Tree Canopy Plan
2023

northern
beaches
council

September 2023

Acknowledgement of Country

We acknowledge the Traditional Custodians and their Country on which we gather today. By these words we show our respect to all Aboriginal people. We acknowledge Elders past, present and emerging and the spirits and ancestors of the Clans that lived in this area.

Contents

This Tree Canopy Plan has been developed with assistance from Mosaic Insights (2022)

September 2023

Executive Summary

While the Northern Beaches has one of the highest tree canopy covers in the Greater Sydney area, it faces the risk of losing its tree canopy at a rapid rate.

Our tree canopy is a key element of our natural and built environment that contributes to the heath, amenity, biodiversity and character of the Northern Beaches. While the Northern Beaches has one of the highest tree canopy covers in the Greater Sydney area, it faces the risk of losing its tree canopy at a rapid rate.

Tree canopy refers to the uppermost branches of the trees, forming a more or less continuous layer of foliage from all trees above 3m and may include a variety of tree types such as natives, exotics, deciduous and evergreen trees.

Council has been focusing on improving the management of trees and greening of public and private lands and has made ongoing commitments in the Local Strategic Planning Statement and the Protect. Create. Live. Environment and Climate Change Strategy.

This Tree Canopy Plan was developed with the input of Council staff through a series of workshops held between June-August 2022. It is also informed by previous community feedback which indicates that our residents value and appreciate:

- our tree canopy
- the benefits of trees
- tree planting
- the need to reduce the heat island effect
- tree canopy is a key form of green infrastructure
- engaging in public tree canopy and greening projects
- controls and policy that support the retention and protection of trees
- environmental sustainability
- role in carbon sequestration
- wellbeing benefits
- proximity to open spaces nature and views

While the Northern Beaches has good tree canopy overall, when considering all land including National Parks (at 56.73% cover), there is room for improvement to meet the State Government target of 40% canopy cover in urban areas[1]. The Northern Beaches is currently sitting at 37%[2], however, we are tracking very well in comparison to the average for Sydney which is currently at 21% urban tree canopy cover.

[1] *NSW Government's Greater Sydney Commission Our Greater Sydney 2056 North District Plan March 2018*

[2] *Northern Beaches Council Light Detection and Ranging (LiDAR) 2019*

This Plan sets the framework for management of the tree canopy across the Northern Beaches. The tree canopy is considered holistically, however, the Actions are primarily focused on Council managed land, and where possible at strengthening tree canopy retention and improvement on private land. Stemming the loss of tree canopy on private land is important because Council's ongoing work to increase tree canopy on public land is not quite offsetting the losses occurring on private property.

The key pressures and challenges are varied and include the following:

- population increases and urban intensification
- climate change (more heatwaves, more trees lost to storms, worsening drought periods)
- illegal tree removal and tree vandalism
- problematic trees and weeds
- pests and diseases
- aging of mature trees
- community expectation.

Five Focus Areas have been developed to frame the Actions identified in this Plan, they are:

Focus area 1

Manage public trees as essential assets to maintain canopy across public lands - streets and parks.

Focus area 2

Increase the capacity of the community to participate and engage in public tree canopy and greening projects.

Focus area 3

Monitor losses and gains in the canopy across the Northern Beaches area and support the community to retain and protect canopy.

Focus area 4

Strengthen the local planning framework (e.g. LEP and DCP) to support retention, protection, replacement, and growth of private trees.

Focus area 5

Enforcement and investigation of unauthorised tree removal/ clearing as a priority.

Commitments

Our commitments under this Plan are to:

1. Retain and improve the tree canopy on Council managed land through planting 5,000 trees per year for 20 years and maximising survival rates

2. Develop tree canopy masterplans for priority areas that are currently or emerging as vulnerable, high heat indexed and low canopy locations, including Brookvale, Mona Vale, Dee Why, Narrabeen, Naraweena, Warriewood, Manly

3. Integrate tree canopy/greening into all parts of the Local Government Area (LGA)

4. Partner with the community to protect the canopy and participate in initiatives and projects

5. Strengthen planning controls (LEP and DCP), policies and guides to ensure developments provide adequate tree canopy or greening

6. Require deep soil and tree planting on private lots and replacement planting through planning controls for any tree losses that cannot go back in the same location

7. Continue to regularly measure and monitor our canopy cover (losses and gains) across the public and private domain.

8. Reviewing resources and processes within Council to improve detection and enforcement of unauthorised tree removal/clearing.

Implementation

This Plan has been developed to manage the tree canopy across the Northern Beaches. It highlights the need to collect, collate and monitor data about trees, integrate management processes across teams, and engage and involve our community to protect and further enhance the canopy cover.

The identified actions will be implemented over the next four years. Their initiation and completion is a high priority for Council as a means of retaining and protecting the tree canopy and is facilitated through a recurrent budget process, current Council priorities and available resources. Each Action will be considered and where relevant included in annual operational plans. Council will use available data and the 2019 canopy baseline information to monitor the impact of the actions and how successful we are in protecting and maintaining a healthy and diverse canopy cover.

The success and progress of all of the Actions will be reviewed annually and the whole Plan will be revised at the end of the four year period. Any new data will be analysed and considered. The Actions of this Plan may be modified and adapted where:

- monitoring and evaluation support an alternative approach
- new data identifies additional or new priorities
- there are new advances in the field of tree canopy management
- it would be advantageous to seek new opportunities.

About this Tree Canopy Plan

Northern Beaches tree canopy coverage is one of the highest in Sydney and is the envy of many other metropolitan areas.

Tree canopy contributes significantly to the liveability and resilience of the Northern Beaches as well as to its biodiversity, amenity, and character. The Northern Beaches community is committed to protecting and growing its tree canopy and this Plan sets out the Actions to be taken over the next four years.

Introduction

This Plan is the result of significant ongoing commitments included in Council's high-level strategies as well as a requirement of the Local Government Act 1993 to implement ecologically sustainable strategies. The Plan responds to strong community feedback regarding the protection of tree canopy.

Council is committed to maintaining and growing the tree canopy. Through this Action Plan Council will contribute to the NSW Government's Greater Sydney Commission Our Greater Sydney 2056 North District Plan March 2018 objective of 40% urban tree canopy cover for metropolitan Sydney by 2036, by maintaining trees in high coverage areas and increasing trees in low coverage areas.

While Northern Beaches currently enjoys a high percentage overall tree canopy cover (at 56.73%), the tree canopy is under threat from a range of pressures: development and associated tree removals; climate change (more heatwaves, loss from increased storm activity, more intense periods of drought and flood events); population increases and urban intensification. Our data shows the canopy is not equitably distributed and there has been a decline in canopy cover between 2011-2019.

There is a need to protect not just the significant trees on the Northern Beaches, but also trees that provide habitat, shade and cooling and aesthetic value for both public and private lands for the benefit of our ongoing health and that of the ecosystems. Old growth trees are a major carbon sink, providing habitat for wildlife and in some places have significance for First Nations people.

The increasing number of residents and businesses moving into the Northern Beaches places pressure on the area's environment. In order to meet the needs of a growing population, we recognise that there will be impacts on the current canopy and that there are many challenges in managing trees and canopy as the population increases.

To meet this challenge, we must work across the public and private realm to address the loss of established tree canopy and maintain the existing tree canopy, including through succession or compensatory planting. Collaboration and cooperation are required between all levels of government and the community.

The Plan outlines the commitment to tree canopy and specific Actions to maintain and enhance it.

