

<b>Policy Number:</b>	LPP 001
<b>Policy Type:</b>	Local Planning Policy
<b>Policy Name:</b>	<b>Cut &amp; Fill and Retaining Wall</b>
<b>Policy Owner:</b>	Chief Executive Officer

**Authority:** Shire of Nannup Local Planning Scheme No.3

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## **INTRODUCTION**

The natural topography of the Shire of Nannup provides a number of challenges to land owners and developers, in particular finding level building sites in some areas. To create these level sites, cut and fill techniques are often used along with the development of retaining walls.

This is more easily addressed at the subdivision stage where the systematic development of retaining walls can be addressed for the whole of the land. More problematic is where individual landowners seek to establish retaining walls and the impacts unregulated designs and finishes will have on immediate neighbours and the locality as a whole.

It is becoming increasingly apparent that the management of these forms of development has not been sufficient.

This policy has been formulated to provide a set of guiding principles for landowners, developers and the local government in respect to where 'cut and fill' of residential land in the local government is sought and specifically, where retaining walls and the like are sought.

## **OBJECTIVES**

The principal objectives of this Policy are:

1. To preserve the natural topography of the Scheme Area by restricting the level of cut and fill development specifically on steep slopes which may be more suitable to other construction techniques (i.e. pole homes, stump system, retaining walls.)
2. To ensure that at subdivision stage, an assessment is undertaken as to the likely need for cut and fill and/or the development of retaining walls based on the slope of the land, lot size and vegetation cover prior to clearance of Western Australian Planning Commission (WAPC) subdivision conditions.
3. To ensure that where individual landowners seek to undertake cut and fill and/or the development of retaining walls on boundaries, the assessment provided in this Local Planning Policy is undertaken.

## DEFINITIONS

1. **“Terrace”** – for the purpose of this policy a “terrace” is a series of flat platforms (or steps) on the side of a hill, rising one above the other. The base of the terrace is taken to be the bottom of the lowest step with the top being the highest point of the highest step.
2. **“Topsoil”** - for the purpose of this policy “topsoil” is taken to be the soil zone containing decomposed organic matter and seed source, generally not to exceed 150mm in depth.
3. **“Unprotected Embankment”** – for the purpose of this policy an “unprotected embankment” is taken to be the face area of a section of fill that is not subject to retaining or other forms of stabilisation.

Other definitions as set out in the Scheme or in the R Codes.

### Application of this Policy

The Policy applies throughout the district. The Policy has a particular focus on residential areas where cut and fill are proposed and which will result in the construction of retaining walls. The Policy also provides guidance to the local government’s decision-making where development requires the local government’s discretion under the ‘design principles’ of the *Residential Design Codes of Western Australia* (R Codes).

### Links to Local Planning Scheme and other documents

This Policy should be read in conjunction with all Shire of Nannup policies and the *Shire of Nannup Local Planning Scheme No.3* (as amended).

The R Codes outline ‘deemed-to-comply’ provisions. Where there is an inconsistency between this Policy and the ‘deemed-to-comply’ provisions of the R Codes, then the R Codes prevail to the extent of such inconsistency.

For land subject to the R Codes, the development is exempt from the need to obtain development approval where:

- (i) development complies with ‘deemed-to-comply’ provisions of the R Codes or any variations to the R Codes permitted by the Scheme; and
- (ii) the site is not on the Heritage List; and
- (iii) the site is outside of the Heritage Area, Flood Risk Land Special Control Area and Landscape Values Area as shown on the Scheme maps.

