

ERDC Parliamentary Inquiry into the Urban Forest

LGA Submission

February 2023

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Introduction

The Local Government Association of South Australia (LGA) welcomes the opportunity to make input into the Environment, Resources and Development Committee (ERDC) Parliamentary Inquiry (the Inquiry) into the Urban Forest.

The local government sector supports the focus of the ERDC on measures to preserve and improve the tree canopy in metropolitan Adelaide.

Having higher levels of natural plant life in local communities has many social and environmental benefits, particularly in urban communities. These include:

- addressing climate change impacts by cooling and shading our suburbs and offsetting greenhouse gas emissions
- encouraging healthy, active outdoor lifestyles, travel and improving community wellbeing
- ensuring a more attractive and liveable city
- improving biodiversity and sustainability
- enhancing air quality
- improving property prices
- supporting stormwater management and minimising flood risks – lack of green spaces/high amount of impermeable surfaces places increased pressure on stormwater network.

As a strong advocate for policies that achieve better outcomes for councils and the communities they represent, the LGA undertakes to work constructively and collaboratively to help maintain and improve the tree canopy in metropolitan Adelaide.

The Inquiry as stated in your terms of reference will seek to examine:

1. Best practice and innovative measures to assist in the selection and maintenance of site appropriate tree species to improve the resilience of the urban forest, with a focus on trees for urban infill developments;
2. Legislative and regulatory options to improve the resilience and longevity of trees comprising the urban forest; and
3. Any other related matters.

The LGA's submission is focused on achieving the best outcome for the environment and for local communities, and addresses the last two of the three terms of reference, namely legislative and regulatory options to improve the resilience and longevity of trees comprising the urban forest; and any other related matters.

The LGA is aware of and supports the City of Marion's submission to the Inquiry.

LGA recommendation / suggested findings

The LGA recommends that the Inquiry form findings that:

1. Improve regulated and significant tree legislation to enhance protection of trees and increase the urban forest as the current protections that exist in the South Australian planning system are not sufficient.
2. Strengthen legislative protections, including regulations for managing trees on private land and incentivising tree planting on private land.
3. Recommend that paying into the Offset Fund should be a last resort and that the cost of payment into the Fund in lieu of planting a tree should be commensurate with the full life cost of the tree.
4. Acknowledge that to achieve the Tree Canopy Cover Target in the Greater Adelaide 30 Year Plan, there is a need for increased tree planting on not just public land, but also and more importantly private land.
5. Address bushfire risk near powerlines with measures such as undergrounding or bushfire switches (turn off power automatically), microgrids and covers; prioritise undergrounding in high bushfire risk areas.
6. Enhance implementation of landscaping measures in the Planning, Development and Infrastructure (PDI) Act to enforce 15% permeable landscaping space.
7. Improve management of carbon accounting for tree planting to support councils and include carbon credit offsets on street trees.
8. Support planning for widespread use of autonomous vehicles which will use less of road space and open up more room for tree planting.
9. Support education programs to improve community support for private trees and their retention as they are critical to reversing canopy loss; garner support from the building industry to provide more choice to consumers such as smaller houses for small families to make room for tree planting on private land.
10. Support further and more targeted funding programs to support councils in the development, design and support of tree canopy strategies and planning including tree planting on public land.
11. Encourage State and Federal Government agencies to commit to increasing tree canopy on government sites and to set a good example.
12. Recognise that heat and heatwaves are a hazard and should be considered in the planning process with tree planting constituting a major element of the long-term approach to preparing for heatwaves.

LGA response to Terms of Reference, #2:

“Legislative and regulatory options to improve the resilience and longevity of trees comprising the urban forest”

Recommendation 1: Improve regulated and significant tree legislation to enhance protection of trees and increase the urban forest as the current protections that exist in the South Australian planning system are not sufficient.

Recommendation 2: Strengthen legislative protections, including regulations for managing trees on private land and incentivising tree planting on private land.

