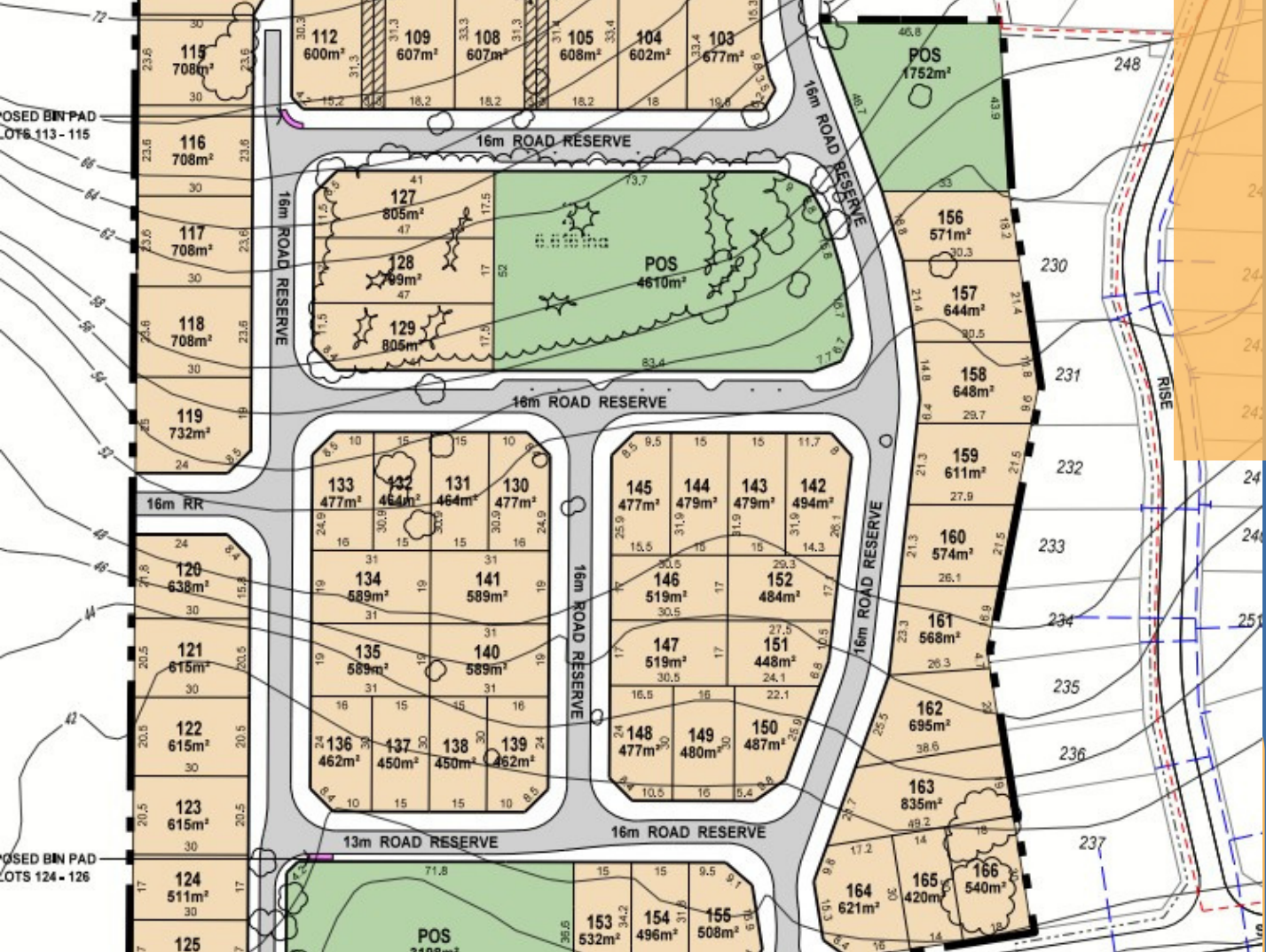




WILSON RISE

DEVELOPMENT INFORMATION

Are you considering development on a lot in Wilson Rise?
There are several important factors to consider:

- Sloping land
- Potential for perched water tables/
subsurface flow
- Site classification



SLOPING LAND

Wilson Rise has been subdivided in a fashion that largely retains the natural topography, consistent with the recommendations of the Shire's Local Planning Strategy and the Residential Design Codes of WA (R-Codes). When developing sloping land the R-Codes have the following 'design principles' related to site works:

P7.1 Development that considers and responds to the natural features of the site and requires minimal excavation/fill.