## POLICY

In assessing a proposal the local government shall consider the following:

1. Where the local government suspects that unstable soil and site conditions occur, or the slope is greater than 1:5, the local government will require a geotechnical report and a structural engineer's report to determine building construction requirements.
2. No land over 1:4 slope prior to grading shall be developed using cut & fill construction techniques, except at the specific discretion of the local government and where it can be shown that a minimum amount of development is in the spirit and not incompatible with the objectives of this policy.
3. The specific policy requirements that apply to all land within Local Planning Scheme No. 3 as set out below:
  - 3.1. Access tracks are to be located in such a manner as to minimise the required earthworks.
  - 3.2. All exposed earthworks will be required to be landscaped in accordance with an approved landscaping plan.
  - 3.3. Topsoil is to be stripped separately and stockpiled on site, to be respread during landscaping.
  - 3.4. Water discharge from the site during development is to be controlled by the use of ripping, contour banks or grade banks and sumps to attenuate turbid and/or nutrient rich water leaving the site.
  - 3.5. Where a residence is to be constructed partially on cut and partially on fill, the excavated material is to be placed outside the building area to form batters and embankments and the platform is to be filled with sand. Consolidated in even lifts, not exceeding 600mm, to produce a density which will resist seven blows per 300mm of standard 16mm diameter penetrometer. As an alternative, pile and beam foundations into natural uncut ground in the fill area are acceptable.
  - 3.6. Fill is not to exceed 1.5m at any given point on the site and the top level of the fill is not to exceed 2.4m from the base of the fill.
4. Subject to site conditions and context, the local government will have regard to this Policy in providing its comments and recommendations to the WAPC on subdivision applications. It is highlighted that the WAPC is the final decision maker in relation to subdivision.

### **Retaining wall requirements**

Unless otherwise provided for within this policy, retaining walls will be required where cut or fill is equal to, or in excess, of 0.9 metre.

1. A retaining wall is not to exceed 2.4m in height (measured from the base of the wall).
2. Where it is proposed to terrace a portion of a lot the policy provisions set out above apply in so far that where a step is in excess of 1m retaining will

be required and the top level of the terrace is not to exceed 3.0m from the base of the terrace.

3. Where an unprotected embankment is proposed no retaining will be required where it is in accordance with BCA Volume 2 Part 3.1.1 – Earthworks (note Attachment 1). Such embankments are to be landscaped in accordance with an approved landscaping plan.
4. Land owners and developers should note their 'Health and Safety' responsibilities with regards to retaining walls during construction and on completion. Provision for safety fencing in accordance with the BCA P2.5.2 – Barriers.

## **Application Details**

### *Subdivision and Development*

1. Where as part of the overall subdivision and development of land, any permanent excavation with a slope steeper than the angle of repose or natural slope of the soil shall have retaining walls of masonry or other materials approved by the local government of sufficient strength and stability to retain the embankment together with any surcharged loads.
2. Design of the retaining structure is to be by a practising Civil or Structural Engineer with certified engineering drawings to be submitted to the local government for approval.
3. Information to be supplied with the engineering assessment will include but not be limited to the following:
  - a site plan showing the main topographical features of the site including slope;
  - contours, sub-catchments, flow paths and drainage lines;
  - flood risk;
  - surface water and groundwater;
  - vegetation;
  - dams and water courses;
  - rock outcrops;
  - soil type,
  - fences
  - buildings;
  - level of top of sand pad/fill;
  - finish floor level;
  - cut and fill section showing sub soil drainage and cut off drains;
  - cut and fill section (of greatest cut and fill) showing method of retention;
  - landscaping plan (if required);

- design and construction details of any retaining walls (if required) which shall be prepared by a suitably qualified structural engineer; and
  - other details required elsewhere within this Local Planning Policy.
4. The local government will determine the type and colour of materials to be used forming the retaining wall. In considering the type and colour of materials, the local government may require the subdivider to undertake a visual assessment to the requirements of the local government. In addition, any brick or block work undertaken will be required to have a 'clean' finish to the adjoining lot.