Where this Plan fits

The Tree Canopy Plan aligns with the Northern Beaches Community Strategic Plan 2040 and supports the implementation of Council's Local Strategic Planning Statement (Towards 2040), Environment and Climate Change Strategy 2040 (Protect. Create. Live. Environment and Climate Change Strategy) and the Resilience Strategy (Withstand.Adapt.Thrive.). See Figure 1.

Greener neighbourhoods

Our goal is that the built environment integrates nature and connects our community through green and blue networks to support active travel and healthy lifestyles. We design our community around nature.

The development of the Tree Canopy Plan is also guided by directions in other key strategies that look towards 2040. Figure 1 shows these strategies and makes the link from the relevant outcome/priority/direction/theme to the Tree Canopy Plan.

Commitments

- increasing the existing tree canopy to expand the local green grid
- planting a minimum of 5,000 trees each year
- ensuring development integrates and supports the surrounding natural environment.

Towards 2040 principles

- Create a resilient, healthy and interconnected urban tree canopy across the Northern Beaches.
- Protect, maintain and enhance the existing urban tree canopy, including mature trees.
- Provide a diverse range of species of varying families and genera, prioritising local native tree shrub and ground cover species where possible.
- Offset tree canopy loss by planting a minimum of two trees for any one tree removed from public land. Undertake succession planning and planting ahead of end of tree life.
- Integrate the design of green, blue and grey infrastructure in support of the urban tree canopy.
- Reduce exposure to UV radiation and the urban heat island effect by increasing the urban tree canopy and green cover, incorporating water sensitive urban design and improving infrastructure and building design.
- Provide habitat for wildlife and connect to the local green grid including wildlife corridors.

Figure 1
Northern Beaches planning hierarchy relating to the Tree Canopy Plan

About this Plan

This Tree Canopy Plan outlines Council's commitment to managing tree canopy, and Actions to maintain and enhance it across the Northern Beaches. The Plan will support Council's vision for the community outlined in the Local Strategic Planning Statement (Towards 2040), Environment and Climate Change Strategy 2040 (Protect. Create. Live. Environment and Climate Change Strategy) and the Resilience Strategy (Withstand.Adapt.Thrive.), and provides a framework for managing Council's tree canopy for the next four years.

This Plan provides:

- the tree canopy definition for the Northern Beaches
- an assessment of the current state of the tree canopy based on available information
- a review of pressures, challenges, and opportunities associated with trees
- five key focus areas for tree canopy management in both public and private lands across the LGA and major Actions to enhance and manage the tree canopy on the Northern Beaches.

Aim of this Tree Canopy Plan

In pursuing Council's goal around tree canopy, this Plan aims to:

- protect, retain, maintain and improve the tree canopy on public and private land and prioritise actions in areas of high urban heat, socio-economic disadvantage, existing established tree canopy, low canopy and biodiversity corridors.

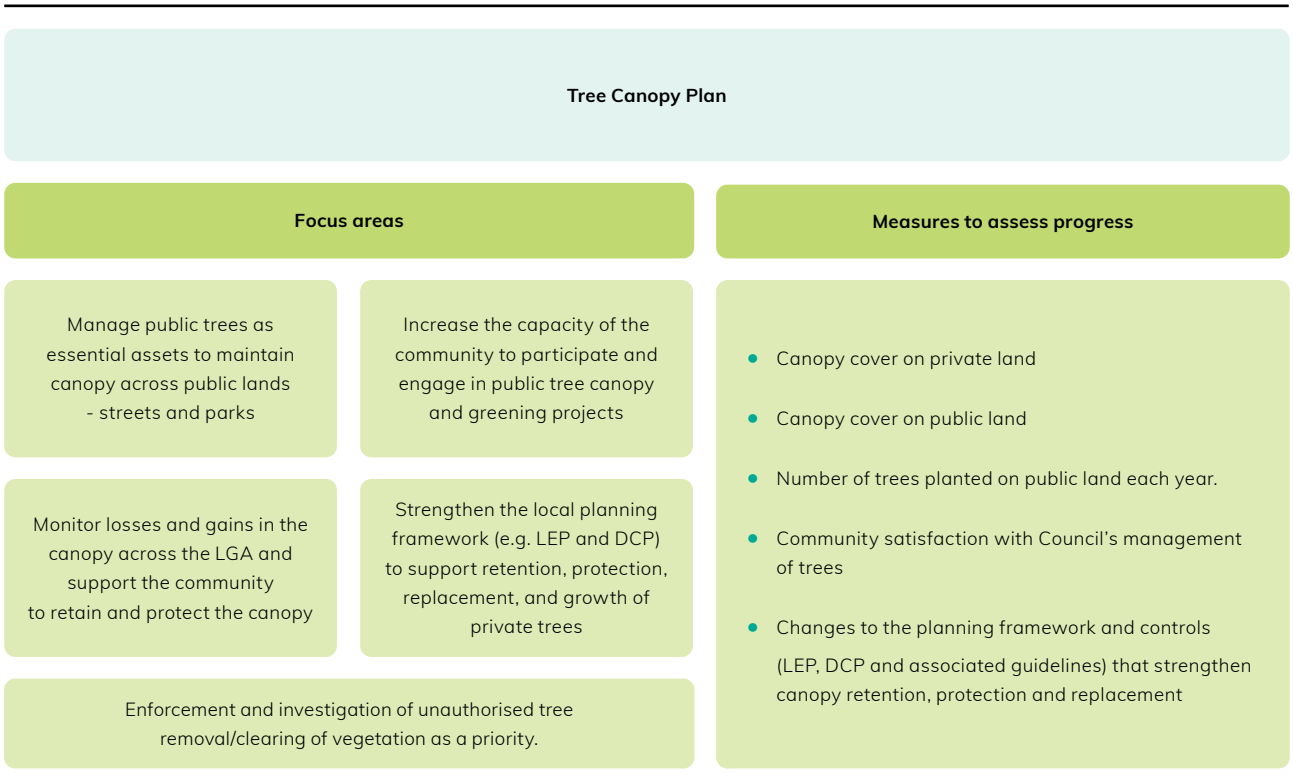
Definitions

- *Tree canopy* refers to the uppermost branches of the trees, forming a more or less continuous layer of foliage, from all trees above 3m. It includes canopy from:
  - a variety of tree types such as natives, exotics, deciduous and evergreen trees occupying a range of environments from town and villages to local main streets and suburbs
  - trees on all land within the Northern Beaches.
- *Canopy cover* is a measure of the extent of the layers of leaves and branches of the trees. It is typically measured as a percentage of the total land area to determine the existing tree canopy cover and to understand changes over time.

Focus areas and measures

The focus areas for this Tree Canopy Plan and measures to assess progress are outlined in Figure 2.

Figure 2
Northern Beaches - Focus Areas and Measures to Assess Progress



Current state of the tree canopy

To adequately plan for the future tree canopy across the Northern Beaches it is important to establish a baseline or a current state.

This section provides a summary of the current state of the tree canopy and related elements using available data. It highlights data gaps for future consideration.

Current canopy cover

Metropolitan context

The Greater Cities Commission (The Pulse of Greater Sydney) identified that of the nine Councils in the Sydney North District, the Northern Beaches, Ku-ring-gai and Hornsby all have over 50% tree canopy. This measure is of the tree canopy in the urban areas identified in the North District Plan and excludes tree canopy cover in National Parks and the Metropolitan Rural Area (MRA).

