REVIEW OF THE RESIDENTIAL DESIGN CODES FOR SINGLE DWELLING MEDIUM DENSITY HOUSING (GREENFIELDS)

This proposal was developed with technical advice and leadership provided by CLE Town Planning + Design in conjunction with the Urban Development Institute of Australia (WA).
CONTENTS

Overview 2

Routine Variations to the R-Codes 4

Mechanisms to vary the R-Codes 5

The Proposal 6

Recommended Variations to the R Codes 7

10 Benefits of a Residential Medium Density Code 8

Specific Design Matters – Open Space 9

R-40 Open Space 10

R-60 Open Space 11

Specific Design Matters – Garage Dominance 12

R-30 Housing Design Outcomes 13

R-40 Housing Design Outcomes 14

R-60 Housing Design Outcomes 15

Recommendations 16
Overview: The Need for a Medium Density Housing Code

The Residential Design Codes (R-Codes) provide a comprehensive basis for the control of residential development in Western Australia through a sliding scale of development standards correlated to residential density. They are a State Planning Policy, which is automatically introduced by reference into local planning schemes by virtue of s 77 of the Planning and Development Act 2005 via provisions in the Model Scheme Text.

The R-Codes continue to serve a purpose, but are currently failing to effectively address single lot medium density residential development. Variations are currently required to the Acceptable Development Provisions of the R-Codes to develop cottage lots and other innovative housing forms between R30 and R60 densities. Variations to the R-Codes are essential to deliver the Directions 2031 and Beyond density requirements and affordable medium density single lot housing outcomes. Variations to the R Codes on a project by project, or stage by stage basis, is adding unnecessary time and cost to approvals processes.

The introduction of a Residential Medium Density (R-MD) code could standardise the provisions for single lot medium density housing. This reform is an opportunity to save significant cost and time for both structure plan assessment and subdivision clearances, streamlining approvals for medium density affordable housing.

This reform initiative proposed by UDIA, based on technical work undertaken by CLE Town Planning + Design, has strong support from all major property developers and builders and once implemented will make a significant difference and improvement to the way medium density single lot housing is delivered.

The last five years has seen unprecedented levels of innovation in the urban development industry. The overview on the following page and the matrix on page 4 summarises the suite of lot typologies that are common place in greenfields master planned communities. R Code variations are essential for lot frontages less than 10m wide and depths less than 30m.

After the crash of the property market in 2008, which was then exacerbated by the global financial crisis, the industry responded to the latent demand for affordable product. The demand was primarily driven by first home buyers and downsizers, with both groups looking for value-for-money outcomes. Initially the industry simply reduced the width of the lots with the housing industry following suit with the “cottage lot” gaining enormous popularity between 2010–2013. Changes to lot widths were relatively simple to achieve without overall redesign of an area, allowing for flexibility.

The problem with very narrow lots is the increased external wall length of the dwellings when compared to a square product of the same overall floor area. The industry has diversified, introducing the squarer “squat lot” to reduce construction costs and achieve new affordability thresholds. Rear laneways are also expensive as the development cost of the road infrastructure and the associated land needs to be factored into the overall cost of the lot, making it an expensive per square metre option. It is also more difficult to service rear loaded lots.

The product today is increasingly front loaded, via either narrower front loaded product or squat lot, and this is creating challenges for the existing R-Codes, which were not designed to accommodate development of this type.
**Changing Land Development**

**Vale Development Plan 3**

- LSP approved by City and WAPC in 12 months from lodgement
- 2100 lots, a mix of lot types in streetscapes
- 16 dwellings per gross urban zoned hectare
- 28 dwellings per site hectare
- 21 different lot types, 2 development fronts
- 347m² average lot size
- To deliver this project & Directions 2031 targets variations to the R-Codes are essential
Routine Variations to the R-Codes

Variations for medium density product in greenfields development are becoming the norm to implement standard and accepted housing typologies and meet density targets, and have been routinely approved by WAPC and Local Governments over the last 10 years via Local Development Plans (former DAPs) as a condition of subdivision approval or Structure Plans. The variations predominantly apply to a limited amount of design elements, the balance remain unchanged.

The key areas requiring variation are summarised below:

- Front setbacks: greater flexibility & consistency in streetscape. Encourages porches & verandas and increase streetscape amenity.
- Boundary walls: allows terrace housing and avoids unusable areas in side setbacks. Reduced side setbacks for single storey housing encourages openings for natural light.
- Open space: reduced open space requirement with requirement for a larger useable area.
- Overshadowing: cannot be complied with for single storey medium density.
- Privacy: suspend provisions to encourage two storey development in greenfields locations.

