

Technical Summary

Impact of proposed changes in Draft Variation 369
Living Infrastructure



TECHNICAL SUMMARY

Impact of proposed changes in Draft Variation 369 Living Infrastructure

For distribution

ABOUT THIS DOCUMENT

This document is a technical summary and analysis of changes to planning rules proposed by the ACT Government in Draft Variation 369 – Living Infrastructure. The Draft Variation includes:

- Introducing Tree Canopy Cover requirements for development in Residential Zones
- Expanding Site Coverage requirements for development in Residential Zones
- Strengthening Planting Area and Canopy Cover requirements for development in Residential Zones

This summary and analysis has been prepared by ACT Greens Planning spokesperson, Caroline Le Couteur MLA. It is intended to help the community to understand the proposed changes and their possible impact. This summary and analysis is **NOT** the view of the ACT Government.

The Greens have long advocated to improve tree canopy in Canberra. Canberra's urban trees are highly valued by the Canberra community. Trees are also critical for keeping our city cool in summer– for example the temperature difference between footpaths in sun and shade can be over 12°C.

The Greens believe that too many trees are being lost through redevelopment and that new suburbs are being built without enough room for trees. Recently, Caroline Le Couteur MLA introduced a motion in the Assembly, calling for three reviews to 'make room for trees' in development and to get better protection for existing trees. In 2019, Greens leader and Minister for Climate Change and Sustainability, Shane Rattenbury, launched the Living Infrastructure Plan, which committed the Government to a range of actions, including targets for a 30% tree canopy cover and 30% surface permeability by 2045.

While significant effort has been put into developing this summary and analysis, it may contain errors. If you see anything you think needs to be fixed, please contact Caroline's office on 6207 8975 or LECOUTEUR@parliament.act.gov.au.

KEY POINTS

Draft Variation 369 is a step forward in making room for trees in residential areas, reducing over-building on residential blocks and increasing permeability and canopy cover. New Site Coverage provisions and increased Open Space and Planting Area requirements are particularly important. However the Variation falls short in several important areas:

- The Variation only includes a 15% Canopy Cover requirement for residential multi-unit infill (RZ1 to RZ5), which falls well short of the Living Infrastructure Plan's 30% target. This is less than the current canopy in many suburbs. Canopy cover in many suburbs could continue to decline unless this requirement is improved.
- The Variation does not cover the streets and public areas of new suburbs. These are often being built with no room for large canopy trees. To make sure new suburbs get the same large street trees that our older suburbs have, the Variation should be expanded to include a 30% Canopy Cover requirement for new residential areas in the Estate Development Code.
- The proposed rules for compact blocks (Single Dwelling Housing Development Code) won't work well. Front-loading compact blocks have tough requirements and rear-loading blocks have weak requirements. The result could be developers only building rear-loading compact blocks, resulting in large areas of terrace homes with no trees and very little open space. Both types need to be adjusted to have balanced requirements for Site Coverage, Open Space and Planting Area.
- The Variation does not include Mixed Use Zone areas, including the important City and Gateway apartment sites. The City and Gateway South Draft Variation (DV368) is out for comment at the same time. It should be expanded to include a Canopy Cover requirement
- Developers may want to fulfil the Planting Area and Canopy Cover requirements with planters on top of basement slabs, and for larger buildings, with roof garden/green roof and green wall options, which may be cheaper than setting aside land for trees. The Variation needs to clarify whether these are acceptable
- The Variation needs clarification of what canopy cover means, and whether tree planting and canopy cover can be within an easement (e.g. under overhead electrical wires).