### **Individual Lots**

1. Where any permanent excavation with a slope steeper than the angle of repose or natural slope of the soil shall have retaining walls of masonry or other materials approved by the local government of sufficient strength and stability to retain the embankment together with any surcharged loads.
2. Design of the retaining structure by a practising Civil or Structural Engineer will be required and shall be submitted to the local government for approval prior approval of a Building Permit.
3. Information to be supplied with the engineering assessment will include but not be limited to the following:
  - contours of site;
  - level of top of sand pad/fill;
  - finish floor level;
  - cut and fill section showing sub soil drainage and cut off drains;
  - cut and fill section (of greatest cut and fill) showing method of retention;
  - drainage, site run-off (minor and major events);
  - flood risk;
  - surface water and groundwater;
  - landscaping plan (if required);
  - design and construction details of any retaining walls (if required) which shall be prepared by a suitably qualified structural engineer;
  - provisions of the Residential Design Codes; and
  - other details required elsewhere within this Local Planning Policy
4. Where a retaining wall in the Residential zone is proposed on a boundary, a Licensed Surveyor must be employed by the landowner to set out the boundaries prior to the commencement of any works. In this

regard, the requirement for a Licensed Surveyor will be included as a condition of Building Permit.

5. The local government will determine the type and colour of materials to be used forming the retaining wall. Generally, the type of retaining wall structure will be of 'earth' tones. The local government will consider oxide-tinted concrete blocks in areas that are not visible from the street.

In relation to the development of land forming the 'Askino' subdivision, retaining walls will be in accordance with the endorsed Development Guide Plan as included in Attachment 2 and ensure that the buildings are in 'earthy tones' and not limestone in colour. Examples of colours that are acceptable include Dulux®:

- Latte;
- Ground Coriander;
- Stucco Tan; and
- Nubuck;

as per the colour chart included as Attachment 3.

Other colours may be also be acceptable and in this regard, it is recommended to liaise with the local government.

\* Dulux® is a Registered Trademark

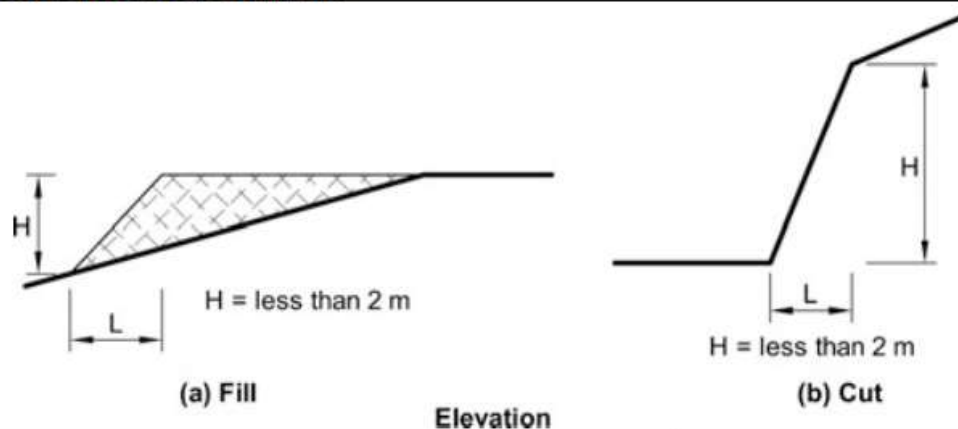
In addition, any brick or block work undertaken will be required to have a 'clean' finish to the adjoining lot.

6. As part of the assessment process, consultation is usually required. The local government may require applicants to supply written support from adjoining landowners specifically implicated by the proposed retaining wall. Where written comments are not able to be obtained by the applicant, staff will provide written advice to adjoining landowners and community groups (at the applicants cost) of the proposed construction and invite them to submit comments to the local government.
7. If an adjoining landowner or community group does not respond within the time provided (generally 14 days), the local government will consider the application on the basis that the landowner has not exercised their opportunity to comment.
8. Where objections are received the submission(s) will be reviewed and considered in light of the applications relevance against the Local Planning Scheme No. 3, the R Codes and the provisions of this Policy.

