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BirdLife Shoalhaven is a branch of BirdLife Australia Limited ABN 75 149 124 774

Shoalhaven City Council
36 Bridge Road
Nowra NSW 2541
Attn. Mr Dunshea, CEO

By email to: council@shoalhaven.nsw.gov.au

26 March 2023

Dear Mr Dunshea,

BirdLife Shoalhaven submission to Draft Amendment (No. 52) - 45 Degree Rule Exemption

Birdlife Australia is Australia's largest bird conservation organisation with over 200,000 members and supporters. For over a century its members have protected birds and their habitats through practical conservation and advocacy based on the best available science.

BirdLife Shoalhaven is a branch of Birdlife Australia, which itself has 1,000 members and supporters. Our charter is to help our members and the wider community enjoy and learn more about birds and to advocate for the conservation of birdlife across the Shoalhaven.

BirdLife Shoalhaven strongly opposes the 45 degree rule and urges Shoalhaven City Council (SCC) to scrap the rule and replace it with a comprehensive urban greening program.

We elaborate below and make several recommendations. We have also attached a fully referenced factsheet on urban trees, that is the result of a body of research conducted on the subject, including in the Shoalhaven, by one of our members as part of a research secondment with the University of Sydney Policy Lab – refer appendix. This includes key areas to consider in order to establish a successful urban greening programme.

1. The 45 degree rule results in perverse outcomes

The 45 degree rule is a blunt instrument and, although couched in safety terms, it is in reality typically misused to remove trees deemed to be undesirable or impinging on development. This in turn results in the removal of healthy trees - including from public land - and the loss of their value to wildlife (as nesting or foraging sites for example) and to humans in the form of aesthetic beauty, erosion control, carbon sequestration, health and passive cooling. The removal of trees with no oversight from SCC also results in ignorance as to where and when trees are lost, and therefore the status of the urban canopy. In our view, many of the trees removed under the 45 degree rule do not in fact need to be removed, and the visual amenity and habitat value of our towns and villages are therefore being needlessly compromised. Removing healthy trees for no reason and failing to replace them also violates the principle of Ecologically Sustainable Development as it erodes ecological integrity and undermines the rights of future generations.

Recommendation 1: better recognise the importance of trees and their moral right to exist by ensuring that tree removal cannot occur via a simple rule and implement a policy that ensures SCC oversight and adherence to the principles of Ecologically Sustainable Development.

2. The 45 degree rule undermines SCC's priorities

The Community Strategic Plan identifies growing the urban canopy as a Key Priority, while the Sustainability and Climate Policy identifies increasing tree canopies in towns and villages as an objective to increase resilience to global heating. Neither is likely to be achievable unless the 45 degree rule is removed and replaced with a policy that promotes the retention and planting of trees.

Recommendation 2: SCC should cease to undermine its own policy priorities by scrapping the 45 degree rule.

3. Conflicts of interest

We are concerned that the 45 degree rule has led to instances of tree removalists using fear of personal safety to persuade residents to remove trees so as to profit from the removal. This is supported by anecdotal evidence. One way to overcome this could be to ensure public oversight of removalists. For example, through a portal system whereby a removalist must submit their intention to remove a tree, along with supporting justification, giving reasonable (10 working days) notice. This would allow community members time to scrutinise proposals, and allow SCC to conduct random cross-checks on removalists to verify their diagnoses on trees, which would be published on the website. Coupled with penalties for misleading or inaccurate information, this system would help ensure integrity.

Recommendation 3: design and implement a system that can ensure public oversight and integrity in tree management.

