



STATE  
PLANNING  
COMMISSION

# Raising the bar on Residential Infill

## Policies in the Planning and Design Code



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Government of  
South Australia

# INTRODUCTION

Infill development is the single largest provider of new housing in Greater Adelaide, with a projected net annual increase of approximately 2500 residential dwellings.

Infill development refreshes our streets and helps create walkable neighbourhoods. In addition to protecting our valuable farming and environmental land, infill development is a response to a clear demand for new housing options in established areas.

It is estimated residential infill represents around one-third of the total dwelling stock growth in metropolitan Adelaide each year, dovetailing with *The 30-Year Plan for Greater Adelaide (2017 Update)* that intends for 85% of all new housing to be built within the existing urban footprint.

Replenishing and upgrading conventional housing with new stock on smaller allotments helps to contain the spread of urban residential development and meet consumer demand for contemporary living, which include living close to jobs, shops and services.

The Planning and Design Code — covering our large regional towns and metropolitan areas — delivers key improvements to the Residential Infill Policy, which focus on four core themes:

- **Trees and Landscaping**
- **Stormwater Management**
- **Carparking and Garaging**
- **Street Appeal and Façade**

In addition, the State Planning Commission contracted BDO EconSearch and Tonkin Engineering to produce two **Options Analysis Reports**, in relation to Stormwater Management and Tree Canopy Cover. These reports are available on the PlanSA portal.

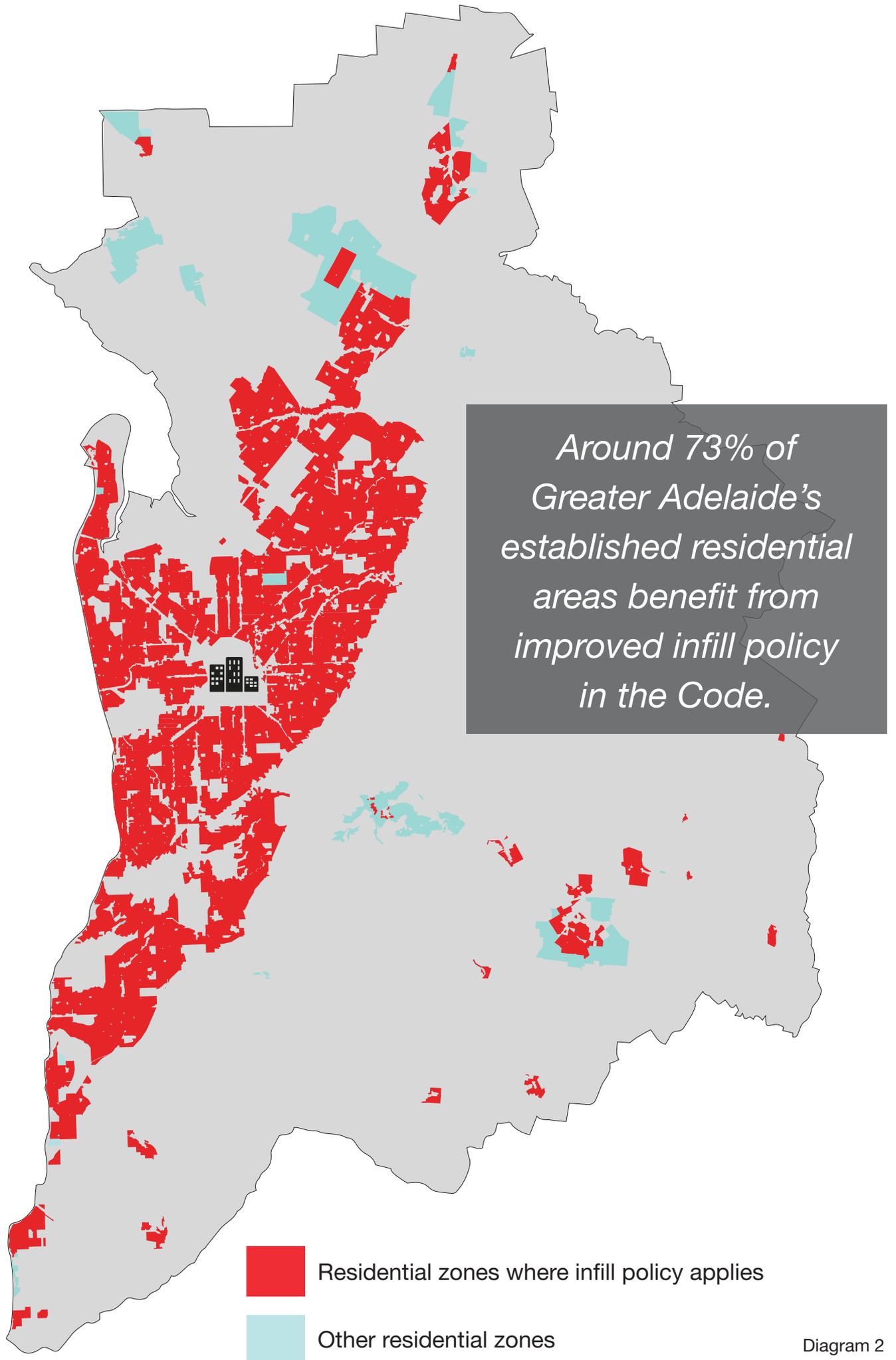
This brochure provides an overview of the policy implemented in the Planning and Design Code to improve residential infill and the benefits supported by evidence-based research.