Related Policies	
Related Procedures/Documents	<ol style="list-style-type: none"> <li>1. Building Codes of Australia Table 3.1.1.1 <a href="#">LPP001 Attachment1.docx</a></li> <li>2. Subdivision Guide Plan Lot 23 Brockman Highway – P0486-01(SGP) dated July 2006. <a href="#">LPP001 Attachment 2.docx</a></li> <li>3. Dulux® colour chart <a href="#">LPP001 Attachment 3.pdf</a></li> <li>4. Decision process of stormwater management in Western Australia (DoW 2009)</li> <li>5. Stormwater management manual for Western Australia (DoW 2007-2009)</li> </ol>
Delegated Level	CEO, Building Surveyor, Manager Infrastructure, Development Services Officer
Adopted	OM 22 April 2010 # 8157
Reviewed	<a href="#">OM 25 January 2018</a>

**Table 3.1.1.1**

**UNPROTECTED EMBANKMENTS**

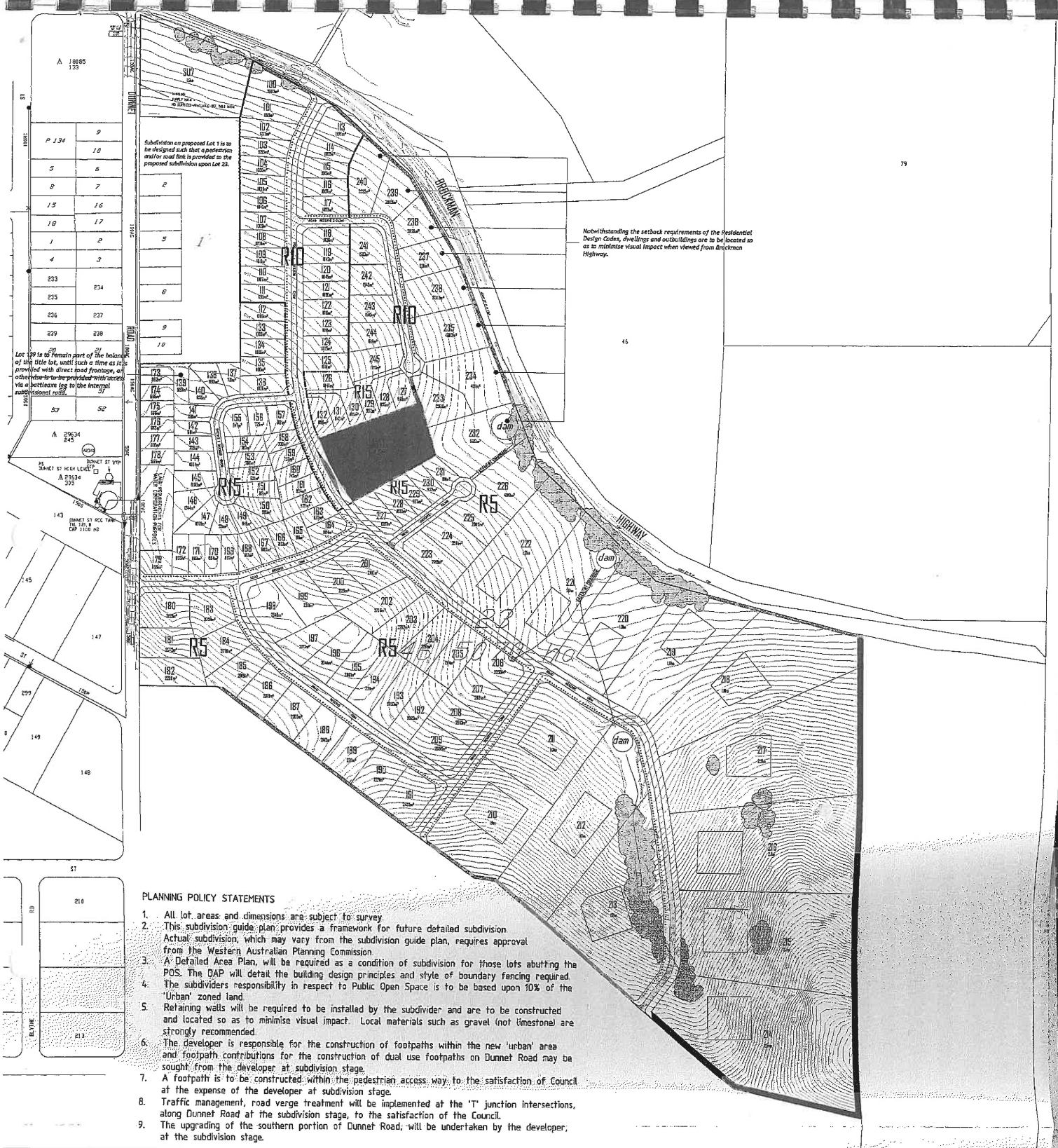


SOIL TYPE (*see Part 3.2.4 for material description)	EMBANKMENT SLOPES H:L	
	Compacted fill (see Part 3.2)	Cut
Stable rock (A*)	2:3	8:1
Sand (A*)	1:2	1:2
Silt (P*)	1:4	1:4
Clay	Firm clay 1:2	1:1
	Soft clay Not suitable	2:3
Soft soils (P*)	Not suitable	Not suitable

**Notes:**

1. Retaining walls or other types of soil retaining methods must be installed where—
  - (a) the embankment slope is steeper than that described in this Table; or
  - (b) the soil type is not described in this Table.
2. Embankments that are to be left exposed at the end of the construction works must be stabilised by vegetation or similar works to prevent soil erosion.





Subdivision on proposed Lot 1 is to be designed such that a pedestrian and/or road link is provided to the proposed subdivision upon Lot 23.

Notwithstanding the setback requirements of the Residential Design Codes, dwellings and outbuildings are to be located as to minimize visual impact when viewed from Brockman Highway.

Lot 19 is to remain part of the balance of the title lot, until such a time as it is provided with direct road frontage, an alternative route is provided with access via a licence to the nearest subdivision road.

**PLANNING POLICY STATEMENTS**

1. All lot areas and dimensions are subject to survey