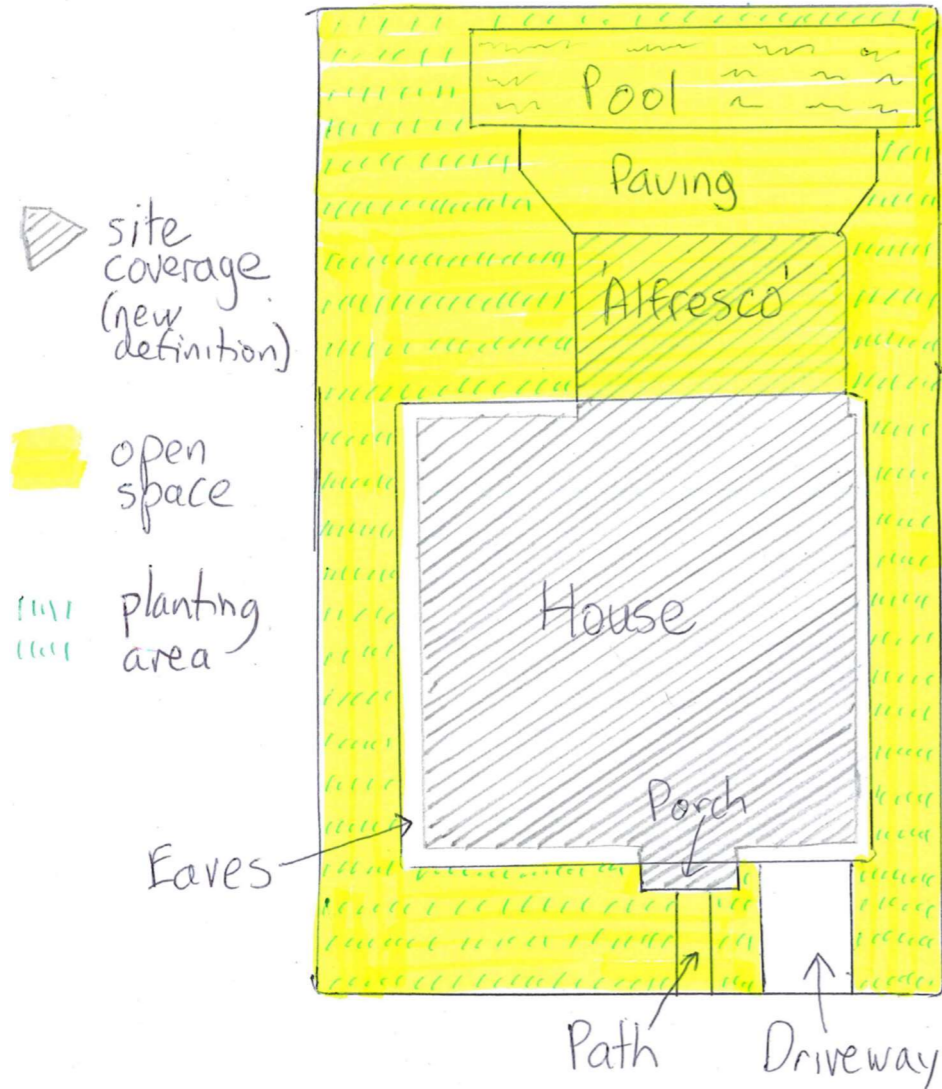
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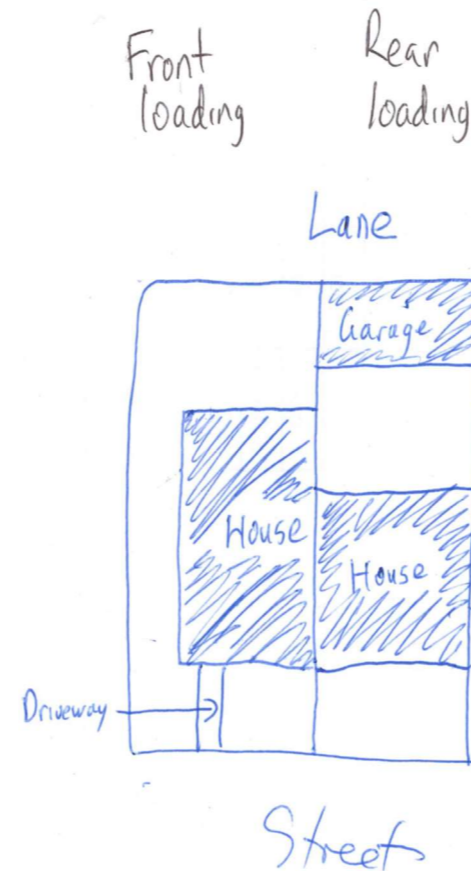


EXPLAINER: WHAT DOES THE PLANNING JARGON MEAN IN THE REAL WORLD?

What do all these terms mean?



What is 'rear-loading' vs 'front-loading' for compact blocks?



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Do the Criteria mean the detailed Rules will be ignored?

For houses and separate title duplexes and terraces, no. Almost all of these are approved by Private Certifiers on the Rules only.

For multi-unit development, the Criteria are important as many developers will have their DAs assessed against the Criteria rather than the Rules

Which of these changes impact on the Living Infrastructure Plan targets?