Infill Development

Building sustainable densities is an important aspect to healthy and vibrant communities. The current policy on cumulative impacts of infill development should be reviewed and monitored with appropriate targets and controls established, and enhanced policy relating to infill development to address issues such as loss of character, carparking, the loss of private open space and the urban tree canopy.

Regulated and Significant Trees

A review of South Australian legislation shows that trees and tree canopy are considered valuable in the state. The state’s planning system provides some protection against the damage and removal of trees identified as regulated or significant as defined in the PDI Act. The aim of this legislation together with other regulations is to protect established trees by requiring an application to be submitted before removing these trees. Yet, South Australia has some of the lowest tree canopy nationwide with its metropolitan areas marked by low levels of tree canopy relative to other Australian capitals. Thus, though the legislation presumably provides some protection for regulated and significant trees, in practice, removal of trees is still prevalent especially in large urban developments, street tree removal due to complaints or allowing tree removal in high bushfire risk areas without approval.¹

Consequently, metropolitan councils and their communities are concerned with the current protections that exist in the planning system to protect regulated and significant trees.

While councils and communities are working hard to plant new trees, there is not enough available space on public land to replace what is being lost from private land because of the reducing allotment size and increasing built site coverage across metropolitan Adelaide.

The LGA has previously written to the Minister for Planning requesting:

“the State Government promptly, conducts a review on the existing ‘Significant and Regulated’ tree laws, with the aim of achieving the goals outlined in the 30 Year Plan for Greater Adelaide, which are:

Urban green cover is increased by 20% in metropolitan Adelaide by 2045:

¹ Andreas et al. “The Urban Tree Canopy – Local Government Leading the Greening of Adelaide”, Group Project (2019).

- a) *for council areas with more than 30% tree canopy cover currently, this should be maintained to ensure no net loss by 2045; and*
- b) *for council areas with less than 30% tree canopy cover currently, cover should be increased by 20% by 2045”.*

It is acknowledged that the State Planning Commission has recently released an independent Arborist Review that contains a detailed analysis of tree species exemptions including a value/cost assessment of particular tree species and a separate Research Report from the Environmental Institute of the University of Adelaide entitled ‘Urban Tree Protection in Australia’ which analysed South Australia’s tree protections as compared to other Australian states and territories, including the size of trees protected and the various exemptions which currently apply.

This research has demonstrated the weakness of the regulated and significant tree legislation in South Australia compared to other states and provide the evidence to inform planning policy and any changes needed to the regulated and significant tree legislation.

Areas for amendment include the following:

1. Definitions and exemptions

Key definitions in s3 of the PDI Act include “regulated tree”, “significant tree” & “tree damaging activity”.

The definitions in turn reference classes of trees declared to be regulated or significant in the PDI (General) Regulations 2017 (Regulation 3F).

Measurement points in Regulation 3F(1) and (2) for circumference calculation is 1m above natural ground – where land around a tree is undulating, is this a vertical circumference 1m above any point? It would be desirable to have a definition of “trunk” given the uncertainty that arose in *Hargraves v City of Holdfast Bay* (2018) SAERDC 41?

There is a need to review the areas of the state subject to controls via the application of the Regulated and Significant Tree Overlay in the Planning and Design Code.

Repeal Regulation 3F(4)(a) - 10m exemption where a tree is proximate to an existing dwelling or in ground swimming pool.

2. Tree damaging activity and maintenance pruning

In terms of the definition of “tree damaging activity” in s3; the term “maintenance pruning” is ambiguous giving rise to uncertainty as to what work is exempted and what is not. The further exclusions in Regulation 3F(6) also require refinement. Having exclusions in the definition in s3 & then also in Regulation 3F(6) is generally undesirable – they could be consolidated and located in a single source. However, implications with respect to the burden of proof in a prosecution need to be considered as set out below. Further, there are additional activities excluded from being “development” in clause 18 of Schedule 4 to the Regulations. These could be consolidated into a single source or definition.