2. This subdivision guide plan provides a framework for future detailed subdivision. Actual subdivision, which may vary from the subdivision guide plan, requires approval from the Western Australian Planning Commission
3. A Detailed Area Plan, will be required as a condition of subdivision for those lots abutting the POS. The DAP will detail the building design principles and style of boundary fencing required.
4. The subdividers responsibility in respect to Public Open Space is to be based upon 10% of the 'Urban' zoned land.
5. Retaining walls will be required to be installed by the subdivider and are to be constructed and located so as to minimise visual impact. Local materials such as gravel (not limestone) are strongly recommended.
6. The developer is responsible for the construction of footpaths within the new 'urban' area and footpath contributions for the construction of dual use footpaths on Dunnet Road may be sought from the developer at subdivision stage.
7. A footpath is to be constructed within the pedestrian access way to the satisfaction of Council at the expense of the developer at subdivision stage.
8. Traffic management, road verge treatment will be implemented at the 'T' junction intersections, along Dunnet Road at the subdivision stage, to the satisfaction of the Council.
9. The upgrading of the southern portion of Dunnet Road; will be undertaken by the developer, at the subdivision stage.

**LEGEND**

- subject property
- vegetation buffer 3m [consisting of shrubs and trees]
- remnant vegetation
- revegetation - avenue of trees
- strategic fire break [6m wide]
- residential density code
- building envelope
- footpath
- Stage 1 - WAPC Approval (May 01, 2006)

Source: cadastre information plotted from Water Corporation data, contour information plotted from Landgate data.

**SUBDIVISION GUIDE PLAN**  
**LOT 23 BROCKMAN HIGHWAY**  
**NANNUP**

North  
 SCALE: 1: 4000  
 DATE: July 2000  
 PLAN NO: P0486-01 [SGP]  
 Rev.5

**PETER D WEBB AND ASSOCIATES**

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**ATTACHMENT 3  
TO LPP001  
DATED 23 APR 09**

