data quality controls for the use of Salesforce for urban tree activities by:

a) providing additional training to staff and contractors on its use; and

b) developing quick guides on different system functions.

Government Position

AGREED

RESPONSE

TCCS provides training to staff and contractors on the use of Salesforce and has developed training material to support staff in its use. This material will be enhanced to strengthen data quality controls and quick guides on different system functions will be developed. A City Operations Triage team has also been created to triage and assign requests related to City Operations, efficiently prioritise and

resolve requests and provide additional training and support to all City Operations teams. These efforts are leading to improvements in data quality, customer responsiveness and staff efficiency.

While Salesforce is used as the TCCS customer relationship management platform, many operational programs are coordinated through the use of spatial data, and training material and programs are also being reviewed or developed for the use of ArcGIS and Fieldmaps.

Operational programs to manage the urban forest include the tree planting program, juvenile tree watering program, contractor tree removal program and the tree assessment/auditing program. These programs are planned, developed, and delivered through the ACT Government's ArcGIS Online instance, with several hosted feature services, hosted view layers, maps and applications (including dashboards). Initial data capture is also undertaken through the ArGIS Field Maps mobile app.

The ArcGIS Online operational program data has continually evolved since the Urban Treescape team started utilising ArcGIS Online to deliver their programs in 2014. An ArcGIS Online hosted data and workflow review (and update) is currently underway to align with current best practice, improve the field capture experience and improve authoritative reporting outputs.

RECOMMENDATION 11 – PUBLIC REPORTING OF ACHIEVEMENTS

TCCS should improve its public reporting on tree planting numbers and achievement against the canopy cover target by including data on tree survival rates and cumulative planting numbers in suburbs with low canopy coverage that are vulnerable to urban heat.

Government Position

AGREED

RESPONSE

TCCS will continue to improve the urban tree planting public reporting capability to include planting survival rates for trees planted within the last three years. Survival rates are estimates only based on audits undertaken during the juvenile tree watering programs (typically on the first 3-5 years) and may not include trees that have failed outside of the juvenile tree care period. Survival rates will be reported on retrospectively to ensure completeness. For example, the survival rate reported for 2023-24 will include trees that have failed since 2021-22.

Please also refer to the response at Recommendation 8 on how this will be further achieved.