The 30% pruning of the crown exclusion is too generous and difficult to police and enforce. It can be abused by multiple occurrences of pruning of less than 30% which, taken together, total more than 30% and not be caught. This should be remedied.

One solution is for a requirement that prior to maintenance pruning being undertaken, that an expert report be obtained which details and quantifies the extent of the crown canopy to be removed in relation to a proposed pruning event, prior to pruning. This would avoid evidentiary issues that have been experienced. It could then be an offence to fail to obtain such a report in advance of pruning. It would

be beneficial to also have the term “crown” defined to avoid the interpretation issues that arose in the Crichton case.

Regulation 3F(6) excludes crown pruning of 30% from the ambit of the “tree damaging activity” definition. In this way the ERD Court at first instance in a prosecution (*Unley v Crichton, Bendyk, Tempest Trees & Gardens & Dylan Tempest* (2019) SAERDC 43) found that it forms part of the defined term and therefore the prosecution needed to prove beyond reasonable doubt that more than 30% of the crown had been removed. If it was clearly expressed as a separate exclusion, the burden of proof on that basis would have reverted to the defendant. This case was appealed to the Supreme Court (*Unley v Crichton & Anor* (2021) SASC 17). The Supreme Court found, contrary to the ERD Court, that the burden of proof on taking the benefit of the 30% exemption fell to a defendant to establish on the balance of probabilities that any pruning works came within the exclusion. In considering what constituted the “crown” of the tree, the Court found that it was only comprised of the living branches and foliage of a tree and did not include dead or diseased wood.

Amendments to assist councils to prosecute in circumstances where the physical evidence is no longer evident should be considered – e.g. tree diameter, volume of canopy removed etc.

The test for what constitutes a “material risk” to a building or person in the exemption in Regulation 3F(6)(b) is vague, ambiguous and difficult to enforce.

3. Application information – s119(7) and (8)

These provisions require refinement. They provide that an expert or technical report can only be required if “special circumstances apply”. What is contemplated by this phrase? It could be clearer.

4. Plans – s119(1)(c) and Schedule 8 to the PDI (General) Regulations

On numerous occasions Schedule 8 requires application plans to include the location of any regulated tree on the site/adjoining land that “might” be affected by the work, or that might affect the work, proposed to be performed. The word “might” should be removed so that trees are shown on the plan regardless and it will then become the decision of the relevant authority about whether such trees might or might not be affected by the proposed development. If the trees are identified on the relevant plans, then the relevant authority can at least turn its mind to the question of potential impact.

5. Interaction with Local Government Act

The interaction between the PDI Act and s221 of the Local Government Act in relation to regulated street trees could be clearer and be better addressed.

6. Conditions

The scope of condition making powers in s127(4)-(8) of the Act and Regulation 59 should be reviewed. The mandatory conditions in Practice Direction 12 where an application is for or includes the killing, destruction or removal of a regulated or significant tree which require either the planting of replacement trees or payment into an urban trees fund or the Planning & Development Fund.

The Practice Direction would also be ideally amended to require the imposition of a mandatory condition that any replacement trees are maintained or if become diseased or die are replaced to the reasonable satisfaction of the relevant authority.

The urban tree fund contribution currently at \$156 per replacement tree not planted should be revised and increased to avoid becoming an “easy” and “cheap” alternative to planting replacement trees.

7. Make good orders – s228

While there is scope for the Court to make certain orders regarding tree replacement and protection, given the benefits often obtained in terms of value uplift arising from the unauthorised removal of a regulated tree, the monetary penalty for such an offence be specifically increased.

Recommendation 3: Recommend that paying into the Offset Fund should be a last resort and that the cost of payment into the Fund in lieu of planting a tree should be commensurate with the full life cost of the tree.

Tree Planting and Offset Fund

A significant improvement to planning policy proposed in the early draft of the Planning and Design Code was the requirement for tree planting and provision of deep root zones within infill development/small lot housing. Unfortunately, this policy has been significantly weakened due to the introduction of an Offset Fund for the planting of the trees required by the policy.

