

## **17.7 Rules: Earthworks**

*[Section inserted by Plan Change 11, 11/10/10]*

### **Note to Plan Users**

1. Except as specified in Rule 17.7.1, these rules apply to all land use activities in all District Plan zones, in addition to the zone standards.
2. All earthworks must comply with section 10 of the Historic Places Act 1993, which protects recorded, suspected and unrecorded archaeological sites from destruction, damage and modification.
3. For earthworks in Areas of Significant Conservation Value and other areas of coastal habitat, wetland, skink habitat and indigenous vegetation, see also Rules 16.5.5 and 16.6.2 of Section 16: Indigenous Vegetation and Fauna.
4. For earthworks in any area shown on District Plan Maps 75, 76 or 77 as 'High Class Soils', see also Rule 6.5.3(viii) of Section 6: Rural.
5. For earthworks within the canopy spread of any tree listed in Schedule 25.3, see also Rule 15.5.1(i) of Section 15: Trees.
6. Any earthworks that may intercept groundwater are likely to require resource consent from the Otago Regional Council. Certain other activities involving earthworks are also controlled through the Otago Regional Council Flood Protection Management Bylaw 2008, in the Regional Plan: Water for Otago and in the Regional Plan: Waste for Otago. Refer to the Otago Regional Council for details.
7. There are common law rights of adjacent landholders in respect of drainage and support of land. These rights apply irrespective of compliance with District Plan rules or any resource consent issued by the Council. These rights are a civil matter.
8. For earthworks that relate to an existing electricity transmission line, see also Regulations 33 to 36 of the Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009.

### 17.7.1 Exempt Activities (Policy: 17.3.9)

The earthworks activities set out in Table 17.4 are regulated through rules in other sections of this Plan, Regional Plan rules or National Environmental Standards, and shall therefore be exempt from Rules 17.7.2 to 17.7.5.

**Table 17.4**

Activity	Mechanism through which this activity is controlled
Earthworks involved in subdivision, provided that detailed engineering plans for these earthworks have been expressly approved by the Council as part of the subdivision consent process.	Section 18: Subdivision Activity, Rules 18.5.1, 18.5.1A and 18.5.2
Scheduled mining and quarrying activities (excluding any excavation that takes place within a Groundwater Protection Zone identified on District Plan Map 6, 7, 8, 27, 28, 29, 30, 41, 42 or 53), provided that these activities comply with the relevant conditions set out in Rules 6.5.3, 6.5.8, 8.7.2 and 8.7.7.	Section 6: Rural, Rules 6.5.2(v), 6.5.3 and 6.5.8, and Section 8: Residential, Rules 8.7.1(v), 8.7.2 and 8.7.7.
Drilling or bore construction, as defined in the Regional Plan: Water for Otago as it is at 1 July 2010, (excluding the deposition of fill resulting from these activities).	Regional Plan: Water for Otago
Earthworks on the bed of any lake or river.	Regional Plan: Water for Otago
Excavation and use of composting pits, silage pits and silage stacks, as defined in the Regional Plan: Waste for Otago as it is at 1 July 2010.	Regional Plan: Waste for Otago
Excavation and use of offal pits, farm landfills and greenwaste landfills, as defined in the Regional Plan: Waste for Otago as it is at 1 July 2010.	Regional Plan: Waste for Otago
Operation of the Envirowaste Fairfield Landfill.	Section 6: Rural, Rule 6.5.8(v)(a) and Regional Plan: Waste for Otago
Earthworks associated with the operation, maintenance, upgrading, relocation or removal of existing National Grid High Voltage Transmission Lines as at 14 January 2010.	Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009

### 17.7.2 Permitted Activities (Policy 17.3.9)

The following activities are permitted activities:

- (i) Earthworks that form part of one or more of the following activities:
  - a) Erection and/or maintenance of fences (excluding retaining walls) and of structures required for the support of overhead lines.
  - b) The driving in of piles for building foundations.
  - c) The cultivation of soil for crops, trees and pasture, and other accepted farming practices, such as mole ploughing and deep ripping, that are similar in effect to cultivation; the harvesting and clearance of crops, trees and noxious weeds; and shelter belt removal.
  - d) Maintenance of tracks, private roads, private ways, dams, farm yards and farm service areas.