P7.2 Where excavation/fill is necessary, all finished levels respecting the natural ground level at the lot boundary of the site and as viewed from the street.

P7.3 Retaining walls that result in land which can be effectively used for the benefit of residents and do not detrimentally affect adjoining properties and are designed, engineered and landscaped having due regard to clause 5.4.1 (privacy).



Example:

Partial two-storey house using the topography to advantage

The R-Codes have explanatory text, which strongly encourage:



Avoiding major interference with the natural site levels;



Housing design which proposes extensive excavation, fill and re-contouring of a site, without regard to neighbouring properties and their amenity, should not be supported.



Sloping sites call for skilful and site-sensitive design to make the best of the natural terrain, in turn resulting in diversity of housing styles and a sense of place and neighbourhood identity.



Where a building cannot be designed to correspond to the natural topography, the result is often retaining walls that are visually prominent. The design of these walls should minimise their height and length through terracing and articulation. Materials should be selected for the walls that are visually interesting and integrated into the surrounding landscape.

A copy of the R-Codes explanatory text is attached.

Example:

Build up
beneath
footprint
of house





Example: Under-croft garaging, house above

Essentially, the Shire of Denmark will be seeking development that:

- 01** Steps down with the natural topography or utilises partial stump/ pole construction to limit modifications to the natural ground level.
- 02** Where excavation/fill is necessary, all finished levels respecting the natural ground level at the lot boundary of the site and as viewed from the street.
- 03** Any necessary retaining should use terracing and landscaping to soften its appearance.
- 04** The Shire is highly unlikely to support large retaining walls in front setback areas.



Example:

Retaining back within the property - mixture of batter and retaining

Example:

Split building levels



Example:

Retaining, terraced and landscaped where necessary

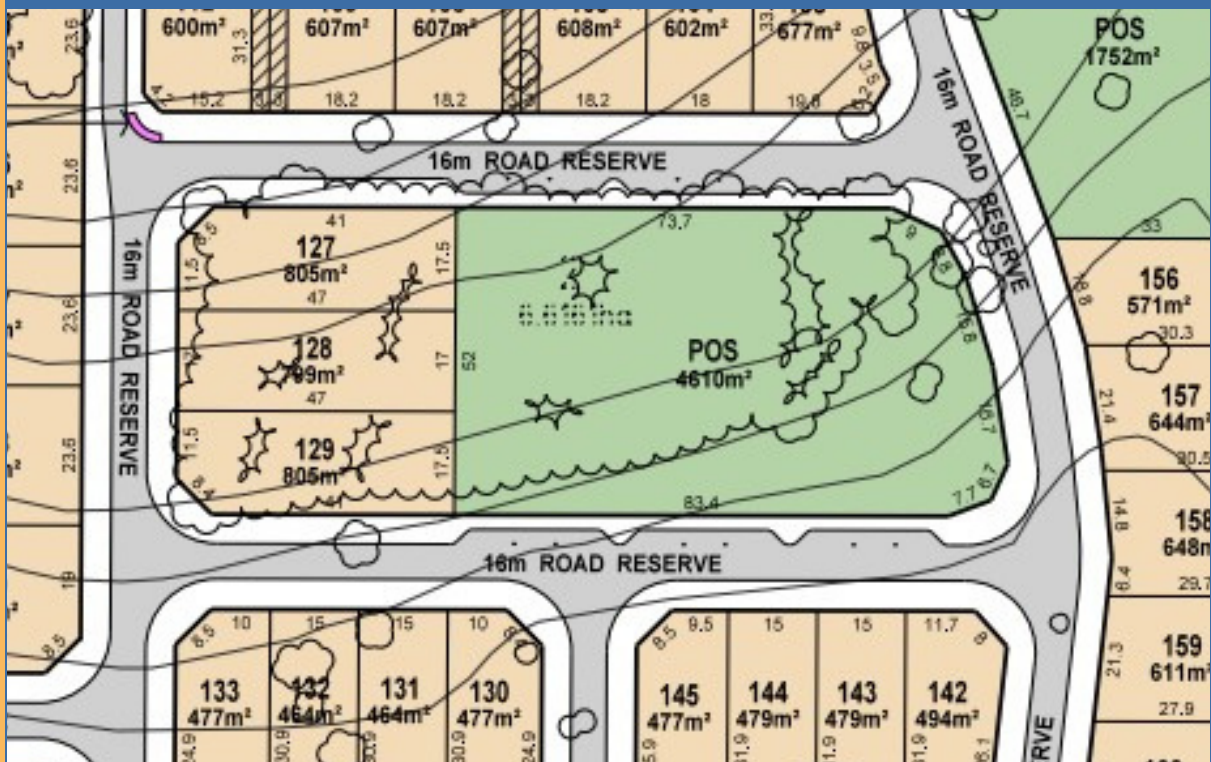


POTENTIAL FOR PERCHED WATER TABLES

The soil profile in Wilson Rise can lead to perched water tables in the winter months. The Shire will require sub-surface drainage to be installed on the high side of the property, connected to the drainage lot connection pit provided with each property.

SITE CLASSIFICATION

The subdivision Geotechnical report indicates that lots within the subdivision are highly likely to have a site classification of Class S to Class E depending upon the thickness of in-situ gravel overlying clay. Landowners are encouraged to undertake site classification with an accredited engineer early in the design process as there may be ramifications for fill and footing requirements.



DEVELOPMENT APPLICATION REQUIREMENTS

In addition to the Shire's requirements for Development Applications, a R-Codes Vol. 1 - Part B Assessment Template must be submitted with justification for any variation against the Design Principles in the R-Codes. Adequate information that informs the R-Code assessment should be shown on plans such as:

- building heights from natural ground level
- calculations of floor area
- site coverage and outdoor living area
- visual privacy (cone of vision)
- overshadowing diagram
- nominated tree planting area

There are two planning policies which vary some of the R-Codes requirements that should be considered as part of the assessment:

- Policy # 49 - Ancillary Dwellings & Detached Habitable Rooms
- Policy # 13 - Outbuilding & Rainwater Tank

GET IN TOUCH

The Shire's planning team is available to assist with any enquiries you may have.



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5.3.7 Site works

DESIGN PRINCIPLES

Development demonstrates compliance with the following design principles (P)

- P7.1** Development that considers and responds to the natural features of the **site** and requires minimal excavation/fill.
- P7.2** Where excavation/fill is necessary, all finished levels respecting the **natural ground level** at the **lot boundary** of the **site** and as viewed from the **street**.
- P7.3** Retaining **walls** that result in land which can be effectively used for the benefit of residents and do not detrimentally affect **adjoining properties** and are designed, engineered and **landscaped** having due regard to clause 5.4.1.

DEEMED-TO-COMPLY

Development satisfies the following **deemed-to-comply** requirements (C)

- C7.1** Retaining **walls**, fill and excavation between the **street boundary** and the **street setback**, not more than 0.5m above or below the **natural ground level**, except where necessary to provide for pedestrian, **universal** and/or vehicle **access**, drainage works or natural light to a **dwelling**.
- C7.2** Retaining **walls**, fill and excavation within the **site** and behind the required **street setback** to comply with **Table 4**.

Table 4 Setback of site works and retaining walls

Height of site works and/or retaining walls	Required minimum setback
0.5m or less	0m
1m	1m
1.5m	1.5m
2m	2m
2.5m	2.5m
3m	3m

Notes:

- i. Take the nearest higher value for all height and length calculations.
- ii. Measurement of the height of **site** works or retaining **walls** for the purpose of calculating **Table 4 setback** is to be taken from the **natural ground level** at the **lot boundary** adjacent to that point of the site works or retaining wall.
- iii. Visual privacy provisions under clause 5.4.1 and overshadowing provisions under clause 5.4.2 apply.
- iv. Where a **boundary wall** incorporates a retaining **wall** directly beneath the boundary wall, the retaining wall does not require assessment under clause 5.3.7 and is to be included in the **wall height** for the purpose of clause 5.1.3.

C7.3

Subject to subclause **C7.2** above, all excavation or filling behind a **street setback line** and within 1m of a **lot boundary**, not more than 0.5m above the **natural ground level** at the lot boundary except where otherwise stated in the **scheme, local planning policy, structure plan** or **local development plan**.