4. The value of trees and funding

The 45 degree rule allows for unfettered removal of trees and places zero value on them, while ignoring the moral right of non-human organisms to have a place in the world. This is inconsistent with the large body of research on the value of trees. Trees are valuable in multiple ways, most obviously to wildlife where they provide valuable nesting, denning and foraging sites and 'stepping stones' between larger patches of habitat. Shoalhaven villages are lucky enough to still support many threatened species (e.g. Gang Gang Cockatoos; Glossy-black Cockatoos; Yellow-bellied Gliders), all of which are reliant on trees. However, trees also have both non-monetary and monetary benefits to humans: non-monetary via positive emotions, pleasure and calming that humans experience among trees. Monetary in the form of increasing house prices, health, passive cooling saving on air conditioning, carbon sequestration and erosion control. It is highly significant that the urban canopy is recognised as one of the most cost-effective means of increasing community resilience to extreme climate driven heatwaves. This resilience disproportionately benefits less well off, elderly and young people.

We draw SCC's attention to a recent news article in which Doctors for the Environment call for increased canopy cover to avoid deaths due to heatwaves in Western Sydney.

<https://www.9news.com.au/national/lack-of-trees-in-part-of-sydney-is-killing-people-doctors-say/cfee8615-f268-4801-b41d-44b400787367>

We note that SCC itself has conducted trial valuations of the urban canopy based on carbon and water and we urge SCC to better recognise the value of trees in decision making on the fate of trees.

Recommendation 4: increase awareness among residents of the monetary and non-monetary value of urban trees and the role of the urban canopy in resilience to extreme heatwaves, and include the value of trees in decision-making processes.

Effective tree management and growing the urban canopy costs money. The investment is worth it as each dollar spent delivers benefits worth multiples of the spend. However, SCC must find that money from somewhere. Other councils (e.g. Sutherland) require a resident who wishes to remove a tree to fund the planting of several other trees in order to increase the area of canopy over time. This funding would help pay for staff to oversee the urban greening program, as well as fund the growing, planting and maintenance of trees. Another method that could be used to fund tree planting and maintenance could be via the private sector: an avenue for private enterprises seeking to offset their emissions via purchasing carbon credits to fund tree planting by SCC would both help increase canopy cover and ensure trees were maintained,

Recommendation 5: as part of the approval process to remove a tree, determine a fee that would be ring fenced to fund an urban greening program.

Recommendation 6: investigate involving the private sector in urban greening via the increasing prevalence of carbon offsetting.

5. Negative perceptions of trees

Some residents have negative perceptions of trees that can involve issues as diverse as physical safety, root disturbance, leaf litter, slipping or tripping and shading. Many risks (including physical injury) are over-exaggerated, but a successful urban greening program will recognise that some residents have negative perceptions of trees. Tools exist (e.g. participatory GIS) to allow residents to participate in planning of planting programs, which can be useful in avoiding conflict. Similarly, offering a choice of tree species to residents can help engender support for plantings, rather than resentment, as residents will value different attributes of trees.

Recommendation 7: design an urban greening program that allows genuine community participation to occur.

If you have any queries, please contact Dr Oisín Sweeney, BirdLife Shoalhaven Committee, at oisinatjb@gmail.com or on 0431 251 194.

Yours sincerely



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APPENDIX

URBAN TREE CANOPY FACTSHEET: BENEFITS, DRAWBACKS AND A PATH TO SUCCESS

Background

For six months in 2018, the National Parks Association of NSW partnered with the Sydney Policy Lab to research why the human wellbeing benefits of nature are not adequately reflected in policy. We interviewed councillors and staff in two regional Local Government Areas (LGAs), the Shoalhaven and Wagga Wagga. These were selected because they share similarities (regional LGAs that are experiencing pressures from in-migration) but also differences (economic drivers, climate and ecology). Although the research considered nature broadly, urban trees were repeatedly raised by both councillors and staff. They are clearly a key, emotive, feature of human-dominated environments in NSW that warrant special attention. Our research revealed concern in both LGAs about the loss of mature trees—a strong sentiment of ‘you don’t know what you’ve got till it’s gone’. It’s time to act now so that we don’t look back in regret at the lost beauty and benefits of the trees that we were so lucky to inherit. In order to do this though, it is important to recognise that there are negative as well as positive implications from urban trees and to navigate a pathway forward that respects differences of opinion.