Permeability: The planning rule most closely related to permeability is the Planting Area as this excludes buildings, pools, driveways and other impermeable surfaces.

Tree canopy: There is no simple translation because mature trees can grow directly over a roof. The following are all relevant (in order of declining importance):

- The Canopy Cover rule (in the Multi Unit Housing Development Code only), as calculating this should factor in all of the below
- The width of the Planting Area because trees need a wide-enough space to grow up in until they are higher than the roof
- Deep soil zone requirements within the Tree Planting rules as trees need space for roots
- Planting Area, Open Space and Site Coverage requirements are helpful because they protect air-space for trees to grow into, especially for taller buildings (i.e. RZ4 and RZ5 Zones) where the roof may be higher than a tree can reach
- The Tree Planting rules themselves are of lesser importance because the new trees required may be removed or die after the Certificate of Occupancy is granted.

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HOUSES AND SEPARATE-TITLE DUPLEXES AND TERRACES (Single Dwelling Housing Development Code)

Context – current requirements

“Large blocks” (over 500m²) rules largely apply to redevelopment in existing suburbs – i.e. an old house being replaced by a new house.

“Mid-sized blocks” (250m² to 500m²) and “Compact blocks” (less than 250m²) currently form the majority of blocks in new suburbs. These rules significantly shape new suburbs.

House-for-house redevelopment of existing suburbs currently often leaves no room for trees and not much green space because:

- The current planning requirements include a Plot Ratio Rule but no Site Coverage Rule, which encourages large single storey dwellings rather than two-storey dwellings with a smaller footprint;
- The Plot Ratio Rule can be exceeded through large ‘alfresco’ areas that are not included in the Plot Ratio calculation but do build over a lot of land;
- The Private Open Space requirements are met in narrow setbacks, paved areas and ‘alfresco’ areas which are not permeable or suitable for tree planting.

New suburbs face all of the above issues, plus the majority of new blocks are mid-sized or compact and these have no Plot Ratio control.

As a result of these issues, the useable open space of new houses is less than the useable open space of 2-3 storey apartment and terrace developments in the Inner North redevelopment area.

Proposed changes

Case	Plot Ratio (Current, no change) Maximum % ratio of gross floor area to site area	Site Coverage (Current) Maximum % of site covered by buildings	Site Coverage (Proposed) Maximum % of site covered by buildings	Private Open Space (Current) Minimum % of block that is outdoor area, including pools and covered ‘alfrescos’ but excluding the driveway	Private Open Space (Proposed) Minimum % of block that is outdoor area, including pools and covered ‘alfrescos’ but excluding the driveway	Planting Area (Current) Minimum % of block that is not covered by buildings, driveways or other impermeable surface	Planting Area (Proposed) Minimum % of block that is not covered by buildings, driveways or other impermeable surface	Canopy Cover/Tree Planting (Proposed) Minimum % canopy cover of block at maturity of trees Number of trees to be planted
Large blocks	50%	Criteria only	40% New definition includes roofed alfrescos, decks and patios as part of buildings	60% minus 50m ² I.e.: 501m ² block = 50% 900m ² block = 54% Minimum dimension of 6m applies to a small proportion	60% Minimum dimension of 6m applies to a small proportion of the open space	Varies: 501m ² block = 25% 900m ² block = 27% (50% of private open space)	30% (50% of private open space) Minimum dimension of 2.5m Stronger definition of planting area	None specified Must plant trees (can retain existing trees instead) Must provide deep soil zone
Mid-sized blocks	None	Criteria only	50% New definition includes roofed alfrescos, decks and patios as part of buildings	40% minus 50m ² I.e. 20% to 30% Minimum dimension of 4m or 6m applies to a small proportion	50% Minimum dimension of 4m or 6m applies to a small proportion of the open space	10% to 15% (50% of private open space)	25% (50% of private open space) Minimum dimension of 2.5m Stronger definition of planting area	None specified Must plant trees (can retain existing trees instead) Must provide deep soil zone

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Compact blocks:								
• Front loading	None	Criteria only	50% New definition includes roofed alfrescos, decks and patios as part of buildings	20%	50%	10% (50% of private open space)	30% Minimum dimension of 2.5m Stronger definition of planting area	None specified Must plant trees (can retain existing trees instead) Must provide deep soil zone
• Rear loading (i.e. terraces)	None	Criteria only	70% New definition includes roofed alfrescos, decks and patios as part of buildings	20%	30%	10% (50% of private open space)	Nil (this may be due to a typo in proposed R20 (c)) Stronger definition of planting area	None specified Must plant trees (can retain existing trees instead) Must provide deep soil zone

Notes and comments

The Single Dwelling Housing Development Code does not include any direct Canopy Cover requirements, only Tree Planting requirements.

