



Streets of[™]
OurTowns

R CODE GUIDE

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What is an R Code?

R Codes, also known as Residential Design Codes, are used in WA to guide you through the housing and development process.

This reference guide helps with the first steps of identifying development opportunities.

There are three tiers to the R Codes for land:

Low density – codes less than R25

Medium density – codes R25 to R80

High density – codes R100 and above

This guide will focus on the more complex issues of Grouped and Multi Dwellings; being units, townhouses and apartments.

This will become clear as you continue through the guide.

Definitions

LGA

Local Government Authority (often commonly referred to as Councils or Shires).

Ancillary Accommodation/Granny Flat

a separate dwelling that is either integrated with or detached from the main dwelling on a lot. Cannot be strata titled or subdivided independent of the main dwelling.

Home Renovation/Extension

a renovation is the act of restoring, upgrading or replacing elements of a house, typically to new condition from old. An extension is an addition of new space to an existing dwelling and is also a renovation.

New House & Land

a new dwelling constructed on vacant land, typically as part of a 'package deal'.

Single Dwelling

a dwelling standing wholly on its own freehold or survey strata lot, without common property.

Demolish & Build

a term to describe demolition on an old house to construct a new dwelling.

Dual Street Frontage/Corner Block

a lot with a frontage to more than one public street – typically a corner block. Concessions to minimum and/or average lot size are available dependant on the base R Code and some or all criteria being met per Development Control Policy 2.2.

Irregular Block

an irregular shaped parcel of land. Typically requires more common property or odd-shaped lots which can affect boundaries, built-form and lot sizes in general.

Terminology

Common residential design code descriptions

Battleaxe Lot a 'battleaxe lot' is a subdivision pattern behind an existing dwelling with an access way typically accommodating a driveway or pedestrian only access, services and landscaping. This formation looks like a handle and an axe head, hence the name battleaxe.

Common Accessway the vehicle and/or pedestrian access held in Common Property on a Strata Plan. 'Accessway' includes the sealed driveway and space either side. 'Driveway' means the sealed roadway within the Accessway. Minimum widths apply for the Driveway and Accessway depending on the number of lots the Common Accessway serves as per the R Codes.

Build-Strata a strata-plan designed for new dwellings, whether single or multiple tier schemes, that captures building and land areas on a strata-plan. A build-strata cannot incorporate an easement. (The original type of Strata, Common Property is not listed as a separate lot).

Survey-Strata a strata-plan designed for single tier schemes which is typically land-only, with or without dwellings or other building already constructed within boundaries. Common Property is shown as its own lot.

Dual Density / Split Code the zoning of a lot with two or more zonings attached, typically a lower and higher zoning. The lower zoning is the 'as right' zoning, and a higher zoning which typically requires a Development Application to be lodged to demonstrate compliance with a Local Planning Policy or Scheme.

Terminology

Common residential design code descriptions

Plot Ratio	is the ratio of total allowable dwelling area against a specified area of land, including all walls. Sometimes referred to as 'architectural area'.
Grouped Dwelling	a dwelling in a group of two or more, typically where no dwelling is wholly or partly above another – and includes dwellings on strata-plans with Common Property.
Multiple Dwelling	a dwelling in a group of more than one, where one or more dwellings are partly or vertically above another. Also includes dwellings above commercial uses.
Common Property	a common portion of strata-tilted land shared with other lot holders within a strata-plan. Usually an accessway (pedestrian or vehicle) found on a built or survey strata-plan, or common walkways, foyers and terraces found on a multiple-tiered scheme.
Car Bay	a portion of a strata-scheme, held either exclusively to a particular lot or in common, for the sole purpose of parking wheeled vehicles.

R Code Table

SOURCE: www.dph.wa.gov.au

State Planning Policy 7.3 Residential Design Codes

Table 1: General site requirements for all single house(s) and grouped dwellings; and multiple dwellings in areas coded less than R40