Northern Beaches context

The Northern Beaches tree canopy data that has informed this Plan was obtained by Council in May 2019 using a LiDAR survey. This provides our baseline canopy cover and will enable us to measure the effectiveness of this Plan and monitor our performance. Figure 3 shows the 2019 canopy cover across the LGA. Analysis of the 2019 LiDAR survey shows there is:

- 56.73% canopy cover across the whole LGA including national parks
- 56.81% canopy cover across open space and bushland.

National Parks

A significant amount of the Northern Beaches tree canopy is located in National Parks. Their presence contributes significantly to the character and beauty of the Northern Beaches. National Parks and Wildlife Service manages these areas on behalf of the State Government. In addition to protecting and preserving tree canopy, these parks play an integral role in conserving biodiversity.

This Plan excludes direct Actions within the National Parks. Nevertheless, the protection and management of the Northern Beaches tree canopy on urban and non-urban areas will support a seamless bush environment for wildlife corridors and provide ongoing support to these parks.

Northern Beaches LGA Land Area

Total Area (minus water bodies) 25,415 hectares

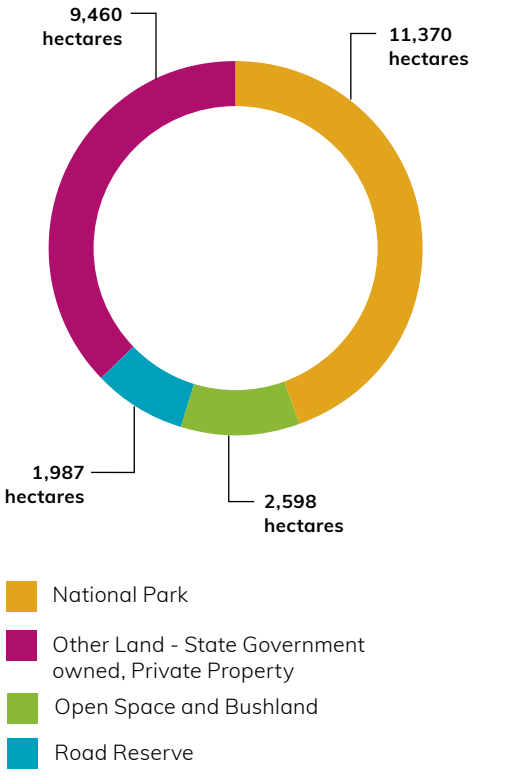
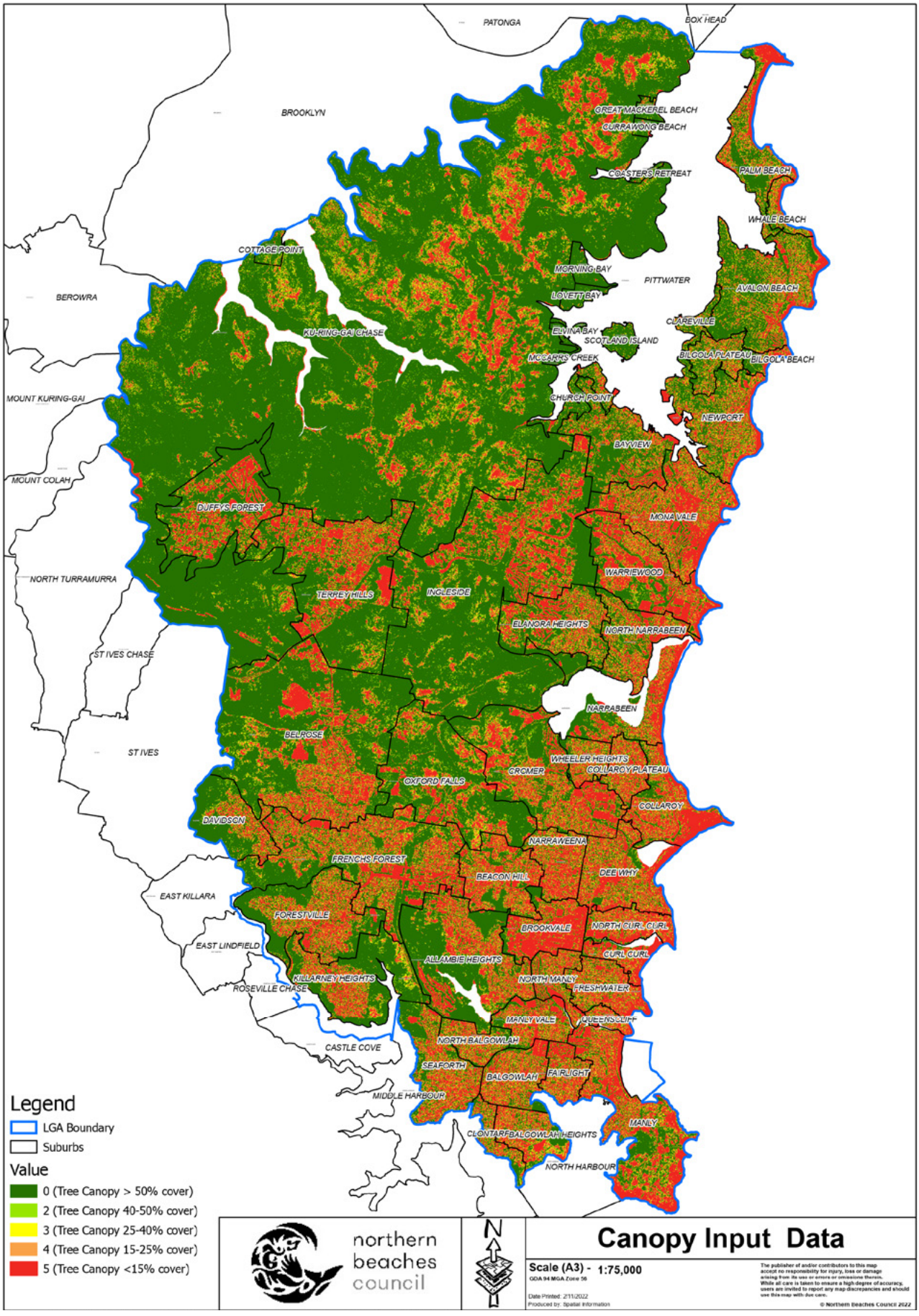


Figure 3
Map of Northern Beaches tree canopy % cover (source: Northern Beaches Council)



Council managed land

Council managed lands include the thousands of trees within parks, sportsgrounds, open space, reserves and road reserves. Of the 4,585 hectares of land that Northern Beaches Council manages more than 1,700 hectares are bushland.

Council undertakes both proactive maintenance works and reactive maintenance works. Proactive works include the regular removal and maintenance of trees which leads to a reduction in reactive work resulting from unexpected weather events posing a threat and hazard to the community. This, in turn, should reduce the level of reactive tree maintenance, as a result of climatic conditions and storm events.

Reactive maintenance such as removing dangerous branches or trees is carried out on a priority basis. Council becomes aware of maintenance works as a result of resident notifications, from their routine maintenance inspections, and in response to damage from storms or work required due to interference with infrastructure.

Street trees are very important assets for councils. They provide amenity, improve air quality by removing carbon dioxide and returning oxygen, enhance property values, provide biodiversity and provide cooling shade. Northern Beaches Council's has many trees across all land types and tens of thousands of street trees, with multiple species, that are both native and exotic, evergreen and deciduous and range in age, size and condition.

Private land

The management of the tree canopy on private property is regulated by the Environmental Planning and Assessment Act 1979, and specifically the State Environment Planning Policy (Bio Diversity & Conservation) 2021, and Councils Development Control Plan for trees and bushland preservation.

