



City of Nedlands

2025–2035

Urban Forest Strategy



Acknowledgement of Country

The City of Nedlands acknowledges the traditional custodians of this land, the Whadjuk people of the Noongar Nation, and pay our respects to culture and Elders, past and present.

The City of Nedlands also values the contributions made to the community over the years by people of diverse backgrounds and cultures, including those who have served and sacrificed.

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Executive Summary

The support for the protection and enhancement of the City of Nedlands (the city) urban forest is overwhelming. Community surveys, strategic policy, planning documents, and the City’s community plan regularly reference and support the importance of the urban forest’s benefits.



A thriving, sustainable city where nature and community flourish together – supported by a resilient and expanding urban forest that nurtures biodiversity, cools and cleans our environment, and enriches the health, wellbeing, and identity of future generations.

Currently, the city has 18.4% canopy cover. This is a loss of 0.2% since 2020. The canopy cover of City-managed Parks is 24.6%, like City-managed Road Reserves at 24.4%. These land use categories have both experienced a decrease in canopy cover since 2020 (0.3% and 0.4%, respectively). The canopy cover of Residential Land is 16%. This is 0.5% less than the canopy cover levels for Residential Land in 2020. If subdivision and infill development continues as is, the canopy cover on residential land could decline to as low as 11.7%.

The City’s urban forest faces significant challenges as many trees reach the end of their natural life concurrently, low species diversity, Polyphagous Shot Hole Borer (PSHB), development and infrastructure impacts, and a changing climate with increased temperatures and lower rainfall.

Appropriately valuing the benefits that the urban forest delivers to the community and environment is essential to determine the level of investment required to manage, monitor and grow this asset. Greater investment should be underpinned by a strong and robust strategy and supporting policies that clearly articulate a vision, measurable and time-based targets, and the actions required to achieve these.

Whilst the urban forest faces significant challenges, managing these and seeking solutions must be undertaken in a holistic and multidisciplinary manner to achieve the vision and outcomes of the Strategy.



Our Vision



A thriving, sustainable city where nature and community flourish together — supported by a resilient and expanding urban forest that nurtures biodiversity, cools and cleans our environment, and enriches the health, wellbeing, and identity of future generations.

Our Key Challenges



1. Canopy loss due to development pressure and infrastructure conflict
2. Impacts of climate change, urban heat and pests and diseases
3. Low tree species and age diversity

Our Strategic Directions



1. Canopy Protection and Equitable Growth
2. Resilient and Diverse Landscapes
3. Transparent and Inclusive Decision-Making
4. Integrated and Accountable Governance
5. Strategic Investment and Capacity

Our Targets



1. Increase canopy cover to at least **20%*** across the entire City, including increasing canopy cover in parks and streetscapes to **30%*** or more.
2. Increase canopy cover equity across the city, focussing planting on areas of low canopy cover and high urban heat.
3. Support a more biodiverse Nedlands, by increasing tree diversity.

* Planting will take place over the 10-year duration of the Strategy, to realise canopy cover targets in 20 years.

Introduction and Purpose

Welcome to the City of Nedland's (the city) Urban Forest Strategy (Strategy). It incorporates and reflects feedback and engagement with the community, City staff, and key stakeholders. The Strategy is firmly grounded in a data-driven approach, using monitoring, analysis, and evidence-based decision-making to guide actions. It articulates the City's vision, outcomes, and strategic priorities for the next five years to enhance and sustain our Urban Forest.

Our Vision



A thriving, sustainable city where nature and community flourish together — supported by a resilient and expanding urban forest that nurtures biodiversity, cools and cleans our environment, and enriches the health, wellbeing, and identity of future generations.

The Strategy will be reviewed annually to ensure continued relevance in a changing environment. The Strategy aligns with the City's Council Plan 2023-33 and ensures the strategic direction outlines the actions that will support, protect, and enhance the City's urban forest into the future.

Transforming the urban forest into a resilient, healthy, diverse, and well-managed asset will enable the city to adapt to a rapidly changing climate, mitigate urban heat island effects, protect its leafy streets (Figure 1) and bushland, and provide ongoing ecosystem services to protect and enhance the wellbeing of the community and environment.

1.1 How was the Strategy developed?

The Strategy was developed through a comprehensive process that included:

- **Review of City policies and guidelines** to identify existing gaps and opportunities.
- **Operational capacity review** with City staff to assess current strengths and highlight areas for improvement.
- **Analysis of remotely sensed data** on vegetation, tree canopy cover, urban heat, and tree condition to map canopy distribution and establish a baseline of tree health to inform strategic directions.
- **Community and stakeholder engagement** through surveys and workshops to capture local knowledge, values, and aspirations.



Figure 1. Leafy streets of Nedlands, where a thriving urban canopy shapes cooler neighbourhoods, enhances biodiversity, and defines the suburb's distinctive character.

Background

The City of Nedlands stretches from the Swan River to the Indian Ocean (Figure 2) and has green, welcoming suburbs with rich history, tree-lined streets, beautiful parks, and strong community ties. It includes the suburbs of Nedlands, Dalkeith, Mt Claremont, Swanbourne, Karrakatta, and parts of Floreat and Shenton Park.

The city has six key bushland reserves that are part of the South-West Botanical Province—one of the world's 36 biodiversity hotspots. These areas feature a mix of coastal plants, woodlands with Banksia, Marri, Jarrah, and Tuart trees, and riverbank rushes. They support local wildlife, including Carnaby's and Forest Red-tailed Black-Cockatoos.

The city works with residents to care for and improve these natural spaces through shared bushland management efforts. Likewise, managing the broader urban forest—including trees in streets, parks, and other public spaces—is a shared responsibility between the city and its residents, reflecting a collective commitment to sustaining a healthy, resilient environment.

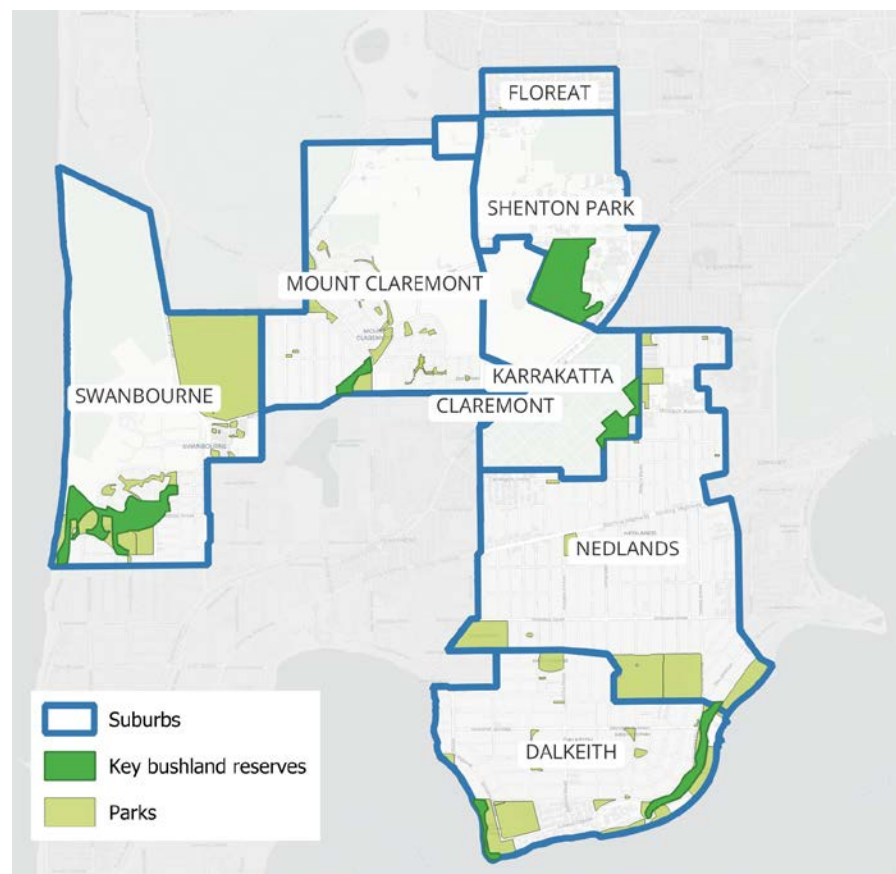


Figure 2. Suburbs, parks and key bushland reserves of Nedlands.



2.1 Urban forestry and the benefits of urban forests

2.1.1 What is the urban forest?

The urban forest includes all of the shrubs, trees, and other vegetation growing within the urban environment (DPLH et al., 2018), as well as the associated soil, water, and ecological elements which determine its growth. It includes the vegetation on public and privately managed land, including parks, streetscapes, private properties and other green spaces. The state of the urban forest influences how communities experience urban living, as urban forests provide social, economic, and environmental benefits.

Within this Strategy, tree canopy refers to the horizontal extent of vegetation greater than 3 metres in height, as derived from high-resolution airborne ArborCam imagery and used for strategic monitoring and target-setting. This definition is applied consistently for analysing canopy cover, urban heat, and long-term trends across the city.

This strategic canopy definition is distinct from the statutory definition of a Protected Tree, which is applied through planning and regulatory instruments and is typically based on criteria such as trunk diameter, species, or heritage or environmental significance. While related, these definitions serve different purposes and are not intended to be interchangeable.

2.1.2 What is urban forestry?

Urban forestry is the practice of managing and planning the flora and fauna within these urban ecosystems to maximise their contributions to the ecological, social, and economic health of urban communities (Miller et al., 2015). Urban forestry presents the opportunity to maximise the ecosystem services provided by urban environments and thereby improve the social, economic, and physical health and wellbeing of urban communities.

2.1.3 What are the benefits of the urban forest?

The processes and products of ecosystems that provide direct or indirect benefits to humans are known as ecosystem services. Urban forests provide a range of ecosystem services such as air and water filtration, erosion mitigation, shading, water and nutrient cycling, pollination, and carbon sequestration. The contributions of urban forests to a clean, healthy, and aesthetically pleasing urban environment have broad and interrelated environmental, social, and economic benefits.

During community engagement, residents were asked to identify the key benefits of their urban forest. Feedback highlighted a strong appreciation for the urban forest and an awareness of its many services, from supporting native wildlife and capturing carbon to offering shade and cooling for the community (Figure 3).

In addition to qualitative and biophysical benefits, the value of trees can be expressed in monetary terms to support informed decision-making. Tree valuation methods such as the Helliwell and Revised Burnley Methods are widely used in Australia to assess the amenity, landscape, and social value of trees based on factors including size, condition, longevity, contribution to streetscape character, and setting. Applying such valuation approaches enables the City to better articulate the economic value of its urban forest, support cost-benefit analysis, and justify investment in tree protection, maintenance, and replacement.

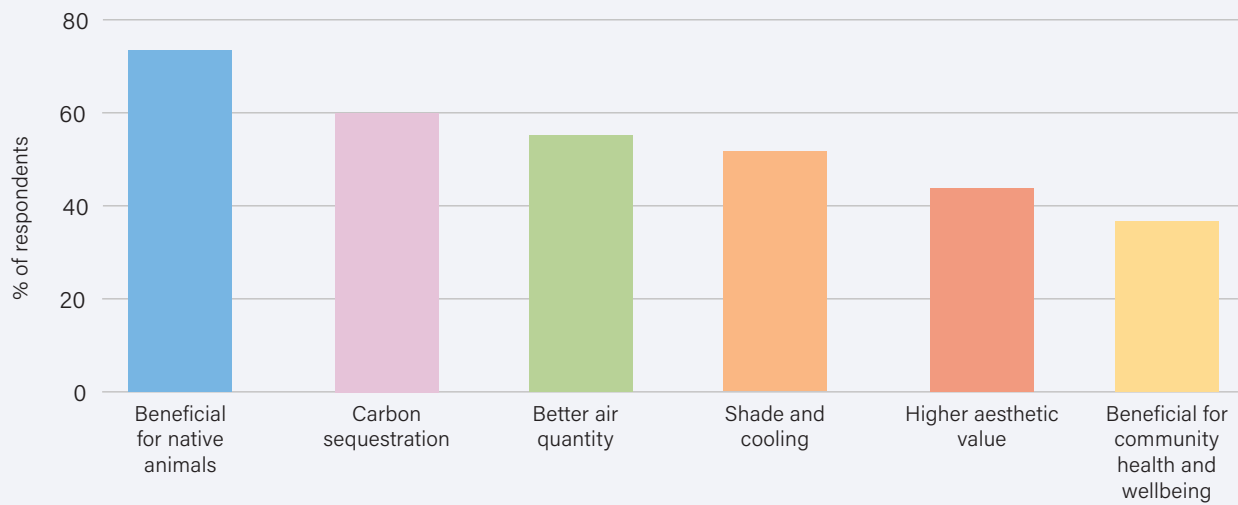


Figure 3. The top six benefits of urban trees identified by Nedland's residents in a community survey.

Biodiversity and ecological services

Biodiversity—the variety of organisms within an area—is fundamental to human and ecosystem health. Urban forests enhance biodiversity by providing habitat and food resources, supporting species otherwise absent from cities. In Nedlands, for instance, Carnaby's Blammck Cockatoo (*Zanda latirostris*) relies on urban trees for food and shelter. As native habitats decline, remnant bushland and urban forests become critical for sustaining such species. Designing urban forests to meet faunal needs strengthens local conservation outcomes, while diverse vegetation supports broader urban biodiversity.

Biodiverse urban forests also benefit people. Exposure to biodiverse ecosystems is linked to improved immune and digestive function and better health outcomes (Giacinto et al., 2021; Marselle et al., 2021). Structural vegetation diversity reduces noise and stress, improving psychological health (Marselle et al., 2021), while urban fauna—such as wild birds—can foster relaxation, stress recovery, and psychological restoration (Gray et al., 2024). These health benefits extend to economic gains through reduced public health costs (Giacinto et al., 2021; Nowak et al., 2018).

Urban heat and climate change

The Urban Heat Island (UHI) is a phenomenon where urban areas experience higher temperatures than rural areas (Figure 4).

Urban trees are critical for mitigating the urban heat island effect through shade and evapotranspiration (Rahman et al., 2020a). Cooling benefits vary by species and vegetation structure (Rahman et al., 2020b; Wang et al., 2021), but expanding the size, quality, and diversity of urban forests improves resident comfort and reduces energy demand for cooling (Tsoka et al., 2021).

“Trees are the single best infrastructure investment to prepare our streets and suburbs for a changing climate” (Conservation Council SA, 2020).

Climate change intensifies these challenges, with global temperatures projected to rise 2.7 °C above pre-industrial levels this century. This will increase droughts, heatwaves, and natural disasters (Australian Academy of Science, 2021). In Perth, higher temperatures and declining rainfall pose significant risks to human and ecosystem health (Australian Academy of Science, 2021).

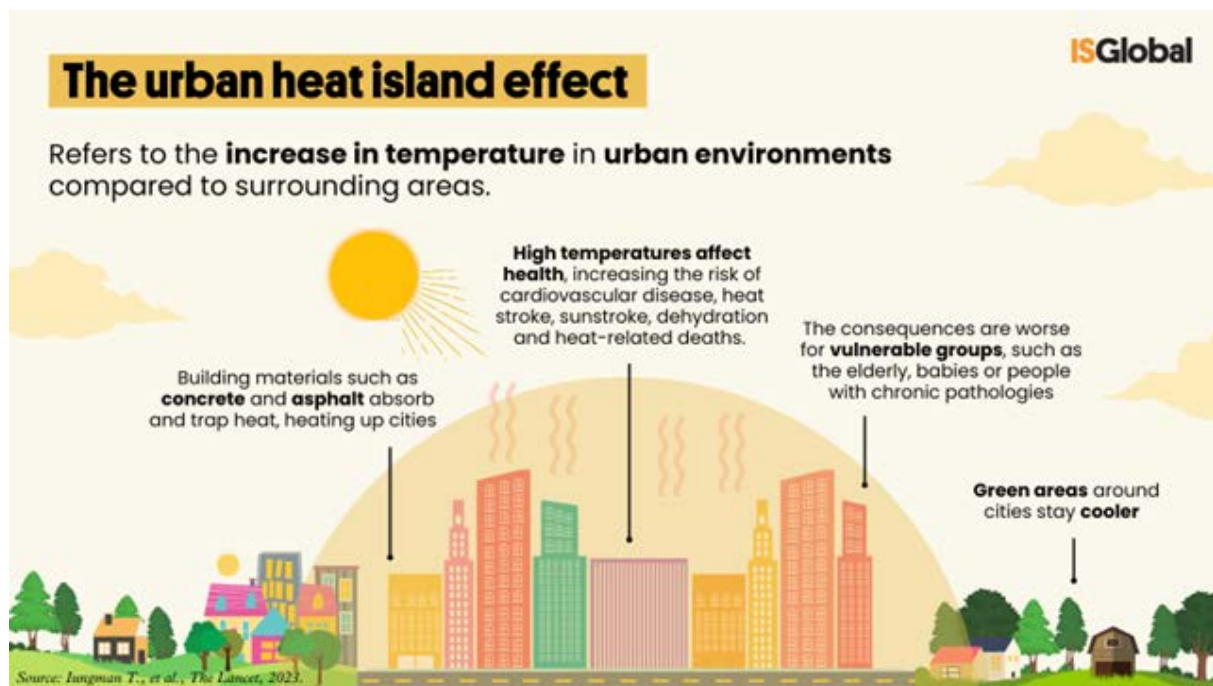


Figure 4. ISGlobal (<https://www.uforest.eu/news/insights/trees-can-help-reduce-deaths-attributed-to-the-urban-heat-island-effect/>)

The UHI affects resident health and wellbeing as higher temperatures are associated with heat discomfort, stress, exhaustion, and, in extreme heat events, heat stroke and mortality (Ho et al., 2023; Yadav et al., 2023). Rising urban temperatures can also increase pests and invasive species as heat-tolerant species become more abundant (Frank & Backe, 2023).

Urban forests deliver interconnected economic, social, and environmental benefits, as shown in Figure 5, contributing to improved liveability, community wellbeing, and ecosystem resilience.

Community and social benefits

Urban vegetation enhances social health by fostering community connection and providing spaces for recreation and interaction (Escobedo et al., 2015; Ewane et al., 2023; Pandit et al., 2013, 2014). The quality and accessibility of green spaces determine these benefits—for example, shaded areas make parks more usable in summer, encouraging social activity. Expanding high-quality green spaces can therefore strengthen community cohesion in Nedlands.

Greener neighbourhoods also deliver economic gains. Urban trees increase property values (Escobedo et al., 2015; Ewane et al., 2023; Pandit et al., 2013, 2014), while neighbourhood greening can drive further investment and development (García-Lamarca et al., 2022), boosting both personal wealth and access to services.