1 R-Code	2 Dwelling type	3 Minimum site area per dwelling (m ²) ◆	4 Minimum lot area/rear battleaxe (m ²) ▼	5 Minimum frontage (m) ▼	6 Open space		7 Minimum setbacks (m)		
					min total (% of site)	min outdoor living (m ²)	primary street	secondary street ●	other/rear
R2	Single house or grouped dwelling	Min 5000	-	50	80	-	20	10	10
R2.5	Single house or grouped dwelling	Min 4000	-	40	80	-	15	7.5	7.5
R5	Single house or grouped dwelling	Min 2000	-	30	70	-	12	6	* /6
R10	Single house or grouped dwelling	Min 875	925	20	60	-	7.5	3	* /6
	Multiple dwelling	Av 1000	-	-	-	-	-	-	-
R12.5	Single house or grouped dwelling	Min 700	762.5	17	55	-	7.5	2	* /6
	Multiple dwelling	Av 800	-	-	-	-	-	-	-
R15	Single house or grouped dwelling	Min 800	-	-	55	-	7.5	2	* /6
	Multiple dwelling	Av 666	655	12	50	-	6	1.5	* /6
R17.5	Single house or grouped dwelling	Min 600	-	-	50	-	6	1.5	*
	Multiple dwelling	Av 571	571	11	50	36	6	1.5	*
R20	Single house or grouped dwelling	Min 350	450	10	50	30	6	1.5	*
	Multiple dwelling	Av 450	-	-	50	-	6	1.5	*
R25	Single house or grouped dwelling	Min 300	425	8	50	30	6	1.5	*
	Multiple dwelling	Av 350	-	-	50	-	6	1.5	*
R30	Single house or grouped dwelling	Min 260	410	-	45	24	4	1.5	*
	Multiple dwelling	Av 300	-	-	45	-	4	1.5	*
R35	Single house or grouped dwelling	Min 220	395	-	45	24	4	1.5	*
	Multiple dwelling	Av 260	-	-	45	-	4	1.5	*
R40	Single house or grouped dwelling	Min 180	380	-	45	20	4	1	*
	Multiple dwelling	Av 220	-	-	45	-	4	1	*
R50	Single house or grouped dwelling	Min 160	380	-	40	16	2	1	*
	Multiple dwelling	Av 180	-	-	40	-	2	1	*
R60	Single house or grouped dwelling	Min 120	380	-	40	16	2	1	*
	Multiple dwelling	Av 150	-	-	40	-	2	1	*
R80	Single house or grouped dwelling	Min 100	380	-	30	16	1	1	*
	Multiple dwelling	Av 120	-	-	30	-	1	1	*

All standards for single house or grouped dwellings within R100, R160 and R-AC areas are as for the R80 Code

Example Only

Legend

- ◆ subject to variations permitted under clause 5.1.1 C1.4
- ▼ only applies to single houses
- secondary street: includes communal street, private street, right-of-way as street
- indicated not applicable
- * see Tables 2a and 2b and clause 5.1.3
- Av. average site area



Grouped Dwellings

A dwelling that is one of a group of two (2) or more on the same strata-plan with Common Property.

Often referred to as townhouse or villa.

The majority of Perth's middle-ring suburbs are typically zoned R20 or below. To address housing diversity and locality needs for a growing population, certain locations or activity centres within suburbs that provide good public transport, infrastructure and local amenities are continually under review.

To find out if your property can be subdivided you must first know the R Code and lot size. This can be found on the Intramaps websites, or in your property's [OurTowns Development Analytics Report](#).

To establish if your lot has development potential, you divide the lot area by the average area for the lot's given R Code... or you can get an OurTowns report.



Case Study: R30, 900m² property – what can be built

Using the R Code table, we know an R30 block required 45% of open space and a minimum lot size of 260m²

Open Space	land area 900m ²	x x	R Code open space 45%	= =	size of open space required 450m ²	*Open space generally refers to the area of the lot that is not covered by building/s (excluding outdoor living areas such as alfrescos and porches that are not enclosed on two sides of more).
Site Coverage	land area 900m ²	- -	open space requirement 405m ²	= =	site coverage 495m ²	
Number of Lots	land area 900m ²	÷ ÷	average lot size 300m ²	= =	number of lots allowed 3	*Site coverage refers to the percentage of the site that can be covered with building/s.
Site Coverage by Lot	site coverage 495m ²	÷ ÷	number of lots 3	= =	max dwelling size 165m ²	*Each lot has to demonstrate open space individually – but can apportion a share of their 'Common Property' to do so.
Accessway / Common Property	average lot size 300m ²	- -	minimum lot size 260m ²	= =	Common Property 40m ² (per lot)	



Interpreting R Codes for Group Dwellings – R2 to R20

R2 - R5

You need to consider the overall lot size but as a rule of thumb the minimum and average lot sizes are the same with R2 – R5 lots.

R Code	Minimum/Average Block	Minimum lot size to subdivide
R2	5,000m ²	10,000m ²
R2.5	4,000m ²	8,000m ²
R5	2,000m ²	4,000m ²

R10 - R20

For R10 – R20 you can create one lot smaller or larger as long as they are not smaller than the minimum.

