



2 June 2022

Dear Sir/Madam

## **SUBMISSION ON URBAN FOREST BILL 2022**

The Australian Institute of Architects (Institute) is the peak body for the architectural profession in Australia. It is an independent, national member organisation representing over 12,500 members across Australia and overseas. Approximately four hundred of these members are based in Canberra and supported by the ACT Chapter.

The Institute commends the Government's overarching goal to preserve and increase our urban forest. We applaud the intent to protect more of the ACT's tree canopy and propose the following amendments to proposed tree protection policy and regulation.

Primarily we would like to see *Variation 369: Living Infrastructure in Residential Zones (V 369)* integrated and simplified with this Bill and the planning reforms currently being undertaken.

Our recommendations are as follows:

- V369 and the Urban Forest legislation should be integrated and simplified to define a **GREEN PLOT RATIO** for sites that include tree canopy and other green infrastructure. This would be a more inclusive approach considering all vegetation and soils as part of the urban forest and the importance of biodiversity rather than just focusing on individual trees as indicated by the strategy.
- V369 and the Urban Forest legislation should be integrated and include measures to retrofit recently developed areas with little or no tree canopy. There does not seem to be a clear plan for retrofitting appropriate tree infrastructure in newer areas.
- All monies obtained from the urban forest payments scheme should contribute to *additional* tree plantings on public land, rather than the proposed existing tree maintenance scheme
- Greater coordination with ACT gov agencies to improve tree canopy on residential streets and public land – Eg TCCS often does not allow street trees near underground power on the verge.
- V369 and the Urban Forest regulation needs to align with the planning reforms to minimise hardstand requirements derived from carparking, driveways and turning circles.
- The ACT Government's target of 30% canopy cover by 2045 is a modest target; Melbourne & Ballarat are aiming for 40% by 2040 and Hobart for 40% by 2046.
- Alternatives to address heat island effect are required for recently developed subdivisions, the Alastair Swain Internship research project found that 30% would not be possible and that the nature of newer suburbs, i.e., the smaller section width, smaller block size and importantly, the significant amount of space



dedicated to roads/driveways, meant that there wasn't enough space available to plant the number of trees required to hit the target.

<https://alastairswaynfoundation.org/funded-research/suburban-heat/>

- The Urban Forest should enable Canberrans to enjoy equitable distribution of canopy.
- The Institute believes a better system would incorporate
  - “**building plot ratio and maximum envelope**”
  - “*maximum hardstand plot ratio*”
  - “**green plot ratio**” encompassing tree canopy and other green infrastructure metrics.”

While the Institute applauds the proposed protection of trees, this legislation may have unintended consequences including

- Property owners (including government) may not plant trees as they would be a constraint for future development or expansion.
- Protection of such a large number of trees in older areas (eg inner south) may limit transition to a more compact city
- Replacement tree size is not defined by the legislation, and equivalent replacement tree size and type is disincentivised by the protection legislation.

A cohesive and integrated approach is required to deliver the 30% canopy target.

We have included the following research and discussion to support the Institute's commentary:

- Alastair Swayn Internship research: suburban heat
- Planning reform to support green infrastructure.

### **ALASTAIR SWAYN INTERNSHIP RESEARCH: SUBURBAN HEAT**

An examination of the urban heat island effect in Canberra, through an in-depth analysis of the suburb of Wright and a review of ACT Government policy. Alastair Swayn Internship (ASI) by Daniel Sandford. Published 08/03/2022.

*Key Findings:*

#### **Canopy Target:**

30% by 2045 is a modest target; Melbourne & Ballarat are aiming for 40% by 2040 and Hobart for 40% by 2046



### In Newer Existing Suburbs:

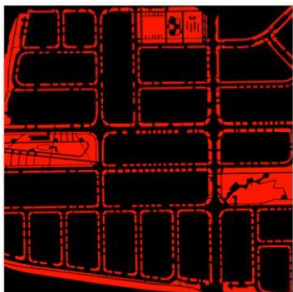
- **Equitable Distribution** The Urban Forest proposal. notes that one of the policy aims is for 'Canberrans to enjoy equitable distribution of canopy' (pp. 3). The ASI research project found that this would not be possible and that the nature of newer suburbs, i.e., the smaller section width, smaller block size and importantly, the significant amount of space dedicated to roads/driveways, meant that there wasn't enough space available to plant the number of trees required to hit this target.
- **Wright Case Study:** The ASI research project focused on the suburb of Wright and found that it could optimistically (not accounting for TCCS mandated clearances between trees and inground services) hope to reach 19% canopy cover. This includes plantings in the public domain only.