Through the policy, the Code preserves and enhances residential amenity and supports the demand for well-designed, quality infill housing that reflects modern living.

The policies discussed in this brochure are the ‘Deemed-to-Satisfy’ criteria which a new house must meet to gain guaranteed planning consent within five business days of lodgement. If one or more of the Deemed-to-Satisfy criteria are not met, the house would be assessed on its merits against ‘performance outcomes’.



2006-2016 percentage change of residential infill in SA



# TREES AND LANDSCAPING

To help support and create cooler and more liveable neighbourhoods, the *30-Year Plan for Greater Adelaide (2017 Update)* set a target to increase urban green cover by 20%. The Code provides policy that outlines minimum tree planting and soft landscaping requirements. In addition the Code facilitates infill development to support community demand to protect our valuable primary industry production lands and create more walkable neighbourhoods with better access to and the use of public transport.

The commissioned research analysed tree planting costs, ongoing maintenance and house footing costs in detail. The findings showed that, in the most common infill development scenario (which reflects about 75% of new houses) house footings are not affected by the Code's mandatory tree planting policy.

This is because, in most instances, a new tree can be planted outside the tree effect zone and/or there is already an existing tree effect from nearby trees.

Regardless of the Code's tree policy, the majority of house footings in established urban areas are already required to be designed to accommodate the impact of nearby off-site trees.

The benefits of the tree planting policy, which includes the requirement to plant or retain trees when new dwellings are built in urban residential areas, are also realised through the Urban Tree Canopy Off-set Scheme (Scheme). In special instances, where planting a tree is not feasible (e.g. when soil types are prohibitive), the Scheme enables contribution into a Fund, which can be used to plant trees in parks, reserves and nature strips, or to create new parks.

## KEY FEATURES

### Tree Planting

- Mandatory tree planting policy in urban infill areas to ensure at least one tree is planted per new dwelling.
- Option for payment into an offset fund, where tree planting is not feasible on-site.
- Open space and tree planting in greenfield/broad hectare areas will be provided through land division and street trees instead of tree planting policy.

### Soft Landscaping

- Minimum soft landscaping of 10-25% over the whole site
- Percentage of soft landscaping in front yards of low-rise housing established at a minimum of 30%
- Garden beds to be at least 0.7m width to ensure area is viable for plant growth.