R Code	Average Block Size	Minimum Lot Size	Minimum lot size to subdivide
R10	1,000m ²	875m ²	2,000m ²
R12.5	800m ²	700m ²	1,600m ²
R15	666m ²	580m ²	1,332m ²
R17.5	571m ²	500m ²	1,142m ²
R20	450m ²	350m ²	900m ²

Sometimes lots that provide less than the developable averages are subdivisible – but you should use our [Due Diligence](#) tool for more information.



Interpreting R Codes for Group Dwellings – R25 versus R80

R25

Average 350m² Minimum Lot 300m²

Example of a 900m² lot – take the 350 average and divide into the 900m² total lot size. This calculates into 2.57 lots. Which is a 2-lot subdivision. You can then create one lot smaller or larger as long as not smaller than 300m² minimum size with Common Property. You would need 1050m² for a 3-lot subdivision if applying the same calculations as per above

R80

Average 120m² Minimum 100m²

Example of 900m² lot – take the 120 average lot size and divide into the 900m² total lot size. This calculates into 7.5 lots which round down to 7 lots. However, depending on your lot shape taking an accessway / driveway into consideration, your final yield could be 6 lots. You can then create lots smaller or larger than the average as long as not smaller than 100m² minimum size.

There are some exceptions to these calculations depending on the proposed dwelling type – please use our [Due Diligence](#) menu for more advice.



Multiple Dwellings

A dwelling in a group of more than one dwelling on a lot where any part of the dwelling is vertically above part of any other.

Often referred to as units, flats or apartments.

Multiple dwellings (or apartments) have many variables, with each LGA usually having its own Local Planning Policy which can sometimes conflict with, or complement, the R Codes. Some LGA's disallow multiple Dwellings altogether.

If your lot have an R Code under R40, you can typically use Table 1 of Volume 1 of the R Codes to determine your lot yield.

If your lot is R40 or over, there is no minimum or average lot sizes for Multiple Dwelling. They rely on a massing control known as Plot Ratio to limit the number of dwellings on a parcel of land; which is variable depending on the size of dwellings you choose to accommodate; or vice-versa. Some LGAs disallow plot ratio to be used in certain areas within their jurisdiction.

The plot ratio is a ratio of total dwelling area, including walls, as a proportion of the land area.



Interpreting R Codes for Multiple Dwellings Using Plot Ratio R40 or Greater

Multiple dwellings (apartments) in areas coded R40 or greater do not have minimum site areas, they have maximum plot ratios for the total number of dwellings on a parcel of land.

A multiple dwelling is not a grouped dwelling and it is important to understand the difference between the two.

Maximum Plot Ratio

R40	0.6
R50	0.7
R60	0.8
R80	1.0
R100	1.3
R160	2.0

Minimum Sizes for Apartments

(internal not plot ratio)

Studios	37m ²
1 Bedroom	47m ²
2 Bed / 1 Bath	67m ²
2 Bed / 2 Bath	72m ²
3 Bed / 2 Bath	95m ²

Understanding apartment sizes (both the minimum sizes and what is selling in your area) is important before you apply plot ratio calculations. Most industry professionals work on an average of 70m² per apartment (being 67m² + 5% for walls) – this is the size used in *Streets of OurTowns* development calculations, or course this can vary up or down depending on the size of dwelling you choose.



Case Study: R60, 900m² property – what can be built

Multiple dwellings excludes those classified as group dwellings

Land Size	x	Maximum Plot Ratio	=	allowable dwelling area
900m ²	x	0.7	=	630m ²
630m ²	÷	(your chosen size of dwelling)	=	(the number of dwellings your lot could accommodate)

Your lot may not yield the maximum number of dwellings due to access, parking, setbacks, heights or other restrictions present under a Local Planning Policy. Remember, a development of this nature has a great deal more to consider up front; such as balconies, stores, landscaping, universal design, dwelling diversity, orientation and communal facilities.

You can find a comprehensive list of all the requirements within the R Codes Volume 2 – Apartments.



Dual Density Coding

Dual Density Coding (Split coding) is intended to provide opportunities for the redevelopment of land in areas that are well serviced by public transport and close to commercial centres.

A dual density coding of R20/40, for example, means there is an 'as right' coding of R20. Subject to meeting the R Codes and Local Planning Policy provisions, there can be no reasonable grounds for refusal when you apply to subdivide this lot.

To take advantage of the higher coding, an applicant will generally be required to meet additional requirements of a Local Planning Scheme (including any Local Planning Policies), by way of a Development Application to the LGA.