Cultural identity and connection to place

The City of Nedlands falls within Whadjuk Nyoongar boodja, on the historic hunting grounds of the Mooro people of the Whadjak Nyoongar nation. The Mooro Nyoongar have been caring for the country known as Nedlands for an estimated 40,000 years, shaping the flora and fauna of the Nedlands area through practices such as cultural burning. As a result, the native flora and fauna of the City of Nedlands are reflective of, and inherently tied to, the cultural practices of the Mooro Nyoongar. Caring for country through considered management of the urban forest presents an opportunity for communities to partake in a 40,000-year-old practice of supporting the ecological communities of the Nedlands area.

Multiple trails from the Whadjuk Trail Network fall within the City of Nedlands. Trails such as the Karak Bidi (Black Cockatoo Trail) and the Karda Bidi (Monitor Lizard Trail) connect remnant bushland with Noongar trails in the area and provide opportunities to appreciate and learn about Whadjuk land and stewardship.

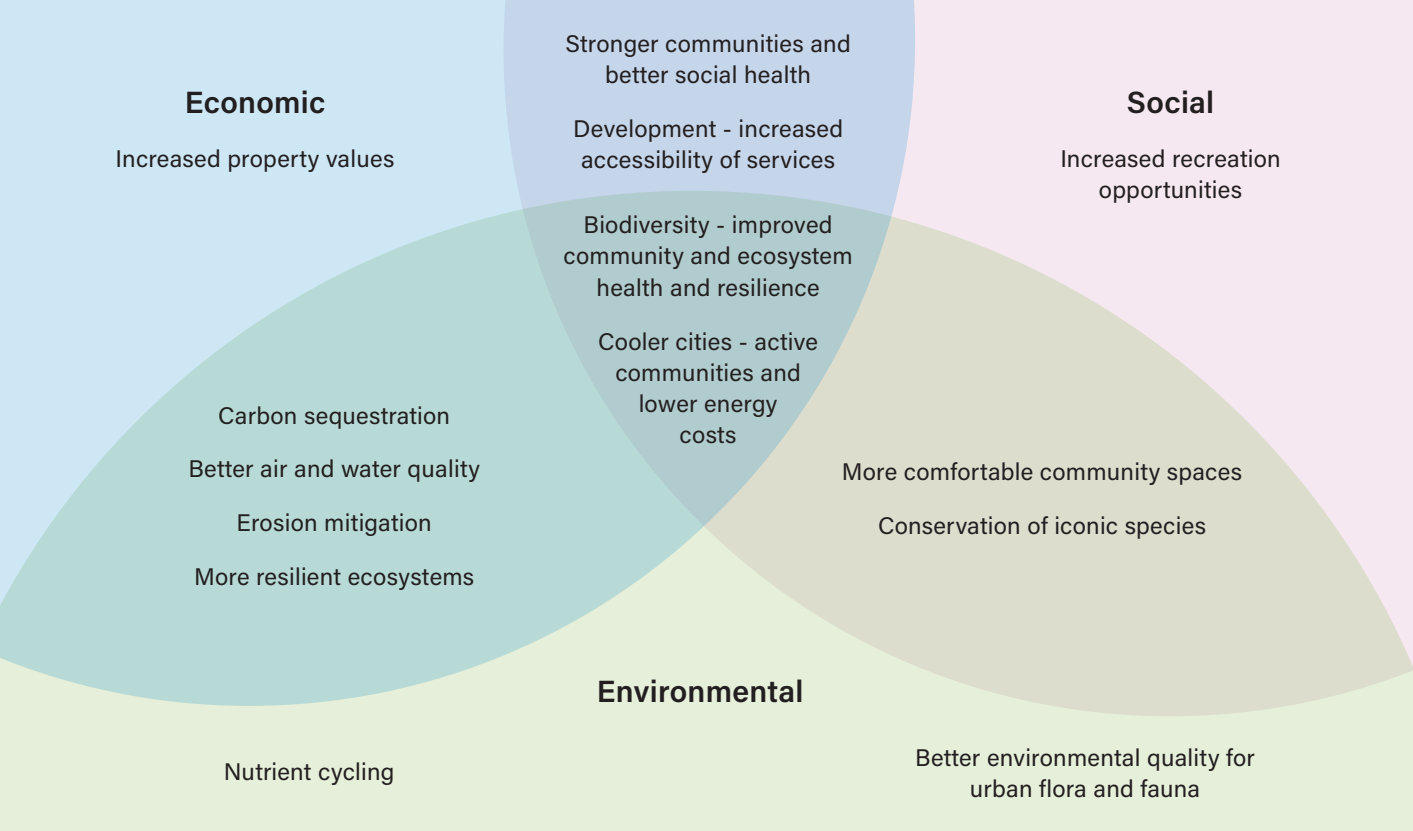


Figure 5. Interconnected economic, social, and environmental benefits of a healthy urban forest. The diagram illustrates how urban tree canopy and green infrastructure deliver overlapping outcomes across economic, social, and environmental domains, reinforcing community wellbeing, ecosystem resilience, and long-term urban sustainability.

Strategic Context

The Strategy is a critical element that contributes to the vision of the city and enhances its liveability, environment and biodiversity, the health and wellbeing of residents, and supports sustainable urban development (Figure 6).

The Strategy aligns with the City's Strategic Community Plan vision and is integrated within the broader existing suite of City policies and strategies, including development, planning, environmental, and landscape management.

The Strategy provides the direction and focusses for implementing the actions of the Urban Forest Strategy, to ensure these actions maximise the benefits to the community and environment.

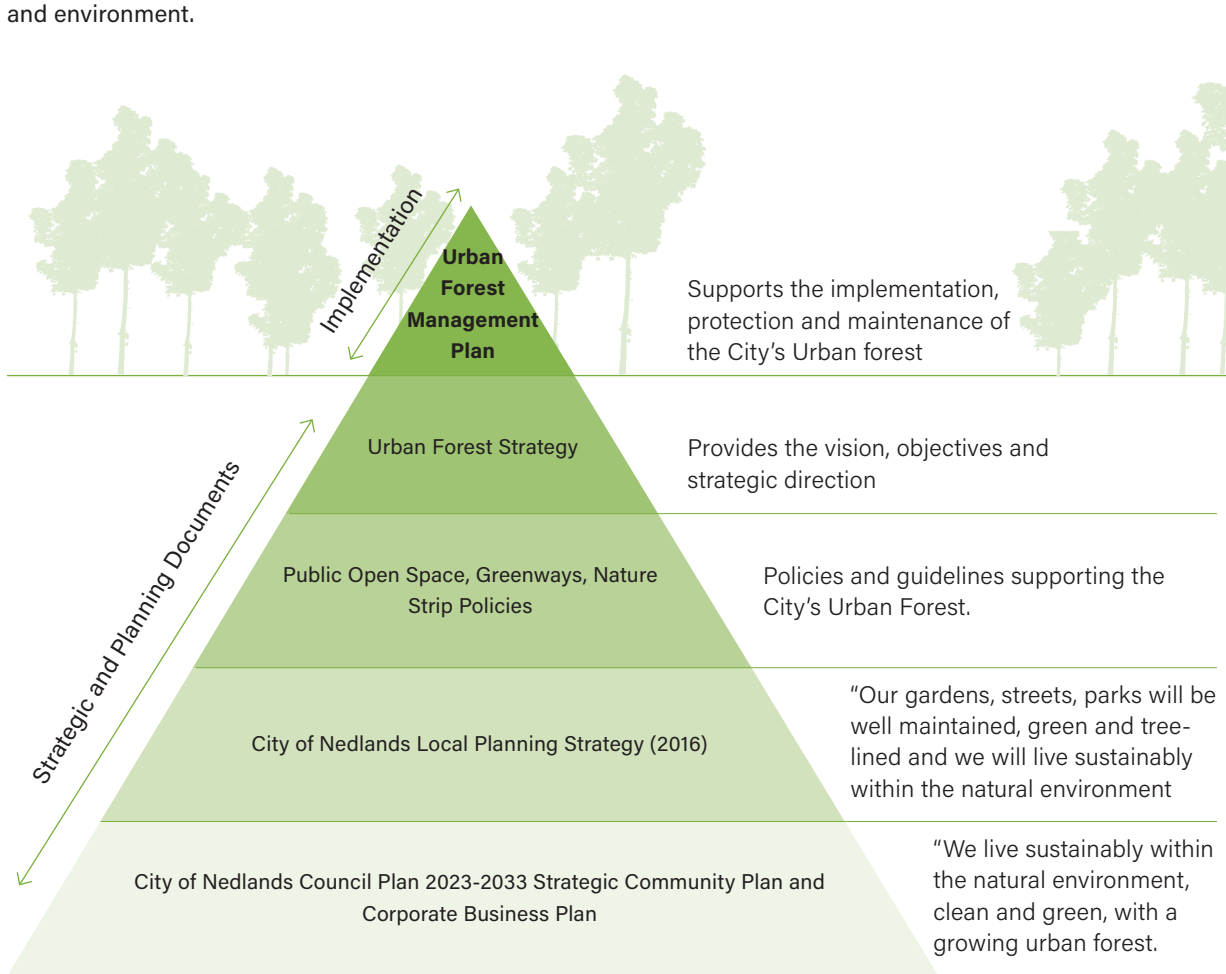


Figure 6. The Strategic context of the Urban Forest Strategy 2025-2035, and where it sits among the City's other documents.

Existing Urban Forest

4.1 Vegetation, canopy cover and urban heat

To better understand and track changes in its urban forest, the City of Nedlands engaged ArborCarbon to capture high-resolution airborne multispectral ArborCam imagery in 2020 and 2024. This data provides detailed insights into vegetation structure, including height-stratified cover (Figure 7 and Figure 8), canopy extent (vegetation taller than 3 m), and land surface temperature (LST). These datasets offer a powerful tool for monitoring urban forest health and guiding future planning.

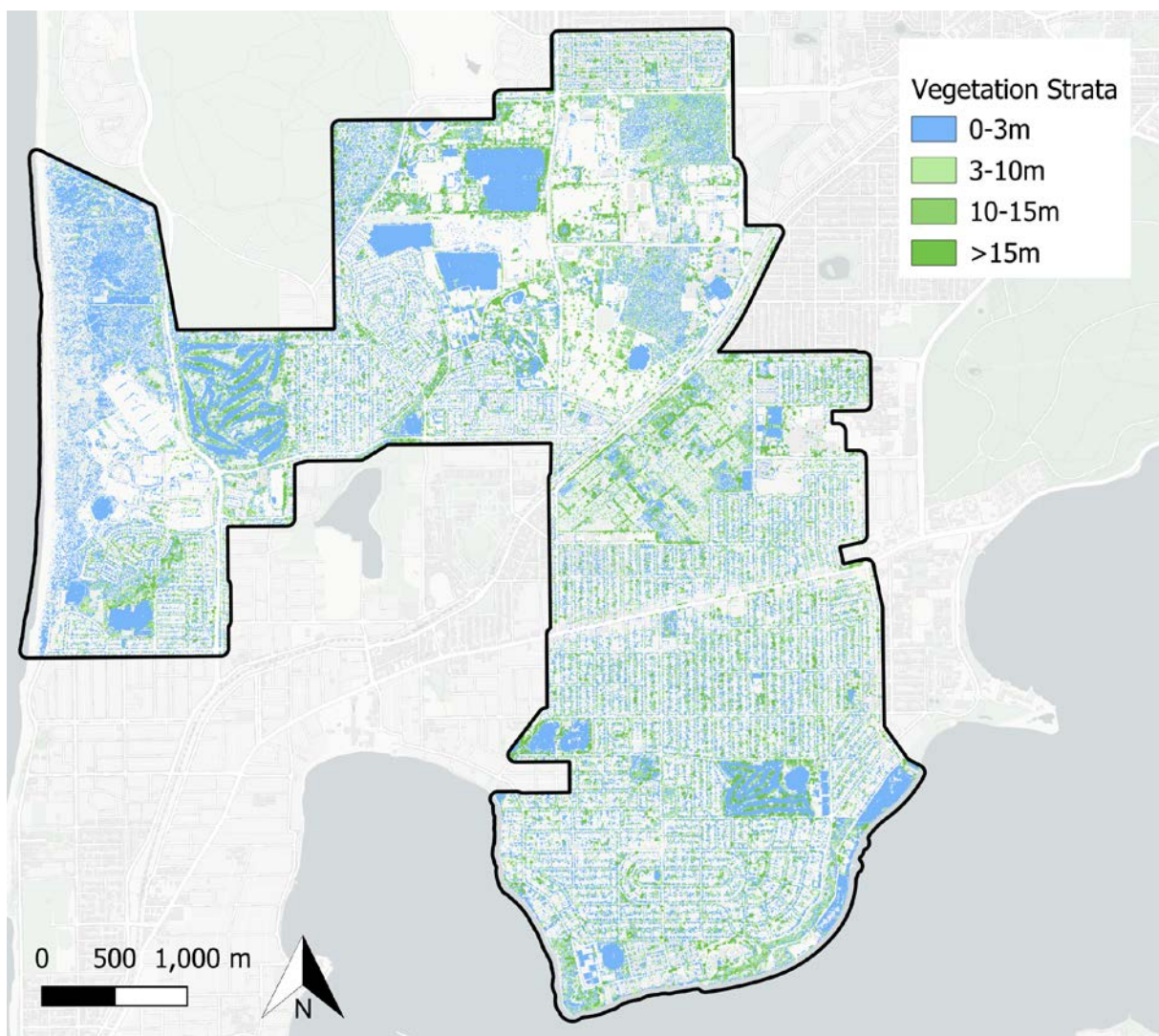


Figure 7. Height-stratified vegetation dataset (2024) of the City of Nedlands, with each stratum displayed in a different colour.

City of Nedlands

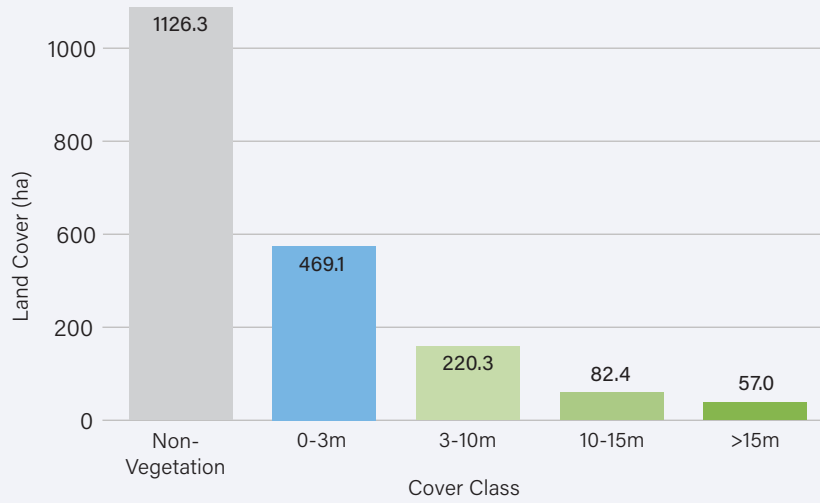
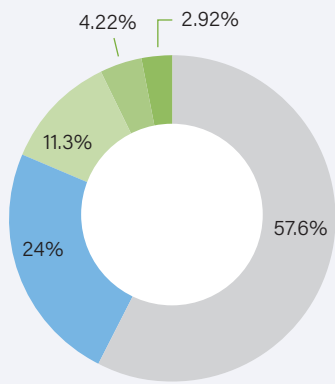


Figure 8. Land cover classification proportion (%) (left) and hectare coverage (right) of the entire City of Nedlands LGA boundary.



City-wide trends:

Canopy cover (vegetation over 3m in height) covers 18.4% (360 ha) of the city (Figure 8).

This is a 0.2% decrease since 2020, when canopy cover was measured to be 18.6%. This reduction equals three hectares of canopy cover (equivalent to approximately 600 medium sized trees).

Non-canopy vegetation (living grass, turf, shrubs, and trees less than 3m in height) covers 24% (469 ha) of the city.

Non-vegetated surfaces (buildings, roads, exposed soil, mulch, sand and dead grass) cover 57.6% (1126 ha) of the city.

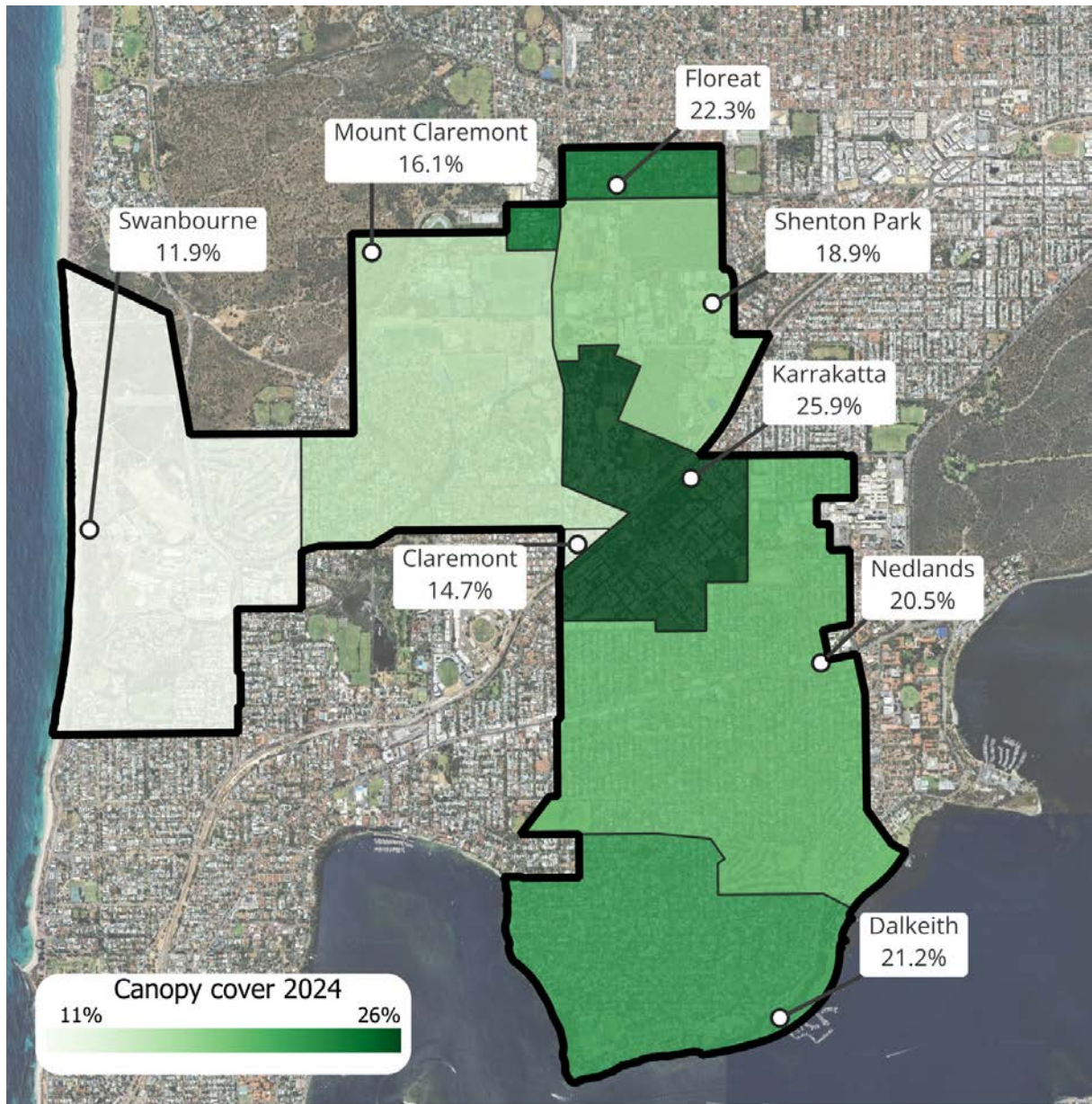


Figure 9. Canopy cover for each suburb in 2024.

