

POLICY



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Policy title: EARTHWORKS, DRAINAGE AND SOIL RESTRAINT
Directorate: GROWTH, ECONOMY AND SUSTAINABILITY
Branch: DEVELOPMENT ASSESSMENT
Policy objective: To prevent nuisance or damage resulting from siteworks.

Policy scope:

When a development application is submitted to the Council to carry out siteworks associated either directly or indirectly with the carrying out of building works, and such siteworks are likely to cause a nuisance or damage to any properties.

Definitions:

TERM	DEFINITION
Terms	Shall, unless otherwise defined in this policy, be given the meaning in the <i>Building Act 1975</i> and the planning scheme of the Council.
Controlled fill	Means material that has been placed and compacted within a defined moisture range in layers by compaction equipment to a defined density requirement in accordance with engineering principles.
Site works	Includes all operations involved in or associated with the clearing, site stripping, loosening, removing, depositing or compacting of earth soil or rock on any land on which development is being carried out or is proposed to be carried out at any time in the future, regardless of whether such land forms all or part of a single allotment, or a number of contiguous allotments

Policy statement:

The following procedure is to be undertaken for this policy:

Part A - Preliminary

1. General
 - (a) The Council encourages owners, developers and builders to minimise extensive cutting and filling of land which may substantially alter the natural contours and have a dramatic effect on adjoining properties.
 - (b) Builders and designers should examine alternatives to excessive cutting and filling of steeply sloping land such as pole construction, stepped or split level designs and terraced retaining walls.

- (c) Whenever earthworks are being carried out and the soil conditions, ground levels, excavation and/or filling so require:
- (i) retaining walls or another approved method of preventing movement of the soil must be provided
 - (ii) provision must be made for the drainage of the building and allotment concerned
- as may be necessary to protect land, building and other structures in the neighbourhood.

Part B - Earthworks

1. When building approval is not required

- (a) A building application to carry out earthworks upon a site shall not be necessary where it can be demonstrated that the proposed earthworks, when completed, will not cause damage, nuisance or annoyance to the owners of the adjoining land, and the natural flow of stormwater from any adjoining land is not interfered with in a manner that causes nuisance or annoyance to any person.
- It shall be deemed that the above requirement has been satisfied when all of the following criteria are met:
- (i) maximum depth of proposed cut or fill does not exceed 1 metre
 - (ii) the proposed siteworks are not within 1,500 mm of any sewer or stormwater pipe
 - (iii) fill shall be stabilised and drained to prevent damage or nuisance to adjoining properties.
- (b) To satisfy section 1(a) above, all of the following criteria must be met:
- (i) Embankments shall not be steeper than 1.5 horizontal to 1.0 vertical in a cut and 4.0 horizontal to 1.0 vertical in an uncontrolled fill situation or 1.5 horizontal to 1.0 vertical in a controlled fill situation.
 - (ii) A strip of 750 mm width of undisturbed natural ground shall be provided adjacent to the site boundary in a fill situation.
 - (iii) Surface drainage water and seepage shall be adequately controlled to prevent a nuisance by scouring, smell and ponding.
 - (iv) Adjoining properties shall be protected from the effect of erosion by protecting the fill batters with turf, landscaping, planting or sediment control fencing.

Note:

1. All necessary precautions shall be taken to prevent a nuisance to adjoining property owners, ie, regular watering to suppress dust, etc.
2. The location of all underground services shall be obtained from the relevant authorities and located on site. Any damage to the Council's property is to be rectified and reinstated to the Council's satisfaction (see detail sheet 4).
3. The grade of any vehicular access to the property shall not exceed a slope of 1 in 4.

2. When building approval is required

- (a) A building application to carry out earthworks upon a site shall be necessary when any of the criteria set out in section 1 above cannot be satisfied.
- (b) The following minimum information shall be submitted with every building application:
 - (i) Contour plan showing the original surface levels (0.25 m intervals) and spot levels to indicate the building platform level. Top of kerb or other suitable permanent reference point or datum shall be shown on the site plan.
 - (ii) Extent and slope of all batters (with cross and longitudinal sections where necessary to clarify the proposal) shall be shown.

Note: Where it is necessary to provide a system of stormwater and/or soil restraint, reference should be made to parts B and C of this policy.

3. Limits on depth of excavation and height of filling

- (a) The maximum height of fill or depth of excavation that will be permitted on a site shall be 3 metres above or below natural ground surface at any one location.
The Council may, upon application, relax the requirement of this policy with respect to a particular case. When determining such relaxation, consideration will be given to:
 - (i) the topography of the site and adjoining land
 - (ii) the design and siting of any proposed building or structure in relation to adjoining land
 - (iii) whether the proposed development of the site as a whole, would be likely to be in accordance with the reasonable expectations of existing or future residents on the adjacent land.
- (b) The toe of fill batter shall be located at least 750 mm inside the property boundary.
- (c) The distance of 750 mm specified in section 3(b) above may be reduced or dispensed with if the applicant notifies the adjoining owner and they have no objection to the toe of the fill batter being constructed on or adjacent to the boundary.
- (d) The top of a battered excavation is to be 750mm from the property boundary.