The changes would remove the perverse incentives which cause developers to over-produce mid-sized blocks

The proposed compact block rules may have negative impacts. Front-loading compact blocks have stricter rules than mid-sized blocks, which is highly restrictive given the design of this type of housing is already heavily constrained by the small lot size. Conversely, the proposed rules for rear-loading compact blocks are weak – Site Coverage is very high and the Planting Area is zero (a gap which may be a typo in proposed R20 (c), which only refers to (a), not (a) and (b)).

The changes do not cover streets, only private land. They will therefore not fix the problem of many streets in new suburbs lacking large-canopy trees



LOW-DENSITY INFILL IN SUBURBAN RESIDENTIAL AREAS (RZ1 AND RZ2 ZONES) (Multi Unit Housing Development Code)

Context – current situation

There is limited multi-unit infill occurring (e.g. dual occupancies, townhouses, splitting big blocks into multiple small blocks) in suburban residential areas (the RZ1 and RZ2 Zones) because it does not stack up financially compared to building a single very large house on the same block. Key reasons include:

- Planning rule penalties and restrictions compared to building a single large house (e.g. lower plot ratio, restrictions on development design, prohibition on apartments, restrictions on subdivision and unit-titling)
- Lease Variation Charge payable by multi unit development but not new single houses
- Market price of one very large house can be higher than the market price of two small new homes, with a similar build cost
- Multi-unit development faces an uncertain DA process, whereas a single house does not need a DA at all.

Where multi-unit development is occurring – e.g. Mr Fluffy dual occupancies, RZ2 Zone in Campbell – it is frequently suffering from:

- Not enough open space and room for trees
- Over-built, leading to conflict with neighbours
- Low permeability
- Large dwellings that don't meet the needs of downsizers and first home buyers.

Low-rise, low-density infill developments in the RZ1 and RZ2 Zones often have worse site coverage, open space and permeability outcomes than denser 2-3 storey redevelopments in the Inner North redevelopment area.