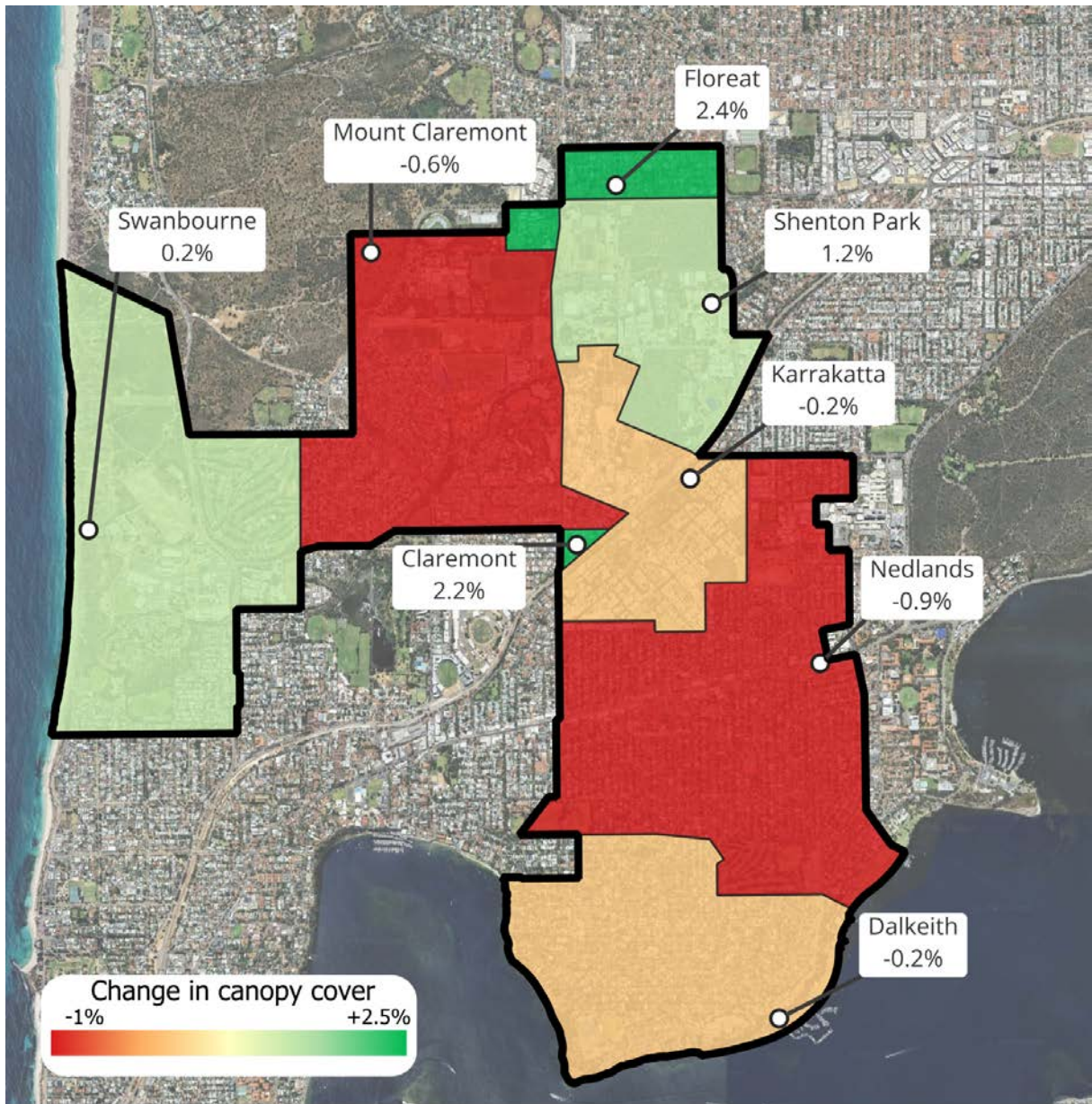


Figure 10. Change in canopy cover for each suburb between 2020 and 2024.

Suburb level trends:

Canopy cover is unequally distributed across the city, with suburbs ranging from 11.9% (Swanbourne) to 25.9% (Karrakatta) (Figure 9).

Since 2020, Nedlands and Mount Claremont have lost the most canopy cover (-0.9% and -0.6%, respectively). A small portion of Claremont and Floreat is within the city boundary, and both areas have experienced an increase in canopy cover (2.2 and 2.4%, respectively). Canopy cover in Shenton Park also increased by 1.2% (Figure 10).

The City was categorised into Land Zones according to the land's main purpose and management (Figure 11, Figure 12 and Figure 13).

Land use level trends:

The canopy cover of City-managed Parks is 24.6%, like City-managed Road Reserves at 24.4%. These land use categories have both experienced a decrease in canopy cover since 2020 (0.3% and 0.4%, respectively).

The canopy cover of Residential Land is 16%. This is 0.5% less than the canopy cover levels for Residential Land in 2020. See Figure 14 for an example of canopy loss in residential land.

Land classified as 'Other' includes land used for public purposes such as land managed by the Commonwealth Government, Water Corporation or State Energy Commission, Special Use Zones (such as the Campbell Barracks), areas of Environmental Conservation (such as Underwood Avenue Bushland) and the Cemetery. The canopy cover of this land is 18%, an increase of 0.3% since 2020.

Commercial Land has a proportional canopy cover of 9.9%, a decrease of 1.7% since 2020 (Figure 15).

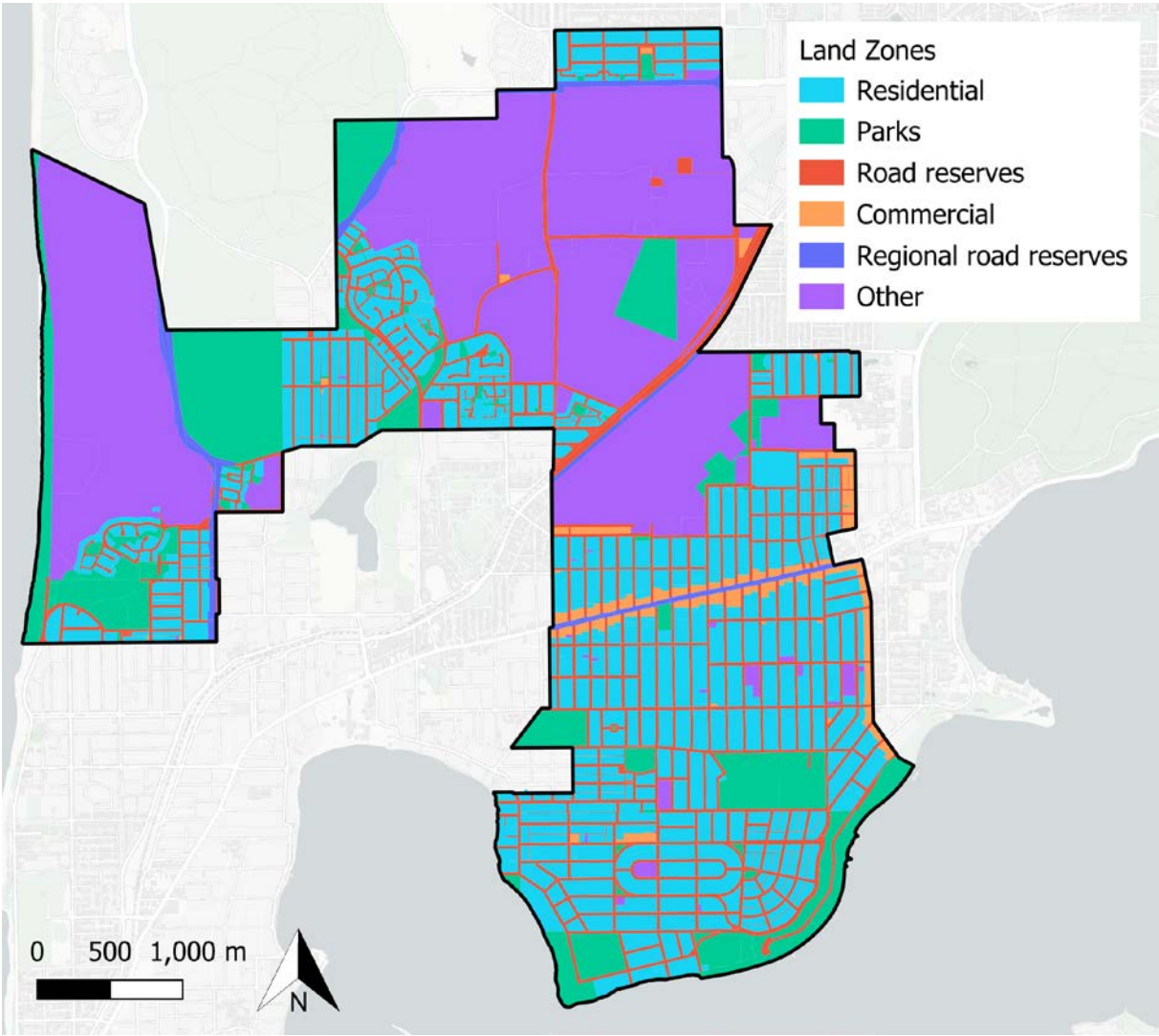


Figure 11. Land Zones of the City of Nedlands, developed for this analysis.

Percent Canopy Cover by Land Zone



Figure 12. Bar graph illustrating the percentage of each Land Zone covered by canopy

Land Zones

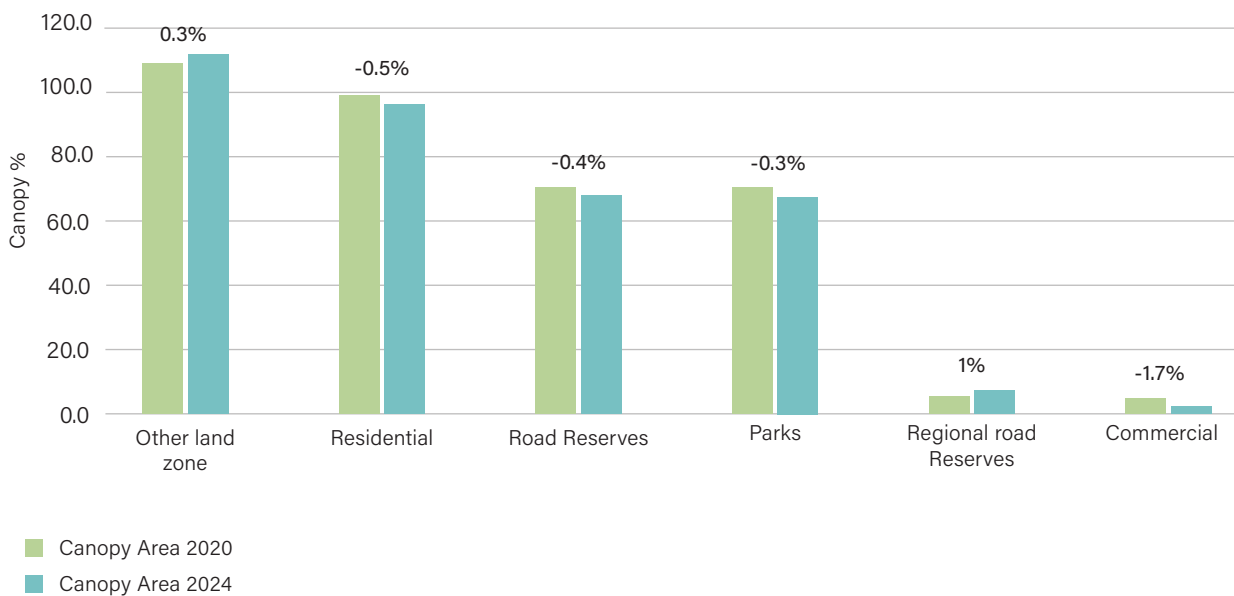


Figure 13. Change in canopy cover between 2020 and 2024 for each Land Zone.



Figure 14. Example of loss of canopy cover on Residential land between 2020 and 2024. Loss of canopy cover is coloured red, and new canopy cover is coloured green.



Figure 15. Example of loss of canopy cover on Commercial land between 2020 and 2024. Loss of canopy cover is coloured red, and new canopy cover is coloured green.

Thermal imaging provides strong visual evidence of the cooling effect of urban trees, showing a clear inverse relationship between canopy cover and land surface temperature. Streets and open spaces with dense tree cover consistently appear several degrees cooler than nearby areas with little or no canopy (Figure 16). For example, treeless areas of Shenton Park were 9oC hotter than treed areas of Dalkeith. This difference is because tree canopies intercept and filter solar radiation, reducing the amount of heat absorbed by hard surfaces, while evapotranspiration from leaves actively cools the surrounding air. In contrast, exposed pavements, rooftops, and other impermeable surfaces without shade retain heat and radiate it back into the environment, driving higher temperatures and intensifying the urban heat island effect. By increasing canopy cover, cities can directly reduce local heat loads, improve thermal comfort for residents, and create more resilient and liveable neighbourhoods.

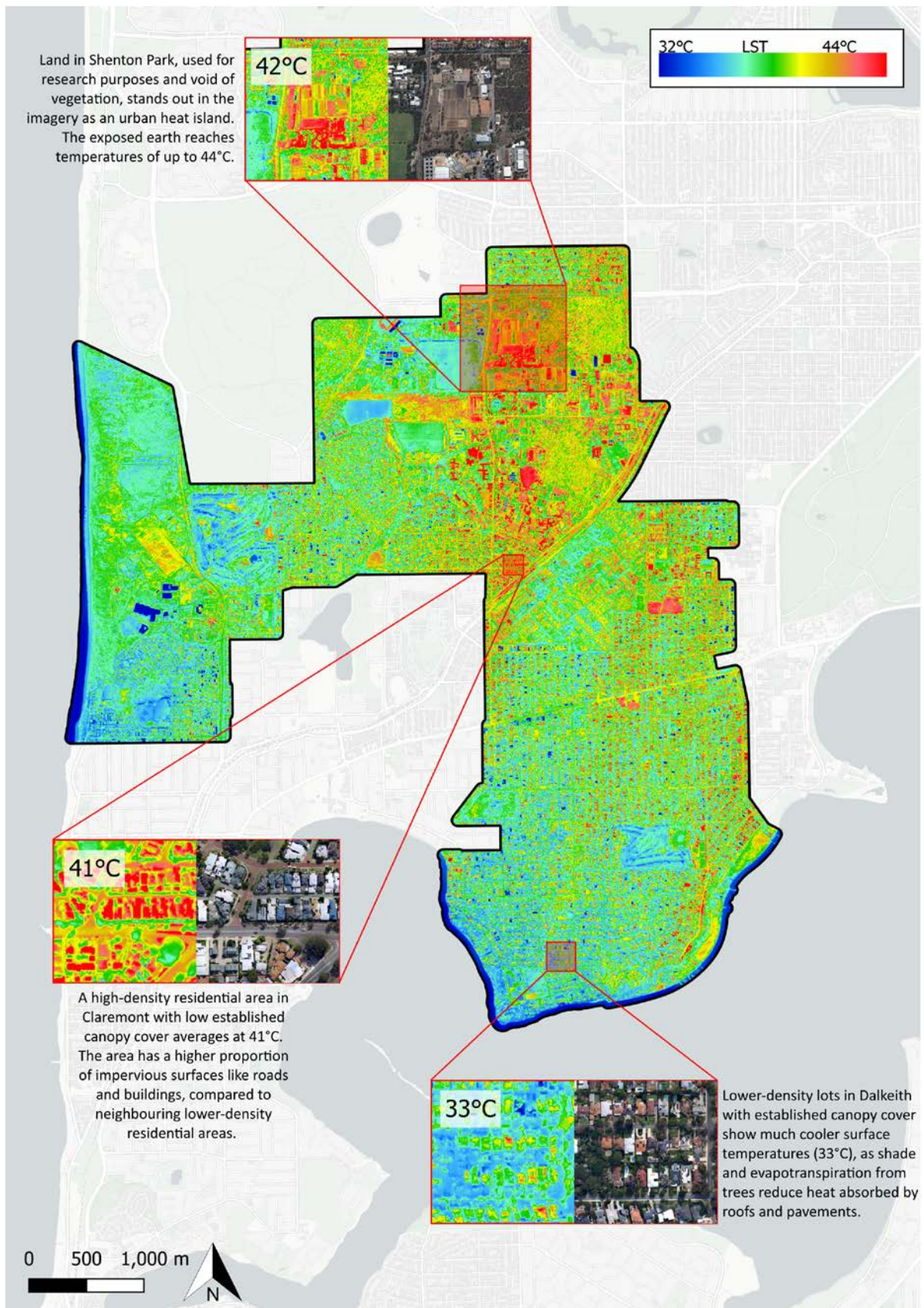


Figure 16. Land surface temperature across the City of Nedlands, highlighting higher temperatures in dense, low-canopy and unvegetated areas, and cooler conditions in lower-density neighbourhoods with established tree canopy.



4.2 Tree diversity

Diversity is critical for urban forest resilience. Increasing urban forest diversity is important in building resilience to climate change, pests and pathogens. Diversity can be measured by analysing the composition of family, genus and species of the urban forest. Urban forest diversity also incorporates life forms, shapes and sizes that make up a complex and rich ecosystem. Diverse urban forests comprise many cultivars and species and multiple vegetation layers that offer the best opportunities and resources for fauna.

The city has an existing tree inventory dataset for street and park trees collected in 2018. This has been analysed to determine key statistics around tree diversity (Figure 17 and Figure 18).