There are a number of tree species that are exempt and do not require approval to be removed regardless of their size. The exempt tree species list can be found on Council's **website** northernbeaches.nsw.gov.au/environment/trees/exempt-tree-species-list.

Additionally, there are exemptions and guidelines for tree species that are classified as part of a complying development or if the property is in a 10/50 Vegetation Clearing Entitlement Area.

This Plan supports Actions to encourage private landowners to retain canopy trees, plant more trees, and assist Council in collecting private tree data.

Suburb canopy cover

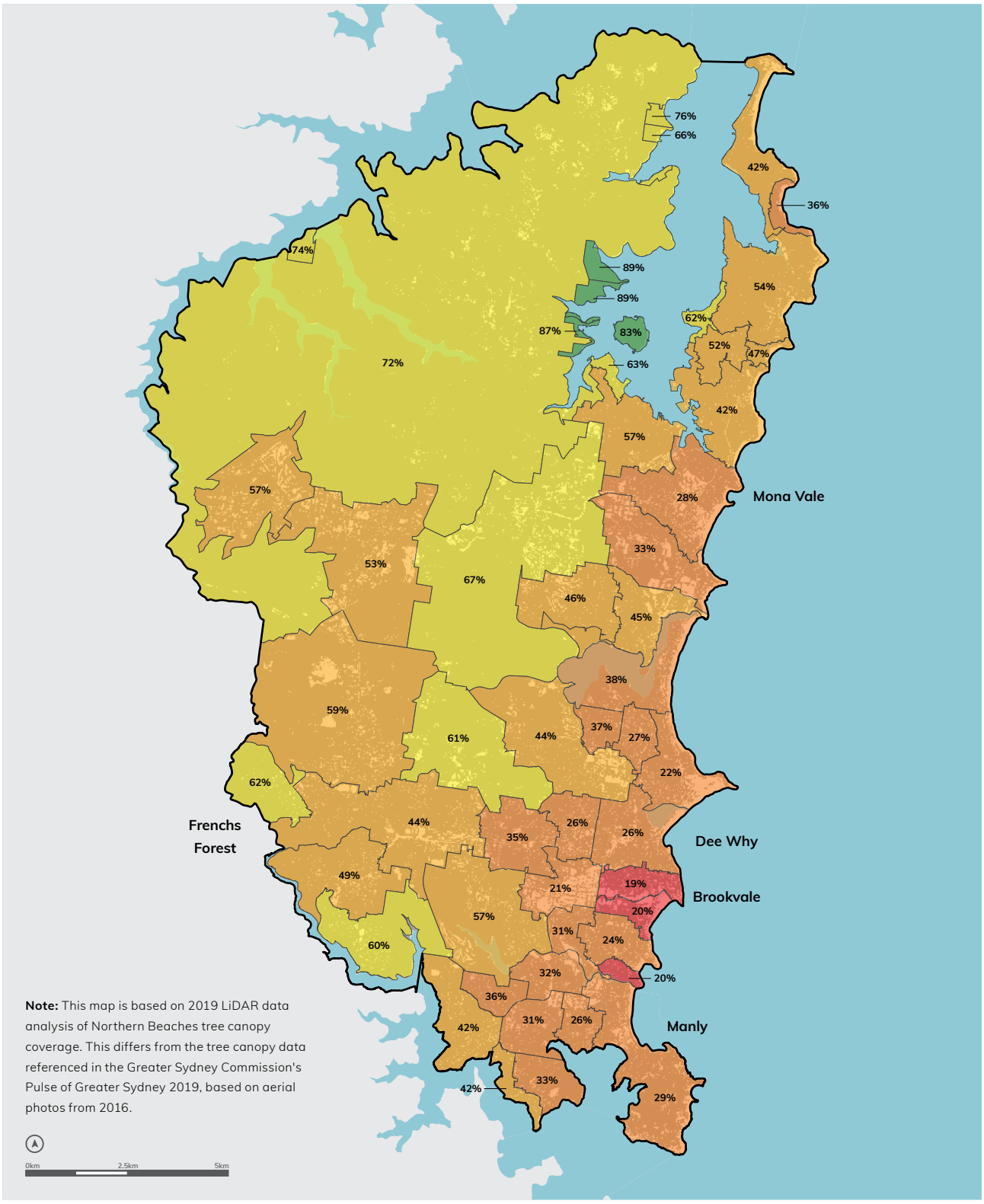
Tree canopy per suburb shows a lower percentage tree canopy in urban areas particularly along the coast (Figure 3 and Figure 4). Across the LGA there are pockets of the urban area with low canopy due to large areas of open space, coastal vegetation that may not grow above 3m in height and a desire for uninterrupted views of the coast.

Some of the suburbs with the lowest tree canopy cover include:

- Curl Curl (20%)
- North Curl Curl (19%), largely due to a lack of canopy at John Fisher Park
- Queenscliff (20%)
- Brookvale (21%)

Suburbs with over 80% tree canopy include the non-urban coastal communities such as Scotland Island, Morning Bay and Lovett Bay.

Figure 4
Northern Beaches tree canopy cover (%) by suburbs



Legend

Tree canopy percentage per suburb

- 80 - 100%
- 60 - 80%
- 40 - 60%
- 20 - 40%
- Less than 20%
- Canopy > 3m
- Suburb boundary

Changes in tree canopy cover

LiDAR survey for the LGA was first undertaken in 2011 and 2013 in the north and southern sections of the LGA respectively. This has been compared to the May 2019 LiDAR. While the survey methods had slight differences, the data still provides a good level of comparison and an indication of changes over time.

Figure 5 shows a comparison of canopy cover over 3 metres between 2011-13 and 2019, there has been:

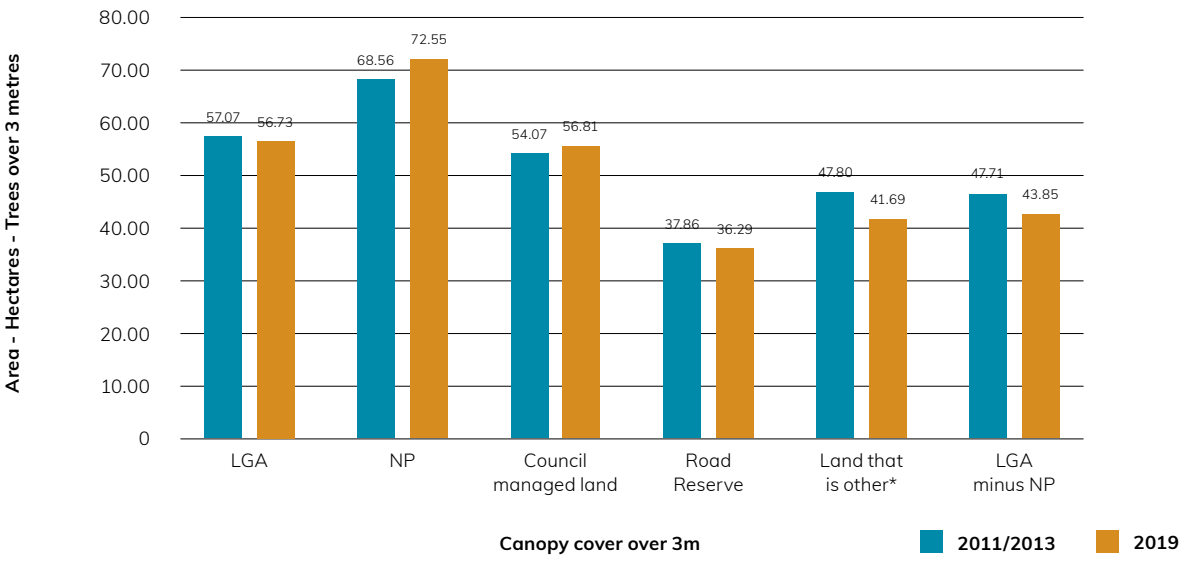
- a small decrease of 0.34% in the overall canopy cover
- an increase of 3.99% in the canopy within the National Parks
- a reduction of 6.12% in the canopy on other land*
- a reduction of 1.57% in the canopy cover associated with streets and roads
- a slight increase of 2.74% in the canopy cover of open space and bushland areas.