Benefits of urban trees

Urban trees are important contributors to biodiversity. Large urban trees are particularly important, as they provide resources (like tree hollows) that are particularly important for wildlife like bats¹². The number of large native trees is positively associated with the number of bird species³ and the larger the tree, the more important it is for bird diversity⁴. Hence big trees are ‘keystone’ features and must be retained where possible. However, large hollow-bearing trees have been shown to be declining rapidly in urban areas⁵. Research in Beijing has demonstrated that urban afforestation can ameliorate bird biodiversity loss as a consequence of rapid urbanisation⁶—a finding that is relevant to Australia as many urban centres grow rapidly.

For humans, the most obvious wellbeing benefit of urban trees in the Australian context is the reduction of the urban heat island effect. Shading from trees can dramatically cool urban areas, providing one of the easiest means of adapting urban areas to already locked-in climate change. This goes beyond simply feeling more comfortable. It has direct implications on human health. A global meta-analysis has shown that people living in hotter areas of cities had a 6% higher risk of mortality or morbidity compared to people in cooler areas, and people in less vegetated areas had a 5% higher risk⁸. This is particularly important as heatwaves are the biggest natural killer in Australia⁷, and disproportionately affect groups such as the elderly, children and the less well-off⁸. Climate change will negatively impact on the health of Australians in a variety of ways including greater heatwave mortality, weather-related disasters, disease transmission and impacts on mental health⁹.

There are other significant human wellbeing benefits too. A Canadian study¹⁰ has shown that having 10 more trees on a city block translates into perceived health benefits for residents equivalent to being seven years younger or \$10,000 richer. Having 11 more trees on a block decreased cardio-metabolic conditions equivalent to an increase in income of \$20,000 or being 1.4 years younger. In the USA, studies on minority and lower-income groups have found that the presence of nearby trees and grass helped people cope better with life challenges through reducing mental fatigue¹¹. Reducing mental fatigue through proximity to trees and grass also reduced violence and aggression¹². In the USA, an increase in mortality from cardio-vascular and respiratory disease—over 21,000 additional deaths—was detectable after disease killed large numbers of trees¹³.

The economic value of trees can be enormous: the median annual value of services (pollution control, water and flooding, CO₂ storage and building energy savings) across ten of the world’s largest cities is \$505 million, or \$967,000 per km² tree cover¹⁴. Studies in US cities have estimated

that every dollar invested in the management of urban trees returns between US\$1.37 - \$3.09 in benefits annually¹⁵.

As well as the extensive public benefits, street trees also benefit property owners by making streets and houses more desirable and increasing property prices (the 'leafy suburbs' effect)^{16,17}.

Drawbacks of urban trees

Our research highlighted that there are negative elements to urban trees that can drive both community and political opposition. Because humans will ultimately determine the success of retaining and re-establishing urban forests, it is important that these concerns are explicitly recognised and addressed. Key concerns centred around safety including the risk of injury from large trees; injury from slipping on berries; allergic reactions to pollen; increased fire risk from flammable species; shading and loss of insolation—particularly for the elderly; mess and interrupting views. Other concerns include damage to subterranean infrastructure, like sewage pipes; damage to surface infrastructure, like footpaths and interference with overhead power lines. If trees are planted in poor locations, costs can outweigh benefits through infrastructure impacts¹⁸.