Concerns about the approach to providing opportunities for offsetting the planting of a tree on these sites include:

- It undermines the overall intent and purpose of the policy for improving amenity and comfort outcomes for occupants and surrounding properties to infill development sites that the tree would provide over time.
- It focusses planting by local councils into the public realm, which is most likely to be away from the locations where canopy loss is occurring on private sites, and arguably where the benefits of additional tree planting would be less beneficial to the overall policy intent (i.e. open spaces and streets already have tree coverage and lower urban heat island impacts).
- It assumes that this will be available as an option, whereas more established locations (where much of the infill is occurring) already have streets filled with mature street trees and open space areas with established trees (or in some cases limited or no open space areas within the same walkable neighbourhood).
- The inadequate cost is a disincentive to plant trees, which is what the community expects for development and will not result in better design and amenity outcomes for occupants. Some of the assumptions within the BDO Cost Benefit Analysis² about those that would take up the fund payment in lieu of the trees planting on the site are open to question.

The cost-benefit analysis undertaken by the State government to support the Offset Fund, misrepresented the amenity benefits of trees within development sites from a comfort viewpoint, particularly considering increasing higher temperature days as a result of climate change (this is as opposed to direct energy cost savings).

The offset scheme option places increased responsibility on local government in achieving the 30 Year Plan's urban tree canopy target, when it is private landowners and developers that are reducing tree canopy, contrary to the policy.

The position also ignores the importance of trees to contributing to better design outcomes for infill development (spaces created to accommodate the trees are part of this), and this is a key objective of the PDI Act.

² BDO EconSearch "Costs and Benefits of Urban Tree Canopy Options for Minor Infill Development in the Planning and Design Code", Report for the Attorney-General's Department (2020).

While the LGA understands the rationale for such a scheme particularly in areas with reactive soils which would result in an increase in the cost of footings, the LGA is concerned that the scheme is open to misuse and as such considers that the following should be taken into consideration in a review of the scheme:

1. The scheme is established to fulfil the requirements of a 'Deemed to Satisfy' application, many of which will be assessed and approved by Private Certifiers. Local government has been concerned that given the minimal cost being proposed for the tree (\$300), applicants and Private Certifiers will see the Offset scheme as the preferred option rather than a tree on the site. Clear rules and obligations are required to be placed on the Private Certifier and applicant to ensure that payment into the offset scheme in lieu of a tree on the property is the last resort. Where a tree is unable to be located on a property in conjunction with a dwelling because of reactive soils, footing costs or setbacks and the applicant is therefore required to pay into the offset scheme, these applications should not be determined as a 'Deemed to Satisfy' application but should become a Performance Assessed Application.
2. Noting that the BDO report³ suggests that the cost of planting and maintaining a tree on public land is \$1600, it is unclear as to why the proposed contribution to the scheme is \$300. It is recommended that the cost of the tree should be commensurate with the full life cost of the tree, notwithstanding the benefit the community will receive. While the purchase cost of a tree is low (<\$100) the ongoing cost of maintaining the tree needs to be fully considered. The BDO Report identified that the cost of planting and maintaining a tree on council land is \$1600 and identified the community benefits of trees and has used the 'community' benefit as a reason for the offset contribution (\$300). However, the BDO report fails to identify the long-term economic benefits of a tree planted on private land to the landholder as a result of reduced cooling costs in summer arising from the cooling effects of a tree and its canopy.

Recommendation 4: Acknowledge that to achieve the Tree Canopy Cover Target in the Greater Adelaide 30 Year Plan, there is a need for increased tree planting on not just public land, but also and more importantly private land.

3. The size requirement of the tree to be planted on the site: the LGA would recommend that the requirement should be for an 'established' tree. In addition, the recent guidelines prepared by Green Adelaide and the State Planning Commission https://plan.sa.gov.au/_data/assets/pdf_file/0019/1100881/Adelaide_Garden_Guide_for_New_Homes.pdf should be mandated.
4. The LGA considers that the planting of an appropriate established tree on the site could form part of the Certificate of Completion/Certification of Occupancy, i.e. the builder/developer should take responsibility for the planting of the tree, rather than it becoming a compliance issue between the council and home owner.