There has been an overall decrease in canopy cover between 2013 - 2019. Changes (losses and gains) in canopy are not evenly distributed.

Direct causes of losses in canopy cover are as a result of:

- bush fire fuel management through hazard reduction burning
- Mona Vale and Warringah Road upgrades
- clearing for development, including both approved and illegal removals
- removal of individual trees, including exempt tree species (both exotic species and trees under 5m tall) and dangerous trees
- application of the 10/50 Code under the Rural Fires Act, which allows removal of trees within 10m of a house in a 10/50 entitlement area
- dead trees due to reaching the end of their natural life.

Figure 5
Hectares of Canopy 2011-13 and 2019



** Other land = Land that is not National Park, Council managed or Water Bodies, includes eg. State owned lands, privately owned*

Urban heat

The Urban Heat Island Effect (UHIE)[3] can be defined as the "discernible temperature difference between urban and adjacent rural areas caused by the excess heat emitted and the solar gain trapped by the urbanised environment" (Gartland, 2008[4]) . Trees provide cooling through evapotranspiration and surface shading. Often UHIEs are associated with extreme heatwaves that increase the demand for energy, water, and healthcare services.

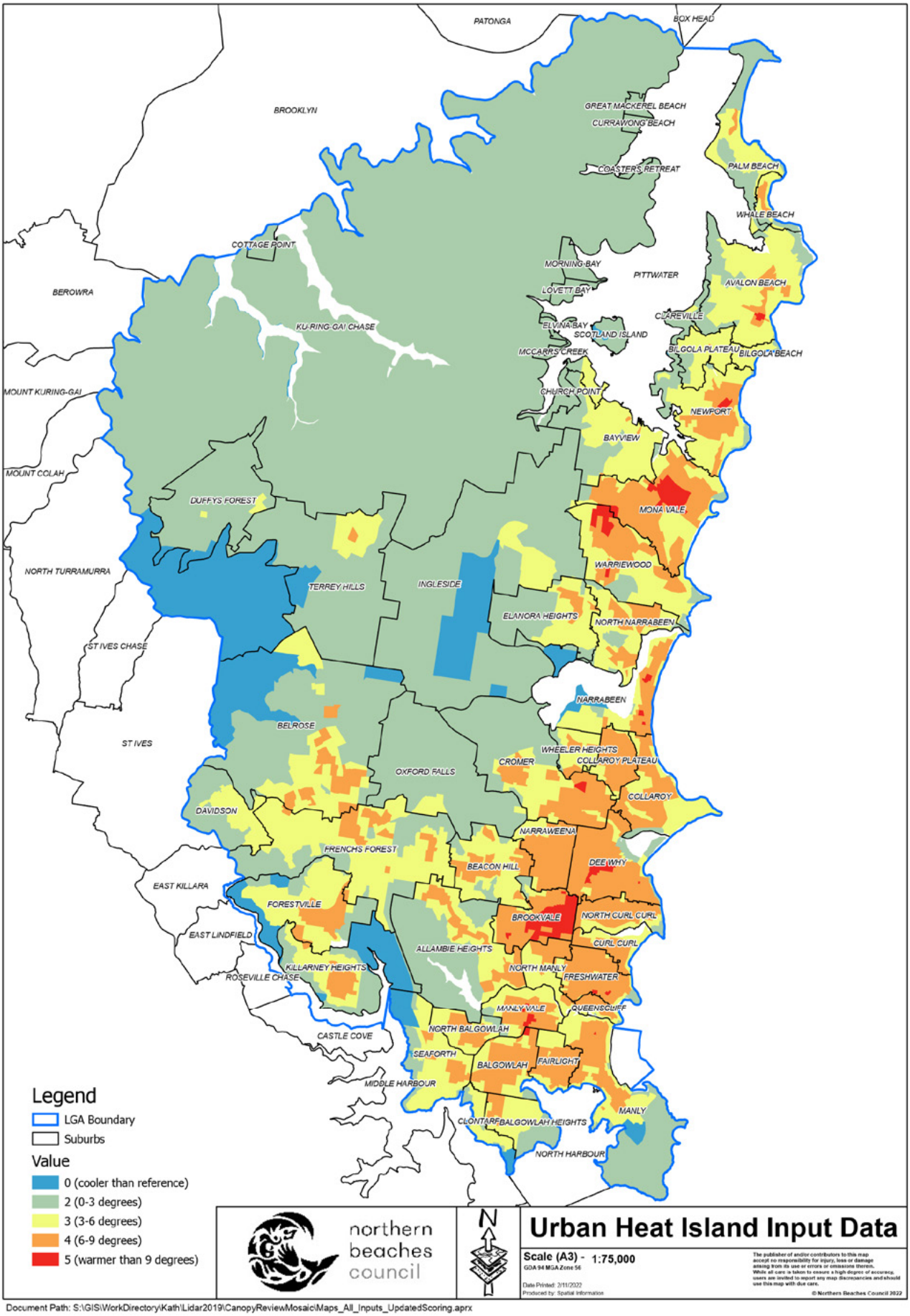
The tree canopy is most effective at combatting the UHIE and providing protection from over-exposure to UV radiation.

More vulnerable individuals, such as the elderly, young children, people living with disability and the economically-disadvantaged, are often the most affected. Brookvale, Manly Vale, Dee Why, Narrabeen, Warriewood and Mona Vale (along with most town centres) are identified as hotspots in the Northern Beaches where the UHIE is more than 9°C higher than the reference area (Figure 6).

Tree canopy is a key form of green infrastructure most effective at combatting the UHIE and providing protection from over-exposure to UV radiation. It is complemented by other forms of green cover including hedges, grass footpaths, verges, green roofs and walls. Water sensitive urban design (WSUD) also emphasises the cooling of urban environments by incorporating biofiltration, water quality ponds, rain gardens and swales.

[3] *Gartland, L. (2008). Heat Islands: Understanding and Mitigating Heat in Urban Areas. Earthscan publications. United Kingdom*
[4] *NSW Climate change adaptation strategy June 2022*

Figure 6
Urban Heat Island (UHI) effect across the suburbs of Northern Beaches



Priority areas

Which areas are most vulnerable?

To achieve the aim of this Plan, it is necessary to focus on the tree canopy holistically, importantly protecting our established canopy, sustaining it with succession planting, along with areas most at risk, reduced or non-existent areas of canopy, areas of low biodiversity and where the community is most vulnerable.

Data analysis

Council completed preliminary analysis of the LGA to contribute towards the development of this Plan. A prioritisation matrix to identify areas of high vulnerability was developed (as seen in Table 1 and Figure 7) to identify the most important areas across the Northern Beaches. Table 1 outlines the elements that were included in the analysis and assessment of vulnerability. Figure 7 and Figure 8 show the layers included in the analysis and the areas that are the most vulnerable.

