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**Establishing Building Pad Levels, Excavation, Fill and Retaining Associated with Residential Development**

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<b><i>Policy Owner:</i></b>	<b>Planning and Development</b>
<b><i>Distribution:</i></b>	<b>All employees</b>
<b><i>Implementation:</i></b>	<b>1 February 2005: Resolution PD01-02/05</b>
<b><i>Scheduled Review:</i></b>	<b>February 2007</b>

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**Objective**

The objectives of this Policy are to:

- provide “acceptable development” standards that suit local conditions and will limit the extent of cut and fill permitted on sites through the control of building pad levels.
- establish an ‘acceptable development’ height for boundary retaining walls and allow retaining walls to be set on the boundary.
- protect streetscape amenity through the control of retaining within the front setback of sites.
- protect the amenity of adjoining landowners through greater care in the assessment of building pad levels.
- guide applicants in applying for site works and staff in assessment of such applications, to improve customer service and assist in expediting the approval process.

**Statement****1.0 General Principles**

- Alteration to site levels prior to an Application being made for the subject site will not be supported. Applications for site works should be made concurrently with an application for a building licence or a development approval.
- Filling and/or retaining to the highest level of a site will not be supported.
- Excavation below natural ground level is generally not visually obtrusive and is considered not to significantly impact on adjacent landowners. Consequently, excavation shall remain in accordance with the Acceptable Development standards A1.1, A1.2 and A1.3 of Clause 3.6.1 of the Residential Design Codes.
- A ‘cut and fill’ approach shall be taken in the consideration of all applications involving alteration of levels on a site. The principle of ‘cut and fill’ is such that equal amounts of cut and fill are undertaken to establish finish levels.
- The natural ground level as per Residential Design Codes which state “...the levels on a site which precede the proposed development, excluding any site works unless approved by the Council or established as part of subdivision of the land preceding development”.

- Retaining walls which require a development approval shall be constructed in masonry<sup>1</sup>, shall be finished to a professional standard<sup>2</sup> to the satisfaction of the Manager of Approval Services and shall be certified by a Structural Engineer.
- Retaining walls located within 1.0m of a dwelling (including neighbouring properties) shall be designed to accommodate any additional surcharge and shall be accompanied by a certificate from a certified Structural Engineer.

## **2.0 *Acceptable Development***

### **2.1 Establishing Building Pad Levels**

The Acceptable Development criteria for *Establishing Building Pad Levels* is calculated by the City as follows:

- A1.1 The appropriate building pad level shall be determined by calculating the average natural ground level<sup>3</sup> of the site (refer Figure 1); and/or on level building sites which rise more than 0.5 metres within the first three (3) metres of the front boundary line, the site levels used in calculating the average natural ground level of the site may be taken from the three (3) metre setback line (refer Figure 2). This level will in turn establish appropriate levels of cut, fill and retaining of the site.
- A1.2 The importation of fill to increase the building pad level shall generally be limited to no more than 0.3m above the average building pad level of the site.

Sites where subsurface limestone or rock occurs which requires the importation of more than 0.3m of fill, shall be substantiated by a Structural Engineers site report that demonstrates such a presence.

The Performance Criteria shall be as per Element 6 (3.6.1, P1) of the Residential Design Codes 2000.

### **2.2 Filling and Retaining Within the Front Setback**

Notwithstanding the standards of Clause 3.6.1 of the Residential Design Codes, development that complies with the following is deemed to meet the Performance Criteria for Excavation or Fill:

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<sup>1</sup> Masonry shall mean brick, stone, concrete or limestone.

<sup>2</sup> Professional Standard shall mean a clean fair face surface, to the satisfaction of the Manager Approval Services.

<sup>3</sup> Average Natural Ground Level is calculated by averaging the relative levels taken from each corner of the site and the central relative level.