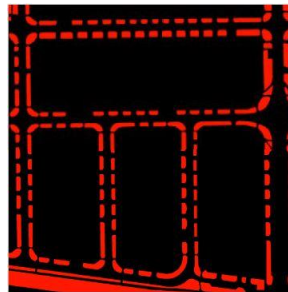
\*Analysis area  
'suburb scale'



\*Analysis area  
'street scale'



\*Red fill  
indicates space  
available in the  
public realm to  
plant trees at the  
'suburb scale'



\*Red fill indicates  
space available in  
the public realm to  
plant trees at the  
'street scale'

- 19% canopy cover is below the target and well below the 30–40% canopy cover found in Aranda/O'Connor or the >40% canopy cover found in Isaacs (pp.20).
- The ASI research project also found that if Wright were built again in the future, but this time inclusive of V369, that it would clear the target on a very tight margin at 32% canopy cover. This figure is inflated by trees in parks/surrounding nature reserves, which boost canopy cover numbers but provide little cooling benefit to occupants/dwellings. The 30% figure may not be achievable in other suburbs that do not have the benefit of significant public urban forest.
- The detailed ASI research paper can be found at the following link:  
<https://alastairswaynfoundation.org/funded-research/suburban-heat/>

### **PLANNING REFORM TO SUPPORT GREEN INFRASTRUCTURE**

The Institute draws attention to current planning regulations and policy goals which we believe put pressure on land use, potentially undermining the urban forest objectives.

We encourage the ACT Government to review the compatibility of the broader planning rules and policies which impact private land use for dwellings, trees/soft landscaping, and



driveways/car parking. To prioritise land use for soft landscaping and trees, the Institute would like to see a focus on:

- balancing building plot ratios with green plot ratio (including site coverage for trees)
- creating incentives for smaller dwellings with provision for dual occupancy and secondary residence unit titling; and
- replacing the capped number of housing storeys with building envelope controls, along with allowance for attics and basements.

The ACT is currently experiencing a housing boom and there is pent up demand for greater housing diversity, affordability, and urban consolidation as part of our broader compact city agenda. There are also current regulations in RZ1/RZ2 zones that limit urban consolidation, and which a 'tree tax' may further impede. Hence, we seek a review of the current zoning system, in favour of the strategic identification of sites for medium to higher density compact housing, including near transport corridors, public reserves and community facilities. We also highlight some existing rules which potentially conspire against the urban forest objectives:

1. There are many planning controls related to car parking, but **the success of our urban forest is linked to our ability to reduce driveway hardstand** on private blocks. Examples include:
  - parking forward of the building line to enable shorter driveways;
  - allowing parking to bedroom ratios to be relaxed if parking demand is lowered by alternate transport modes and work at home strategies;
  - relaxing the requirement for a minimum of one covered car space (some householders may be content with an unroofed car space);
  - adhering to the B85 driveway turning circles (per the Australian Standard) not B99 cars which further enlarge hardstand surface areas; and
  - investigating viable shared driveway and street parking options, as can be seen elsewhere in Australia.
2. Another area of **pressure on land use relates to growing house size**. Canberra needs housing that is affordable, sustainable, and of high amenity that is achieved through clever design strategies, including smaller, energy-efficient, low carbon dwellings; cost-effective, space efficient and quality-controlled mass housing; and the adaptation of existing housing stock to accommodate multi-generational families, and support ageing-in-place. Fortunately, local demand for medium density townhouses continues to increase in line with our urban consolidation and housing choice objectives. Encouraging smaller houses through our planning system controls can help prioritise land for our urban forest but we believe some planning provisions are a disincentive to smaller townhouses and secondary residences:
  - Currently RZ1 rules enable 50% plot ratio for a single detached dwelling while compact dual occupancy or multi-unit dwellings—perpendicular to the street—attract plot ratios on a sliding scale ranging from 35% for smaller



blocks down to 22% for large blocks. There are also rules governing private outdoor space and car parking. The blocks cannot be unit-titled. These restrictions impede the progress of smaller landscape-oriented townhouse solutions when compared with single detached dwelling.

- The RZ2 zone, which allows a higher density of development and separate titling, is generally limited to areas prescribed by an arbitrary measure of some 200 metres from shopping centres.
- Compact blocks were intended for affordable housing, however, the minimal setbacks and lack of plot ratio criteria for these blocks results in disproportionately large (and therefore expensive) housing on very small blocks with little space for trees.

3. **Building heights directly impact land use and the area prioritised for our urban forest.** Height controls are 8.5 metres but limited to two storeys, while attics and basements (except for garaging) are generally not permitted. We seek a relaxation of the number of storeys by allowing basements and attics within the 8.5metre height (above natural ground), to enable more efficient use of the building footprint and envelope thereby providing more space for trees.
4. **Block or site setbacks are also linked to urban forest and tree retention,** and we would seek dispensation for a building design to encroach into a setback when doing so maximises retention of trees on a private block. For example, we would seek consideration of reduced front setbacks in the event of a greater number of trees to the rear of a block. Although setback encroachments can be Merit Track approved, the urban forest bill may cause many more developments to displace their built form into setback zones and we would seek greater access to *Code Track* and *Exemption* mechanisms for such circumstances.

Lastly, for equity we would like to see a tree quota or canopy quota (minimum/maximum) tied to block size. Existing blocks that have many more trees and canopy (than the 30% say) should not be penalized for contributing more to our urban forest.

We would be pleased to discuss our submission further. Please contact our ACT Executive Director Liz Lang on 0447 262 415 in the first instance.

Yours sincerely

Jane Cassidy  
ACT Chapter President  
Australian Institute of Architects