The risk of injury from falling trees or branches is very low. A UK study estimated the risk of death at one in ten million¹⁹. A comparable analysis is not available for Australia, but a Hunter Valley study²⁰ of hospital admissions resulting from falling objects between 2008 and 2012 found that trees were responsible for 4.8% of such accidents, which translated to an admission rate of 0.28 per 10,000 people (compared with 6.84 per 10,000 for all falling objects). Further, two-thirds of tree-related injuries resulted from interactions with the tree, meaning the risk of a chance injury from falling trees is much lower. This is well below a proposed level of acceptable risk from amenity trees in the UK of 1/10,000²¹. The data therefore do not support the widespread removal of mature trees in the interests of risk reduction, and tools (a quantified tree risk assessment calculator) likely to be adaptable to Australia exist to permit risk assessment²¹. Nonetheless, there have been deaths from falling limbs^{20,22}, some of which have received significant media attention, so there is a need to resource the ongoing management and maintenance of trees to ensure they are safe; to consider signage alerting the public to risks in public spaces and for legal guidance on local government responsibility in relation to trees and risk to be made available to LGAs.

Another safety concern was increasing fire risk by either increasing total fuel load through adding trees, or by increasing flammability through inappropriate tree selection. In peri-urban communities close to bushland, the risk of ember attack from bushfires should be considered, particularly as climate change is lengthening the fire danger season²³. However, there are a wide range of tree species that are not readily combustible, including native rainforest species and some gums, that offer a means by which canopy can be increased while minimising fire proneness²⁴.

A pathway to success

Assuming trees are not put in inappropriate locations¹⁸ the benefits of an urban tree canopy consistently outweighs the costs. The value is likely to increase in future as urban tree canopies are a cost-effective way of reducing extreme heat events, particularly for the most vulnerable. Urban trees are therefore desirable on many fronts, leading one researcher to state that "Strategically growing the urban forest will improve our world²⁵"! Some LGAs that have successfully implemented urban tree strategies (e.g. Melbourne) are well-resourced. Our research highlighted that funding is a barrier to local government action to restore tree canopies, and this is likely to be experienced by other regional LGAs. Other tiers of government should therefore incentivise local government to develop and implement urban tree strategies. Key elements of success—based on those areas that have successfully implemented urban tree strategies—are:

- Have a plan or strategy that explicitly recognises the wellbeing benefits of urban trees (e.g. Melbourne's Urban Forest Strategy). The '2020 Vision' gives good guidance on how LGAs can go about developing and implementing an urban canopy strategy²⁶. The Food and Agriculture Organisation of the United Nations also offers guidelines²⁷;

- State clearly the goals of the strategy. For example, canopy cover targets and the proportion of trees vs exotic trees;
- Identify and retain existing patches of forest / bushland / greenspace and large trees as a priority as these are irreplaceable for many decades. A rule of thumb is that if native vegetation comprises 30% of an area, there are strong positive effects on bats, birds, beetles and bugs²⁸;
- Explicitly consider the negatives, particularly safety concerns from fire and injury, and how the strategy overcomes them. Work with residents who want trees;
- Involve the community early through participation (not just informing) in planning the strategy. Tools such as Participatory GIS²⁹ enable communities to highlight barriers and opportunities to authorities to ensure that concerns are heard and overcome prior to planting, and enabling communities to choose tree species confers ownership;
- Involve the community in other elements of the strategy's delivery: this might include community nurseries to grow trees and shrubs to give to residents or to provide to planting programs or training 'citizen foresters' to be a point of contact for communities;
- Involve the private sector where possible: Melbourne has an 'Urban Forest Fund' to help private property owners undertake initiatives in line with the urban forest strategy;
- Develop advice and communicate it to residents on aspects such as the benefits of trees; appropriate species to plant in different locations; which species to avoid planting due to negative impacts; and how aspect and shading should be considered to avoid conflict with neighbours; legal responsibilities and risk and tree management;
- Resource the regular management and maintenance of trees. Regular maintenance and a known point of contact will help reduce fears of injury by residents. For example, Washington DC has a Department of Urban Forestry to manage urban trees;
- Funding: urban forest plans can become self-funding (e.g. Sutherland Shire) but will require initial capital. State and federal governments could consider incentivising local governments in recognition of the fact that regional areas have lower rate bases and high infrastructure maintenance costs.

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