4.2.1 Tree family

- Almost two-thirds of the publicly managed trees were in the Myrtaceae family. This includes genera like *Eucalyptus*, *Corymbia*, *Lophostemon*, *Agonis* and *Melaleuca*. Myrtaceae are the most common native tree family in Australia and are the dominant family among native forests throughout Australia.
- Other commonly planted families included Bignoniaceae (6.5%, includes *Jacaranda*) and Casuarinaceae (4.5%, includes *Casuarina* and *Allocasuarina*). The remaining families made up at least 3% of the population each.

Distributions of Tree Family

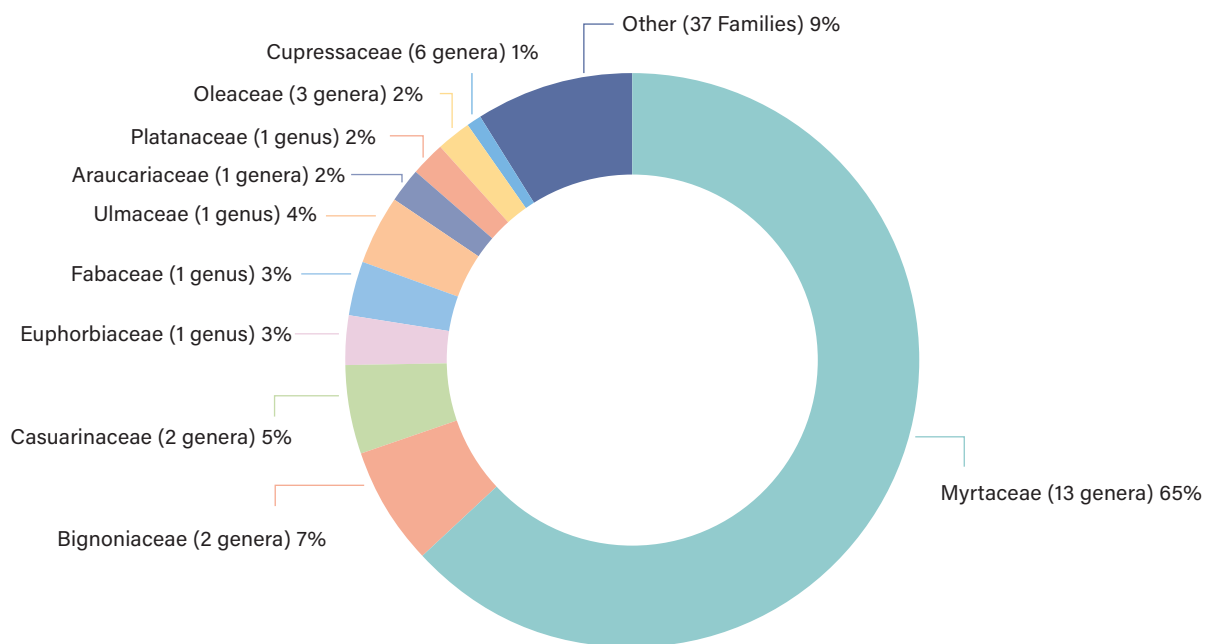


Figure 17. Distribution of tree families within the public tree population.

4.2.2 Tree genus

- One third of the publicly managed trees are in the *Lophostemon* genus and include two species (such as *Lophostemon confertus* (Queensland Box)).
- Trees in the *Eucalyptus* genus made up 11% of the population, and included 48 species, such as *Eucalyptus marginata* (jarrah), *E. gomphocephala* (tuart), and *E. camaldulensis* (river red gum).
- A further 8% were *Agonis*, such as *A. flexuosa* (peppermint/wonil), and another 6% were *Jacaranda*, such as *J. mimosifolia*.
- Many of the City of Nedlands' established streets are defined by single species avenues and rows of trees. These are frequently single species, such as Queensland Box or *Jacaranda* and are often all the same age as they were planted simultaneously. While these avenues create striking visual landscapes, they provide for poor species and age diversity.

Distributions of Tree Genus

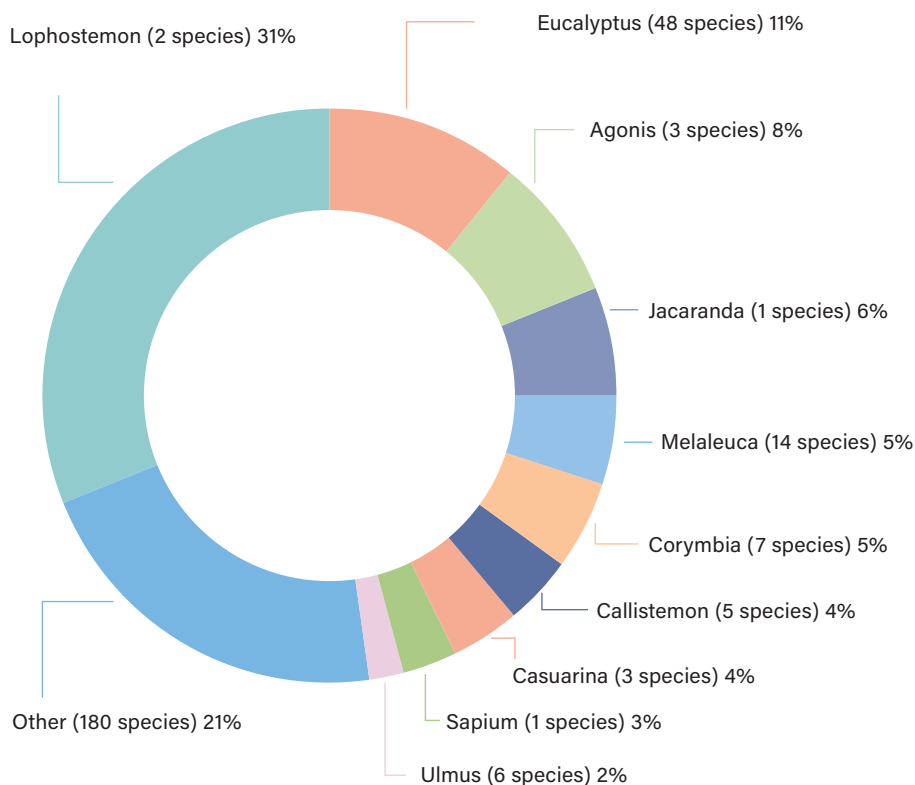


Figure 18. Distribution of tree genera of public tree population.



4.3 Available planting space

An analysis of Available Planting Space (APS) was undertaken to identify where new trees could be planted to increase canopy cover. APS was defined as areas of grass or bare earth visible in ArborCam imagery, excluding locations unsuitable for planting due to constraints such as small or irregular lot shapes, proximity to infrastructure (e.g., powerlines, lighting poles, and road intersections), or use as sporting fields.

This analysis highlighted numerous verges, median strips, and other road reserves with little or no canopy but with space for one or more trees (Figure 19). The APS dataset has been used to inform canopy cover targets for road reserves and parks in Section 8.

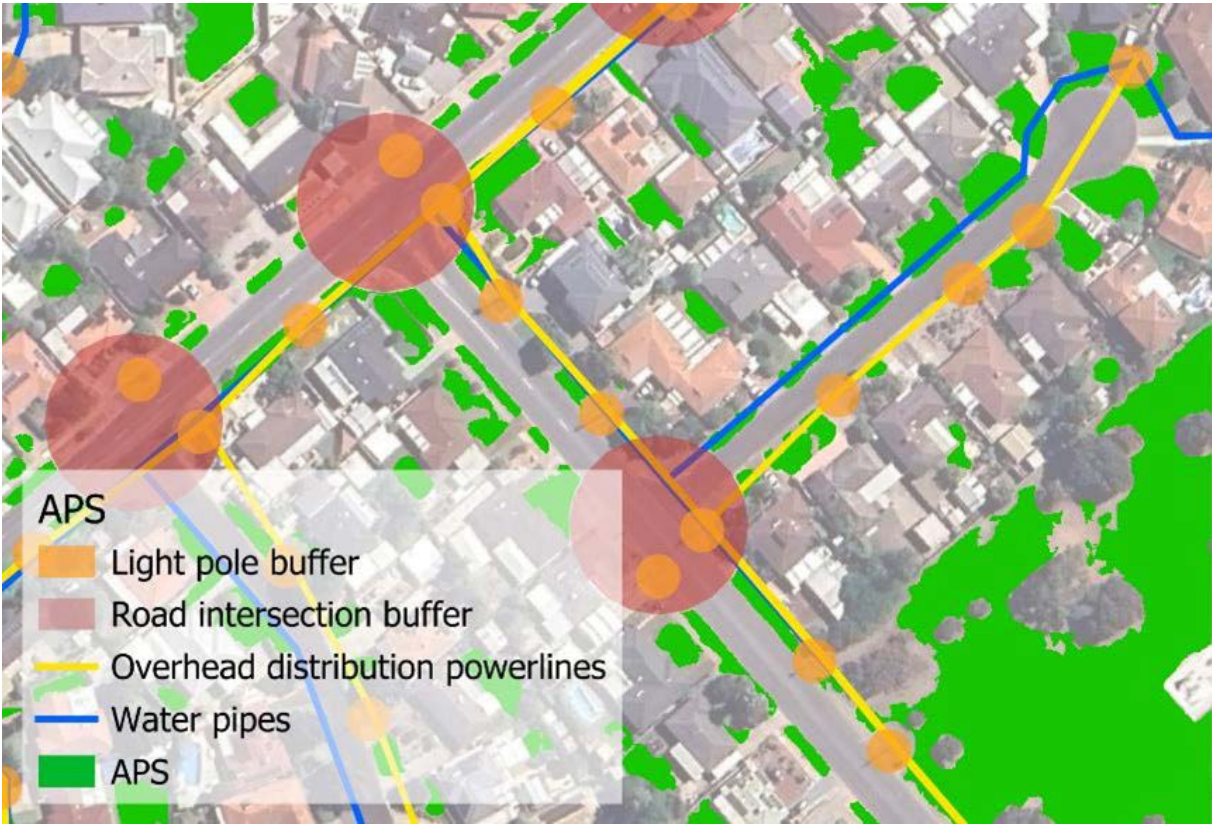
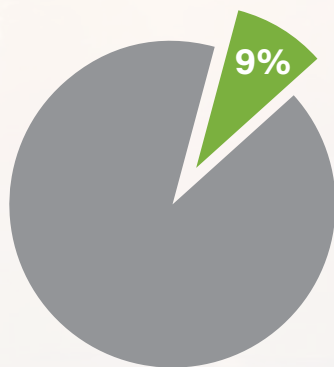
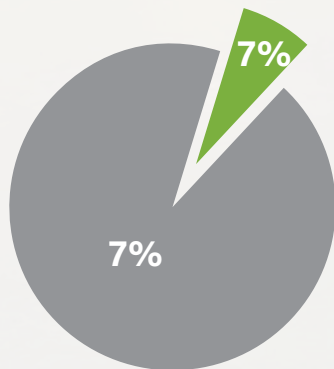


Figure 19. Available Planting Space (APS) and the limiting factors used to determine areas of APS.

The analysis found that 9% of parks qualify as APS. With playing fields excluded, this suggests that some parks - currently turf, dead grass, or bare earth - could support additional canopy cover. Similarly, approximately 7% of road reserves were identified as APS, highlighting opportunities to plant unused verges and median strips to expand canopy cover (Figure 16).



■ APS
■ non-APS



■ APS
■ non-APS

Figure 20. Proportion of APS for Parks and Road Reserves.

Community Engagement

5.1 Community survey consultation

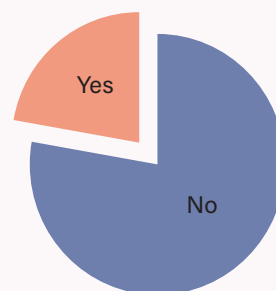
Between January and March 2025, the City of Nedlands provided the opportunity for the Nedlands community to comment on the state of the urban forest and its management via an online survey. The City received 147 submissions from the Nedlands community. The findings clearly indicate community values, priorities, and expectations for the future of Nedlands' trees.

The Nedlands community values urban trees and the benefits that they provide. Trees are valued for providing food and habitat for native wildlife, absorbing carbon dioxide, improving air quality, and cooling by providing shade. Respondents also appreciated that trees improve the aesthetic value of urban areas and contribute to community health and wellbeing.

The community expressed a strong desire for more trees, both in public (Figure 21) spaces and on private (Figure 22) land. Respondents envisioned a greener and more sustainable Nedlands, valuing the careful selection of tree species to increase the presence of native tree species, improve biodiversity, and improve the sustainability and resilience of the urban forest. In public spaces, responses suggested that planting efforts should focus on street verges and public parks. Residents demonstrated a desire to participate in the management of the urban forest, seeking engagement opportunities such as organised planting events.

Insight: 78% of respondents said there are not enough public trees.

Do you feel that there are enough public trees in our streets and parks?



Do you feel public (street and park) trees are well maintained in the area?

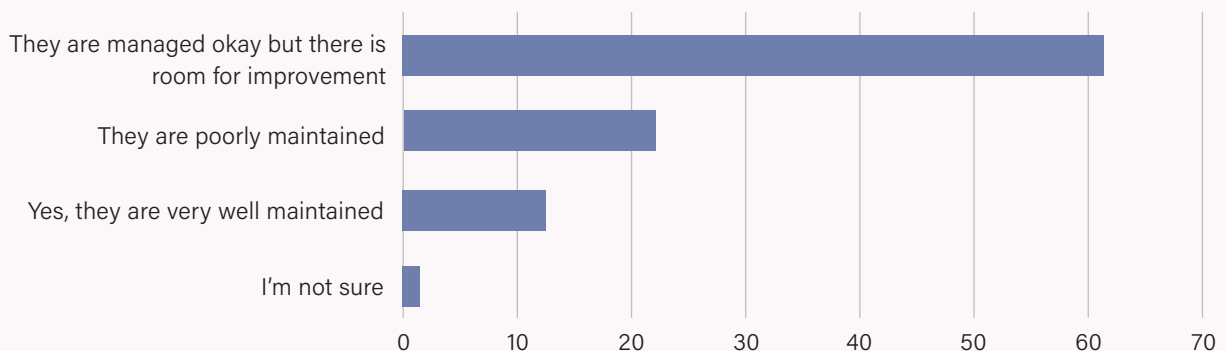
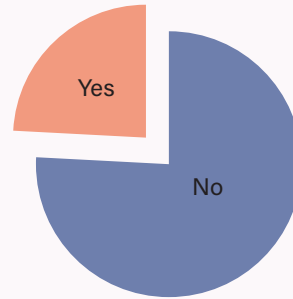


Figure 21. Community opinions on public trees.

Insight:

76% of respondents said there are not enough private trees.

Do you feel that there are enough trees on private property in your neighbourhood?



Do you feel that trees on private property are well managed by local residents/business owners?

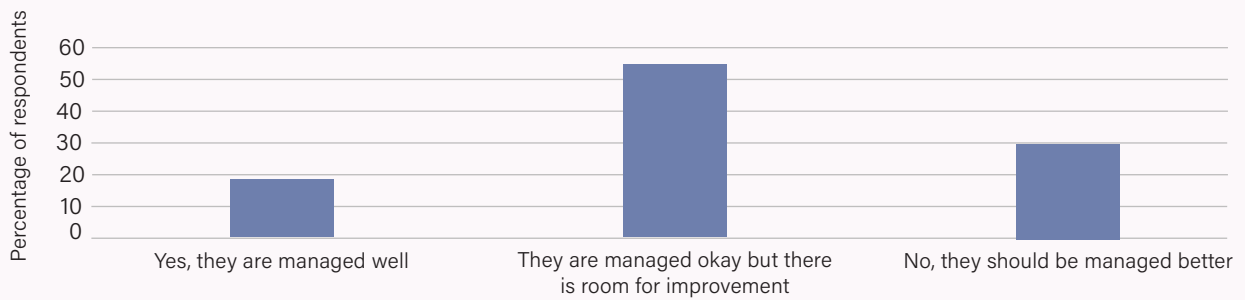
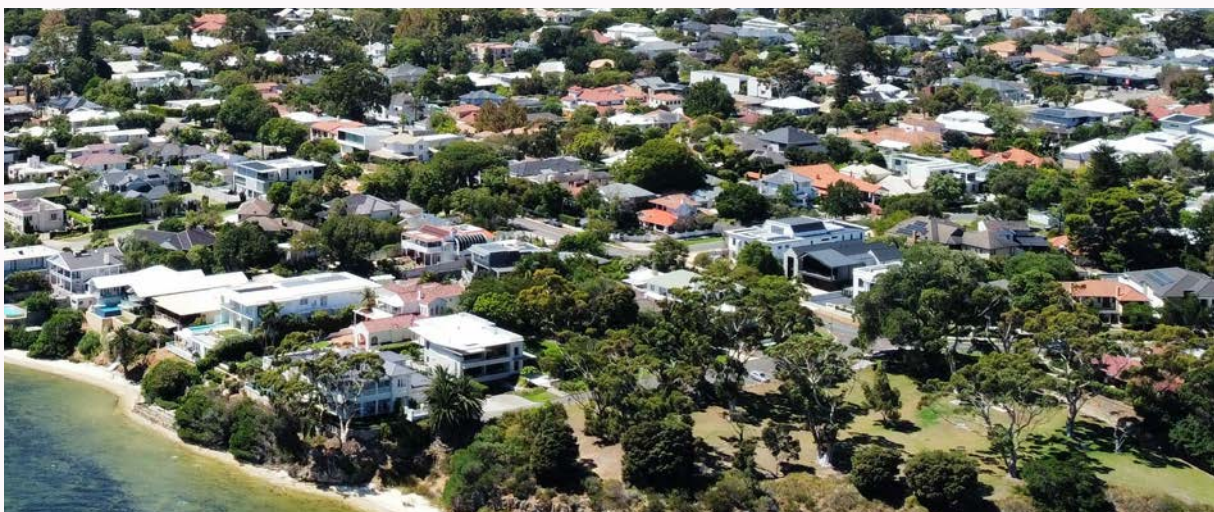


Figure 22. Community opinions on private trees.



In addition to planting more trees, responses consistently emphasised the importance of retaining trees on public and private property (Figure 23). Respondents were particularly concerned about the impact of new development and routine maintenance on established trees, expressing concern about removing established trees on private property during development and damage to public trees during construction and tree maintenance. Residents want stronger protections for existing trees, including penalties for unnecessary removals and incentives for retention. They also expressed a desire for improved City maintenance, including better care for living trees and timely replacement of dead or damaged ones.

What opportunities do you see in your local area to increase tree canopy?