A1.5 Filling within the front setback will only be supported if the principles of terracing<sup>4</sup> are followed and the following can be met:

- (i) The first terrace level if located within 1.0m of the front boundary shall not exceed 0.5m; and
- (ii) Subsequent terraces shall generally be of equal height and equally spaced across the slope and the vertical rise should not exceed the horizontal return (maximum ratio 1:1) (refer Figure 3); and
- (iii) Terraces shall be spaced a minimum of 1.0m apart.

### 2.3 Retaining walls within 1.0m of boundaries

Notwithstanding the standards of Clause 3.6.2 of the Residential Design Codes, development that complies with the following is deemed to meet the Performance Criteria for Setback of Retaining Walls:

A2.2 (i) Retaining walls<sup>5</sup> are permitted on side and rear boundaries to a height determined by the average site level and building pad level to a maximum height<sup>6</sup> of 1.0m without the need to consult with adjacent landowners.

The height of the retaining wall shall be measured from natural ground level<sup>1</sup> at the boundary from the base of the proposed retaining wall.

A2.2 (ii) Retaining on side boundaries within the front setback area shall be in accordance with the standards of Filling and Retaining Within the Front Setback section above or, should be graded or, stepped to follow the natural ground level within the front setback area.

### 3.0 *Performance Criteria*

Should an application be received which varies from the Development provisions as stipulated in this Policy, the applicant can apply for a variation under the general Performance Criteria of the relevant clauses of the Residential Design Codes.

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<sup>4</sup> Terracing means the creation of a series of raised banks of earth with vertical or sloping sides and a series of flat levels formed across a slope.

<sup>5</sup> Retaining Wall means a wall designed to retain soil.

<sup>6</sup> Height in relation to retaining walls shall mean the difference between the top and bottom of the wall measured from the natural ground level, or in the case of subdivisional retaining walls from the finished earthwork levels.

The applicant will need to submit a Building Licence and Codes Variation application and attach a supporting letter/report explaining the variation and providing justification for the variation using the Performance Criteria within the Residential Design Codes. Comments from affected landowners will also be required.

In addition to comments provided by the adjacent landowner and the performance criteria submitted, the City shall have regard for the following:

- Any alternative design options which may exist
- Physical restrictions of the property (easements, unusual shape, excessive gradients);
- Energy efficient provisions (Building Codes of Australia).
- The existing streetscape;
- The amenity of the locality
- Relative levels, finish floor levels and contours of adjoining and abutting properties;
- Ease of accessibility; and
- The general principles of this Policy.

THE FOLLOWING SECTION IS NOT PART OF THIS POLICY AND IS PROVIDED FOR PRACTICE ONLY

#### ***4.0 Neighbour Consultation***

- Where applications comply with the Acceptable Development standards of this Policy the application will not require neighbour consultation.
- Applications that do not meet the requirements of the Acceptable Development standards of this Policy may be referred to affected landowners, as determined by the City, for comment using the City's proforma "Adjoining Property Owner Comment on Proposed Variations to the Residential Design Codes".

The following alternative forms of consent from neighbours will be considered acceptable:

- Site plans showing all relative and finish floor levels that have been signed and dated by all affected landowners with their name/s, and affected property address and contact phone number clearly printed.
- A letter signed and dated by all affected landowners with their name/s, address and contact telephone number(s) clearly printed which acknowledges the type and location of the development proposed.

Should the above not accompany an application, the City will undertake advertising in accordance with the requirements of the District Planning Scheme No.2. Letters will generally be forwarded to affected landowners for a period of 14 days. Should no comment be received within this period it will be construed as the landowner having no objection to the development proposal. This should not be construed as an approval of the application.

