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4.0 EARTHWORKS

4.1 PURPOSE

This chapter is intended to provide supplementary information to expand on some of the elements specified in the Filling and Excavation Code of the *Brisbane City Plan*. Therefore **the user must read this chapter in conjunction with the *Brisbane City Plan* to ensure that the development proposal complies in its entirety with the relevant codes, provisions and planning scheme policies.**

4.2 GENERAL

The design standard of earthworks must comply with *AS 3798 - Guidelines on Earthworks for Commercial and Residential Developments*. *AS 3798* gives guidance on the specification, execution, and control testing of earthworks and associated site preparation works for commercial and residential developments.

The Filling and Excavation Code requires that an operational work application be lodged for:

- Filling or excavation exceeding one vertical metre in relation to the natural ground level.
- Filling or excavation of land subject to the Waterway Code or Wetland Code or Acid Sulfate Code.

4.3 EROSION AND SEDIMENTATION MEASURES

Refer Chapter 12 of Part C of this document.

4.4 BATTERS AND EARTH RETAINING STRUCTURES

Batters and earth retaining structures must also conform to the requirements set out in Schedule 5 of the *Standard Building Regulation 1993*. For example, fill batters steeper than 1V:4H and retaining walls greater than 1 m in height will require the lodgement of building applications. Batters and earth retaining structures (including footings) must be wholly contained within the allotments. Where the slope of the allotment batter is steeper than 1V:6H, the toe of fill batter or the top of cut batter abutting existing or future public space (eg road reserves, parks, etc) must be provided with a minimum setback distance of 0.3 m from the property boundary.

The locations of batters and earth retaining structures must be shown on plans certified by a Licensed Surveyor prior to the development being accepted On Maintenance or prior to the issuance of a Certificate of Classification. Note that On Maintenance applies mainly to subdivisions and developments with significant portions of donated assets.



4.4.1 Types of Treatment

Batters

It is desirable that fill batters of 1V:4H be provided adjacent to residential properties, although steeper landscaped embankments up to 1V:2H will be considered. Where access to the adjoining parkland is required as part of the development, a batter of 1V:6H should be provided. If any proposed fill or cut is likely to have a damaging effect on the visual amenity of the adjoining property, or 1V:4H batters are impracticable, consideration should be given to providing a low retaining wall and associated landscaping of the reduced embankment.

The minimum treatment required for batters is topsoiling and grassing. Irrespective of the treatment, a cross section showing the interface between the proposed development and the existing properties must be shown on the engineering drawings. The effects on the drainage of adjoining properties of any cut or fill operation must be considered and details shown on the engineering drawings. No ponding or nuisance from stormwater runoff will be accepted.

Retaining Walls

All retaining structures are to be shown and detailed on engineering plans for approval by the Engineering Officer Development and Regulatory Services.

Generally all walls must be:

- Aesthetically pleasing to adjoining property.
- Contained wholly within the property (refer Section 4.4).
- Combined with landscaping. (Note: The Filling and Excavation Code requires the stepping of retaining walls over 1.5 m in height).
- Designed with catch drains along the toe of the wall should overland flow overtip the wall.
- Designed with subsoil drainage.

Walls exceeding 1 m in height will require building application and structural certification. When the combined height of a retaining wall and fence exceeds 2.0 m, the aforementioned requirements plus the written authorisation from the low side neighbour will need to be provided with the engineering drawings.



Some of the typical performance criteria and the corresponding acceptable solutions in respect of retaining walls, as prescribed in the *Brisbane City Plan*, include:

1. Filling and Excavation Code.
 - Performance Criteria: Filling and excavation must not impact adversely on visual amenity or the stability of land.
 - Acceptable Solution (partial solution only): Retaining walls over 1.5 m are stepped every 0.75 m for every 1.5 m height, terraced and landscaped.
2. Subdivision Code
 - Performance Criteria: Lot size and layout must take into account of the slope of the land to minimise impacts of retaining walls associated with dwelling construction.
 - Acceptable Solution (partial solution only): Lot size and frontage width increase as slope increases across the lot and proposed retaining walls are less than 1.5 m in height.

Timber retaining walls are not permitted on land adjoining public space. Construction materials acceptable to Council include boulders, reinforced concrete, and masonry.

4.4.2 Surface Water

Plans submitted for approval need to indicate effects on surface water created by filling. No ponding or nuisance from stormwater is to occur. In redeveloped areas, shallow concrete spoon drains may need to be constructed along the toe of the embankment to permit the drainage of adjoining property. In low areas subsoil drainage may also be required along the toe of the fill batters as the compaction of fill may affect subsoil drainage of the area.