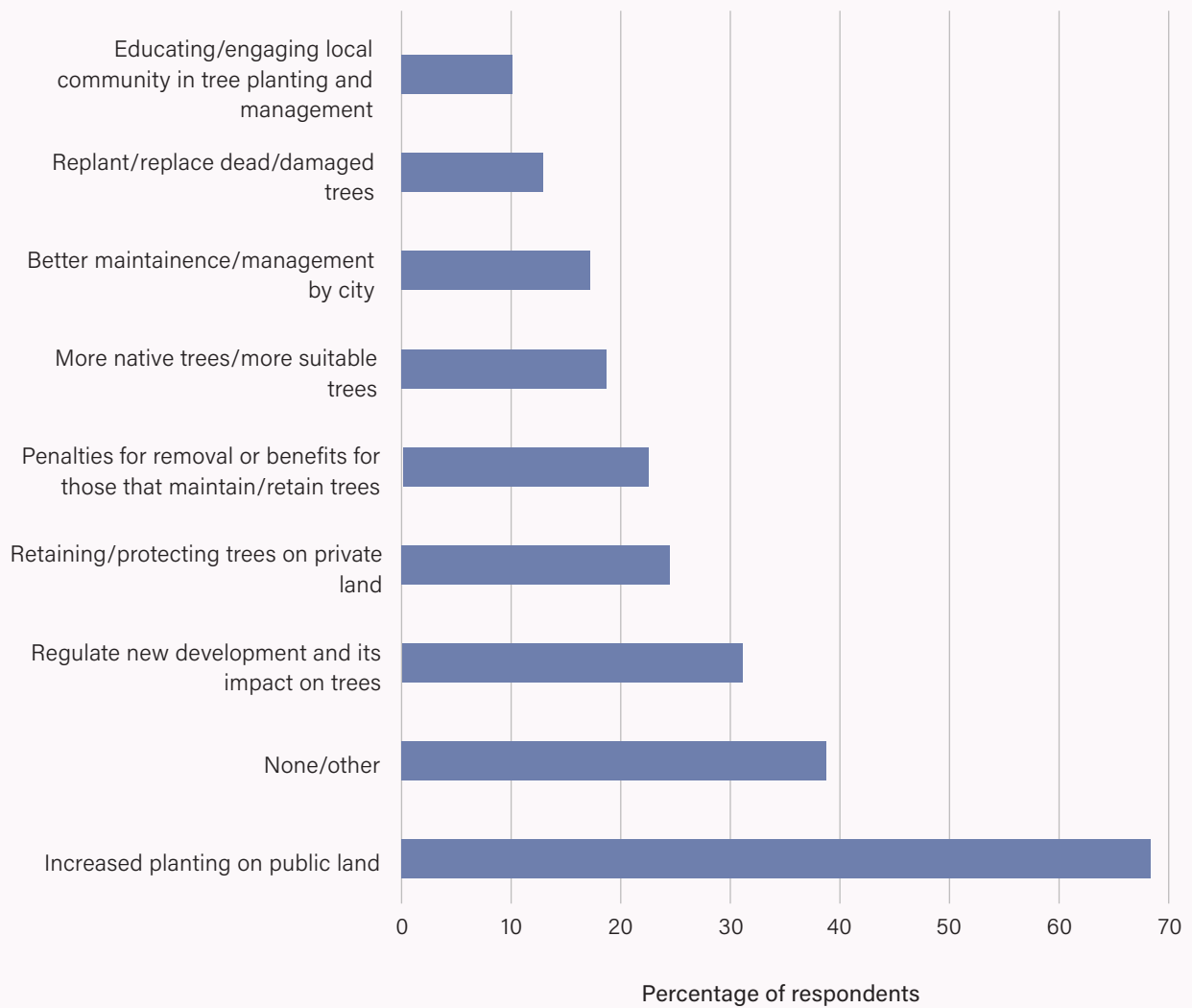


Figure 23. Opportunities identified by the community to increase tree canopy cover in the city.

5.2 Stakeholder engagement workshop

In May 2025, City staff, passionate residents and key community group members came together to share ideas and co-create the next chapter of our urban forest. This included members from:

- Nedlands Tree Canopy Advocates
- Friends of Hollywood Reserve
- Friends of Point Resolution
- Melon Hill Bushland Group
- Friends of Shenton Bushland Group

At the heart of this workshop was a shared drive to move from consultation to action. Participants contributed over 120 practical ideas to protect and expand the urban forest, grounded in lived experience and a deep connection to place. Six clear priorities emerged from these discussions, forming the foundation of a transformative Urban Forest Strategy powered by local insight and collective commitment.

Valuation frameworks such as the Helliwell and Revised Burnley methods provide a practical mechanism for recognising trees as high-value community assets. Incorporating monetary tree valuation into asset management and decision-making processes will support consistent assessment of tree loss, inform offset requirements, guide prioritisation of maintenance and retention, and align urban forest management with broader financial and infrastructure planning. This update has been included within the recent update to the City's Street Tree Policy.

1. Climate and Biodiversity

- Protect canopy cover and native vegetation.
- Plant drought-tolerant and diverse tree species.
- Build urban ecosystems that support wildlife.



**Biodiversity is everything,
it's our key asset for resilience.**



**We need to plant now before the
climate dries more.**

2. Tree Protection & Governance

- Strengthen tree protection laws.
- Embed urban forestry in planning policies.
- Reduce developer influence in high-canopy areas.



**Developers shouldn't have such
overwhelming power.**



**We must reform outdated
planning laws.**

3. Involve residents in decision-making

- Support school and volunteer greening projects.
- Increase public education and awareness.



The community is the driving factor in all of this.



If people don't understand the value of trees, they won't fight for them.

4. Urban Design Innovation

- Integrate green infrastructure into new builds.
- Use verges, corridors, and nature strips creatively.
- Expand ecological networks across the city.



Developers shouldn't have such overwhelming power.



We must reform outdated planning laws.

5. Better Rules and Planning

- Align local and state policies for cohesive urban forest protection.
- Ensure urban infill developments include greening requirements.
- Implement long-term urban forest planning frameworks.



We need policies that protect trees, not just afterthoughts in development.

6. Funding and Partnerships

- Secure resourcing for urban forest projects.
- Fund local community groups and schools.
- Build partnerships with universities, NGOs, and industry.



How do we get more money and more hands into the community?



We need sustained investment, not just one-off grants.

As a result, the following key actions were identified:

Trialling climate-resilient species

To future-proof our canopy, the Strategy supports testing drought-tolerant, biodiverse species that can survive hotter, drier conditions. Pilot plantings of native and regionally adapted trees will help determine what thrives in Nedlands' changing climate.



We have the opportunity to plant trees from more arid environments now — so they can survive better as our climate changes.

Protecting Mature Trees

Large, established trees offer unmatched benefits: cooling, habitat, and long-term carbon storage. Stronger planning controls, heritage tree registers, and incentives for private landholders will help protect this vital green infrastructure.



We're losing big trees too fast. It takes decades to replace them — we need to protect them now.

Partnering with Schools and Community Groups

Greening Nedlands is a shared responsibility. The Strategy will expand partnerships with schools, local groups, and volunteers to deliver tree planting, citizen science, and education programs that build lasting stewardship.



The community is the driving factor. It's about informing and empowering people to take part.

Embedding Green Design into Planning

Urban development and canopy protection don't have to be at odds. We can build neighbourhoods that support housing and habitat through smarter design, like green roofs, tree-lined streets, and nature-based drainage. Trees will no longer be an afterthought; they'll be core infrastructure.



Let's stop treating green space like a luxury. It's core infrastructure — like roads, power, or water

5.3 Community insights to strategic action

Community feedback has directly shaped this Strategy. Survey results confirmed strong support for protecting and expanding tree canopy, especially on private land, and highlighted a desire for more equitable greening, inclusive engagement, and transparency in decision-making.

These themes were echoed in the stakeholder workshop, where participants stressed the need for better protection of mature trees, strategic planting in heat-vulnerable areas, and stronger partnerships with the community. Residents want to be more than passive recipients. They want to help shape and care for the urban forest.

The Strategy responds directly to these priorities. The five strategic directions embed the community’s call for equity, resilience, transparency, integration, and long-term investment. Together, they provide a roadmap to a greener, cooler Nedlands where nature and community thrive side by side. Key themes raised through community consultation and stakeholder engagement, and how they have informed the Strategy’s directions and actions, are summarised in Table 1.

You Said:	We Heard:	We’re Doing:
We want more trees, especially where canopy is low.	Canopy loss on private land is a top concern, and residents support stronger protections.	Setting more precise canopy targets and developing new planning tools to protect and grow private land canopy.
Trees are essential for health, shade, and liveability.	Trees are considered essential infrastructure, not just ‘nice to have.’	Framing trees as critical assets in communications, design, and planning capital works.
Be more transparent, tell us why trees are removed or not planted.	There’s strong demand for more transparent decision-making and better communication.	Creating new communication materials and embedding transparency as a key Strategic Direction.
Involve us, we want to help, not just be told.	The community sees itself as a partner in delivery, not a passive audience.	Expanding co-designed projects, school programs, and precinct greening partnerships.
Protect the big trees before it’s too late.	Mature trees offer the greatest benefits and are being lost too quickly.	Prioritising large tree retention through stronger protections and planning policy reform.
We need trees that can handle a hotter, drier climate.	There are a strong awareness of climate change and a desire for species diversity.	Trialling drought-tolerant and climate-ready species as part of future planting programs.
The community should drive this; we’re ready to help.	Residents, schools, and volunteer groups want to be active stewards.	Building long-term partnerships and supporting grassroots greening initiatives.
Trees must be built into planning and not added later.	Green infrastructure is still treated as an afterthought in new developments.	Embedding canopy targets and green design in development approvals and design frameworks.
We need better laws, more funding, and less developer influence.	Residents want stronger governance, investment, and equity in decision-making.	Advocating for improved planning alignment, better policy tools, and expanded resourcing.

Table 1. How Community and Stakeholder Feedback Informed the Urban Forest Strategy.



5.4 How Community and Stakeholder Feedback Shaped This Strategy

Extensive feedback was received during the development of this Strategy through community surveys, stakeholder workshops, formal written submissions, and internal City review. Key themes consistently raised included the urgency of action to prevent further canopy loss, the importance of protecting mature trees (particularly on private land), the need to maintain and extend the life of existing tree assets, and a strong desire for greater transparency and accountability in urban forest decision-making.

This feedback has directly informed the refinement of the Strategy's strategic directions, priorities, and implementation actions. It strengthened the emphasis on canopy protection alongside new planting, reinforced the focus on private land retention and equitable canopy growth, and led to the inclusion of explicit actions addressing proactive tree maintenance and canopy retention within the Implementation and Action Plan. Feedback also influenced the staging of actions, ensuring that key measures commence immediately within the early phase of the Strategy.

Not all feedback resulted in direct changes to targets or policy positions, as some matters are subject to Council decision-making, budget allocation, or separate statutory and planning processes. However, all feedback was carefully reviewed and used to inform the overall direction, structure, and practicality of the Strategy.

A detailed summary of consultation feedback and how it has been addressed is provided in Appendix A, with Table 5 outlining the key themes raised, the Strategy's response, and where changes have been incorporated within this document.



Challenges For Maintaining an Urban Forest

The City of Nedlands is well placed to build on its strong foundations in tree planting and community support. However, a range of environmental, social, and organisational challenges are impacting canopy cover and the broader benefits delivered by the urban forest. These challenges must be addressed to ensure long-term success, particularly as the city grows and densifies.

This section outlines the key pressures facing the urban forest, drawing on canopy analysis, internal staff feedback, and a review of current programs and processes.

6.1 Ongoing canopy loss and development pressure

The most immediate threat to the City's urban forest is the continued removal of mature trees on private land. Nedlands has experienced a 0.2% decline in canopy cover since 2020. This is small in percentage, but equivalent to the loss of around 600 mature trees. Most canopy loss occurred on private residential land, driven by housing redevelopment and subdivision. If this trend continues, residential canopy cover could fall from 16.4% to just 11.7%.

As lot sizes shrink and built form expands, less physical space exists to retain or plant trees. Without clear protections, incentives or guidance, private landowners are often unable or unwilling to preserve existing trees, resulting in a slow but steady erosion of the City's green character.

6.2 Impacts of climate change and urban heat

Rising temperatures, more frequent heatwaves, and declining rainfall are increasing stress on trees in Nedlands, particularly in areas with low canopy cover, high impervious surfaces, or compacted and poorly irrigated soils. Western Australia's southwest is drying faster than almost any other region globally, with longer droughts intensifying the risk of decline in vulnerable species such as young, shallow-rooted, or drought-intolerant trees. Thermal imagery shows surface temperatures reaching 44°C in parts of Nedlands lacking shade. This compares to 33°C in areas with canopy, underscoring the role of tree canopy in moderating urban heat. As the climate continues to shift, maintaining and expanding canopy will be critical for thermal comfort, biodiversity, stormwater management, and reducing health risks and energy costs linked to urban heat islands.

6.3 Conflict with Infrastructure and Car-Dominated Streetscapes

Many of Nedlands' streetscapes are not designed to accommodate large, healthy canopy trees. Narrow verges, crossovers, above and below ground services, and on-street parking all limit planting space and species selection. This is particularly pronounced in higher-density development areas, where new street trees do not offset private canopy loss.

Feedback from staff also highlighted ongoing tension between green infrastructure goals and the delivery of traditional engineering or transport outcomes. Without a coordinated approach, urban forest objectives can be sidelined in favour of vehicle access, drainage, and roadworks, further constraining opportunities for shade and greening.

6.4 Environmental stressors, pests and disease

Nedlands' urban forest is increasingly affected by a combination of biological threats, environmental stressors, and changing soil conditions. Prolonged drought periods and compacted, nutrient-poor soils are reducing tree vigour and longevity.

The City of Nedlands already hosts serious biosecurity threats, including Phytophthora dieback, Armillaria root rot and Marri canker. The Polyphagous Shot Hole Borer (PSHB), now in WA, has already devastated trees throughout Perth. New threats like myrtle rust and giant pine scale are looming on the national horizon. These threats are particularly significant given the limited diversity within parts of the City's tree population. A disease or pest outbreak impacting dominant species could result in significant canopy loss if not pre-emptively addressed.

6.5 Policy gaps and enforcement limitations

The City's current urban tree policy framework is limited in its ability to influence outcomes on both public and private land. While the Street Tree Guidelines provide a useful operational framework, enforcement capacity remains low, particularly for unauthorised tree removals or damage on private property.

There are no tree bonds, penalties, or offset requirements in place for developers, and tree protection conditions are inconsistently applied through the development approvals process. Internal staff noted that stronger, clearer policies and compliance resourcing would help ensure tree retention is treated as a shared responsibility across the development lifecycle.

The absence of enforceable mechanisms such as tree bonds, financial penalties, or mandatory offsets limits the City's ability to deter unauthorised tree removal and damage during development. Introducing clearer compliance tools and enforcement pathways would strengthen accountability, reinforce the value of trees as community assets, and reduce avoidable canopy loss associated with construction activity.

6.6 Community expectations and engagement complexity

Community engagement for this Strategy revealed strong support for trees overall but also highlighted a diversity of opinions. While many residents expressed pride in the green character of Nedlands, others raised concerns about maintenance, safety, and nuisance impacts.

A vocal minority of residents continues to resist planting near properties or objects to species that drop leaves or fruit. At the same time, some community members have called for greater transparency and involvement in tree-related decisions. This complexity requires a mature and consistent engagement approach that empowers residents while supporting transparent and evidence-based decision-making by the city.

6.7 Ageing tree population and limited diversity

A large proportion of Nedlands' tree population is mature or nearing the end of its useful life expectancy. This includes legacy plantings of species such as *Agonis flexuosa*, *Jacaranda mimosifolia* and *Lophostemon confertus*, which have been widely used across verges and reserves. As these trees reach senescence, the city faces a looming wave of removals and replacements over the next 10 - 20 years.

While the City has tried to diversify its planting palette, some streets and precincts remain dominated by single species or genera, increasing vulnerability to pests and climate stress. Further diversification, particularly at the family level, will be critical to building a resilient, future-ready urban forest.

Without a stronger emphasis on proactive maintenance and retention as part of an integrated urban forest management approach, existing mature trees are at risk of premature decline or removal, reducing canopy cover and undermining the long-term effectiveness of planting programs.



6.8 Capacity to deliver

Delivering on the Strategy's objectives requires adequate resourcing, staffing, and internal capability. Currently, the City has limited staffing capacity for planting, inspections, maintenance oversight, and community engagement. Internal coordination often relies on a small number of individuals, and strategic functions are spread across different roles and departments.

The annual planting budget is modest and restricts the City's ability to scale up or undertake proactive works. Compared to peer councils, Nedlands has fewer dedicated staff managing trees, limiting its responsiveness and capacity to engage with emerging challenges.

6.9 Systems, data and processes

The City's tree inventory is incomplete and not fully integrated with core asset systems, reducing its usefulness for strategic planning, risk management, and maintenance scheduling. Tree removals and pruning approvals remain largely manual or paper-based, with some still requiring full Council sign-off, which creates inefficiencies and delays.

Improving data systems and workflows, including modern asset management integration and digital tracking, is essential to managing the tree population as critical infrastructure.

6.10 Interdepartmental alignment and strategic integration

Urban forest outcomes are shaped by decisions made across planning, engineering, parks, and development compliance. While staff reported a high level of informal cooperation and goodwill, there is limited formal structure for alignment or shared accountability.

Opportunities to integrate canopy outcomes into capital works planning, road upgrades, and subdivision approvals are not always captured, and trees are often considered too late in project scoping. Establishing stronger cross-departmental coordination and a shared urban forest governance framework will be essential to deliver long-term outcomes effectively and efficiently.



Impacts of Subdivision on Canopy Cover in Residential Areas

As discussed in Section 6, one of the biggest risks to the City's urban forest is the impact of development and infill subdivision. The effects of development in residential land throughout the city were modelled to estimate the impact that development will have on projected canopy cover. The analysis was guided by the specifications set out for each R-code, as detailed in State Planning Policy (SPP) 7.3 – Residential Design Codes, Volumes 1 and 2 (Figure 24).