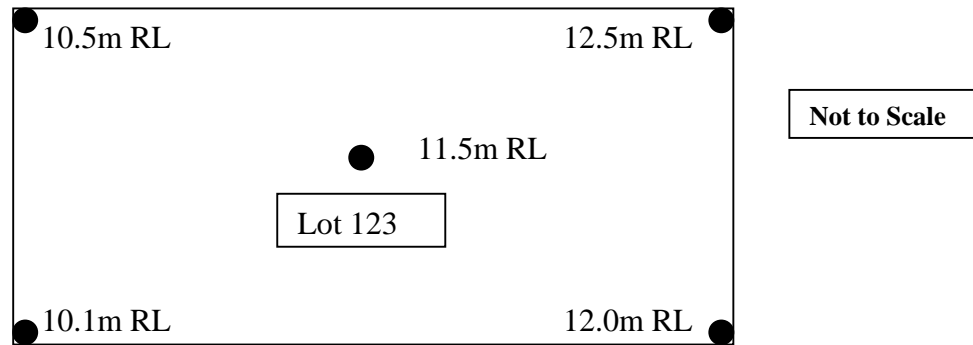
### ***5.0 Minimum Plan Requirements on Submission***

1. A site plan prepared by a licensed land surveyor or professional retaining wall contractor depicting:
  - All existing and proposed natural ground levels (in RLs) with spot levels provided at 0.5m intervals for the subject site, finished paved levels and immediately adjoining the property;
  - All existing or proposed built structures and their finish floor levels eg. house, garage;
  - Top of wall and bottom of wall heights of all proposed and existing retaining walls, in relative levels shown at each change in height;
  - Finish Floor Levels of neighbouring dwellings; and
  - A reference datum point.
2. Structural Engineers Certification
3. If specifically requested by the City, a shadow diagram prepared in accordance with Element 3.9 of the Residential Design Codes and demonstrating compliance with the Energy Efficient Provisions of the BCA.

### **Responsibility for Implementation**

#### **Manager Development and Health Services**

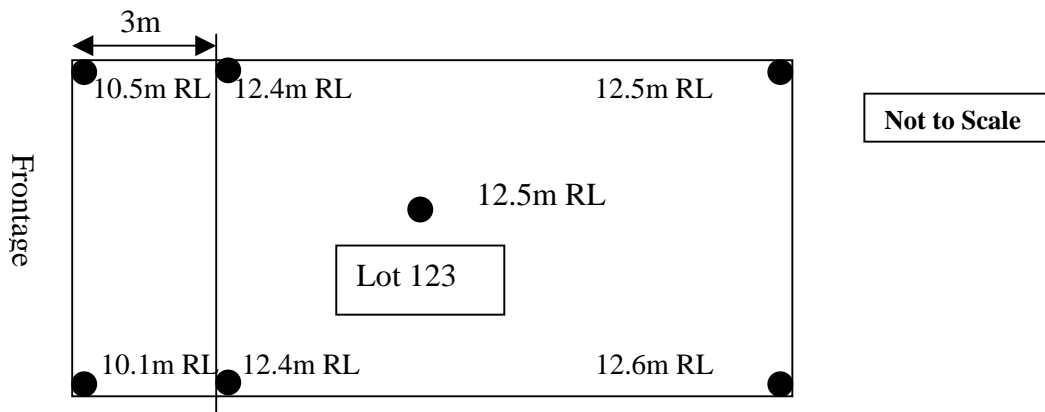
**Figure 1: Calculation of Average Natural Ground Level of Site and determination of Appropriate Building Pad Height.**



$$\text{Average Natural Ground Level of Site} = \frac{(10.5+12.5+12.0+10.1+11.5)}{5}$$

$$\text{Appropriate Building Pad Height} = 11.32\text{m RL (+ up to 0.3 metres)}$$

**Figure 2: Calculation of Average Natural Ground Level of Site and determination of Appropriate Building Pad Height, where the site rises above 0.5m from the front boundary.**



$$\text{Average Natural Ground Level of Site} = \frac{(12.4+12.5+12.6+12.4+12.5)}{5}$$

$$\text{Appropriate Building Pad Height} = 12.48\text{m RL (+ up to 0.3 metres)}$$

**Figure 3: Example of Terracing: 0.5m maximum at the boundary, equal spacing and height of subsequent terrace levels.**