Importantly, the R Code variations can incentivise efficient design outcomes that facilitate housing that addresses the street and adds amenity to the streetscape, as well as provide functional and useable outdoor living areas within the private realm.
Mechanisms to vary the R-Codes

Currently there is significant inconsistency in the mechanisms being used to vary the R-Codes. This dramatically increases potential risk for both the developer and the eventual owner, and can result in additional cost and time delays in approvals. Local Development Plans or Structure Plans can be used as the vehicle, while Structure Plans are the preferred model, there are still limitations. The key advantages and disadvantages of each are summarized below:

Local Development Plans

- cumbersome, costly as they are typically prepared and approved on a stage by stage basis as a condition of subdivision approval
- creates an additional subdivision condition / clearance requirement, potentially causing delays to lot creation
- some Schemes require advertising of LDP’s, extending the approval timeframe
- generates unnecessary work for industry and government when there are alternate options available
- some Local Authorities only accept this approach, resulting in estate wide LDPs

Structure Plans

- incorporating variations into structure plans can give greater efficiency in approvals timeframes; however, this is not the preferred approach by some local authorities
- the risk of this approach is that the provisions can be “reassessed” each time depending on the local government, officer, the corridor or the region, increasing the risk of this approach.

The same basic provisions/principles are being advertised, assessed and approved by WAPC and Local Governments across most major projects regardless of the mechanism. A survey of one major planning firm indicated that variations in the provisions have been approved for a minimum 26,000 lots and up to 35,000 lots. It is anticipated that this number could increase tenfold across the industry for lots being rolled out over the next 10 – 15 years.
The Proposal

There is an opportunity to streamline the approvals process for single lot medium density housing via the introduction of standard provisions into the R Codes for this housing. This reform would greatly assist the delivery of affordable housing supply, underpinned by good housing design, providing certainty, consistency and clarity for industry.

A suite of provisions, referred to as Residential Medium Density, or R-MD could be incorporated into the R Codes. A structure plan would then be able to code an area R30-MR, R40-MD or R60-MD and bring into effect these standard set of provisions. These provisions would primarily apply to greenfields developments, as well as large infill projects and effectively differentiates between the design requirements in established suburbs as compared to master planned developments.

This RMD model is based on the same principle as the R-IC provisions that already exist in the R Codes for inner city development.

The RMD provisions are based on application of R Code variations for over ten years across major projects for all key developers. The work has been comprehensively reviewed and updated in the last 6 months to recognise housing innovation, and also rationalised to balance positive streetscape outcomes. The principles of these variations have already been adopted or applied in some growth Councils and have been approved by WAPC for individual projects.

The RMD provisions standardise the variations required for front setbacks, open space, boundary walls, overshadowing and privacy to incentivise outcomes that create high amenity streetscapes and functional and useable outdoor living areas.

Extensive consultation has been undertaken with builders and key developers, including the review of many house plan designs to develop and better understand the variations.

The detail of these provisions and a comparison can be seen in Attachment 1. Detailed analysis has been undertaken, refer to the attached case studies, demonstrating that houses could not reasonably be constructed on many of the innovative lot types being created without the R Code variations. This analysis shows that the variations proposed via the RMD provisions actually result in superior house design outcomes: verandas fronting the street, reduced garage dominance to the street, larger more useable private open space areas than what would currently be required under the Codes, encourage two storey development and light wells to get more natural light into the dwelling.

Details of the code are provided on the following page.

Source: Homebuyers Centre
**Recommended Variations to the R-Codes for Medium Density Housing in Greenfields Locations.**

<table>
<thead>
<tr>
<th>Code</th>
<th>Front setback</th>
<th>Proposed Variation</th>
<th>Lot boundary setback</th>
<th>Open space</th>
<th>Proposed Variation</th>
<th>Garage setback</th>
<th>Garages / Car Parking</th>
<th>Overlooking</th>
<th>Privacy</th>
<th>Proposed Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>640</td>
<td>Front Load: 5m x 30m - 150m²</td>
<td>5m min. 3m max. to dwelling</td>
<td>1.5m to porch for 25% max length</td>
<td>1.5m to porch / verandah no max length</td>
<td>No maximum length</td>
<td>Both side boundaries</td>
<td>Minimum dimension 4m</td>
<td>1/3 required OLA area may be covered</td>
<td>No maximum overshadowing</td>
<td>No maximum overlookings</td>
</tr>
<tr>
<td>440</td>
<td>Front Load: 7.5m x 30m - 250m²</td>
<td>2m min. 4m max. to dwelling</td>
<td>1.5m to porch / verandah no max length</td>
<td>1.5m to porch / verandah no max length</td>
<td>No maximum length</td>
<td>Both side boundaries</td>
<td>Minimum dimension 4m</td>
<td>1/3 required OLA area may be covered</td>
<td>No maximum overshadowing</td>
<td>No maximum overlookings</td>
</tr>
<tr>
<td>350</td>
<td>Front Load: 7.5m x 30m - 250m²</td>
<td>2m min. 4m max. to dwelling</td>
<td>1.5m to porch / verandah no max length</td>
<td>1.5m to porch / verandah no max length</td>
<td>No maximum length</td>
<td>Both side boundaries</td>
<td>Minimum dimension 4m</td>
<td>1/3 required OLA area may be covered</td>
<td>No maximum overshadowing</td>
<td>No maximum overlookings</td>
</tr>
</tbody>
</table>
10 Benefits of a Residential Medium Density Code