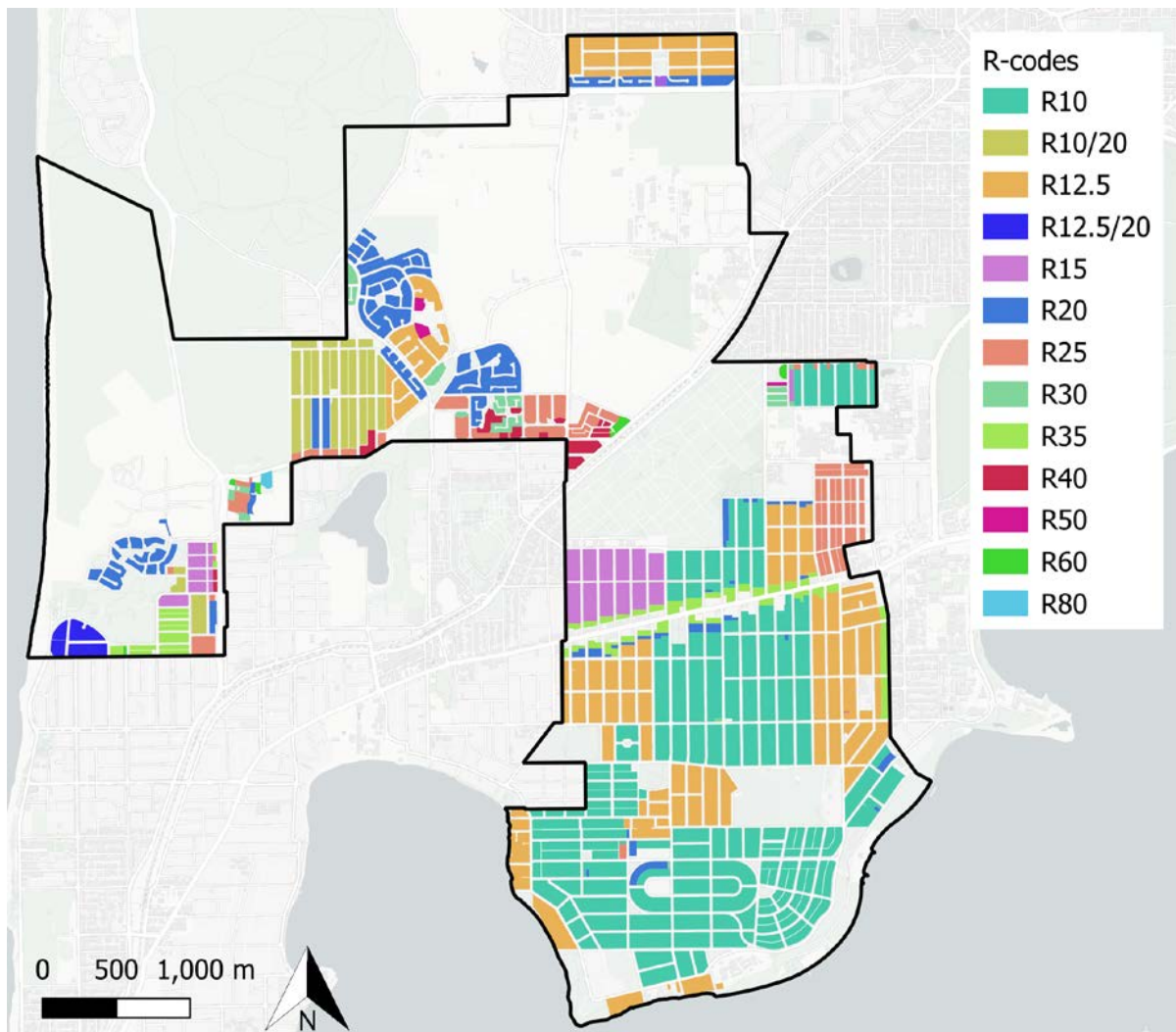


Figure 24. (A) Residential land categorised by R-code. (B) Each lot is colourised by its potential to be subdivided under the current Residential design codes. Blue lots have development potential and will potentially undergo significant canopy loss, while green plots are considered fully developed and unlikely to lose canopy.

To project future canopy cover on private land, the average canopy cover of fully developed lots (with no further development potential) was applied to lots that could still be developed under the current Residential Design Codes (R-codes). These estimates are shown in Figure 25 and are used to inform canopy cover targets in Section 9.

If all residential lots in Nedlands were developed to their maximum capacity under existing R-codes, canopy cover on residential land would decline from 16.4% to 11.7%. This represents a loss of around 29 hectares of canopy—equivalent to approximately 5800 mature trees (based on a 50 m² crown area). Given that residential land makes up roughly one-third of the City’s total area, such a reduction would substantially impact overall canopy cover.

Projected Canopy Cover of each R-Code

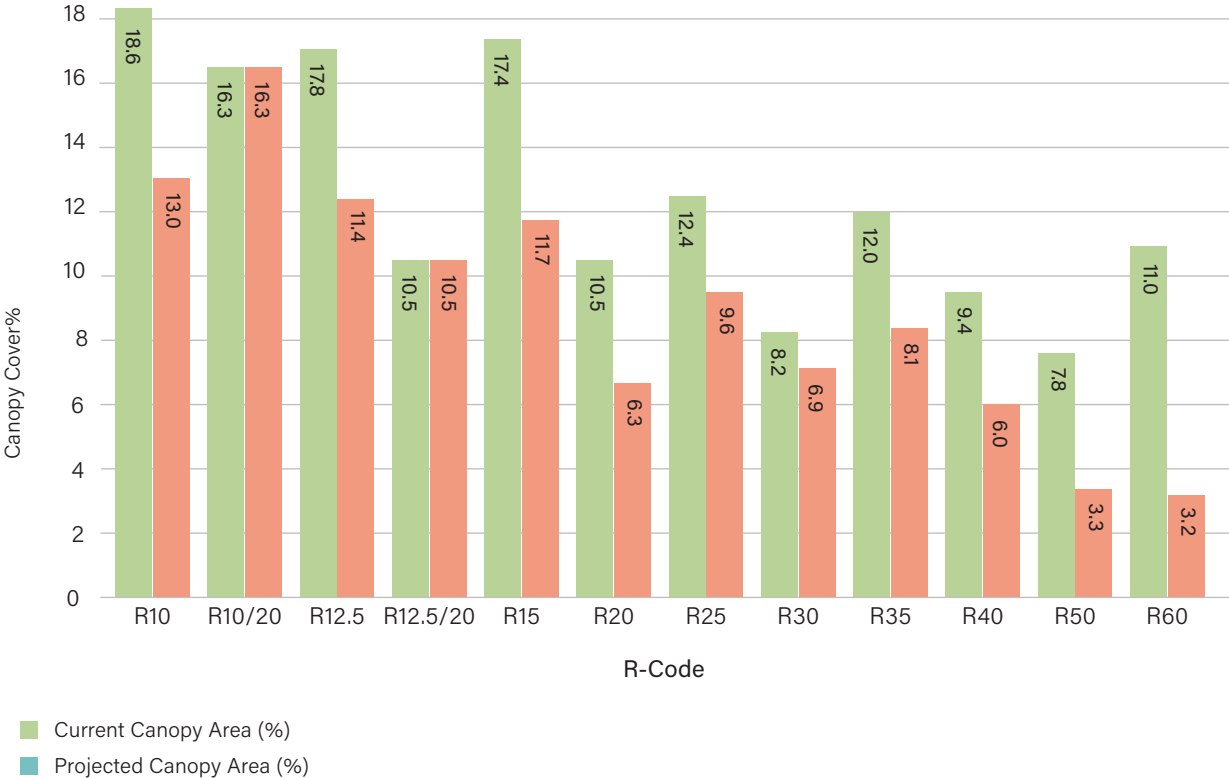


Figure 25. Current and projected canopy cover (%) for each R-Code.

Realising the Vision

A well-planned and effectively managed urban forest requires a clear framework that connects the vision and long-term aspiration of the city and its community to the day-to-day operations and delivery. This Urban Forest Strategy provides that structure, aligning vision with evidence-based, operationally achievable actions, and is supported by the community.

8.1 Strategic hierarchy

The strategic hierarchy ensures every initiative is purposeful, aligned, and measurable. It connects the City's long-term vision with practical delivery, creating a shared framework for staff, Council, and the community.

Vision: The long-term aspiration for Nedlands' urban forest.

Strategic Directions: The key priorities that guide focus and investment.

Focus Areas: The desired long-term objectives that the Strategy aims to achieve.

Actions: Specific initiatives that deliver each focus area.

8.1.1 Vision

The vision for Nedlands' future urban forest is:



A thriving, sustainable city where nature and community flourish together, supported by a resilient and expanding urban forest that nurtures biodiversity, cools and cleans our environment, and enriches the health, wellbeing, and identity of future generations.

To realise this vision, the Strategy is structured around five Strategic Directions. These directions reflect the City's key priorities for canopy growth, community partnership, resilience, integration, and stewardship.

8.1.2 Strategic directions

The five **Strategic Directions** form the foundation of the Urban Forest Strategy. They represent the City's commitments for the next 10 years and shape the actions and initiatives that will drive long-term sustainability:

- 1 Canopy Protection and Equitable Growth** - Protect and expand canopy where it is most needed, ensuring all neighbourhoods share the benefits.

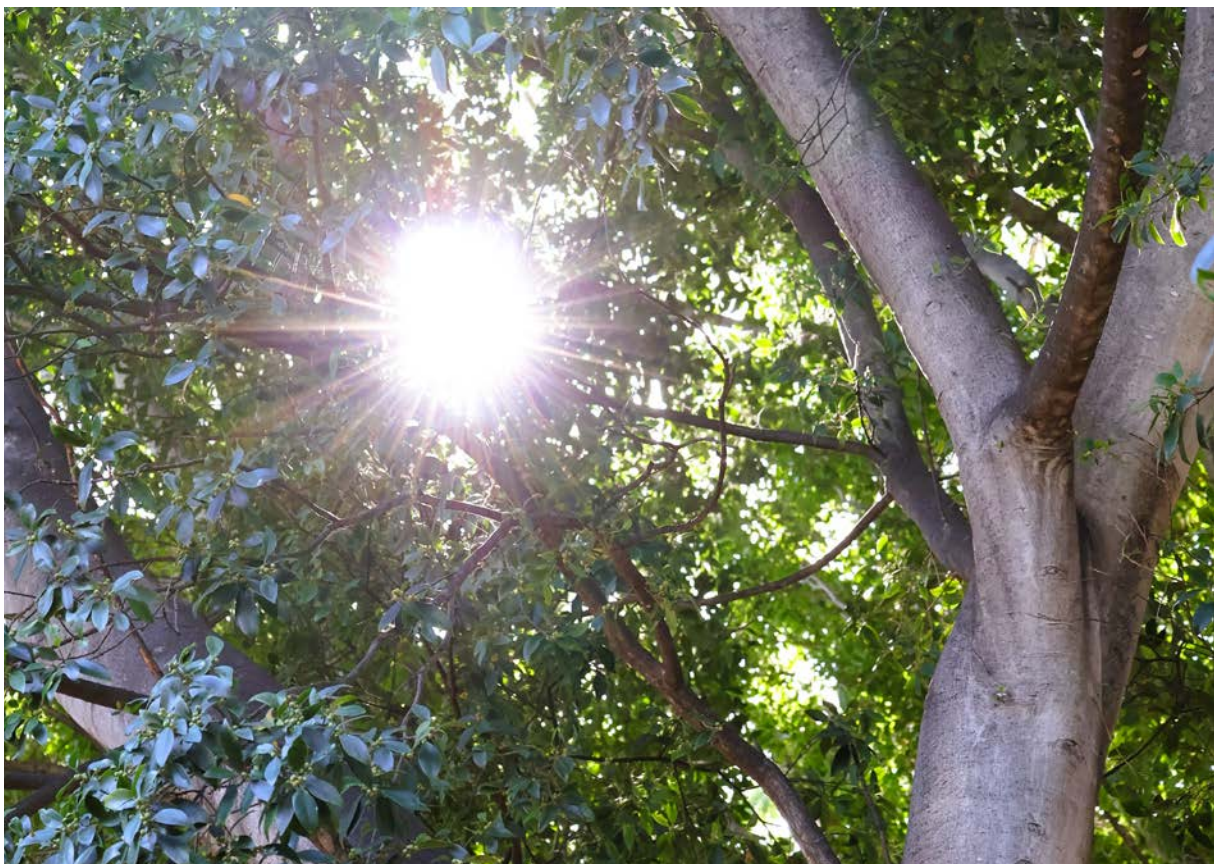
- 2 Resilient and Diverse Landscapes** - Build an urban forest that can withstand climate stressors, pests and pathogens, support biodiversity, and adapt to future challenges.

- 3 Transparent and Inclusive Decision-Making**- Empower residents, schools, and community groups to co-deliver and care for the urban forest.

- 4 Integrated and Accountable Governance** - Embed urban forest outcomes into planning, capital works, and asset management systems to ensure trees are treated as core infrastructure.

- 5 Strategic Investment and Capacity** - Align budgets, staff capacity, and investment decisions with canopy targets and defined service levels.

Each direction is supported by clear outcomes that describe the conditions the City is working to create, and actions that will deliver them over time.



1

Canopy Protection and Equitable Growth

Ensuring all residents share in the benefits of a greener, cooler Nedlands

Tree canopy and green infrastructure are not evenly distributed across the city. Canopy loss on private land, particularly due to redevelopment, is accelerating, with three hectares of canopy lost between 2020 and 2024, mostly from residential zones. Without stronger protections and targeted investment, the benefits of trees risk becoming increasingly concentrated in already well-canopied suburbs. Equitable growth means deliberately investing in areas of low canopy, supporting private land retention, and ensuring that urban greening initiatives serve all demographic groups and land uses.

Focus Areas

1.1 Private Land Protection and Incentives:

Over three-quarters of recent canopy loss occurred on private land. To reverse this trend, the city needs to apply a mix of regulatory and non-regulatory tools. These include a Tree Protection Policy, guidance for development applicants, tree retention incentives, and mechanisms such as offsets, rebates, or rate reductions to reward landowners who retain or plant trees.

1.2 Targeted Education:

While most of the community supports canopy expansion, resistance remains in some areas, with vandalism of new trees at around 10%. Targeted communications should reframe trees as essential “health infrastructure” that improves wellbeing, reduces heat, and supports liveability.

1.3 Place-Based Prioritisation:

Use canopy data alongside socio-economic and heat vulnerability mapping to direct investment to suburbs with the lower canopy cover. This spatial targeting ensures trees deliver cooling, shade, and environmental equity where needed most.

2

Resilient and Diverse Landscapes

Building an urban forest that thrives under a changing climate.

Nedlands is experiencing hotter, drier conditions, and climate change will intensify these pressures. The urban forest is currently dominated by a limited range of species, increasing vulnerability to pests like Polyphagous Shot-Hole Borer. Many plantings also struggle due to poor soils, lack of subsoil volume, and drought and heat stress. Building a resilient urban forest means diversifying species and structure, embedding soil and water-sensitive design, and focusing on long-term establishment rather than just planting numbers.

Focus Areas

2.1 Species and Structural Diversity:

Establishing clear diversity benchmarks (e.g. species, genus, family) will reduce vulnerability to pests and diseases. Prioritise high-performing, climate-resilient species suited to sandy soils and low rainfall. Trial underrepresented native species and adopted adaptive palettes like those supported by Which Plant Where and the current WALGA species trials.

2.2 Soil and Water Integration:

Embedding soil health improvements and water-sensitive urban design within capital works will ensure that new trees have the conditions they need to survive long term. Expand use of structural soil cells, rain gardens, and passive irrigation in verges and medians.

2.3 Tree Planting Programs:

Shift from "tree planting" to "tree establishment". Define success as canopy grown, not trees planted. Include multi-year maintenance, watering, and audit cycles in contracts to reduce failure rates.

2.4 Responding to Threats:

Develop species risk assessments and contingency plans for emerging pests and diseases like PSHB. To manage risks, use integrated pest management (IPM) and ongoing tree health monitoring.

2.5 Maintaining and Extending the Life of Existing Trees:

While increasing canopy through planting is critical to achieving the City's long-term canopy targets, feedback from the community, stakeholders, and internal review consistently highlighted the importance of protecting and maintaining the City's existing mature trees. Mature trees provide immediate and irreplaceable benefits, delivering disproportionately higher cooling, habitat, and carbon services than newly planted trees, and play a critical role in neighbourhood character and liveability.

Extending the safe, functional life of existing trees is therefore a core component of canopy retention and urban forest resilience. Proactive maintenance, early intervention, and informed decision-making can reduce premature tree decline and removal, improve public safety outcomes, and maximise the return on past investment in the City's urban forest. Recognising existing trees as long-term assets ensures that canopy protection and maintenance are considered alongside new planting as integral elements of urban forest management.



3 Transparent and Inclusive Decision Making

Embedding trust, openness, and shared responsibility in the way decisions are made.

Community expectations for greening are high, but perceptions of trees are mixed. Some residents object to verge plantings, request removals, or dispute decisions. The lack of transparency around how trees are selected, removed, or prioritised can erode trust. Embedding inclusive decision-making means explaining trade-offs, increasing visibility of elected leadership, and broadening community stewardship opportunities. Structured engagement and stewardship opportunities will enable residents to play an active role in shaping and caring for the urban forest.

Focus Areas

3.1 Leadership Alignment and Strategic Direction:

A unified, organisation-wide commitment is essential to implement the Urban Forest Strategy successfully. Internal alignment across departments, programs, and leadership levels ensures that priorities are consistently championed, resourced, and integrated into planning and delivery frameworks.

3.2 Community Involvement and Co-Design:

Expand the successful foundation of partnerships with schools, precinct groups, and community organisations. This includes enabling co-delivery of greening projects and inviting place-based decision-making where appropriate. Aligning community values with technical expertise will strengthen outcomes and deepen public ownership.

3.3 Clarity of Decision-Making:

Develop accessible guidelines and communications that explain why trees are removed, how new species are selected, and how complaints are handled. Publish an annual “State of the Urban Forest” update.

3.4 Subsidies and Support:

Consider expanding community planting subsidies, including verge tree installation, understorey planting packs, or co-funded watering interventions for residents.



4 Integrated and Accountable Governance

Breaking down silos and embedding urban forest priorities into the Town's core operations.

Urban forest outcomes are shaped not only by vision but by how effectively the organisation works together. At present, teams are not yet fully aligned, processes are still spreadsheet-based, and data systems are underdeveloped. There is no integrated tree asset management system, and tree-related responsibilities are spread across teams without clear ownership. Strengthening governance means aligning roles, integrating systems, and embedding trees into all relevant operational and strategic processes.

Focus Areas

4.1 Integrated Urban Forest Planning:

Ensure that urban forest priorities are consistently reflected in wider Council planning and asset strategies. Align greening objectives with capital works, infrastructure delivery, and land use planning to maximise impact and efficiency.

4.2 Efficient Processes and Systems:

The transition to an integrated tree asset management system must be used to streamline workflows, record lifecycle events, and reduce inefficiencies in work allocation.

4.3 Policy and Compliance Reform:

Strengthening tree policies, including clearer removal processes and better enforcement of conditions, will provide accountability and consistency.

4.4 Monitoring and Evaluation:

Developing a monitoring framework will allow the Town to measure canopy change, tree health, and program success, ensuring accountability and adaptive management.



5

Strategic Investment and Capacity

Embedding trees as essential assets, backed by sustained funding and long-term care.