Tree planting policy applied effectively can contribute to the metropolitan green canopy and result in increased urban cooling, and greater amenity for residents and communities.

³ ibid

Recommendation 5: Address bushfire risk near powerlines with measures such as undergrounding or bushfire switches (turn off power automatically), microgrids and covers; prioritise undergrounding in high bushfire risk areas.

A simple approach to increasing the extent of the urban forest and its performance is the undergrounding of power lines, including in common services trenches under roadways which combine water, gas, electricity and communication services in a single trench. This approach further enhances the stability of the electricity grid in case of fires and storms. It also removes a major bushfire ignition source in fire-vulnerable areas.

Additionally, placing a common trench in the middle of the roadways also makes more room for below- and above-ground space planting on the verge, thereby increasing the size and number of trees that can be planted on the roadside.

Yet, undergrounding of powerlines is an expensive venture and state funding would be critical to efforts to increase the pace of the approach. It costs ca. \$3,000 per metre to underground powerlines. The Power Line Environment Committee (PLEC) which is responsible for assessing and recommending undergrounding of powerlines has annual funding in the order of \$10 million and operates in a co-funding model where councils are generally expected to contribute at least one third of the undergrounding cost, thus ca. \$1,000 per metre.

Currently, undergrounding of powerlines is rare and generally limited to high-profile corridors and developments because of the limited co-funding available through PLEC and the high funding requirement on councils. Therefore, reducing the level of co-funding required by councils and providing additional funding to PLEC would allow the removal of more overhead powerlines. This would have great positive effect on increasing not just the opportunity for planting more trees, but also improving safety and public amenity. Further, pursuing more undergrounding would possibly also reduce the net cost per metre as a result of efficiencies of scale.

Recommendation 6: Enhance implementation of landscaping measures in the Planning, Development and Infrastructure (PDI) Act to enforce 15% permeable landscaping space.

Recommendation 7: Improve management of carbon accounting for tree planting to support councils and include carbon credit offsets on street trees.

Recommendation 8: Support planning for widespread use of autonomous vehicles which will use less of road space and open up more room for tree planting.

LGA response to Terms of Reference, #3:

“Any other related matters”

Recommendation 9: Support education programs to improve community support for private trees and their retention as they are critical to reversing canopy loss; garner support from the building industry to provide more choice to consumers such as smaller houses for small families to make room for tree planting on private land.

To achieve the Tree Canopy cover in the Greater Adelaide 30 Year Plan, there is a need to understand that to reduce the heat island effect arising from the increased paved areas and effects of climate change, a consistent canopy cover is essential. This can only be achieved by trees being planted on both public land (reserves, open space and streets) and private land.

To reduce the heat island effect in the higher density infill areas, there is a need to ensure that trees are planted on private land and green space is provided. It is imperative to educate people about the cooling benefits of trees around houses. Cultural change is required about the expectations and desire for excessively large houses which limit open space for trees – need to demonstrate other successful and attractive options, options for other household types.

Developers and builders need to recognise and accept that they have a responsibility to ensure this occurs and the responsibility does not lie only with State and local government.

Recommendation 10: Support further and more targeted funding programs to support councils in the development, design and support of tree canopy strategies and planning including tree planting on public land.

Recommendation 11: Encourage State and Federal Government agencies to commit to increasing tree canopy on government sites and to set a good example.

Trees are frequently removed by state government on state government land without regard to the value of the tree against the justifications for their removal. This mostly occurs at public school sites and along roads. Yet, these kinds of locations have particularly high risks associated with increased urban heat.

The federal government (e.g. Department of Defence) also enjoys an exemption from these state laws and therefore has little responsibility to maintain or protect trees on site.