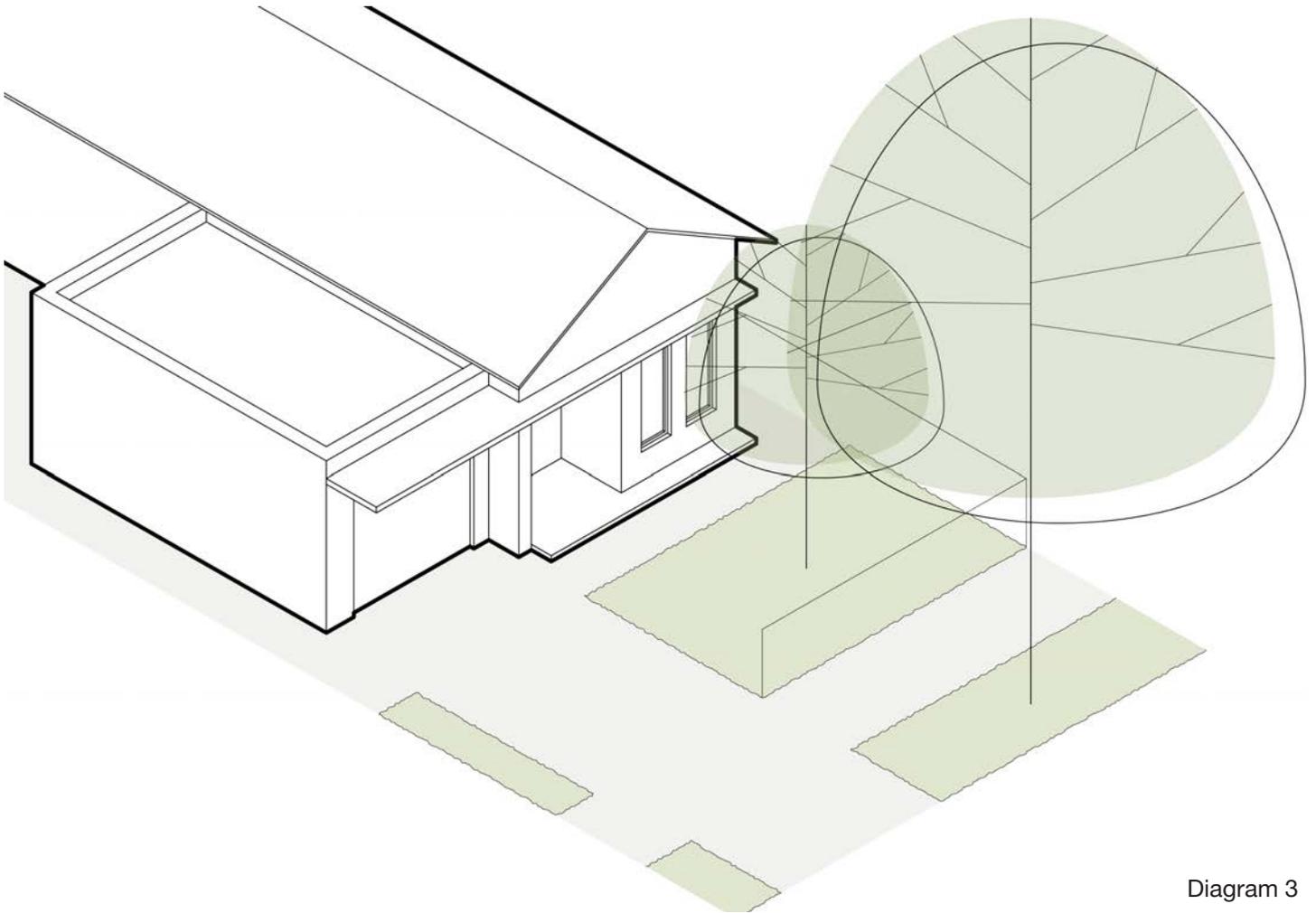


Diagram 3

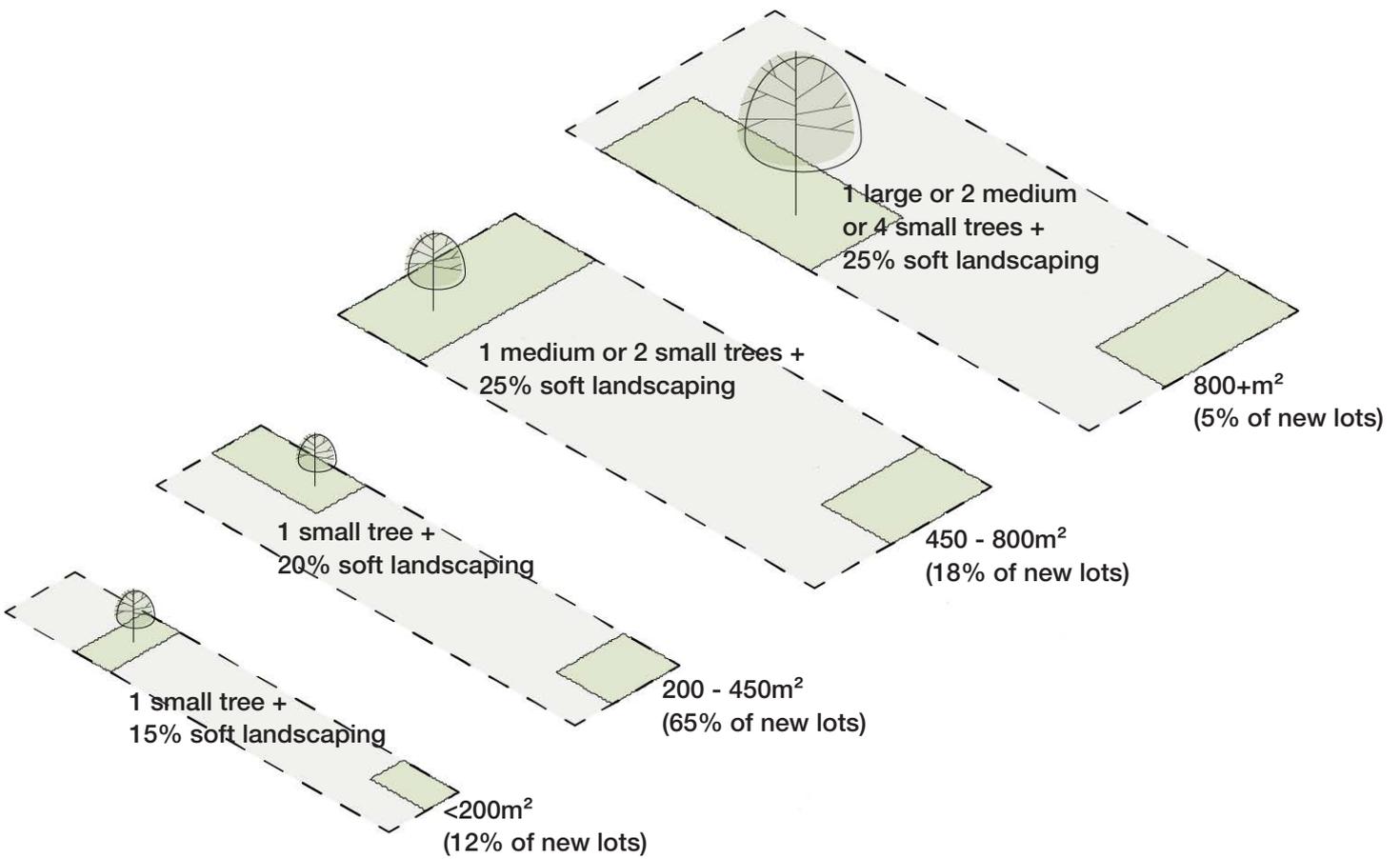


Diagram 4

# STORMWATER MANAGEMENT

The commissioned research analysed water tank costs including supply, installation and plumbing, operation and maintenance, and drainage system upgrades in detail. An analysis of different rainwater tanks found that additional costs associated with larger tanks will generally be offset by water bill savings for individual households.

The findings also highlighted the benefits of both retention of detention tanks and recommended a combination tank to maximise water quality, conservation and stormwater management benefits.

Installation of a rainwater tank is an important part of stormwater management and can help avoid or delay stormwater infrastructure upgrades. Its benefits include:

- reduced potable water demand
- less pollutants in stormwater
- reduced public infrastructure costs.

## KEY FEATURES

### Water Tanks

- Standardised water tank sizes throughout Adelaide to provide a consistent and fair approach.
- The tanks are required to be plumbed to one toilet, to avoid costly plumbing connections to upstairs toilets.
- The combined use of retention (reuse) and detention (hold and release) tanks provide greater benefits to both homeowners and the wider community.
- At least 60% of the roof area for detached, semi-detached and row dwellings are connected to rainwater tanks, with at least 80% of the roof area connected to tanks for other forms of residential development to improve water capture, reuse and tank performance.
- On-site water tanks are not required for new housing estates ('Master-Planned' areas) where storm water solutions are developed at the land division stage, using water sensitive urban design solutions.
- The 1000L rainwater tank requirement in the Building Code has been removed.
- Consistent provision of 1000L detention component, where site permeability is low, to improve management of runoff.