Delivering canopy growth requires reliable funding, skilled staff, and recognition of trees as core infrastructure. Current planting budgets are low, maintenance is not aligned with defined service levels, and staffing capacity is stretched. Without investment in resourcing and proactive management, the Town will struggle to achieve its canopy targets. Positioning trees as long-term assets means aligning budgets to service levels, embedding lifecycle costing, and increasing organisational capacity to deliver planting and maintenance effectively.

Focus Areas

5.1 Long-Term Funding Commitment: Embed the urban forest as a core service area with sustained funding that aligns with service levels and canopy growth targets. Secure resourcing for both planting and long-term maintenance and monitoring and integrate urban forestry into broader financial planning.

5.2 Strategic Tree Asset Management: Establish a proactive approach to managing the tree population as long-term infrastructure. This includes embedding lifecycle thinking, monitoring frameworks, and risk-based maintenance planning to support better performance and accountability.

5.3 Organisational Capability and Delivery: Strengthen internal capacity to deliver planting and maintenance programs at scale. This includes building skills across teams, improving oversight of external contractors, and fostering a culture that recognises trees as essential assets.



Urban Forest Targets

9.1 Genetic diversity

Genetic diversity is a foundation for a healthy and resilient urban forest in the City of Nedlands. A wide variety of species, genera, and families helps protect the tree population from pests, diseases, and the impacts of a changing climate. The commonly used 10/20/30 guideline recommends no more than 10% of trees from one species, 20% from one genus, and 30% from one family. While this benchmark has limitations — especially in areas naturally dominated by native Myrtaceae such as Eucalyptus — it provides a useful framework for reducing risk. Challenges to diversity often stem from nursery practices, where only a few cultivars are mass-produced, increasing vulnerability through uniformity. To address this, the City can strengthen resilience by sourcing stock from multiple suppliers, avoiding over-reliance on single cultivars, and encouraging the role of private trees in adding diversity to the broader canopy.



9.2 Age class diversity

Age diversity is a key indicator of urban forest health. A balanced mix of young, establishing, and mature trees helps ensure the continuity of benefits such as shade, cooling, and habitat, while reducing the risk of sudden canopy loss. Although there is no universal target for age distribution, many cities aim for an even spread across age classes. More recently, best practice suggests that benchmarks should reflect how long trees typically spend in each stage of their life, with a larger proportion in the 'mature' category, where they deliver the greatest benefits. At the same time, planning must ensure that as older trees reach the end of their useful life, younger trees are already in place to maintain canopy cover. For the City of Nedlands, adopting an age-class benchmark will help guide planting and replacement programs to build a resilient and sustainable urban forest (Table 2).

Age Class	Description	Indicative tree of a 50-year life span Years within age class and % of life span	Benchmark range
Juvenile/ young	Approximately the same size as nursery-grown advanced sized stock, easily replaceable	Years 0-5 10%	8-12%
Semi-mature	Not yet achieved a mature appearance and is still actively increasing in biomass, not easily replaceable from regular nursery stock	Years 6-20 30%	24-36%
Mature	Have grown to a size where biomass remains relatively constant	Years 21-50 60%	48-72%
Over-mature	Static or declining biomass and repeated symptoms of decline		Less than 1%

Table 2. Tree age classes and benchmark ranges, and their application to tree management, adapted from the City of Sydney Urban Forest Draft Strategy 2022.

9.3 Survivorship

Tree survival is critical to sustaining the benefits of the urban forest and achieving long-term canopy cover targets. Monitoring survival rates provides insight into the health of both City-managed and privately owned trees and helps identify issues affecting establishment and growth. While few cities set strict numerical targets due to limited data, establishing baseline mortality rates allows meaningful goals to be developed. For the City of Nedlands, integrating survivorship monitoring into existing tree audits will make it possible to track progress, improve survival rates over time, and ensure that canopy cover targets are realistic and achievable.

9.4 Biodiversity

Biodiversity in the City of Nedlands refers to the variety of plants, animals, and microorganisms that form part of the unique ecosystems of the Southwest of WA. As urbanisation increases, supporting biodiversity within cities becomes increasingly important to ecosystem resilience and the delivery of vital services such as habitat, pollination, and climate regulation. Biodiversity can be strengthened by enhancing habitat connectivity, protecting ecological corridors, and managing invasive species. For the City of Nedlands, prioritising habitat protection and expanding biodiversity corridors will help ensure native species can move, adapt, and thrive within the urban environment.



9.5 Canopy cover targets

Setting canopy cover targets is crucial in any strategic plan, as they establish criteria for assessing the Strategy's success over time. These targets highlight essential metrics that can be reliably measured to gauge progress toward the Strategy's overall goals and vision. Regular evaluation of strategies and policies is a fundamental aspect of adaptive management, enabling adjustments when the current approach falls short of achieving the desired outcomes.

In the context of urban forests, targets often focus on the extent and distribution of canopy cover, which serves as a valuable indicator of the environmental, wellbeing, and amenity benefits provided by the urban forest. However, setting these targets involves balancing the ambition for increased canopy cover with what is realistically achievable within a given timeframe. The full impact of planting new trees on urban canopy cover is usually observed decades after planting. Additionally, much of the land in urban forests is privately owned, limiting local governments' ability to influence canopy cover outcomes in these areas. Their influence is generally restricted to development controls, local environmental plans (LEPs), community education and engagement, and indirect methods like tree giveaway programs. The effects of these policies on canopy cover may take considerable time to manifest. Thus, targets for increasing canopy cover should be viewed with a long-term perspective. However, for government policy evaluation and adaptive management, more frequent milestone assessments are necessary.

These targets need to inspire and motivate the community to work towards a shared future vision while remaining realistic and attainable. Overly ambitious targets can discourage City employees and residents if progress assessments reveal insufficient advancement. To ensure targets are practical, they should balance the goal of enhancing canopy cover with the City's limitations. The approach a city adopts to manage these competing priorities should reflect the values of both the local community and the city organization.

The following draft canopy cover targets have been developed based on Land Use (see Section 3.1.2 for baseline canopy cover figures). Considering the capacity for land of different uses to increase canopy cover, the method to develop the canopy cover target differs depending on land use. The outcome is a canopy cover target based on land use, and it considers each lot independently. It considers the potential loss of canopy cover on residential land discussed in Section 6. Considering this potential predicted loss, an increase in canopy cover has been focused on road reserves and parks.

Two scenarios have been provided based on different planting efforts for road reserves and parks. These scenarios are based on 75% (Scenario 1) and 100% (Scenario 2) of available planting space planted with trees.

Table 3 and Table 4 present the draft canopy cover targets for each land use zone under Scenario 1 and Scenario 2 respectively, including indicative tree numbers and associated costs based on an average tree crown area of 50 m². The number of trees planted have been calculated using an average crown area of 50m². Approximate costs have been estimated using the costings below, and include installation, labour, maintenance and watering for three years:

- \$540 per tree for parks and streetscapes. This estimated cost is considerably lower than some other councils in Perth who estimate the cost at more than \$700 per tree.

The targets are based on a 20-year period, with all planting taking place during the 10-year period of the Strategy, to realise canopy cover by the 20-year mark.

					10-year period		Annual	
Land Use Zone	Total Area (ha)	Current Canopy %	Target Canopy %	Increase in canopy	No. of new trees	Establishment and maintenance cost	No. of new trees	Establishment and maintenance cost
Commercial	35.5	9.9	13.2	1.2	239	N/A	24	N/A
Regional road reserves	39.6	18.2	18.2	0.0	0	N/A	0	N/A
Other Land Use	698.6	16.0	16.0	0.0	0	N/A	0	N/A
Residential	609.4	16.0	12.1	-23.3	-4651	N/A	-465	N/A
Parks	283.9	24.6	31.8	20.4	4077	\$2,201,558	408	\$220,156
Road reserves	288.0	24.3	29.9	16.3	3260	\$1,760,162	326	\$176,016
Total LGA	1955.1	18.4	20.2	35.4	7337	\$3,961,721	N/A	\$396,172

Table 3. Canopy cover targets for Land Use Zones in Scenario 1 (75% of APS planted in road reserves and parks). Numbers of trees and costs are provided for the 10-year planting period and as annual figures.

Under Scenario 1, to meet the canopy cover target of 20.2% across the entire City over ten years, the city must plant 4077 new trees in Parks and 3260 new trees in road reserves. This will cost approximately \$3.96 million (\$396,172 every year).



					10-year period		Annual	
Land Use Zone	Total Area (ha)	Current Canopy %	Target Canopy %	Increase in canopy	No. of new trees	Establishment and maintenance cost	No. of new trees	Establishment and maintenance cost
Commercial	35.5	9.9	13.2	1.2	239	N/A	24	N/A
Regional road reserves	39.6	18.2	18.2	0.0	0	N/A	0	N/A
Other Land Use	698.6	16.0	16.0	0.0	0	N/A	0	N/A
Residential	609.4	16.0	12.1	-23.3	-4651	N/A	-465	N/A
Parks	283.9	24.6	34.2	271	5421	\$2,927,318	542	\$292,732
Road reserves	288.0	24.3	31.7	21.3	4268	\$2,304,482	427	\$230,448
Total LGA	1955.1	18.4	20.8	471	9689	\$5,231,801	528	\$523,180

Table 4. Canopy cover targets for Land Use Zones in Scenario 2 (100% of APS planted in road reserves and parks). Numbers of trees and costs are provided for the 10-year planting period and as annual figures.

Under Scenario 2, to meet the canopy cover target of 20.8% across the entire City over ten years, the City must plant 5421 new trees in Parks and 4268 new trees in road reserves. This will cost approximately \$5.23 million (\$523,180 every year).

Scenario 2 represents the planting effort required to maximise canopy outcomes within available planting space in parks and road reserves. Community has expressed a desire to achieve a canopy cover figure of 30% by 2045. We estimate, aligning with the same assumptions applied in Scenarios 1 and 2, that more than 35,407 trees would need to be planted at a cost of \$19.12M. There are no additional planting spaces available to accommodate these trees. As such, it would require the removal of hard infrastructure for planting, and the protection of existing tree canopy in private and public land.

Note that these costs are simplified and make several assumptions:

- 100% success rate of each planted tree.
- No tree loss/death.
- Tree establishment and maintenance cost only (does not consider additional operational costs associated with an increased tree planting program).

Implementation and Action Plan

Urban Forest Strategy Implementation and Action Plan 2025–2035

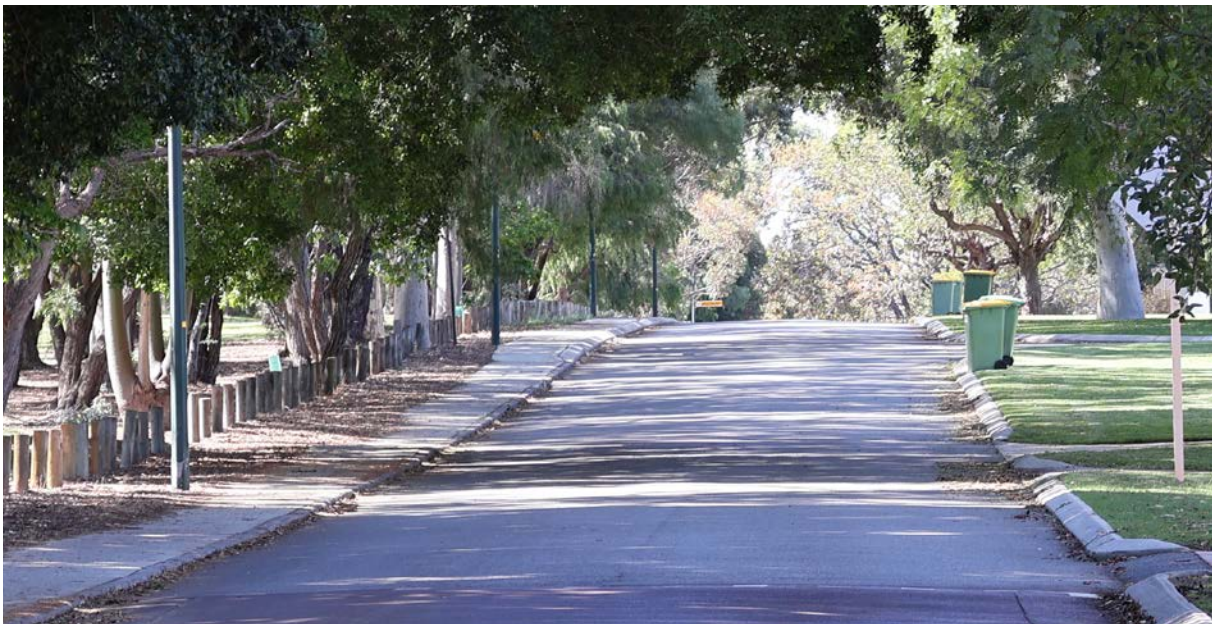
Delivering the City's urban forest vision will require coordinated effort, clear priorities, and sustained investment over time. The actions outlined in this plan translate the strategic directions of the Urban Forest Strategy into practical steps that can be embedded across Council operations, partnerships, and community programs.

The plan recognises that urban forestry is a long-term commitment. Trees take decades to establish, and the benefits of increasing canopy will only be realised if consistent action is taken year after year. For this reason, actions have been staged to align with the 10-year lifespan of the Strategy, balancing immediate priorities with the need to embed structural change and maintain momentum over time.

Stage One - Short Term 1-2 Years: Early priorities and foundational actions.

Stage Two - Medium Term 3-6 years: Scaling up programs and embedding systems.

Ongoing - Throughout the life of the Strategy, and long-term program refinement based on monitoring and evaluation.



Focus Area 1.1 – Private Land Protection and Incentives

Action	Responsibility	Timeframe	Resourcing / Notes
Action 1.2.1 - Develop a targeted communications campaign themed around “Trees as Health Infrastructure,” with emphasis on shade, wellbeing, and cooling, using graphics, short videos, and relevant canopy data from this Strategy.	Communications / Urban Forest Team	Stage one	Internal staff resources
Action 1.1.2 - Review and strengthen the City’s Tree Protection Policy to provide greater protection across more residential zones.	Strategic Planning / Urban Forest Team	Stage one	Internal staff resources and council support
Action 1.1.3 - Investigate and implement financial or regulatory incentive schemes such as rate rebates, tree bonds, or developer offset contributions to encourage retention and offset unavoidable losses.	Finance / Planning / Governance	Stage one	Dependent on feasibility study and Council approval.

Focus Area 1.2 – Targeted Education

Action	Responsibility	Timeframe	Resourcing / Notes
Action 1.2.1 - Develop a targeted communications campaign themed around “Trees as Health Infrastructure,” with emphasis on shade, wellbeing, and cooling, using graphics, short videos, and relevant canopy data from this Strategy.	Communications / Urban Forest Team	Stage one	Internal staff resources
Action 1.2.2 - Expand education through schools and childcare centres, including tree-themed programs, planting days, and heat awareness activities that engage both students and parents.	Communications / Urban Forest Team	Stage one	Internal staff resources. Align with broader education and greening programs



Focus Area 1.3 – Place-Based Prioritisation

Action	Responsibility	Timeframe	Resourcing / Notes
Action 1.3.1 - Use canopy, heat, and vulnerability data to inform planting programs. Develop a street and park planting prioritisation matrix that combines canopy cover, land use, heat exposure, active transport routes and social indicators to guide tree planting, cooling infrastructure, and engagement efforts. Review prioritisation matrix every 3-5 years as new data (thermal, canopy, socio-economic) becomes available.	Urban Forest Team / Parks and Open Space / GIS	Stage one	Technical consultant may be required to develop prioritisation matrix.
Action 1.3.2 – Integrate the planting prioritisation matrix into annual planting programs to guide the selection of planting sites each year, ensuring investment is targeted to maximise cooling, equity, and community benefit.	Urban Forest Team / Parks and Open Space	Ongoing	Deliver through existing planting program with adjusted internal processes.
Action 1.3.3 - Design and deliver visible demonstration greening projects in priority locations, such as high-heat areas near aged care, schools or key pedestrian routes, to demonstrate commitment to equity in greening. Evaluate demonstration sites after 3 and 5 years to document cooling, usage and community feedback and use as case studies.	Urban Forest Team / Parks and Open Space	Stage two	May require landscape team design input or small capital works budget.

Focus Area 2.1 – Species and Structural Diversity

Action	Responsibility	Timeframe	Resourcing / Notes
<p>Action 2.1.1 – Embed minimum diversity benchmarks in all planting programs, applying targets of no more than 10% of any one species, 20% of any one genus, and 30% of any one family (as recommended in Section 9.1 of this Strategy). If over-represented species is identified, new planting of that species is paused except for critical heritage/ character locations.</p>	<p>Urban Forest Team / Parks and Open Space</p>	<p>Stage one</p>	<p>Apply through design and planting review process.</p>
<p>Action 2.1.2 – Expand species trials and monitoring programs, including formal participation in WALGA's Climate-Ready Street Tree Trial and ongoing testing of underused native and climate-adapted species aligned with the Which Plant Were species selector.</p>	<p>Urban Forest Team</p>	<p>Stage one</p>	<p>Leverage external research and partnerships.</p>
<p>Action 2.1.3 – Use the tree inventory to track diversity trends and regularly review species, genus, and family composition to identify over represented groups and guide future planting choices</p>	<p>Urban Forest Team / GIS/ Assets</p>	<p>Ongoing</p>	<p>Requires updated inventory and consistent data input.</p>
<p>Action 2.1.4 Review and update the City's Preferred Species List every 3 years, incorporating new data from planting performance, community feedback, and climate readiness trials. Ensure each update includes an analysis of diversity targets and risk exposure.</p>	<p>Urban Forest Team</p>	<p>Stage two</p>	<p>Use as primary reference for all planting selections.</p>

Focus Area 2.2 – Soil and Water Integration

Action	Responsibility	Timeframe	Resourcing / Notes
Action 2.2.1 – Implement soil improvement at planting and ensure all new street tree plantings include optimal soil volumes, organic compost, soil conditioners, deep mulching and continual turf removal to support establishment. All standard drawings/details and contract specifications will be updated and referenced in procurement.	Urban Forest Team / Parks and Open Space	Ongoing	Implement through standard planting specifications and contract requirements.
Action 2.2.2 – Embed passive irrigation and WSUD principles into design and capital works to enhancing tree access to water by incorporating water-sensitive features such as kerb inlets, swales, raingardens, and passive infiltration zones in verge and streetscape designs to reduce water stress and enhance tree performance. Trial sites for retrofitting WSUD into existing streets where appropriate to support enhanced tree health and stormwater management.	Urban Forest Team / Engineering Design	Stage two	Capital works funding and specialist design input for WSUD integration.