Both federal and state government agencies must take steps to not just preserve the trees on their sites but also plant more.

Recommendation 12: Recognise that heat and heatwaves are a hazard and should be considered in the planning process with tree planting constituting a major element of the long-term approach to preparing for heatwaves.

Heat records are being broken and broken again in South Australia. January 2019 and December 2019 are the hottest January and December on record. In 2019, Adelaide experienced 17 days with temperatures over 40 degrees Celsius. Hot conditions exacerbate drought and heatwaves contribute to greater bushfire activity.

Heatwaves have significant impacts on people and infrastructure. During a heatwave, everyone is at risk of heat-related illness. Directly, heatwaves affect human health including morbidity, mortality and well-being. These indirectly lead to increased demand for health and social services as well as reduced productivity as the affected stop working. Heatwaves have caused more deaths than any other type of natural disaster.⁴ Assets and infrastructure are also affected via mechanical failure leading to failure of essential services such as water and electricity supply as well as interruption to transport and supply chains.

Though heatwaves cannot be prevented, their impacts can be mitigated through action to reduce exposure to heat. Planting of trees form part of a long-term approach to preparing for heatwaves. It is essential that landscaping is designed to contribute to greening, cooling and shading, and trees are just the critical element to such designs. Large (shade) trees should be provided and protected in open spaces. Undertaking urban heat mapping to understand where current development is contributing to urban heat islands is critical to prioritising and increasing the planting of trees.

Challenges and Opportunities to Maintaining and Increasing the Urban Forest

Notwithstanding the above, the LGA would like to note other challenges and opportunities to increasing the urban forest:

1. Lack of implementation of landscaping measures in the PDI Act to enforce 15% permeable landscaping space.
2. Remove the barriers that power and water utilities create to urban greening:
 - wanting to reduce the cost of vegetation management around powerlines/water pipes
 - encouraging tree removal
 - encouraging planting of small trees (e.g. SAPN Powerline Friendly Trees List)
 - discouraging planting altogether
 - transferring risk of tree planting to councils.
3. South Australia Power Networks (SAPN) is recently more stringently enforcing transfer of responsibility for trees planted under powerline which is inconsistent with the Powerline Friendly Species List. The risk implications of this for councils are significant (responsible for cost of outages, damage caused by trees) as is the potential impact on the urban forest as councils are directed to remove trees.
4. Opportunities to upgrade the stormwater network to enable watering of trees and other vegetation.
5. Improve the level of education about the need for tree diversity to enhance biodiversity and protect trees from possible pests as well as lower their risk of being impacted by a disease such as Dutch Elm Disease.
6. Recognise that urban greening is not just trees but all greenery, benefits of gardening and growing trees, food sources and other greenery.
7. Encourage through legislation the retention of vegetation where dwellings and other structures are demolished.
8. Improve planning controls to manage climate change and urban greening (eg mandated permeable open space, requirements for trees, stop removal of trees to allow better performance of solar panels).
9. Review operations of the Open Space Fund and where funds are being directed.

⁴ Coates L, Haynes K, O'Brien J, McAneney J and de Oliveira FD. "Exploring 167 years of vulnerability: an examination of extreme heat events in Australia" 1844–2010. *Environmental Science & Policy*. 42:33-44. (2014)
<https://www.sciencedirect.com/science/article/pii/S1462901114000999>

10. Address the challenges of the species lists - SAPN's *Powerline Friendly Tree* document and SA Water's *Tree Planting Guide*, which mean only 62 tree species are considered appropriate for street tree planting, and most of these are either shrubs or small trees (offering limited shade and tree canopy).
11. Encourage Office of the Technical Regulator to advocate for power costs to include component for bushfire risk to respond to the urban greening need.
12. Proper cost-benefit analysis of the costs of not improving bushfire risk.

If you have any questions relating to this submission, please do not hesitate to contact Policy Officer Kwaku Dankwah at kwaku.dankwah@lga.sa.gov.au or 0882242078.

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