Clause 5.3.8 Retaining walls deleted by amendment dated 2/7/2021

6.6 SITE WORKS (Clause 5.3.7 of R-Codes Volume 1)

GENERAL GUIDANCE

Retaining the natural topography and ground level

Variations in topography make an important contribution to **local character** and to a **sense of place**.

In many locations, the land form (topography) allows views out of the locality. These views are highly valued and can only be optimised, that is, shared by the maximum number of **dwellings**, by respecting the natural topography and maintaining a consistent scale in **building**. This also has an effect on the potential for privacy and overlooking, which is an issue dealt with in clause 5.4.1 of the R-Codes Volume 1 (refer to section 7.1 of guidelines).

The extensive earth working of residential **sites** removes remnant vegetation, disturbs soil profiles, expends energy and creates greenhouse gas emissions. It also adds to the cost of housing.

Development of land should avoid major interference with the natural or pre-existing **site** levels, to preserve the natural topography and minimise development costs. **Natural ground level** is the level of land before land development has occurred or that resulting from the pre-existing development.

Because much of the State's housing was built before accurate contour mapping was available, it is often not possible to know precisely the levels that preceded **development**. In these cases, it may be necessary to refer to other evidence in order to establish, as closely as possible, the relevant levels.

Housing design which proposes extensive excavation, fill and re-contouring of a **site**, without regard to neighbouring properties and their **amenity**, should not be supported. The R-Codes Volume 1 call for skillful and site-sensitive design to make the best of the natural terrain, in turn resulting in diversity of housing styles and a **sense of place** and neighbourhood identity.

Take advantage of the natural topography for view sharing and retention of the visual impression of the natural level of the site

By stepping a **building** to correspond with the natural topography, less cut and fill is required and the visual impression of the natural level of the **site** is retained (refer to **Figure 55**).

Changes to topography at subdivision

In cases where the original subdivision involved changes from the natural levels, the relevant levels to take are those established at subdivision, prior to **buildings** being erected.

It is common for new finished levels to be established through the **building** of retaining **walls** at boundaries. Where this occurs, and for the purposes of establishing boundary **setbacks** and heights, retaining walls may be regarded in the same light as natural topographical features.

Proposed changes of level at subdivision should be examined just as carefully as level changes via **development**.

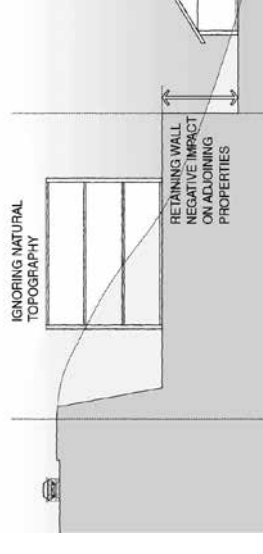
Excavation and retaining walls

Development below **natural ground level** only rarely affects neighbouring **sites**, although it may be necessary to take account of the location of essential services, particularly where protected by a registered easement. By contrast, filling above natural ground level, especially where, it results in replacing a natural slope with level ground and retaining **walls**, is usually visually prominent.

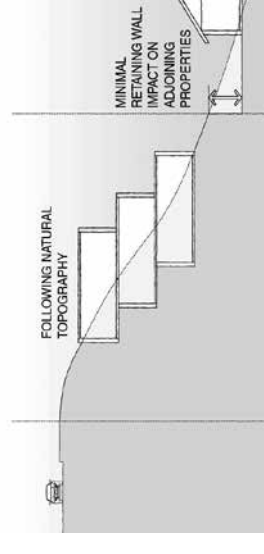
Excavation below natural level is not usually as visually obtrusive as filling above natural level. Consequently, excavation behind the **street setback line** is normally acceptable, provided the resulting spaces and rooms conform to BCA standards.

Minimise impacts on neighbours and public streetscape in the design and selection of materials for retaining walls

Where a **building** cannot be designed to correspond to the natural topography, the result is often retaining **walls** that are visually prominent. The design of these walls should minimise their height and length through terracing and articulation. Materials should be selected for the walls that are visually interesting and integrated into the surrounding **landscape**.



Development ignores the natural slope of the land, resulting in diminished character of the area and increased development impact



Development acknowledges the natural slope of the land and minimises impact on adjoining land.

Figure 55 Development on steep or undulating sites should be designed to minimise the amount of cut and fill required. **Buildings** should have a form that responds to the natural topography of the area