

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.