Case Study: R20/R40, 900m² – Grouped Dwelling

R Code	Dwelling Type	Minimum Site Area Per Dwelling (m ²) *		Min Lot Area / Battleaxe *	Min Frontage (m)	Site Coverage Max % of Site	Open Space		Minimum Setbacks (m)	
		Minimum	Average				Min % of Site	Min Outdoor Living (m ²)	Primary Street	Secondary Street #
R20	Single house or grouped dwelling	350	450	450	10	50%	50%	30	6	1.5
	Multiple Dwelling	450			20				6	1.5

Let's look at R20. When subdividing land, either as a Single or Grouped Dwelling, divide the site area by the Average area of your zoning

$$900\text{m}^2 \div 450\text{m}^2 = 2 \quad \text{So this site, at this zoning, could allow two (2) new lots.}$$

The Minimum is only used if needed. The difference between the Minimum and the Average site area is for two reasons;

- 1) To allow for varying lot sizes to suit an existing site's restriction e.g. an existing house position, or awkward lot shape; and
- 2) To allow for Common Property as part of a strata scheme e.g. driveway or pedestrian access way, which allows a lot to be subdivided that cannot meet the Average lot size or minimum Battleaxe lot size.

For example, the R20 lot may have an existing house in the middle of the lot. If possible, you could provide 350m² behind this dwelling, leaving the existing house on a larger title with a common property accessway.

You would need the accessway to this lot to be common property, because the proposed lot size falls short of both the average lot size and the minimum Battleaxe lot size for this zoning.



Case Study: R20/R40, 900m² – Multiple Dwellings

Let's look at R40. When subdividing land as a Multi Dwelling, times the site area by the maximum plot ratio of your zoning.

$$900\text{m}^2 \quad \times \quad 0.6 \quad = \quad 540\text{m}^2$$

So this site, at this zoning, could allow 540m² dwelling area. Let's use our sample dwelling size of 70m²

$$540 \quad \div \quad 70 \quad = \quad 7.7$$

The choice is with the applicant as to whether this is rounded up to 8 dwellings (reducing their size to 67m² each) or rounded down to 7 dwellings (and possibly increased to 77m² each).

The number of dwellings can vary depending on the size of dwellings chosen – as long as the allowable plot ratio (in this case, 540m²) isn't increased. For example, an applicant could choose:

- six (6) 90m² dwellings, or
- ten (10) 54m² dwellings – and any number and size in between,

however, the limit to the number of dwellings is 'balanced' by the site's ability to provide the required number of car bays and essential utilities, along with minimum setbacks and maximum heights per the LGA Scheme.

Therefore, a site may not yield the maximum number of smaller dwellings. This 'balance' between dwellings and essential utilities (car bays, stores, balconies etc) has to be demonstrated with a development application.

Now might be a good time to do your 'Due Diligence'



Case Study: R20, 900m² – Battleaxe

A Battleaxe lot is one that has exclusive access from the street, not as Common Property – however, it can be Strata or Freehold (individual) title. If the subdivision is proposed like a Battleaxe, but can't meet the Minimum Battleaxe size, then the lot must meet the Minimum lot size; with the success as Common Property.

For example, the Minimum Battleaxe lot size at R20 is 450m².

The site could have a street-front lot as 450m² and a Battleaxe lot as 450m² – no Common Property.

If the site has a restriction, like an awkward shape or existing house, then 350m² to the rear might only be possible, with an access way of 80m² as Common Property. The remaining lot size is 470m² by default.

There is no minimum lot area for Common Property access way, only a minimum width of 4m. The lot sizes must work first, with the Common Property width; and the Common Property area is what is remaining.

The same rules apply for the higher coding of R40 with Single and Grouped Dwellings.



What to watch out for

Most LGAs have unique Local Planning Policies, or clauses within their Local Planning Schemes, that should be investigated as part of any wider due diligence when purchasing or developing a Dual or Split Coded lot.

An example of local exceptions being;

- The City of Wanneroo requires all development in a split coded area (whether higher or lower coding) to provide “consolidated access” – or one crossover for all dwellings.
- The City of Belmont requires more than half of all development to be greater than two (2) storeys, with additional accessway widths and consolidated access among other requirements.
- The City of Joondalup requires minimum lot frontage widths for different dwelling types along with stringent built-form outcomes.
- The City of Swan required a minimum lot size to take advantage of the higher coding.
- The City of Kalamunda requires minimum lot sizes, or more than one street frontage, or a mix of dwelling types among other requirements



Need More Advice?



If you have completed an [OurTowns Development Analytics Report](#) for a property and you wish to proceed with further investigation, please head to our [Due Diligence menu](#) to find out more.

We also strongly recommend completing our [free Development Analytics CPD training](#) to further upskill yourself on Western Australian R Codes.

Disclaimer

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