- e) The extraction of aggregate within a farm or plantation forest, for the sole purpose of maintaining access within the same landholding (excludes any aggregate extraction that takes place within a Groundwater Protection Zone identified on District Plan Map 6, 7, 8, 27, 28, 29, 30, 41, 42 or 53).
- f) Maintenance of man-made drains, ditches and canals.
- g) Maintenance of defences against water, as defined in the Regional Plan: Water for Otago as it is at 1 July 2010.
- h) Maintenance of existing roads as provided for under Rule 20.5.1 of Section 20: Transportation.
- i) Earthworks associated with:
  - Utilities activities provided for under Rule 22.5.1 of Section 22: Utilities, subject to performance standards listed in Rule 22.5.2; and/or
  - The maintenance and operation of lawfully established utilities activities and electricity generation facilities, and associated infrastructure.
- j) Forestry earthworks carried out in accordance with the NZ Environmental Code of Practice for Plantation Forestry 2007, specifically Best Environmental Practices 2: Earthworks, 12: Historical and heritage management and 13: Historical and heritage site discovery.
- k) Retaining walls up to, and including, a maximum height of 600mm.

These earthworks are not subject to the performance standards set out in Rule 17.7.3.

- (ii) All earthworks that are not listed in Table 17.4 or provided for in Rule 17.7.2(i), provided that the works comply with Rules 17.7.3(i) to 17.7.3(vi).

### **17.7.3 Performance Standards for Permitted Activities** (*Policy 17.3.9*)

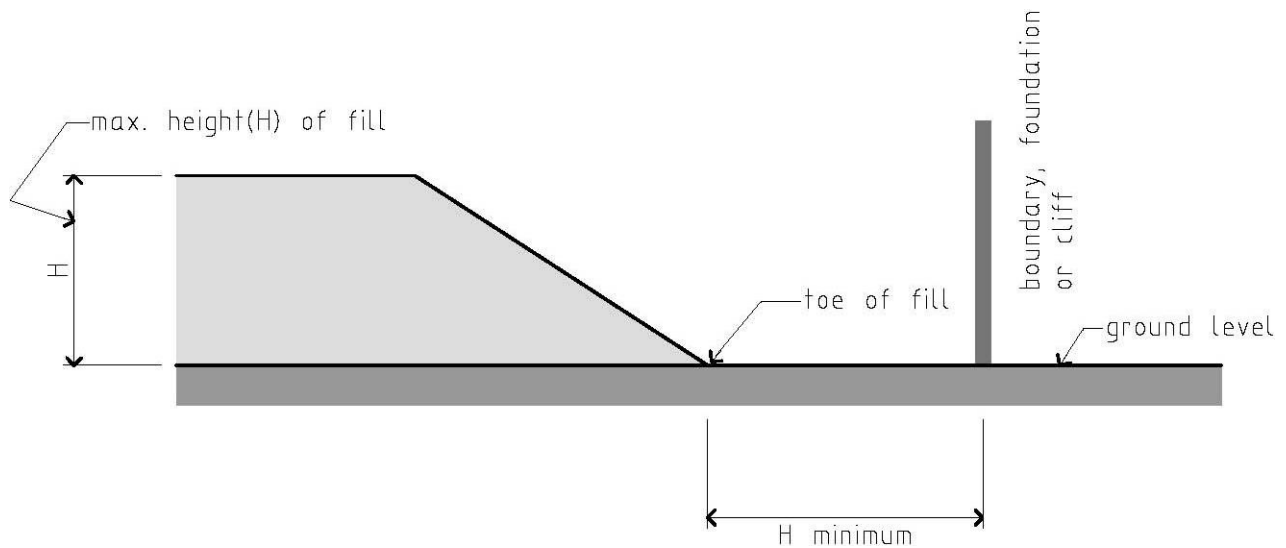
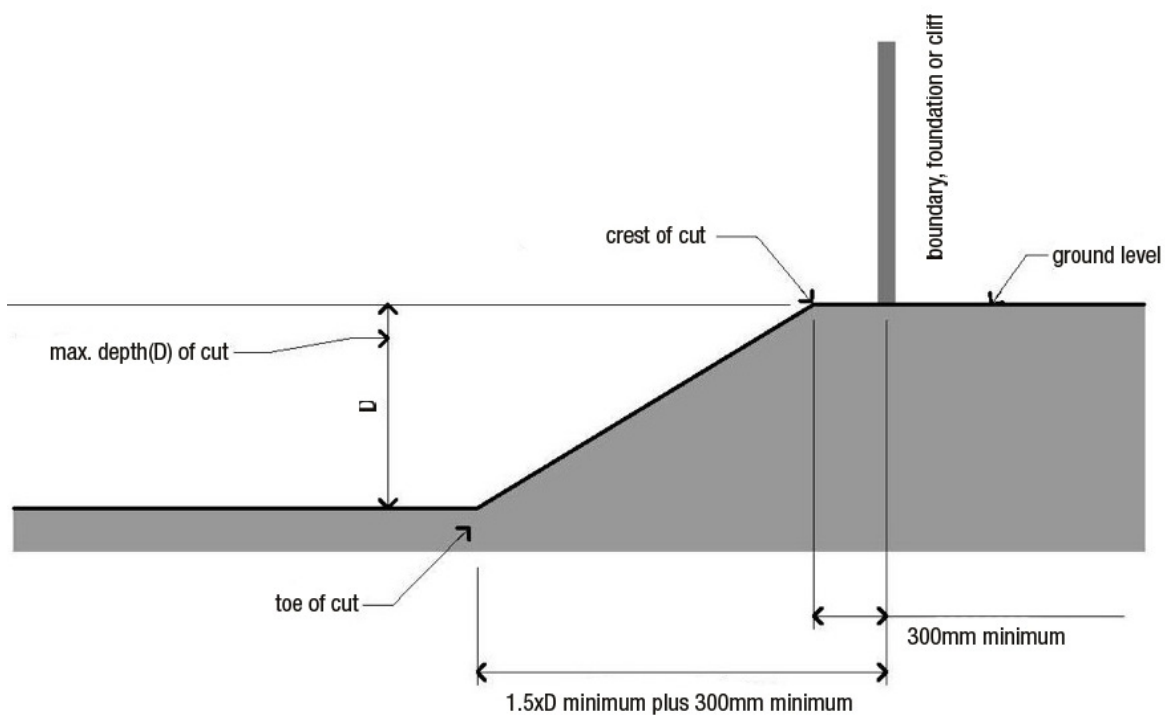
The following performance standards apply to activities permitted under Rule 17.7.2(ii):