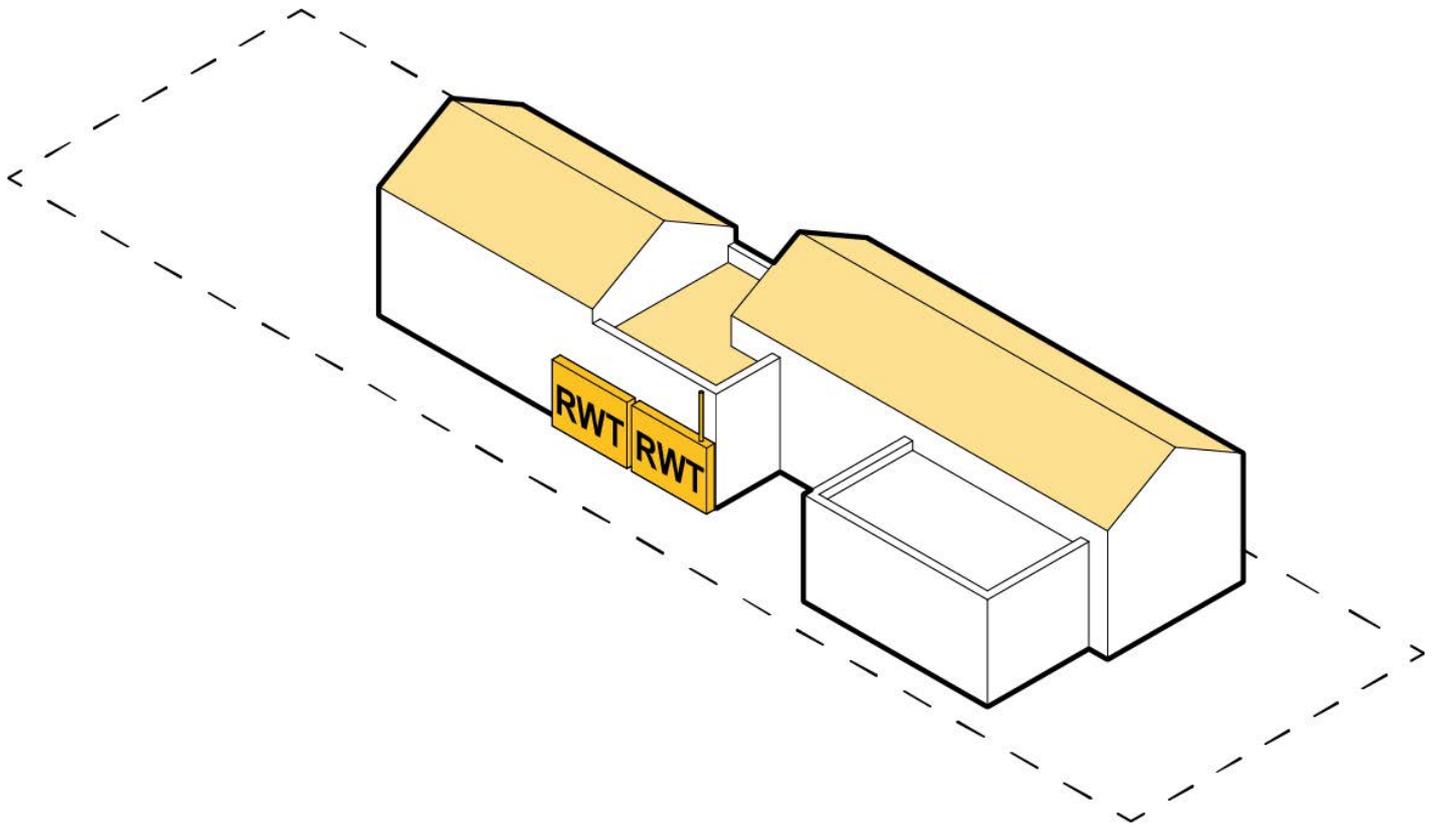
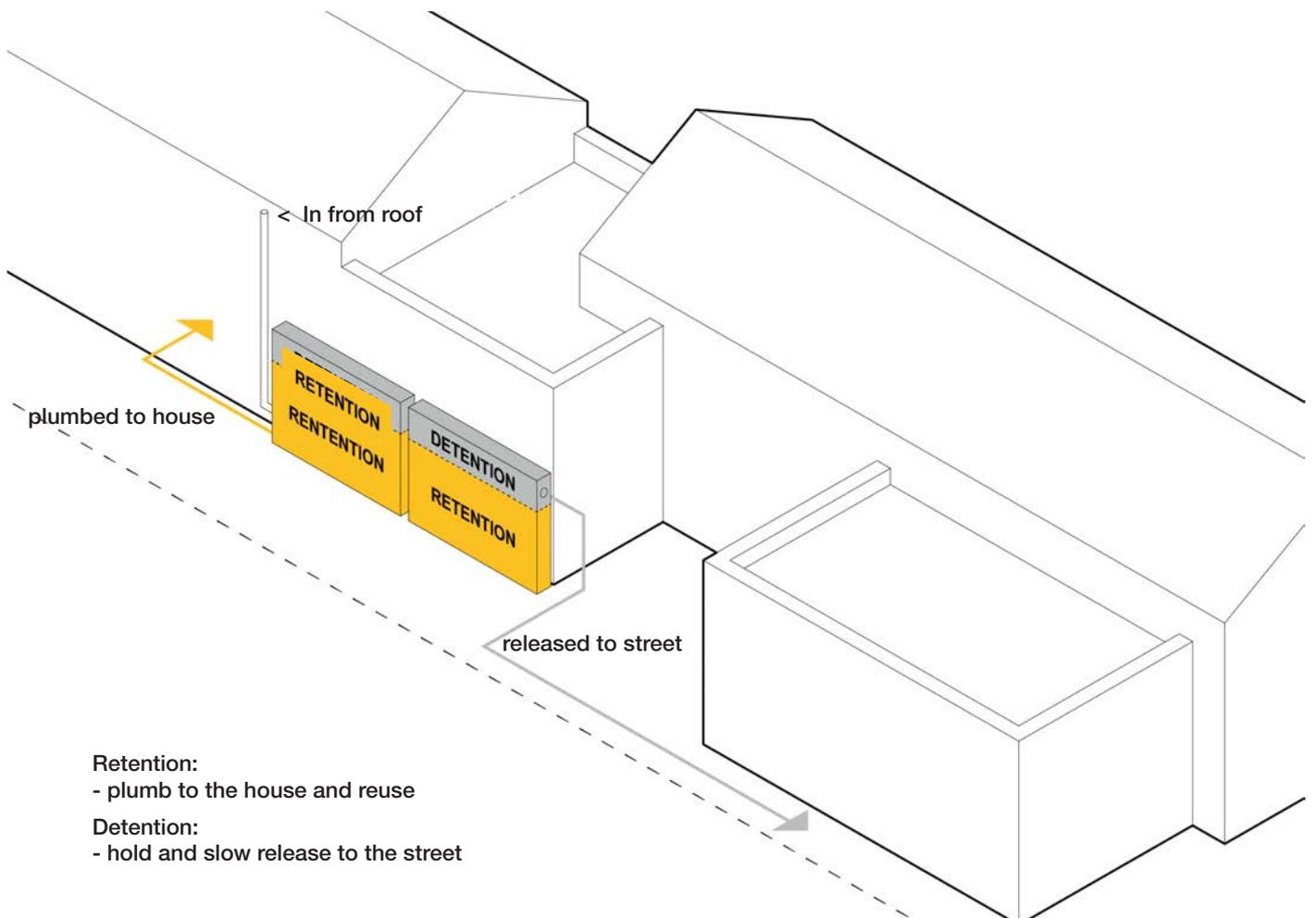


