



# CONSERVATION COUNCIL

ACT REGION

## Submission re Draft Variation 369 to the Living Infrastructure Plan in Residential Zones

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TO: Territory Plan Section, EPSDD, [terrplan@act.gov.au](mailto:terrplan@act.gov.au)

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The **Conservation Council ACT Region** is the peak non-government environment organisation for the Canberra region. We have been the community's voice for the environment in the Canberra region since 1979. Our mission is to achieve an ecologically sustainable and zero net carbon society through advocacy, education, research and engagement with community, the private sector and with government.

We represent more than 40 member groups who in turn represent over 20,000 supporters. We harness the collective expertise and experience of our member groups and networks. We work collaboratively with Government, business and the community to achieve the highest quality environment for Canberra and its region.

The Conservation Council campaigns on:

- **Climate Change** – a regional, national and global challenge
- **Biodiversity** – protecting our unique ecological communities in the Bush Capital
- **Water** – smart use of a scarce resource
- **Transport** – connecting people and places
- **Waste** – being efficient through closed-loop systems
- **Planning** – the right things in the right places
- **Governance** – for a smarter, sustainable Canberra

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## Introduction

The Conservation Council welcomes the opportunity to comment on the *Draft Territory Plan Variation 369 – Living Infrastructure in Residential Zones*. This submission will explore the proposed changes which respond to both Direction 3.3 of the ACT Planning Strategy 2018 and Action 2 of Canberra’s Living Infrastructure Plan: Cooling the City (2019).

Urban tree cover is crucial to ensure the sustainability and vitality of the city in the future. The incorporation of living infrastructure in urban landscapes provides an array of benefits such as shade in summer months and a reduction in the urban heat island effect, and the consequential reduction in energy costs for cooling in residences and commercial buildings. Trees play an important role in improving the look and feel of Canberra’s suburbs, making them enjoyable places to relax and connect with others in the community. A healthy tree canopy specifically supports active transport, an important consideration in the context of the increasing temperatures we are facing as a result of the changing climate. Furthermore, urban trees play an important role in providing habitat for biodiversity and building connectivity for species across the urban landscape. This includes various pollinators, which are crucial to protecting biodiversity. Moreover, trees have the capacity to draw down carbon from the atmosphere, reducing the impact of greenhouse emissions on global climate. They play an important role in reducing the risks associated with a changing climate, both now and into the future.

The Conservation Council strongly supports enhancing living infrastructure across the city and better tree protection within the ACT. As such, we welcome the commitments detailed within Canberra’s Living Infrastructure Plan (2019), which set a city-wide target of 30% tree canopy and 30% permeable surfaces by the year 2045. The current tree canopy across the city is estimated to be 21%, though currently some suburbs have much higher tree canopy coverage than others. A CSIRO report on Canberra’s heat island effect showed that newer suburbs with less public planting space such as Bonner were noticeably hotter than other suburbs such as Reid, which has significantly larger tree cover, shady parks and irrigated gardens.

The delivery of the targets outlined in the Living Infrastructure Plan require a strategic response across the public and private space in the urban domain. While residential areas do provide opportunities to increase tree canopy and permeable surfaces, this will depend on the size of the blocks being considered. It is going to be challenging to plant trees that will effectively contribute to the canopy on very small urban blocks. Consideration will need to be given to increasing the public urban open space available to facilitate plantings on streets, something that will require additional space on nature strips in new suburbs.

DV369 does not appear to be developed in cohesion with other aspects of the Living Infrastructure Plan. Without a comprehensive overarching strategy, there is a risk that the strategy for building living infrastructure across the city will occur in a piecemeal way. However, the Conservation Council acknowledges that this should not be a reason not to make positive changes that will improve outcomes on new residential blocks. Nevertheless, consideration should be given to revisiting this work in light of a wider urban tree strategy

further down the track. It is clear that there is more work to be done across a range of different mechanisms, and across the directorate areas of City Services, Climate Change and Sustainability, and Planning.

To support the 30% canopy target, new residential developments must have planting requirements that are both ambitious and regulated. The Conservation Council acknowledges that positive aspects of the Draft Variation show improvement to the green infrastructure requirements for new residential developments. This includes the introduction of tree planting zones, the expansion of definitions to cover key terms (canopy tree and deep soil zones), an increase in planting targets across a range of different development types in both the Single-Dwelling and Multi-Unit Housing development codes, and the incorporation of guidelines to consider water infiltration, deep root planting, tree canopy and landscape quality.