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Proposed changes

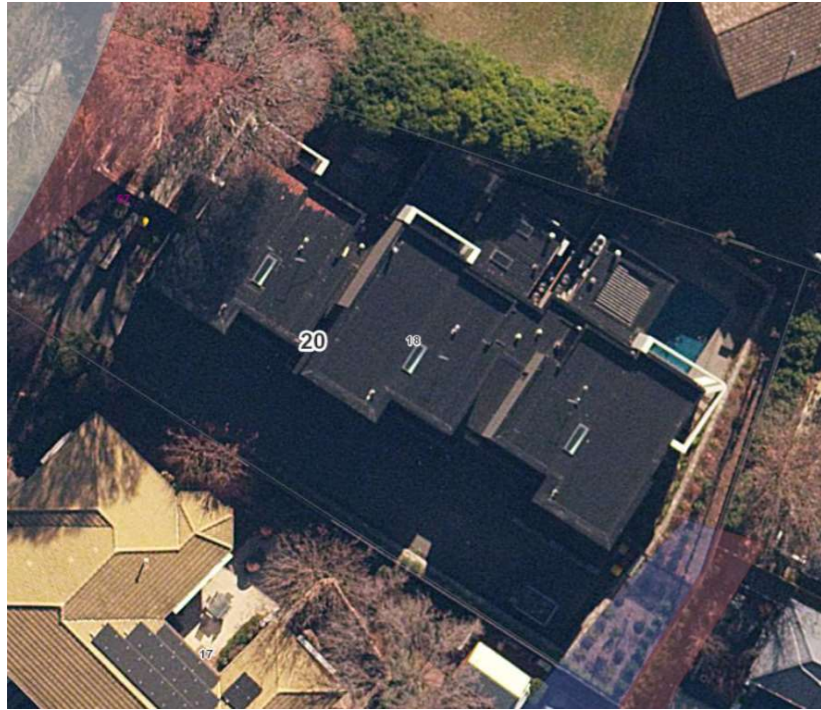
Case	Plot Ratio (Current, no change)	Site Coverage (Current)	Site Coverage (Proposed)	Open Space (Current)	Open Space (Proposed)	Planting Area (Current)	Planting Area (Proposed)	Canopy Cover/Tree Planting (Proposed)
	Maximum % ratio of gross floor area to site area	Maximum % of site covered by buildings	Maximum % of site covered by buildings	Minimum % of block that is outdoor area, including pools and covered 'alfrescos' but excluding the driveway	Minimum % of block that is outdoor area, including pools and covered 'alfrescos' but excluding the driveway	Minimum % of block that is not covered by buildings, driveways or other impermeable surface	Minimum % of block that is not covered by buildings, driveways or other impermeable surface	Minimum % canopy cover of block at maturity of trees Number of trees to be planted
RZ1 Zone	<p><u>Standard blocks:</u> (140/Block size + 0.15) x 100 I.e.: 700m² block = 35% 1,000m² block = 29%</p> <p><u>Mr Fluffy blocks</u> as above except: front-and-back dual occ = 35% side-by-side dual occ = 50%</p> <p>Restriction on plot ratio of rear dwelling of a front-and-back dual occupancy</p>	None	40% New definition includes roofed alfrescos, decks and patios as part of buildings	40% Minimum dimension of 2.5m	40% Minimum dimension of 2.5m	20%	35% Minimum dimension of 2.5m Stronger definition of planting area	15% Must plant trees (can retain existing trees instead) Trees must be in a deep soil zone
RZ2 Zone	50%, except front-and-back dual occ (35%) Restriction on plot ratio of rear dwelling of a front-and-back dual occupancy	None	40% New definition includes roofed alfrescos, decks and patios as part of buildings	40% Minimum dimension of 2.5m	40% Minimum dimension of 2.5m	20%	35% Minimum dimension of 2.5m Stronger definition of planting area	15% Must plant trees (can retain existing trees instead) Trees must be in a deep soil zone
FOR COMPARISON:								
Both Zones: Very large house under the Single Dwelling Housing Code (assumes block over 500m ²)	50%	Criteria only	40% New definition includes roofed alfrescos, decks and patios as part of buildings	60% minus 50m ² I.e.: 501m ² block = 50% 900m ² block = 54% Minimum dimension of 6m applies to a small proportion	60% Minimum dimension of 6m applies to a small proportion	Varies: 501m ² block = 25% 900m ² block = 27% (50% of private open space)	30% (50% of private open space) Minimum dimension of 2.5m Stronger definition of planting area	None specified Must plant trees (can retain existing trees instead) Must provide deep soil zone

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Example



The 3-townhouse development at left is in the RZ2 Zone in Campbell. It has:

- Site Coverage of around 36% and would probably meet the proposed new Site Coverage rule
- Open Space of about 40% and that rule is unchanged
- Planting Area of 20%, much of which is narrow (in parts less than 50cm wide). Meeting the proposed 35% with a minimum width of 2.5m would require a significant re-design
- Tree Canopy of 10%. Meeting the proposed 15% tree canopy requirement would not require a redesign if small trees could be planted in an easement. This highlights an issue that the proposed changes do not address – whether the tree canopy needs to be clear of easements. This is an important issue, especially for overhead electrical easements in older suburbs.

(Note assumptions have been about which areas meet the definition of dwelling vs 'alfresco' area. Percentages are measured off aerial photos and are approximate only)

Notes and comments

It is not clear why the proposed Planting Area is higher for multi-unit infill than a single very large house. Both types of development can have significant impacts on the local environment and streetscape.

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2 TO 6 STOREY RESIDENTIAL DEVELOPMENT (RZ3, RZ4 AND RZ5 ZONES) (Multi Unit Housing Development Code)

Context – current situation

These zones are seeing active development largely in the following parts of Canberra:

- The Inner North redevelopment area (RZ3 and RZ4)
- Greenfield areas in the Molonglo Valley (RZ4 and RZ5)¹

Inner North redevelopment area (RZ3 and RZ4)

In the Inner North, these zones were producing a mix of 2-storey townhouses and 2-to-3 storey apartment buildings until recently, but the market has recently shifted from apartments to 2-storey terraces with basement parking. Development has been occurring at a reasonable pace despite competition from apartment sites in commercial and mixed use areas.

Note current development design is partly due to the 'deep root planting' areas required at the rear of most blocks by the Inner North Precinct Code, which covers this area. EPSDD is currently consulting on Draft Variation 368 City and Gateway South which would replace the 'deep root planting' areas with a more flexible requirement for a Planting Area of 25% of each block and a deep soil zone of at least 7% of each block.