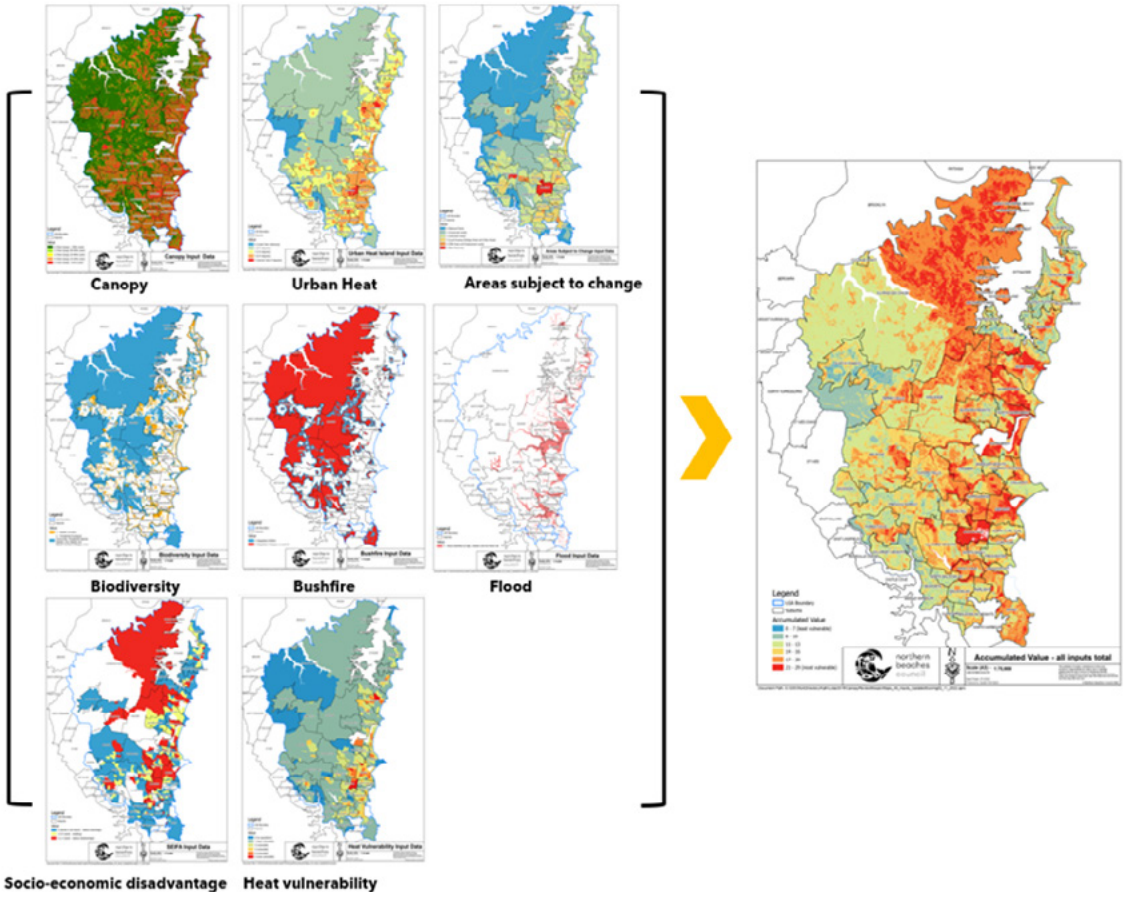
The priority of areas will change as more data becomes available. It will be important to confirm the method of priority assessment and to establish a multi-disciplinary approach that includes relevant teams across Council.

Table 1

Elements and criteria for assessment of high vulnerability areas

Element included in analysis		Criteria for assessment as being vulnerable
1.	Existing canopy cover	Canopy cover is low
2.	Socio-economic disadvantage (SIEFA)	Socio-economic advantages are low
3.	Urban heat	Urban heat is higher
4.	Areas subject to change with future development	The area is expecting increased development
5.	Flooding hot spots	The area is subject to flooding
6.	Biodiversity	There are threatened species present, or the area is a wildlife corridor
7.	Bush fire risk	There is identified bush fire mitigation required
8.	Heat vulnerability	The community is more vulnerable to urban heat

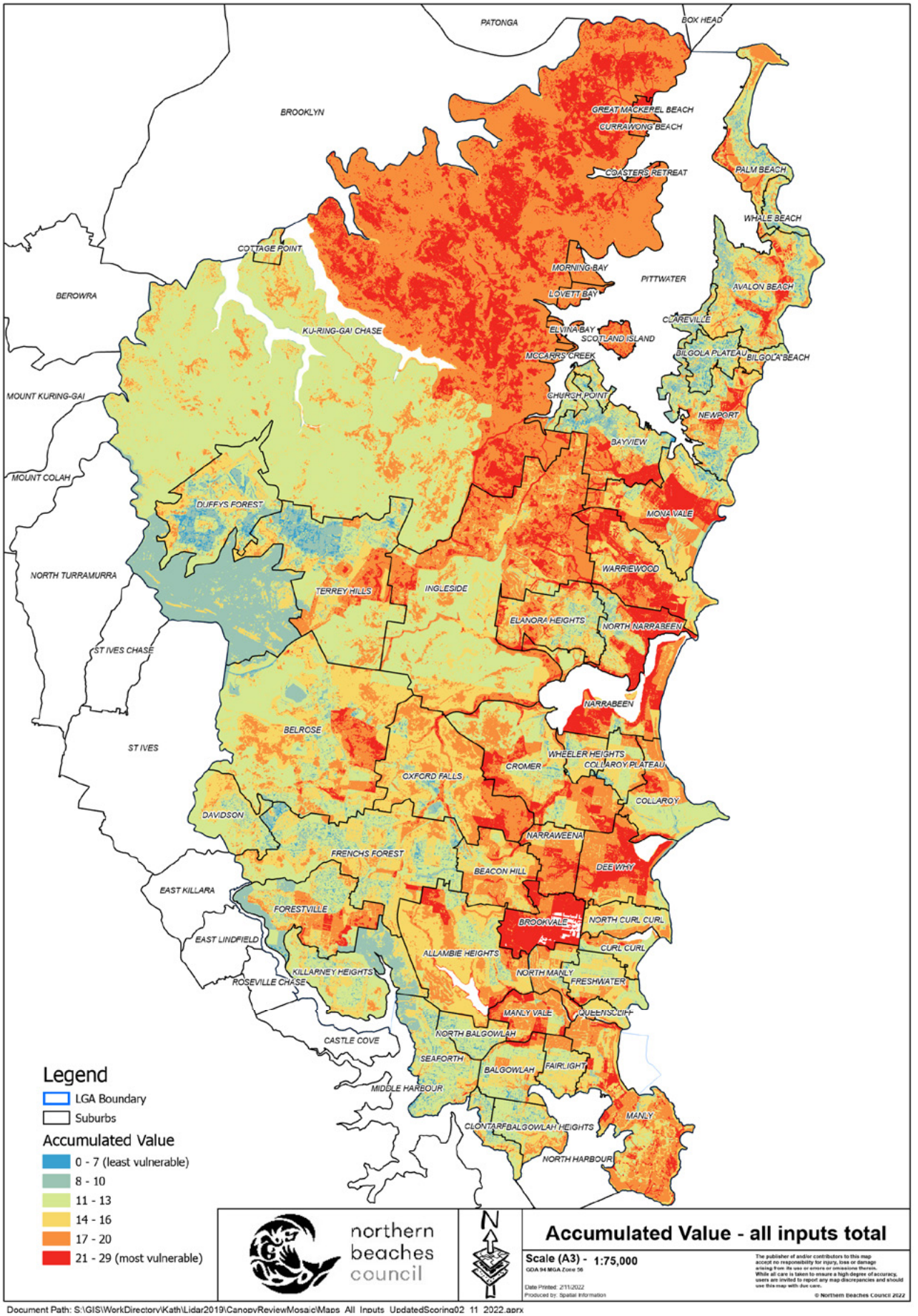
Figure 7
Elements and criteria for assessment of high vulnerability areas



Emerging priority places for canopy Action
The analysis of data using the prioritisation matrix shows that the high priority areas for intervention and canopy improvements, identified as vulnerable locations because of heat island effect, low or no canopy cover, or socio-economic disadvantage (Figure 8) are currently:

- Brookvale
- Dee Why
- Mona Vale
- Narrabeen
- Manly
- Manly Vale
- Narraweena
- Curl Curl
- Queenscliff
- Warriewood.