Diagram 5



- Retention:  
 - plumb to the house and reuse
- Detention:  
 - hold and slow release to the street

Diagram 6

# CAR PARKING & GARAGING

Data on car ownership suggests the community's concerns with insufficient on-site parking may be due to difficulty or inconvenience of using garages for parking vehicles. The Code addresses local parking through a combination of requirements for minimum garage dimensions, optimisation of on-street parking provision / retention, and minimum on-site car parking rates.

## KEY FEATURES

### On-site and on-street parking

For detached, semi-detached and row dwellings (not rear-loaded):

- 2 spaces per 2+ bedroom dwelling
- 1 space per 1 bedroom dwelling
- Retention or creation of on-street car parking at a minimum rate of 1 on-street car park per house, duplex or 3 row dwellings to preserve accessible on-street parking
- for visitors (where appropriate) - a minimum car park space length of 5.4m is required where directly accessible or 6m long for intermediate spaces.

For group, residential flat and rear-loaded row dwellings:

- 2 spaces per 3+ bedroom dwelling
- 1 space per 1 or 2 bedroom dwelling
- Plus, where development involves 3 or more group or residential flat dwellings, 0.33 spaces per dwelling for visitor parking.

### Driveway width

Maximum driveway widths for narrow allotments, providing more room for street tree planting and on-street parking as follows:

- 5m wide driveways apply on sites >10m wide
- 3.2m wide driveways apply on sites <10m wide.

### Garage door widths

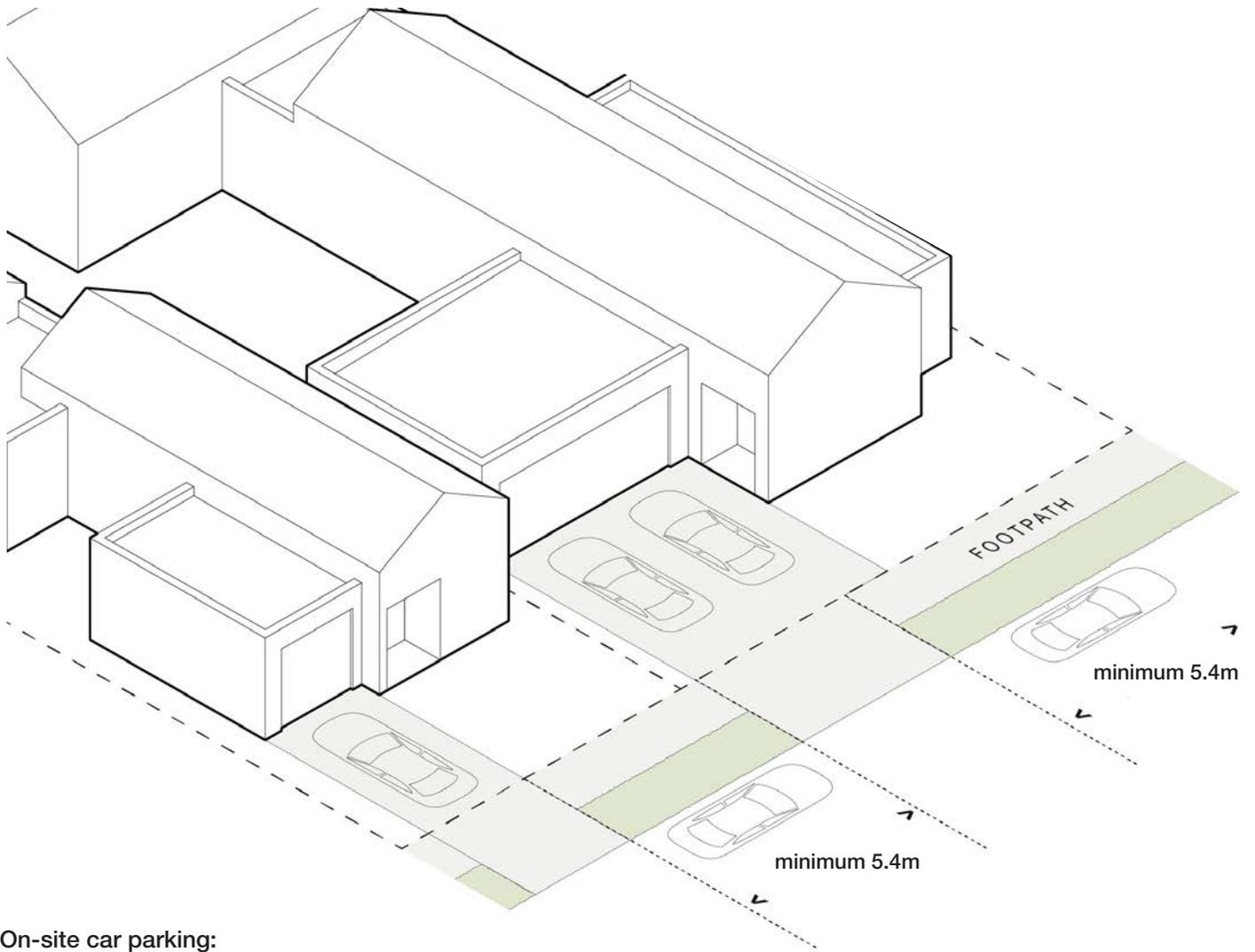
Maximum garage widths along street frontages established or maintained to contribute to streetscapes appearance:

- For single storey dwellings – garages not exceeding 50% of the site and up to 7m wide in most cases
- Older, established residential areas – garages not exceeding 30% of the site frontage and up to a maximum width of 7m
- Dwellings with two or more storeys – garages can have a maximum width of 7m and can exceed 50% of the site width, but 30% maximum applies in older established areas.

### Internal garage dimensions

Align minimum internal garage dimensions with Australian Standards:

- 3m x 5.4m single garage
- 5.4m x 5.4m double garage
- 2.4m garage door width per space.



**On-site car parking:**

- 2 x spaces per 2+ bedroom dwellings
- 1 x space per 1 bedroom dwelling

**On-street car parking:**

- 1 x space per 3 new houses @ 5.4m length

Diagram 7



# STREET APPEAL & FAÇADE

The Code delivers a range of design improvements to enhance the street appeal of residential infill. Research analysis found that street appeal is enhanced through greater use of design elements and materials as well as improvements to dwelling front windows, entry doors and bin storage.

## KEY FEATURES

### Façade design features

- Incorporate a minimum of 3 design features (out of 7 design options) on front façades including eaves, porches, balconies, different materials, stepping, etc. to improve visual interest and building articulation.
- Limits on garage door widths (refer previous section).

### Entry door

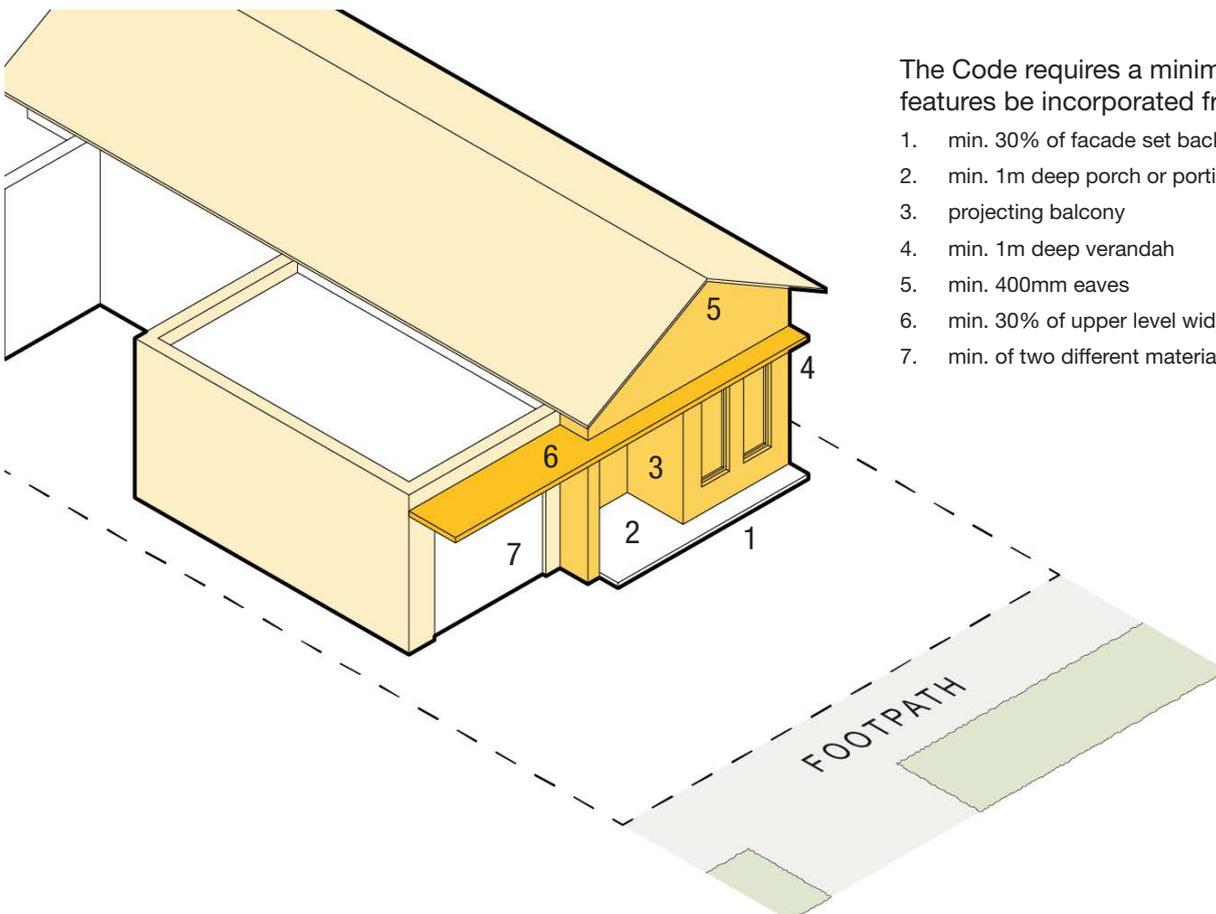
- Dwellings with a frontage to a public street ensure entry doors are visible from the primary street boundary, to create a sense of address.