The Conservation Council has detailed below improvements which could be incorporated into DV369 to strengthen living infrastructure outcomes in new residential developments.

### **Integration of DV369 with the implementation of the Living Infrastructure Plan**

DV369 largely focuses on the development criteria for private and residential spaces. Consequently, DV369 does not consider how the living infrastructure targets are being met in the public sphere, including the streets and public areas of new developments. The Conservation Council understands that work will be undertaken to implement the Living Infrastructure Plan in the Estate Development Code. However, it is important that DV369 is strongly connected with changes to the Estate Development Code to ensure that private open space and the associated planting minimums are closely aligned with planting space and planting requirements in public areas. It is also important that both DV369 and the Estate Development Code document planting requirements that are consistent with the Living Infrastructure Plan (2019) and will allow for the achievement of the 2045 targets.

Furthermore, tree planting zones do not equate to tree canopy coverage. The largest tree planting zone proposed in DV369 is 30% of the total block size (large blocks), however the tree canopy under such provisions is unlikely to be 30%. In general terms, the Conservation Council is concerned that while DV369 increases planting minimum requirements and soft landscaping areas, it won't facilitate the private realm significantly contributing to the 30% canopy target, and that resulting tree canopy will be of a much lower amount in these areas. This will put pressure on other areas within the ACT to compensate.

### **Recommendations**

1. Ensure that planting targets and soft landscaping requirements across the Estate Development Code and DV369 reflect the Living Infrastructure Plan to ensure that tree canopy consistently expands across private and public spaces to 30% by 2045.
2. Reassess minimum planting requirements based on calculations of how the 30% canopy cover will be proportioned across the ACT, taking into consideration the infrastructure and land available for planting.

### **Ease of understanding of DV369**

The expression of planting minimums is complex and easy to misinterpret. For example, in Section 3.1.1., R39 states that mid-size blocks must have private open space that represents a minimum area of 50% of the total block area. It then states that at least 50% of the private open space must be planting area, making the total planting area for the block equal to 25%. Different percentage values are also used with reference to “site coverage” that mirror the percentages for private open space. Consideration could be given as to how to communicate these requirements in a way that is more easily understood.

#### Recommendation

3. Reassess the way that the percentage requirements for site coverage, private open space and planting zones are expressed in DV369 to ensure they are more easily understood.

### **Lack of Mandatory Rules for Tree Canopy Targets**

The DV369 provides criteria and rules which are used by developers to ensure they are meeting the requirements for new residential blocks. However, rules and criteria are not mandatory unless stated and the model allows for one to be supplemented by the other when in many cases, they do not reflect similar standards. Following this format, the DV369 incorporated only one mandatory rule across both codes (R38C in the Multi-Unit Housing Development Code). This provides space for new developments to fall short of the guidelines for residential blocks and undermine the minimum tree planting requirements necessary to ensure we meet the 30% living infrastructure targets. If this format is to remain, the criteria and rule model needs to be amended to ensure both reflect similar requirements and deliver a similar outcome.

#### Recommendation

4. Strengthen the criteria of the DV369 so that they more similarly reflect the rules. Being that either the criteria or rule can be used, both need to reflect similar guidelines to achieve the intended outcome.

### **Opportunity to Influence Species Selection**

Definitions provide no clarification of what types of trees will be suitable in new development areas as we experience the effects of a changing climate. Trees being planted in new residential areas should be suitable for the Canberra climate, capable of withstanding hot and dry conditions and able to provide ecological benefits such as habitat for wildlife and benefits to pollinators. The Urban Forest Tree Research conducted by the ANU would be useful as guidance, or alternatively could be integrated into DV369.

#### Recommendation

5. Provide a rule for tree species suitable for planting in residential areas. Species must be determined based on their suitability to Canberra’s climate, their ability to withstand prolonged hot and dry conditions and their ability to provide habitat and adequate shade.

## Plant Grouping to Promote Survival

Whilst DV369's proposed changes are a move in the right direction, further consideration should be given to how planning law could improve the quality of tree canopy. Green infrastructure will struggle in an increasingly severe climate, and trees in isolation will be more at risk of dying. Large canopy trees may benefit from being planted in groups to create a microclimate which is conducive to their ongoing wellbeing. Developers of multi-unit developments should be encouraged to maximise urban cooling opportunities by combining plantings areas and creating useful greenspace for residents. A good example of this (albeit using existing trees) is the City Edge apartments in O'Connor where residents have access to a shared common area which actively contributes to urban cooling. Consequently, the DV369 needs to provide greater consideration of the landscaping requirements necessary for canopy trees and ensure that these requirements can be adequately enforced to ensure the long-term health of planted trees.