Figure 8
Priority areas across Northern Beaches for canopy replacement



Pressures and challenges

There are several pressures and challenges for the Northern Beaches in maintaining or growing the tree canopy.

Significant urban development, population growth and climate change all pose challenges for Council and the community.

Population increases and urban intensification

The Northern Beaches' population is expected to increase by around 39,000 people over the next 20 years, representing 3% of Greater Sydney's growth. Based on the DPIE's population projections, Council has set a target to provide 3,582 dwellings to meet the increasing housing demand in the Northern Beaches between 2021 and 2026.

In 2021, the Northern Beaches LGA had an estimated population of 270,642 people. This population is growing. By 2036, the number of people is expected to increase to 304,025 representing a 12% growth.

Future development has the potential to impact tree canopy. Examples include:

- failure to design developments with adequate space to allow the retention of existing large trees as well as new trees
- associated clearing for bush fire asset protection zones and entitlements under the 10/50 Code
- an increased preference for larger houses and maintenance free yards
- construction of secondary dwellings.

Climate change

Greater Sydney will experience rising average temperatures, more frequent and longer heatwaves, and an increased frequency and severity of bush fires due to climate change. It is expected that droughts and extreme storms will become more frequent and severe, resulting in more flooding. Maheshwari et al. (2020)[5] showed that the climate of Sydney markedly changed during 1986-2011 compared to the reference period of 1960–1985 as a result of continued densification and expansion. According to future climate change scenarios, a shift to a hotter, drier climate would exacerbate declines in growth and health, showing that the trees are vulnerable to climate change. Climate change will likely result in:

- increased impact of disease and pests on tree health (warmer weather can increase reproductive potential and increase pest and disease development rate)
- introduction of a range of new pathogens and pests as they find the new climate conditions favourable
- premature tree death
- decline in tree health due to scorching and dehydration
- branch and tree failure of otherwise healthy trees due to high winds and heavy rains
- an increased risk of private tree removal as people become concerned about trees, perpetuating climate change impacts
- potential mass loss of canopy habitat and wildlife and other canopy benefits as a result of bush fire
- ongoing occurrence of tree failure post fire
- increased tree instability and soil erosion from heavy rains

[5] *Maheshwari, B., Pinto, U., Akbar, S., & Fahey, P. (2020). Is urbanisation also the culprit of climate change? Evidence from Australian cities. Urban Climate, 31, 100581.*

- detrimental impact on tree health from salinity and coastal inundation
- diseases of canopy more prevalent in damp and humid conditions
- impact on tree maintenance due to the potential effects of water restrictions
- reduced available food for wildlife
- trees located in areas vulnerable to saline inundation require more energy to distil water from saline soils.

Illegal tree removal and tree vandalism

Illegal tree removal varies from single trees to large scale clearing. There are opportunities to make the community more aware of the reasons for tree retention and the reasons for following the requirements to remove trees.

Council has resolved to use banners or shrouding of affected trees where appropriate as a deterrent to vandals, or to preclude offenders from gaining the intended view. An offer of a reward of up to $10,000 is available to persons with information leading to a successful prosecution.

Tree and vegetation vandalism can occur in a variety of forms, including poisoning, pruning, removal and destruction from clearing native understory. Vandalism has a significant and cumulative impact on the environment. Impacts include reduced visual and community amenity, loss of environmental services such as windbreaks and erosion control, and loss of wildlife habitat. There have been incidences of tree vandalism on the Northern Beaches, especially in foreshore and non-urban areas. Removal and pruning of trees to gain a view is not considered an adequate reason for such works. Education and compliance of these issues needs to be considered and implemented.

Community expectations

An individual's behaviour and attitude towards trees on their property can be very personal. Fostering a greater awareness of the benefits and challenges of maintaining and increasing tree canopy should encourage the local community to support and enhance the work being done in the public sphere. In turn, it is hoped that the local community will translate this into action within their own sphere of influence.

Although the Northern Beaches has one of the highest tree canopy coverage rates in Greater Sydney, rates of loss are also high due to the aging of mature trees and a demand for larger detached dwellings, secondary dwellings, urban and infrastructure developments. The understanding of the importance of trees and motivating people to plant and effectively manage trees on their own properties remains important in protecting, maintaining, and enhancing the existing tree canopy, including mature trees.

Problematic trees and weeds

While trees provide a range of benefits to the community, there are some tree species that are more problematic than others. Different tree/plant species are listed as exempt species on private property under Council's Exempt Tree Species list. This list of exempt species may change over time due to the impacts of climate change and other emerging research.

Pests and disease

Climate change is likely to increase the spread and severity of pest and disease in trees. Increased international travel has also increased the risks of pests arriving. By actively monitoring tree health we can identify and treat trees affected by disease and pests. Early intervention allows for better treatment of the affected trees. Proactive management of the tree canopy and natural environment provides the best long-term protection for trees.

Actions so far

Council is committed to maintaining our tree canopy. Here are some examples of what we have already undertaken.

1. Ongoing management of more than 1,700 hectares of bushland by Council, home to 1,460 native plant species and 540 native animal species
2. Ongoing management of pseudo-arboretums including Stony Range Botanical Garden at Dee Why, Ivanhoe Park Botanical Garden in Manly and the Palm Beach Bible Garden
3. Ongoing management of our community nursery program which enlists the help of dedicated volunteers who propagate thousands of Indigenous plants, including rare species, from seed every year
4. Bushcare program with over 400 volunteers who work at over 80 different sites throughout the Northern Beaches using plants from our community nursery program
5. Ongoing annual tree planting program which includes considering succession planting, avoiding overhead or underground infrastructure, proactive new tree maintenance programs and monitoring survival rates of new trees
6. Tree giveaways at special events such as National Tree Day and market days where advice is provided, and young trees are given to the community to plant in their own gardens
7. Developed and implemented a risk-based approach to the management of trees on public land and the assessment of trees on private land
8. Developed a nature strip planting program with residents
9. Planted 36,396 trees since 2018 – 2022 with our target 100,000 by 2038
10. Cyclic tree maintenance and audit program
11. Developed the Public Open Space and Design Guidelines with professional input from arborists, planners, engineers, urban designers, biodiversity experts, landscape architects and the Northern Beaches community, including a species list to seek better outcomes in public domain projects
12. Adopted our award winning Local Strategic Planning Statement, Towards 2040, providing a strong strategic planning framework to inform new LEP & DCP controls
13. Developed a suite of Technical Studies to inform the new LEP & DCP controls, including conservation zones, as well as studies on biodiversity, waterways, stormwater, bush fire and riparian areas which are vital to support the tree canopy
14. Facilitated offset compensatory programs within the planning framework resulting in the renewal of canopy across the LGA
15. LiDAR information baseline surveying of LGA
16. Reviewed Green Cover Targets based on the Government Architects NSW Targets
17. Initiated planting program including identifying planting opportunities on public land
18. Successfully obtained grant funding of $1.9 million for tree planting projects

Focus areas

We will build upon our existing achievements relating to bushland and biodiversity and work towards achieving our goals, commitments and aspirations. Our areas of focus for the next four years are:

1. manage public trees as essential assets to maintain canopy across public lands - streets and parks
2. increase the capacity of the community to participate and engage in public tree canopy and greening projects
3. monitor losses and gains in the canopy across the LGA and support the community to retain and protect the canopy
4. strengthen the local planning framework (e.g. LEP and DCP) to support retention, protection, replacement, and growth of private trees.
5. Enforcement and investigation of unauthorised tree removal/ clearing as a priority.