Molonglo Valley (RZ4 and RZ5)

Initially these sites struggled to sell and resulted in low-density townhouse development. However, demand has picked up and DAs are now generally for apartment buildings of 3 to 6 storeys. This shift has caused serious concerns in the local community, mostly around building height and overlooking of neighbouring homes. Several of these DAs have since been rejected. Looking at both the townhouse developments and the early examples of apartment buildings, the current rules do not appear to be providing adequate open space, permeability or tree canopy.

Proposed changes

Case	Plot Ratio (Current, no change) Maximum % ratio of gross floor area to site area	Site Coverage (Current) Maximum % of site covered by buildings	Site Coverage (Proposed) Maximum % of site covered by buildings	Open Space (Current) Minimum % of block that is outdoor area, including pools and covered 'alfrescos' but excluding the driveway	Open Space (Proposed) Minimum % of block that is outdoor area, including pools and covered 'alfrescos' but excluding the driveway	Planting Area (Current) Minimum % of block that is not covered by buildings, driveways or other impermeable surface	Planting Area (Proposed) Minimum % of block that is not covered by buildings, driveways or other impermeable surface	Canopy Cover/Tree Planting (Proposed) Minimum % canopy cover of block at maturity of trees Number of trees to be planted
RZ3 Zone	65%	None	45%	20% Minimum dimension of 2.5m	UNCLEAR DUE TO DOCUMENT ERROR 20% Minimum dimension of 2.5m	10%	25% Minimum dimension of 2.5m	15% Must plant trees (can retain existing trees instead) Trees must be in a deep soil zone and in communal areas

¹ Other locations such as Bruce/Fern Hill and Franklin have these zones but there is very little development occurring at this point in their lifecycle

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RZ4 Zone	80%	None	45%	20% Minimum dimension of 2.5m	UNCLEAR DUE TO DOCUMENT ERROR 20% Minimum dimension of 2.5m	10%	25% Minimum dimension of 2.5m	15% Must plant trees (can retain existing trees instead) Trees must be in a deep soil zone and in communal areas
RZ5 Zone	None	None	45%	20% Minimum dimension of 2.5m	UNCLEAR DUE TO DOCUMENT ERROR 20% Minimum dimension of 2.5m	10%	25% Minimum dimension of 2.5m	15% Must plant trees (can retain existing trees instead) Trees must be in a deep soil zone and in communal areas
FOR COMPARISON ONLY								
Commercial or Mixed Use zone	None	None	No change	20% Minimum dimension of 2.5m	No change	10%	No change PROPOSED FOR NORTHBOURNE SITES: 25% Minimum dimension of 2.5m	None PROPOSED FOR NORTHBOURNE SITES: 7% of block as deep soil zone

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Example



The 8-terrace-with-basement-carpark development at left is in the RZ4 Zone in O'Connor. It has:

- Site Coverage of around 50% and would need a significant redesign to meet the proposed 45%. (Note the basement slab has a greater site coverage than the dwellings above it)
- Open Space of about 48%. The proposed changes are unclear on Open Space due to a document error. However this development would meet any likely open space requirement for this zone
- Planting Area of about 28%. It would meet the proposed 25% with minimum dimension of 2.5m with a very minor landscaping change
- Existing Tree Canopy of 10%, plus two young trees that could take it up to 14%. Meeting a 30% tree canopy requirement would not require a redesign, just more trees to be planted in the available space.

(Percentages are measured off aerial photos and are approximate only)

Notes and comments

Note a key part of this section of the Variation document appears to be in error.

The changes proposed for the Northbourne Avenue commercial and mixed use sites in Draft Variation 368 City and Gateway South will also not achieve 30% canopy cover. The proposed 25% Planting Area is not backed by Site Coverage or Open Space requirements strong enough to protect air-space for trees to grow into.

The proposed requirement for trees to be in communal areas only will not work for many terrace-style developments, which have private open space rather than communal space. (The terrace example above is not typical as it has a large communal open space due to the unusual shape of the block.)

Given the density of RZ5 developments, green roof, roof garden and green walls arrangements may be financially viable as an alternative to setting aside more land for trees. This will lead to developer pressure for this outcome. However, it is not clear how the proposed rules would deal with them – or even if it is a good idea.