### Recommendation

6. Consider how DV369 could be expanded to encourage multi-unit developers to group trees together in a shared common green space to create valuable greenspace for residents that also enhances the survival rate of newly planted trees, and builds urban microclimates.

## Definition of a Canopy Tree

A canopy tree is defined as being capable of an 8 metre diameter crown, yet small canopy trees only reach a mature height of 5-8 metres. It is questionable if a small "canopy tree" would ever be capable of delivering an 8 metre diameter crown. For clarity about species that would be able to deliver such outcomes, the definition of a canopy tree could point to a list of trees that would be suitable. If this is not addressed within the DV, then it could perhaps be considered in information provided to developers and the public.

### Recommendation

7. Clarify canopy tree definition with regards to the height of small canopy trees and the potential for meeting definition of a "canopy tree" and provide public information as to the particular species that would meet the "canopy tree" definition.

## Compact and Large Blocks

For both compact block types, the planting area is set to 30% of the total block. However, private open space and site coverage for front loading and rear loading blocks differs, with private open space on front loading compact blocks 20% larger than rear loading compact blocks. It is unclear why these are inconsistent. There is also inconsistency when compared to larger blocks, as blocks up to 800m<sup>2</sup> have a minimum requirement of 30% of total block when factored into private open space. Compact blocks should not carry a higher load for planting area than larger blocks. Instead, they should be consistent with the amount of space they facilitate.

#### Recommendation

8. Reassess planting area on compact and large blocks, and create more consistent requirements for front and rear-loading compact blocks.

### **Large Block Tree Planting Gradients**

Rule 40B in Section 3.1.1. and Rule 38E in Section 3.1.2 outline the minimum requirements for tree planting on large residential blocks. For block areas which exceed 800m<sup>2</sup>, only 1 additional large tree or 2 medium canopy trees are required per extra 800m<sup>2</sup> of block area. Consequently, we are concerned that the gradient for planting requirements on large blocks is too large and does not reflect the available private open space of the block. Minimum planting requirements for blocks over 800m<sup>2</sup> should be amended so that tree planting requirements gradually increase with increases in block size, instead of only per extra 800m<sup>2</sup> of block.

#### Recommendation

9. Amend the gradient of planting minimums on large blocks in Rule 40B in Section 3.1.1. and Rule 38E in Section 3.1.2 so that tree requirements increase more gradually as block size increases.

### **Inconsistent Existing Tree Requirements**

Clause C40A of Section 3.1.2. details the requirements for retaining existing trees on new residential blocks. This is important as canopy cover calculations also consider the percentage of cover provided by existing trees on a block. However, a similar clause is not reflected in the Single-Dwelling Housing Development Code (Section 3.1.1.). Consequently, the Conservation Council would like this to be expanded across both sections to ensure consistency across the plan.

#### Recommendation

10. Add the same existing tree requirements as detailed in the Multi-Unit Housing Development Code (Section 3.1.2, C40A) to the Single-Dwelling Housing Development Code (Section 3.1.1.).

### **Error in Rule 40 in Section 3.1.1. for Compact Blocks**

Two different block types are listed (i.e. front and rear loading blocks) in this rule, however planting area as determined in section c refers only to front loading blocks (section a). This needs to be amended so that planting area minimums are relevant to both front and rear loading blocks (sections a and b).

#### Recommendation

11. Amend Rule 40 in Section 3.1.1. of DV369 to clarify that planting minimums are relevant to both front and rear loading blocks.

### **Canopy Coverage in RZ3, RZ4 and RZ5 Zones**

Although 15% tree canopy cover to RZ3, RZ4 and R75 residential blocks was ascertained as sufficient by an EPSDD study, we are concerned that this may not be sufficient living infrastructure in these zones. This minimum reflects one-fifth of the zone space and does not reflect the 30% tree canopy targets as outlined in the Living Infrastructure Plan: Cooling the City (2019). Therefore, we recommend that the DV369 allocates a more ambitious canopy coverage percentage to RZ3, RZ4 and RZ5 zones to ensure we meet the 2045 canopy cover targets.

#### Recommendation

12. Increase tree canopy coverage in RZ3, RZ4 and RZ5 zones to reflect the 30% targets outlined in the Living Infrastructure Plan: Cooling the City 2019.