4. Slope of batters

- (a) Where it is proposed to provide erosion protection by turfing, the slope of a batter (in cut or fill) shall not exceed 1 in 4.
- (b) However, when the applicant wishes to adopt a steeper slope, full details of the proposed method of stabilisation with accompanying engineering certification as to the long term stability of the proposed soil restraint shall be submitted to the Council.

5. Vehicular access

- (a) Vehicle access shall be clearly shown on the site plan. The longitudinal grade of the driveway shall not exceed a slope of 1 in 4. Areas on the site used for manoeuvring of vehicles will not have a slope greater than 1 in 12.

- (b) If an applicant wishes to exceed the above grades, full details of the proposal shall be prepared by a suitably qualified engineer, showing how vehicles can safely access the site.
6. Engineering requirements
- (a) Where building approval is required, the application for such approval is to be accompanied by a geotechnical report.
 - (b) Excavation, compaction of fill, assessment of the risk of slip failure and methods of batter protection shall be carried out strictly in accordance with the engineers' recommendations in the geotechnical report provided by the applicant.
7. Building platform*
- (a) The building platform with finished level for the proposed building shall be clearly shown on the site plan.
 - (b) A path, at least 1 metre wide, shall be provided for the full perimeter of the proposed building with a cross fall of 1 in 20 falling away from the building.
 - (c) The finished floor level of the building shall be at least 225 mm above the building platform level.
- * For drainage of platform refer to part C - drainage.

Part C - Drainage

1. Surface drainage

The natural flow of stormwater from the subject property as well as from any adjoining land shall not be altered, redirected or concentrated so as to cause a nuisance or damage to land, buildings and other structures in the neighbourhood.

2. Roof water drainage disposal

- (a) Any of the following systems of roof water disposal are acceptable to the Council:
 - (i) Connect roof water to kerb and channel. Where the allotment slopes to the street, this is the preferred system of discharging roof water.
 - (ii) Connect roof water to underground system. Where such a system is available, connection to same is the preferred system.
 - (iii) Discharge roof water through adjoining property to existing kerb and channel. This system is preferred where discharge to kerb and channel cannot be achieved and an underground system is not available.
- (b) The discharge of roof water to rubble pits or absorption trenches is only acceptable in rural areas.

3. Roof water drainage through adjoining property

- (a) Where it is not practical for stormwater from a roof or paved area to be collected and discharged to the street kerb and channel, and there is no underground roof drainage system, the applicant will be encouraged to discharge the roof stormwater off the property by piping through neighbouring land.
- (b) The applicant shall be responsible for the following:
 - (i) Investigate all possible drainage paths.

- (ii) Obtain addresses of adjoining downstream property owners from the Council to obtain their permission to pass stormwater drains through their property (typical draft letters covering this aspect are available from the Council.)
- (iii) Submit to the Council the proposed system of drainage together with the consent of the adjoining property owner through whose property the pipes are to be laid.

Part D – Soil Restraint

1. Height and boundary setback

- (a) Where adjoining allotments are vacant, retaining walls below one metre which are not located within a distance of 750 mm of side or rear boundary can be built without the Council's approval (see detail (b) on detail sheet 1 and to detail sheet 3).
- (b) Where an adjoining allotment is not vacant, a retaining wall may be constructed without the Council's approval up to one metre high provided:
 - (i) In a cut situation, it is kept 750 mm from a fence or boundary, or 1000 mm from a structure* on the adjoining property, whichever is the greater.
 - (ii) In a fill situation, regardless of the location of the structure or adjoining property, a minimum distance of 750 mm from the fence or boundary is required.
- (c) A retaining wall exceeding one metre in height with a maximum of 3 metres may be constructed on site not closer than 1.5 metres to any side or rear boundary. The Council's approval is required (see detail (c) and (d) on detail sheet 2).
- (d) A retaining wall up to 3 metres high may be erected on the boundary in a cut/fill situation as a joint application with an adjoining owner (see detail (b) on detail sheet 2).

Note: Where an applicant wishes to construct a retaining wall not complying with the Council's policy, a written application shall be submitted to the Council for relaxation of any part of the policy. The application shall set out reasons why the application should be considered by the Council, and shall be accompanied by a copy of correspondence written to the adjoining owner advising them of the proposal and that they have seven (7) days to object.

* *Structure shall include but not be limited to, pergola, retaining wall, carport, garage, swimming pool or dwelling.*

2. Effect on adjoining properties

- (a) Precautions shall be taken to prevent earth fill including waterborne material encroaching on adjoining land (both private and public) or spilling against boundary fences.
- (b) To avoid damage to the adjoining allotment and any structures thereon, and to enable surface water to be adequately controlled, a strip at least 750 mm wide shall be provided between the boundary line and the nearest face of the

retaining wall, not exceeding one metre in height and for retaining walls exceeding one metre in height, the distance shall be at least 1,500 mm.