The following summarises the benefits to state and local government, as well as private industry, of the RMD implementation model and standard suite of provisions set out in Attachment 1:

1. The proposed reform, delivered through carefully structured provisions, balances streetscape and amenity outcomes via an incentive driven approach to achieve large useable open space areas.

2. Protects streetscapes by avoiding garages dominating the street and encourages housing to engage with the street.

3. R-MD will apply throughout the State giving greater consistency and clarity. (NB: Some Local Authorities have adopted, or plan to adopt, the proposed provisions).

4. Delivers Directions 2031 targets, affordable housing and addresses housing supply issues.

5. Applies to greenfield and major infill projects via Structure Plan provisions.

6. Sets a new R Codes benchmark for greenfields medium density housing.

7. The approach increases development certainty whilst reducing cost and time delays for both government and industry.


9. Local Development Plans revert back to their original intent under Liveable Neighbourhoods – special design circumstances.

10. Resolves current requirement for WAPC to approve such R Code variations and provides guidance on what is acceptable for greenfields medium density housing.

10. The RMD provisions are simple to implement as the provisions already approved by WAPC and accepted by industry, this does not need to be a time / resource consuming project. The RMD model is similar to the existing RIC approach, and thus is a tested model.
Specific Design Matters

It is critical to recognise that the RMD provisions protect critical design elements to ensure both high amenity streetscapes and useable private open space areas. The design of the home and the creation of quality streets is not compromised, but rather enhanced through these provisions. This is discussed in further detail below.

Open Space- Covered and Uncovered Outdoor Living Areas

The current R-Codes allow one third cover to the minimum outdoor living area. For an R60 lot with a 16sqm court yard, 5.3sqm can be covered (a space 2mx2.5m) or at R40 a 2mx3m. This is inadequate for a functional covered space that fits a table, chairs and barbeque. A standard six chair outdoor setting requires 3.6mx3m. Current R Code variations approved by Local Authorities and WAPC allow for two thirds coverage to give a functional space at an R60 and R40 code.

The current R-Code variations are creating larger, more functional and useable opens space areas. It is critical that the open space variations are tied to provision of a larger outdoor living area, for example under the R60 code the current requirement is for a 16sqm outdoor living area, while under the proposed RMD provisions the requirement is for a minimum 20sqm, which is often exceeded by builders through many standard designs.

EXAMPLE

This is an example of how this positive design outcome can work for a house on a 12.5 x 25m lot (312sqm).

- The house has 56% site cover, R Codes would require 45%.
- This is more than offset by the creation of a 35.85m² courtyard, some 15sqm larger than the R Codes minimum requirement of 20m².
- Of this outdoor living area 15.21m² covered, or 42% coverage. The R Codes would only allow 6.6sqm coverage, 2.2m x 3.3m space, which is not sufficient for a useable protected space.

Examples of open space for R40 and R60 are provided on the following pages.
R40 Open Space

<table>
<thead>
<tr>
<th>Open Space (R40)</th>
<th>Proposed Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>R Codes</strong></td>
<td><strong>Proposed Variation</strong></td>
</tr>
<tr>
<td>• 45% open space (55% site cover)</td>
<td>• 35% open space (65% site cover) subject to a 24m² courtyard being provided;</td>
</tr>
<tr>
<td>• 20m² courtyard</td>
<td>• 2/3 OLA coverage</td>
</tr>
<tr>
<td>• 1/3 required OLA area may be covered</td>
<td></td>
</tr>
<tr>
<td>• Minimum dimension 4m</td>
<td></td>
</tr>
</tbody>
</table>

- 24m² OLA
- Central internal courtyard / light well
- Affordable – house & land starts from $338 193, within State Affordable Housing Strategy target price point for affordable housing at Golden Bay ($240 000 - $445 000)

Golden Bay

Source: Switch Homes
• 32m² OLA
• Single garage
• Addresses street
• Integrated build out
• House and land packages sub

$350 000 at Whiteman Edge, significantly below the $450 000 average price for the project and NE Corridor

R60 Open Space

<table>
<thead>
<tr>
<th>Open Space (R60)</th>
<th>Proposed Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>R Codes</td>
<td></td>
</tr>
<tr>
<td>• 40% open space (60% site cover)</td>
<td>• 25% open space (75% site cover) subject to a 20m² courtyard provided</td>
</tr>
<tr>
<td>• 16m² courtyard</td>
<td>• 2/3 OLA coverage</td>
</tr>
<tr>
<td>• 1/3 required OLA area may be covered</td>
<td>• Minimum dimension 3.5m to one axis only, on lots 8.5m or less in width</td>
</tr>
<tr>
<td>• Minimum dimension 4m</td>
<td></td>
</tr>
</tbody>
</table>

Requirement for larger open space area creates useable areas
Specific Design Matters - Garage Dominance

One of the key concerns for regulators and industry is the dominance of the garage in narrow lot product. It is recognised that on lots less than 10 metres wide is it difficult to provide a positive streetscape with a double garage and there is increasing acceptance of single tandem garages.