FA 1 Manage public trees as essential assets to maintain canopy across public lands - streets and parks

Table 2

Major Actions of focus area 1

Actions		Timing/Resourcing
1.	Undertake an audit of public trees in priority areas e.g. Brookvale, Mona Vale etc. and develop and implement tree masterplans to assist with continuing to meet our tree canopy target of 56%	Year 1 & 2 Within existing operational budget
2.	Implement an Iconic Tree Register with the aim of recording the scientific, social, historic and aesthetic values of all significant trees on the Northern Beaches	Year 2 Within existing operational budget
3.	Implement a standard tree valuation methodology to guide decisions about the protection of trees	Year 1 Within existing operational budget
4.	Continue sourcing trees, both local Indigenous and other species, for public tree works and preference local Indigenous species in biodiversity corridors	Ongoing Within existing operational budget
5.	Continue with annual 5,000 trees public tree planting program which includes considering succession planting, avoiding overhead or underground infrastructure, proactive new tree maintenance programs and monitoring survival rates of new trees	Ongoing Within existing operational budget
6.	Review the adopted species lists in the Public Space Vision and Design Guidelines to include high performing public trees, local Indigenous and climate resilient species to supplement the species identified within the Plant Species Vegetation Diversity Guide	Ongoing Within existing operational budget
7.	Investigate the creation of carbon credits from our green infrastructure/ tree assets and implement any viable recommendations	Year 2 Within existing operational budget
8.	Reduce exposure to UV radiation and the urban heat island effect by increasing the urban tree canopy and green cover, incorporating water sensitive urban design and improving infrastructure and building design	Year 2 Within existing operational budget
9.	Develop and implement criteria to prioritise protection and preservation of significant tree canopy areas across the LGA. Give equal ranking to those areas identified as part of the emerging priority places for canopy action.	Year 2 Within existing operational budget

FA 2 Increase the capacity of the community to participate and engage in public tree canopy and greening projects

Table 3
Major Actions of focus area 2

Actions		Timing/Resourcing
1.	Develop and implement a communication and engagement Plan to educate the community about canopy initiatives , including those outlined in the Actions below	Year 2 Within existing operational budget
2.	Continue a nature strip planting program in partnership with residents	Ongoing Within existing operational budget
3.	Continue tree giveaway programs to support canopy growth across the LGA via special events such as National Tree Day and market days where advice is provided, and young trees are given to the community to plant in their own gardens	Ongoing Within existing operational budget
4.	Raise awareness about public tree planting programs	Year 2 Within existing operational budget
5.	Investigate and promote recommended species lists for private trees and include climate tolerant endemic species in this list	Year 2 Within existing operational budget
6.	Investigate the development of a virtual Digital Arboretum, this is an online botanical collection of trees to show what tree species look like.	Year 2 Within existing operational budget
7.	Continue to manage and support volunteers at our pseudoarboretums including Stony Range Botanical Garden at Dee Why, Ivanhoe Park Botanical Garden in Manly and the Palm Beach Bible Garden	Ongoing Within existing operational budget
8.	Increase participation in our Bushcare programs particularly among young people, in line with our Youth Voice strategy, and continue to manage our Bushcare program with over 400 volunteers who work at over 80 different sites using plants from our community nursery.	Ongoing Within existing operational budget
9.	Continue to manage our community nursery program which enlists the help of dedicated volunteers who propagate thousands of Indigenous plants, including rare species, from seed every year	Ongoing Within existing operational budget
10.	Develop a system of notification for council approved tree removals with signs posted at properties alerting the community to the proposed removal, providing opportunity for community feedback, **and** identifying that permission exists for tree removal.	Year 1 Within existing operational budget

FA 3 Monitor losses and gains in the canopy across the LGA and support the community to retain and protect canopy

Table 4
Major Actions of focus area 3

	Actions	Timing/Resourcing
1.	Measure tree canopy cover every 4 years , building on data from 2011/13 and 2019 as a baseline to quantify losses and gains over time	Year 1 Within existing operational budget
2.	Create incentives for landowners to retain trees on private land (adapted from Bushland and Biodiversity Action Plan) to encourage the planting of canopy trees of sufficient scale to contribute to the diversity of the canopy on private land	Year 2 Within existing operational budget
3.	Develop and implement a public awareness campaign about trees - public and private	Year 2 Within existing operational budget
4.	Offset tree canopy loss by planting a minimum of two trees for any one tree removed from public land. Undertake succession planning and planting ahead of end of tree life.	Ongoing Within existing operational budget

FA 4 Strengthen the local planning framework to support retention, protection, replacement, and growth of private trees

Table 5
Major Actions of focus area 4

Actions		Timing/Resourcing
1.	Address tree canopy through statutory (LEP) requirements for landscape open space, deep soil and floor space ratios. Statutory controls will be linked to DCP provisions for tree removal such as height, diameter, canopy area, and species. In the case of replacement ratios, the DCP will provide for the issues relating to planting trees, increased setbacks and other provisions such as excavation	Year 1 Within existing operational budget
2.	Promote the importance of retention and protection of trees as part of the development application and tree removal application processes	Year 1 Within existing operational budget.
3.	Investigate and act upon unauthorised activities that impact upon tree canopy such as illegal vegetation clearing, unauthorised recreational trails, and other environmental damage, and support Council's Compliance team to enforce penalties as required	Ongoing Within existing operational budget
4.	Develop a replenishment/compensation tree planting program for private trees that considers the right tree replenishment (replacement) ratios and improves auditing of compliance with replenishment/ compensation tree planting permits	Ongoing Within existing operational budget
5.	To continue with the erection of banners in response to illegally removed trees And offer rewards of up to $10,000 for information that leads to a successful prosecution	Ongoing
6.	Invest in planting advanced trees on public land where canopy cover is low in line with priortisation matrix	Ongoing
7.	Continue to work with Ausgrid on the feasibility on undergrounding and/ or the installation of aerial bundle cabling to allow for increased street tree planting opportunities. To implement there will need to be a financial contribution from Council as these works are currently unfunded	Ongoing

FA 5 Enforcement and investigation of unauthorised tree removal/ clearing as a priority

Table 6
Major Actions of focus area 5

Actions	Timing/Resourcing
1. Reviewing resources and processes within Council to improve detection and enforcement of unauthorised tree removal/clearing	Year 2 Within existing operational budget

Measuring and monitoring

We will measure, monitor and report on what we are doing, to ensure we are always tracking towards the goals, aspirations and commitments in the 'Protect. Create. Live – Environment and Climate Change Strategy 2040'. We will monitor, measure and report on:

- canopy cover on private land
- canopy cover on public land
- the number of trees planted on public land each year
- community satisfaction with Council's management of trees
- changes to the planning framework (LEP, DCP and associated guidelines) that strengthen canopy retention, protection and replacement.

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