3. Height of combined fence/retaining wall

- (a) The maximum height of a combined fence and retaining wall on or within 1.5 metres of a site boundary shall not exceed 4 metres, in a joint cut/fill situation. A relaxation is required if the fence and retaining wall is greater than 2 metres above natural ground.
- (b) The maximum height of a combined fence and retaining wall not within 1.5 metres of a site boundary in a fill situation, shall not exceed 4.5 metres above natural ground level.
- (c) The maximum height of a combined fence and retaining wall not within 1.5 metres of a site boundary in a cut situation shall be assessed by the Council as to the effect on the neighbourhood.
- (d) The maximum height of the retaining wall in 3(a), (b) and (c) above shall be 3 metres.

4. Approval by the Council

- (a) Construction of a retaining wall or embankment stabilisation, as approved by the Council, shall be provided prior to any other building construction works, including excavation for footings, unless otherwise approved by the Council in writing.
- (b) Where conditions of building approval such as soil restraint nominated on the approval plans have not been completed, final approval will not be issued and the Council will seek compliance by the owner in accordance with the requirements of the *Building Act 1975*.
- (c) Where a slope steeper than 1.5 horizontal to 1 vertical for cut and 4 to 1 for fill or other method of retention of an embankment exceeding 1 metre in height is proposed, the building application shall be supported by a design certificate prepared by a registered professional engineer.
- (d) When, due to excavation, the difference in ground level exceeds 1 metre, a fence or other approved barrier not less than 1,000 mm high may be required to be provided along the upper level as a safety barrier to prevent people falling.

Part E – Sediment and Erosion Control

1. Erosion hazard rating matrix

- (a) Whenever there is any major soil disturbance on a site, the Erosion Hazard Rating Matrix for building and development projects shall be completed to determine the relevant category for the site and the works proposed.
- (b) If the site is assessed as category 1, a Sediment and Erosion Control Plan shall be produced in accordance with the provisions of this policy, and submitted to the Council for approval prior to the commencement of any works on site.
- (c) If the site is assessed as category 2, general protection measures in accordance with the provisions of this policy shall be implemented prior to the commencement of any works on the site.

- (d) If there is any major soil disturbance on the site, the following erosion and sediment controls must be undertaken as required:
 - (i) Install and maintain a temporary sediment fence (geotextile fabric) to ensure sediment does not move off site.
 - (ii) Install and maintain sediment traps around all on site stormwater inlets and/or kerb inlet pits.
 - (iii) Install and maintain sediment barriers in drainage lines in close proximity to the site.
 - (iv) Minimise the movement of vehicles on the site during wet weather or when the site is muddy.
 - (v) Locate any stockpiles of sand, gravel etc to ensure that the material:
 - (a) does not spill onto the road pavement; or
 - (b) is not in drainage lines or watercourses.
 - (vi) Promptly stabilise driveways and all disturbed areas; temporary sand bag cross-banks may be required on driveways prior to paving.
 - (vii) Revegetate all disturbed areas as soon as practicable.
 - (viii) Ensure proper disposal of all on site waste building materials.
 - (ix) Do not place soil or substitute materials in the gutter to provide allotment access.
 - (x) Immediately remove any soil or other materials spilled onto the road or reserve.
2. Sediment and erosion control plans
- (a) Sediment and Erosion Control Plans shall be prepared in accordance with the provisions of the Queensland Urban Drainage Manual, or the Soil Erosion and Sediment Control Engineering Guidelines for Queensland on a paper print for submission to the Council for approval prior to the commencement of any works on site.
 - (b) The plan(s) shall show:
 - (i) the site's existing topography
 - (ii) how and when it will be altered
 - (iii) the sediment and erosion control measures that are proposed to be used (marked on the print in red)
 - (iv) the catchment boundaries and the direction of flow for the different drainage areas before and after development
 - (v) the stormwater management system proposed.
 - (c) Upon agreement to the adequacy of the measures proposed, the sediment and erosion control plan shall then be produced as a drawing forming part of the construction set.
 - (d) It is emphasised that no matter which measures are selected and implemented, they must be properly maintained in order to remain functional.
3. Maintenance

The sediment control measures shall be inspected after every storm event and cleaned out (when 40% full), repaired or reinstated as required to maintain their effectiveness.

4. Liability for sedimentation

- (a) In cases where sediment from a building site is deposited on land controlled by the Council, including roads and drainage systems, parks, drainage reserves and drainage easements, the Council reserves the right to undertake the removal and disposal of such sediment. The owner shall be liable for the costs of removal of any such sediment, including ancillary costs such as washing down of adjacent driveways.
- (b) In cases where sediment from a building site is deposited on adjacent privately owned land, the owner of the source site shall be responsible for the removal of such sediment including the rehabilitation of any areas damaged as a result of the sedimentation or the removal process.

Related policies/legislation/other documents:

DOC ID	DOCUMENT TYPE	DOCUMENT NAME
-	Legislation	<i>Building Act 1975</i>