### Street-facing windows

- A habitable room dimension of 2.4m to have a minimum 2m<sup>2</sup> window area (aggregate) facing the street to improve street appeal and increase passive surveillance.

### Bin Storage

- Allocation of a dedicated area for bin storage behind the building's façade, with a minimum area of 2m<sup>2</sup> and an unobstructed path to the street for collection (excluding moveable objects such as roller doors, vehicles or gates).
- Only required where dwellings are built to both side boundaries.



The Code requires a minimum of 3 design features be incorporated from 7 options:

1. min. 30% of facade set back
2. min. 1m deep porch or portico
3. projecting balcony
4. min. 1m deep verandah
5. min. 400mm eaves
6. min. 30% of upper level width projecting
7. min. of two different materials (max. 80%)



# Residential Infill Policy

in the Planning and Design Code for Urban Areas



1. Garage width commensurate to lot width
2. Entry door visible from street
3. Eaves, porticos, balconies and a variety of materials to improve design quality
4. Minimum 2m<sup>2</sup> window area facing street



5. Dedicated bin storage area screened from the street
6. Mandatory tree planting,  $\frac{1}{3}$  front yard is landscaped
7. Less hard surface, more pervious areas to reduce stormwater runoff
- 8+9. Reduced driveway widths; more space for trees and street parking

# FUTURE PROJECTS

The State Planning Commission is progressing a range of projects that will enhance the planning system and consider the future needs and growth of South Australia and its communities.

## OPEN SPACES AND TREES PROJECT

The State Planning Commission has initiated the 'Open Space and Trees Project' to better understand the use and benefits of open space and trees in an urban context, and the impact of infill development on our urban tree canopy.

The Project aims to provide the Commission with a suitable evidence base to inform planning policy review relating to open space and trees in urban contexts.

The issues and opportunities to be considered within the Project include:

- the impact of climate change and the 'urban heat effect'
- open space and urban greening policy and its contemporary relevance
- loss of urban trees as a result of infill development
- the potential imbalance between the value of regulated and significant trees, and the penalties which apply for their removal
- inappropriate tree species included (or excluded) as regulated and significant trees.

The Project will be undertaken in three parts:

**Part 1:** Review trees that are exempt from regulated tree controls and quantify an appropriate off-set contribution for the removal of regulated and significant trees.

**Part 2:** Undertake a comprehensive review of regulated and significant tree regulations and legislative measures.

**Part 3:** Review the impact of infill development and the operation of the Commission's 'infill tree policy' within the Planning and Design Code following 12 months of operation, with reference to the new Urban Tree Canopy Off-set Scheme, This review includes the fees set under the Scheme and the spatial application of the Scheme.

Additionally, as part of the preparation of the new 30-Year Plan for Greater Adelaide, commencing in 2022, the Commission will review the tree canopy target in light of data and methodologies available, and further investigate how the planning and development system can further urban greening outcomes.

## Project progress

During 2021, a desktop review of the regulatory tree controls identified in Part 1 of the Project was undertaken by the Attorney-General's Department, Planning and Land Use Services (PLUS).

In order to finalise Part 1 of the project, a more detailed analysis of tree species exemptions will be undertaken in consultation with the Department for Environment and Water, the Adelaide Botanic Gardens, and Green Adelaide.

Part 1 of the Project will also see a PhD researcher in environmental management engaged to prepare a detailed Options Analysis Paper for tree valuation methods, which will help to inform future regulatory reform options.

## Next steps

A broader review of regulated and significant tree regulations (Part 2 of the Project) is programmed for 2022, but this will be subject to further consideration by the Minister for Planning.

Any proposed changes to regulations resulting from the Project will be the subject of community and industry consultation. Further analysis (including a regulatory impact assessment) might also be required to support any changes.





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