The problem is that the current R-Code provision is not well structured for narrow front loaded lots. Clause 5.2.2C2, the current acceptable development provision, states:

“Where a garage is located in front or within 1m of the building, a garage door and its supporting structures (or a garage wall where a garage is aligned parallel to the street) facing the primary street is not to occupy more than 50 per cent of the frontage at the line as viewed from the street. This may be increased to 60 per cent where an upper floor or balcony extends for the full width of the garage and the entrance to the dwelling is clearly visible from the primary street (refer to Figure 8c)”

This provision effectively allows a double garage on a lot 10m wide or less where the garage is setback 1m behind the main line of the building. It is recognised by industry that there needs to be greater design controls to ensure a positive streetscape outcome for double garages on a 10m wide lot, as well as urban design controls that encourage “salt and peppering” or mixing of lot and housing types on a street.

Source Home Buyers Centre

It is recommended the text is amended as follows:

“In addition to Clause 5.2.2 C2 of the Residential Design Codes, for lots with a street frontage of 10m a double garage may be permitted subject to it being setback a minimum of 1m behind the main building line of the dwelling, the front door and major opening to a habitable room of the dwelling is to be visible to the street, and two or more of the following be provided to the front elevation:

a. Portico attached to the front of the dwelling
b. Porch with a separate roof
c. Veranda
d. Gable / gablet
e. Projecting sill courses and / or contrasting sills
f. A feature blade wall, or feature wall of contrasting colours or materials”

This provision has been workshopped with and supported by industry. Importantly these requirements do not add additional cost to the construction of the dwelling as many house designs have these elements, or can easily accommodate these elements, as standard. The house design below demonstrates how this positive design outcome can operate and appear from the street.

Examples of design outcomes for R30, R40 and R60 are provided on the following pages.
R30 Housing Design Outcomes

PROPOSED VARIATIONS
- Gives larger usable open space areas
- Verandahs to the street
R40 Housing Design Outcomes

PROPOSED VARIATIONS

- Significantly larger outdoor living areas
- Housing addresses the street
- Garage setbacks not varied
- Single garaging for lots less than 10m
R60 Housing Design Outcomes

PROPOSED VARIATIONS
- Gives larger usable open space areas
- Verandahs to the street
- Terrace housing and side setbacks for natural light

R-CODE DEEMED TO COMPLY
- Unworkable layouts, ie 4m wide house on 6m lot

Source: Homebuyers Centre

Source: ABN
**Recommendations**

By having a standard set of provisions for medium density housing embedded in the R-Codes to be referred to or enacted via a structure plan, the proposed R-MD will deliver a model for standard variations to the R-Codes for medium density housing in greenfields locations and major infill projects. It is a similar model to R-IC which is an accepted approach. It provides a balance with amenity and streetscape outcomes and will save industry significant workload and cost and result in significant approvals timesavings. The urgency of this reform cannot be overstated given the scale of the variations currently applied and that the implementation of R Code variations is required for all major projects under Directions 2031. It is critical that the RMD provisions provide a sound basis for delivery of great streetscapes and affordable housing, the experiences of industry over the last 10 years and the housing that has already been delivered under these provisions must provide the basis for this reform.

In summary UDIA recommend that WAPC:

1. **Adopt the R-MD provisions into the R Codes as a standard set of provisions for greenfields and major infill projects, which have been tested by industry and approved by WAPC and growth councils for individual projects. The provisions could also be inserted into or referenced in the current Liveable Neighbourhoods Review as a desirable suite of provisions and implementation model for major projects.**

2. **The R-MD should recognise that other variations may be approved as part of structure plans to allow further innovation, in keeping with R Codes Design Principles, but the code itself should focus on the key areas listed in this document. LDPs would then be reserved for special design circumstances.**

3. **As an interim measure a WAPC Planning Bulletin could provide direction for variations to be included in Structure Plans and avoid large scale LDPs, as well as identify WAPCs support for the RMD standard variations as being acceptable in Structure Plans. This clarification of WAPC’s position would help to avoid LDPs and will standardise provisions and avoid unnecessary approvals delays in reassessing tested and supported provisions.**