Focus Area 2.3 – Tree Planting Programs

Action	Responsibility	Timeframe	Resourcing / Notes
Action 2.3.1 – Establish a canopy target aligned tree planting program that reflects the adopted investment required to achieve the City's canopy increase by 2045 as modelled in Section 9.5 of the Strategy.	Urban Forest / Finance	Stage one	Integrate into long-term capital works budget planning.
Action 2.3.2 – Revise tree planting contracts and specification to ensure they meet best practice and include three years of establishment care, covering watering, audits, and defect replacement, to ensure long-term survival.	Urban Forest / Procurement	Stage one	Align with contract review cycles and include performance monitoring.
Action 2.3.3 – Establish and Implement a Nursery Stock Procurement, Growth Monitoring and Quality Assurance Program. Sets minimum standards aligned with AS2303:2018, includes regular inspection audits for compliance and framework for quality assurances (aligned with Action 2.3.2 and Action 5.2.2).	Urban Forest Team	Stage one	Technical consultant may be required to develop specification, audit templates and training.
Action 2.3.4 - Develop typology-based tree planting details to guide best practice tree installation and ensure the best chance of tree establishment.	Urban Forest / Design Services	Stage one	May require technical design input.
Action 2.3.5 - Track and report tree establishment success, not just planting numbers. Monitor survival rates and canopy increase at year 1, 3 and 5 years to drive continuous improvement	Urban Forest / GIS	Ongoing	Utilising airborne remote sensing and incorporate into asset management system and planting program review cycle.

Focus Area 2.4 – Responding to Threats

Action	Responsibility	Timeframe	Resourcing / Notes
Action 2.4.1 – Implement proactive monitoring by establishing a tree health monitoring program, using the baseline vegetation condition data (VCI) collected as part of this Strategy and annual/ biannual repeat acquisitions, to detect early signs of stress, pest infestation, or decline across priority areas.	Urban Forest / GIS	Stage one	Will require budget for repeat aerial data collection and support for geospatial data analysis.
Action 2.4.2 – Develop and formalise an Integrated Pest Management (IPM) framework that outlines proactive surveillance, early detection triggers, evidence-based control options, and safe treatment protocols for both current and emerging threats. The framework should guide coordinated responses, prioritise preventative management, and ensure consistent application across all urban forest operations.	Urban Forest / Environment	Stage one	Can be led internally or developed in partnership with specialists
Action 2.4.3 - Develop management protocols for high-impact threats (e.g. PSHB, Phytophthora), including rapid removal and replacement strategies for affected species or areas.	Urban Forest / Environment	Stage one	Coordinate with biosecurity agencies and technical experts

Strategic Direction 3: Transparent and Inclusive Decision Making

Focus Area 3.1 – Alignment and Strategic Direction

Action	Responsibility	Timeframe	Resourcing / Notes
Action 3.1.1 – Embed urban forest outcomes and targets in corporate planning and reporting frameworks including strategic community plans, quarterly reporting, KPI plans, and capital works frameworks.	Corporate Strategy / Governance	Stage two	Align with broader sustainability and liveability reporting frameworks.

Focus Area 3.2 – Community Involvement and Co-Design

Action	Responsibility	Timeframe	Resourcing / Notes
Action 3.2.1 – Establish a community Urban Forest Working Group to embed a collaboration and foster a culture of shared ownership and ongoing support for greening across the municipality. Develop a term of reference document to guide objectives and focus efforts.	Urban Forest / Community Engagement	Stage one	Resourcing for facilitation and group coordination. Representative of priority suburbs and vulnerable cohorts.
Action 3.2.2 – Foster constructive community relationships by developing and publishing clear protocols for managing public input and feedback, building staff capacity in engagement and communication, and shifting interactions with residents from reactive to proactive.	Urban Forest / Community Engagement / Customer Service	Stage two	Internal training and comms development required.
Action 3.2.3 Hold seasonal tree events, or open planting days to foster stewardship and visible, positive interaction with the City’s programs. Support place-based greening pilots where residents, community groups, and technical staff co-design small-scale tree planting in priority areas.	Urban Forest / Community Engagement	Stage two	Coordinate with seasonal planting programs; will require small events budget.

Focus Area 3.3 – Clarity of Decision-Making

Action	Responsibility	Timeframe	Resourcing / Notes
Action 3.3.1 – Develop and publish a Public Tree Decision-Making Framework that explains tree removal, replacement processes in clear, accessible language to the public.	Urban Forest Team/ Communications	Stage two	Internal working group to draft, with Communications input to ensure clarity.
Action 3.3.2 – Issue an annual ‘State of the Urban Forest’ snapshot, driven by aerial data collection, reporting on canopy trends, planting achievements, and upcoming projects.	Urban Forest Team	Ongoing	Deliver as part of ongoing monitoring and evaluation program.
Action 3.3.3 Update and consolidate the City’s existing Verge Planting Guidelines to show approved species and planting configurations. Ensure the document is graphically presented and accessible.	Urban Forest Team / Parks and Open Space	Stage two	Use internal resources with graphic design input for accessibility.

Focus Area 4.1 – Integrated Urban Forest Planning

Action	Responsibility	Timeframe	Resourcing / Notes
Action 4.1.1 - Align capital works with urban greening by ensuring tree planting is integrated into all new road upgrades, drainage, and footpath projects. Use the Green Infrastructure Working Group to coordinate projects.	Engineering / Infrastructure / Urban Forest Team	Ongoing	Requires early cross-team coordination. May need updates to capital works checklists and design templates.
Action 4.1.2 - Obtain early arboricultural input on infrastructure projects to protect existing trees and identify opportunities for canopy enhancement.	Engineering / Urban Forest Team	Ongoing	Embed arboriculture referral trigger into workflows.

Focus Area 4.2 – Efficient Processes and Systems

Action	Responsibility	Timeframe	Resourcing / Notes
Action 4.2.1 - Implement an integrated tree asset management system to allow for streamlined workflows and tracking of planting, maintenance, removals, and inspections in real time (work orders). Consider implementing a bespoke tree management platform.	Urban Forest Team / IT Services	Stage one	Platform procurement may require budget and internal IT integration support. System to support mobile apps for field crews, photo capture and work order tracking.
Action 4.2.2 - Improve internal reporting by establishing and utilising an urban forest dashboard or web-based geospatial user interface to monitor performance against planting and maintenance targets.	Urban Forest Team / IT Services	Stage two	Use existing reporting tools where possible; platform procurement may require budget and internal IT integration support.
Action 4.2.3 - Review and update service delivery contracts to ensure they align with digital tracking and support proactive maintenance.	Urban Forest Team / IT Services/ Procurement	Stage two	Align with contract renewal cycles to embed digital and performance requirements.

Focus Area 4.3 – Monitoring and Evaluation

Action	Responsibility	Timeframe	Resourcing / Notes
Action 4.3.1 - Conduct acquisition of aerial thermal, vegetation cover and condition data every 1-2 years using consistent remote sensing techniques to track progress toward targets, identify localised canopy loss, identify urban heat islands, monitor change in vegetation condition, and inform adaptive planning and investment.	Urban Forest Team / GIS	Ongoing	Delivered as part of ongoing remote sensing program; budget to be established for annual/biannual acquisition.
Action 4.3.2 - Use data (inventory and aerial data) to support evidence-based decision making, including refining planting locations, adjusting maintenance priorities, and adapting community engagement based on observed outcomes.	Urban Forest Team / GIS	Ongoing	Internal coordination required across departments to ensure data informs annual programming and planning cycles.



Focus Area 5.1 – Long-Term Funding Commitment

Action	Responsibility	Timeframe	Resourcing / Notes
Action 5.1.1 - Establish planting and maintenance budgets aligned with the lifecycle costings developed in the tree asset management plan (action 5.2.2). Ensure forward planning accounts for future asset replacement and ongoing care.	Finance / Assets and Urban Forest	Stage one	Additional resources required
Action 5.1.2 - Incorporate urban forest funding requirements into Long-Term Financial Plans and annual budgeting cycles to provide continuity and reduce reliance on one-off grants.	Finance/ Urban Forest	Stage two	Embed in forward planning to stabilise funding.
Action 5.1.3 Identify opportunities for external funding such as federal or state greening programs, private partnerships, or developer contributions to support tree planting and infrastructure.	Urban Forest / Strategic Planning	Ongoing	Monitor grant programs and leverage co-investment opportunities.

Focus Area 5.2 – Strategic Tree Asset Management

Action	Responsibility	Timeframe	Resourcing / Notes
Action 5.2.1 – Update and improve the existing tree asset inventory to provide a reliable foundation for planning, maintenance, and monitoring. Ensure all records include species, condition, canopy size, planting potential, and location.	Urban Forest / Assets / GIS	Stage one	Will require field tree inspections. Can be delivered internally over time or with funding for one off acquisition.
Action 5.2.2 - Develop a Tree Asset Management Plan to guide lifecycle costing, scheduled maintenance, renewal, and risk mitigation. The plan should link with updated tree inventory data, support long-term budgeting, and embed trees as critical infrastructure assets within the City’s broader asset management framework.	Urban Forest / Assets	Stage two	Can be delivered internally or with specialist consultant.
Action 5.2.3 Implement proactive maintenance programs based on condition, age, and risk data. Use inventory insights to guide pruning schedules, risk mitigation, and targeted interventions for ageing, underperforming, or high-value trees, ensuring efficient use of resources and consistent service levels across the city.	Urban Forest / Assets	Ongoing	Additional funding required. Align with contract specifications and internal capacity. Use risk-based prioritisation and document reduced risk.

Focus Area 5.3 – Organisational Capability and Delivery

Action	Responsibility	Timeframe	Resourcing / Notes
Action 5.3.1 - Create a dedicated urban forest implementation role to assist with implementation of the Urban Forest Strategy, oversee planting programs, and maintain the tree asset inventory register. This role will coordinate contractors, ensure consistent delivery, and serve as a key contact point for interdepartmental and community engagement.	Urban Forest Team / HR / Finance	Stage one	New staff position; resourcing to be secured through budget planning
Action 5.3.2 Build staff capacity and training across relevant departments in tree protection, species selection, and community engagement. Ensure key urban forest staff are qualified in a recognised industry tree risk framework such as QTRA, TRAQ or VALID.	Urban Forest Team / HR	Stage one and ongoing	Include training costs in annual staff development budgets.
5.3.3 Strengthen oversight and performance management of external contractors involved in planting, watering, and pruning. Consider outcome-based contracts that include canopy growth or establishment benchmarks.	Urban Forest Team / Procurement	Stage two	May require contract review and updates to include performance metrics.



References

- DPLH, WAPC, & WALGA. (2018). *BETTER URBAN FOREST PLANNING*. Western Australian Planning Commission. https://www.planning.wa.gov.au/dop_pub_pdf/Better_Urban_Forest_Planning.pdf
- Escobedo, F. J., Adams, D. C., & Timilsina, N. (2015). Urban forest structure effects on property value. *Ecosystem Services*, 12, 209–217. <https://doi.org/10.1016/j.ecoser.2014.05.002>
- Ewane, E. B., Bajaj, S., Velasquez-Camacho, L., Srinivasan, S., Maeng, J., Singla, A., Luber, A., de-Miguel, S., Richardson, G., Broadbent, E. N., Cardil, A., Jaafar, W. S. W. M., Abdullah, M., Corte, A. P. D., Silva, C. A., Doaemo, W., & Mohan, M. (2023). Influence of urban forests on residential property values: A systematic review of remote sensing-based studies. *Heliyon*, 9(10), e20408. <https://doi.org/10.1016/j.heliyon.2023.e20408>
- Frank, S. D., & Backe, K. M. (2023). Effects of Urban Heat Islands on Temperate Forest Trees and Arthropods. *Current Forestry Reports*, 9(1), 48–57. <https://doi.org/10.1007/s40725-022-00178-7>
- García-Lamarca, M., Anguelovski, I., Cole, H. V. S., Connolly, J. J. T., Pérez-del-Pulgar, C., Shokry, G., & Triguero-Mas, M. (2022). Urban green grabbing: Residential real estate developers discourse and practice in gentrifying Global North neighborhoods. *Geoforum*, 128, 1–10. <https://doi.org/10.1016/j.geoforum.2021.11.016>
- Giacinto, J. J., Fricker, G. A., Ritter, M., Yost, J., & Doremus, J. (2021). Urban forest biodiversity and cardiovascular disease: Potential health benefits from California's street trees. *PLOS ONE*, 16(11), e0254973. <https://doi.org/10.1371/journal.pone.0254973>
- Gray, A., Doyle, S., Doyle, C., Young, J. C., & McMahon, B. J. (2024). Birds and human health: Pathways for a positive relationship and improved integration. *Ibis*, 166(3), 761–779. <https://doi.org/10.1111/ibi.13290>
- Ho, J. Y., Shi, Y., Lau, K. K. L., Ng, E. Y. Y., Ren, C., & Goggins, W. B. (2023). Urban heat island effect-related mortality under extreme heat and non-extreme heat scenarios: A 2010–2019 case study in Hong Kong. *Science of The Total Environment*, 858, 159791. <https://doi.org/10.1016/j.scitotenv.2022.159791>
- Huang, W., & Lin, G. (2023). The relationship between urban green space and social health of individuals: A scoping review. *Urban Forestry & Urban Greening*, 85, 127969. <https://doi.org/10.1016/j.ufug.2023.127969>
- Jennings, V., & Bamkole, O. (2019). The Relationship between Social Cohesion and Urban Green Space: An Avenue for Health Promotion. *International Journal of Environmental Research and Public Health*, 16(3), Article 3. <https://doi.org/10.3390/ijerph16030452>

Marselle, M. R., Lindley, S. J., Cook, P. A., & Bonn, A. (2021). Biodiversity and Health in the Urban Environment. *Current Environmental Health Reports*, 8(2), 146–156. <https://doi.org/10.1007/s40572-021-00313-9>

Nowak, D. J., Hirabayashi, S., Doyle, M., McGovern, M., & Pasher, J. (2018). Air pollution removal by urban forests in Canada and its effect on air quality and human health. *Urban Forestry & Urban Greening*, 29, 40–48. <https://doi.org/10.1016/j.ufug.2017.10.019>

Pandit, R., Polyakov, M., & Sadler, R. (2014). Valuing public and private urban tree canopy cover. *Australian Journal of Agricultural and Resource Economics*, 58(3), 453–470. <https://doi.org/10.1111/1467-8489.12037>

Pandit, R., Polyakov, M., Tapsuwan, S., & Moran, T. (2013). The effect of street trees on property value in Perth, Western Australia. *Landscape and Urban Planning*, 110, 134–142. <https://doi.org/10.1016/j.landurbplan.2012.11.001>

Rahman, M. A., Stratopoulos, L. M. F., Moser-Reischl, A., Zölch, T., Häberle, K.-H., Rötzer, T., Pretzsch, H., & Pauleit, S. (2020a). Traits of trees for cooling urban heat islands: A meta-analysis. *Building and Environment*, 170, 106606. <https://doi.org/10.1016/j.buildenv.2019.106606>

Rahman, M. A., Stratopoulos, L. M. F., Moser-Reischl, A., Zölch, T., Häberle, K.-H., Rötzer, T., Pretzsch, H., & Pauleit, S. (2020b). Traits of trees for cooling urban heat islands: A meta-analysis. *Building and Environment*, 170, 106606. <https://doi.org/10.1016/j.buildenv.2019.106606>

Sullivan, W. C., Kuo, F. E., & Depooter, S. F. (2004). The Fruit of Urban Nature: Vital Neighborhood Spaces. *Environment and Behavior*, 36(5), 678–700. <https://doi.org/10.1177/0193841X04264945>

Tsoka, S., Leduc, T., & Rodler, A. (2021). Assessing the effects of urban street trees on building cooling energy needs: The role of foliage density and planting pattern. *Sustainable Cities and Society*, 65, 102633. <https://doi.org/10.1016/j.scs.2020.102633>

Wang, X., Dallimer, M., Scott, C. E., Shi, W., & Gao, J. (2021). Tree species richness and diversity predicts the magnitude of urban heat island mitigation effects of greenspaces. *Science of The Total Environment*, 770, 145211. <https://doi.org/10.1016/j.scitotenv.2021.145211>

Yadav, N., Rajendra, K., Awasthi, A., Singh, C., & Bhushan, B. (2023). Systematic exploration of heat wave impact on mortality and urban heat island: A review from 2000 to 2022. *Urban Climate*, 51, 101622. <https://doi.org/10.1016/j.uclim.2023.101622>

Appendix

Appendix A – Consultation Feedback and Strategy Response

This appendix summarises key themes raised through community consultation, stakeholder submissions, and internal City review during the development of the Urban Forest Strategy. It demonstrates how feedback has been considered and, where appropriate, incorporated into the Strategy.

Table 5 provides a summary of the key feedback themes and outlines the Strategy's response, including where changes have been incorporated within the document.

Not all feedback resulted in direct changes to targets or policy positions, as some matters are subject to Council decision-making, budget allocation, or separate statutory processes. However, all feedback was reviewed and informed the refinement of strategic directions, priorities, and implementation actions outlined in this Strategy.



Feedback source	Key theme or issue raised	Strategy response	Where addressed in Strategy
City of Nedlands – Arborist (internal review)	Action Plan does not explicitly address maintaining and improving existing tree assets and canopy	Added a dedicated focus area and actions addressing proactive tree maintenance, canopy retention, and extending the life of existing trees	Section 8.1.2 (Strategic Direction 2 – Focus Area 2.5); supported by existing actions in Section 10 (Implementation and Action Plan)
Community survey	Strong support for protecting existing trees and increasing canopy cover; concern about ongoing canopy loss	Reinforced canopy protection as a core strategic direction alongside planting; prioritised retention and equitable canopy growth	Sections 5, 6, 8
Community survey	Desire for clear, transparent decision-making and better communication about tree management	Strengthened focus on transparent and inclusive decision-making, including clearer communication and reporting actions	Sections 8 and 10
Nedlands Tree Canopy Advocates (NTCA)	Urgency of action; concern that Strategy delays key actions to later stages	Expanded Stage One actions to include immediate canopy protection, maintenance, and private land-focused actions	Section 10
NTCA	Request for higher canopy targets (30% by 2040)	Strategy presents evidence-based scenarios and costs; final target setting remains a Council decision informed by this Strategy	Section 9
NTCA	Need for stronger protection of mature trees, particularly on private land	Strengthened focus on private land protection, incentives, education, and planning integration	Sections 6, 8, 10
NTCA and community submissions	Need for better maintenance of existing trees to avoid premature removal	Explicitly recognised maintenance as a canopy-retention strategy, not just an operational task	Sections 6 and 10
Stakeholder workshop participants	Desire for practical, actionable steps rather than high-level vision only	Developed a staged, action-oriented Implementation Plan with defined responsibilities and timeframes	Section 10

Table 5. Summary of Key Consultation Feedback and Strategy Response



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