- (i) **Minimum Setback Distance:**  
The minimum setback distances set out in 17.7.3(i)(a), (b) and (c) shall apply between earthworks over 600mm in height or depth and each of the following features:
  - Property boundary.
  - Foundation of any existing building.
  - The top or toe of any cliff (i.e. existing slope with an average gradient of over 63° or 1 to 2 horizontal to vertical ratio).

Minimum setback distances to the foundation of any existing building and to the top or toe of any cliff for any cut or fill, and minimum setback distances to the property boundary for any cut, apply only to earthworks that were not granted an earthworks permit prior to 1 July 2010 and that do not form part of a project that was granted building consent on or after 1 July 2010.

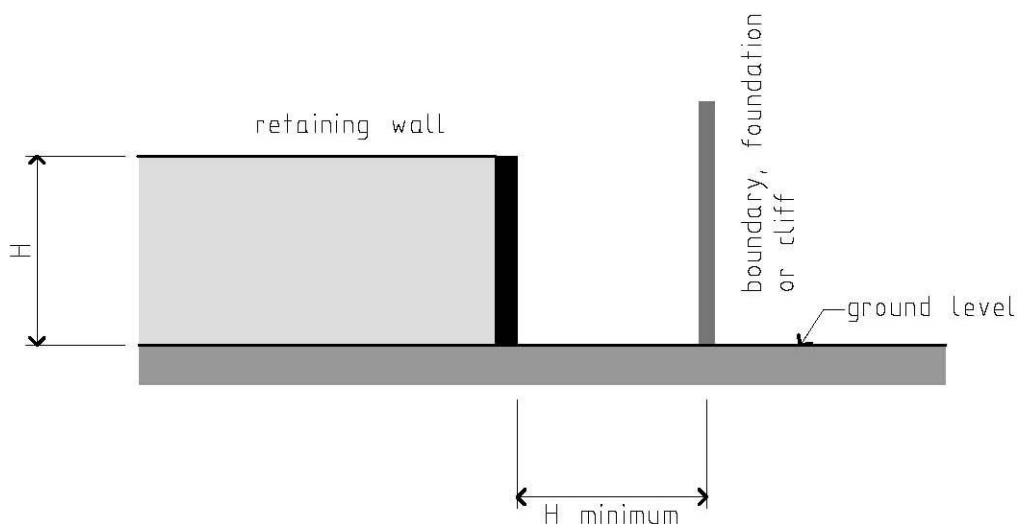
- (a) For earthworks not supported by a retaining wall the minimum setback distance:
  - (i) to the toe of any fill shall be at least equal to the maximum height of the fill (see Figure 17.1).
  - (ii) to the toe of any cut shall be at least equal to 1.5 times the maximum depth of the cut, plus a minimum of 300mm (see Figure 17.2).
  - (iii) to the crest of any cut shall be at least 300mm (see Figure 17.2).

Note that this standard does not impose a maximum gradient for cut or fill batters.

**Figure 17.1 Unsupported fill (elevation view)****Figure 17.2 Unsupported cut (elevation view)**

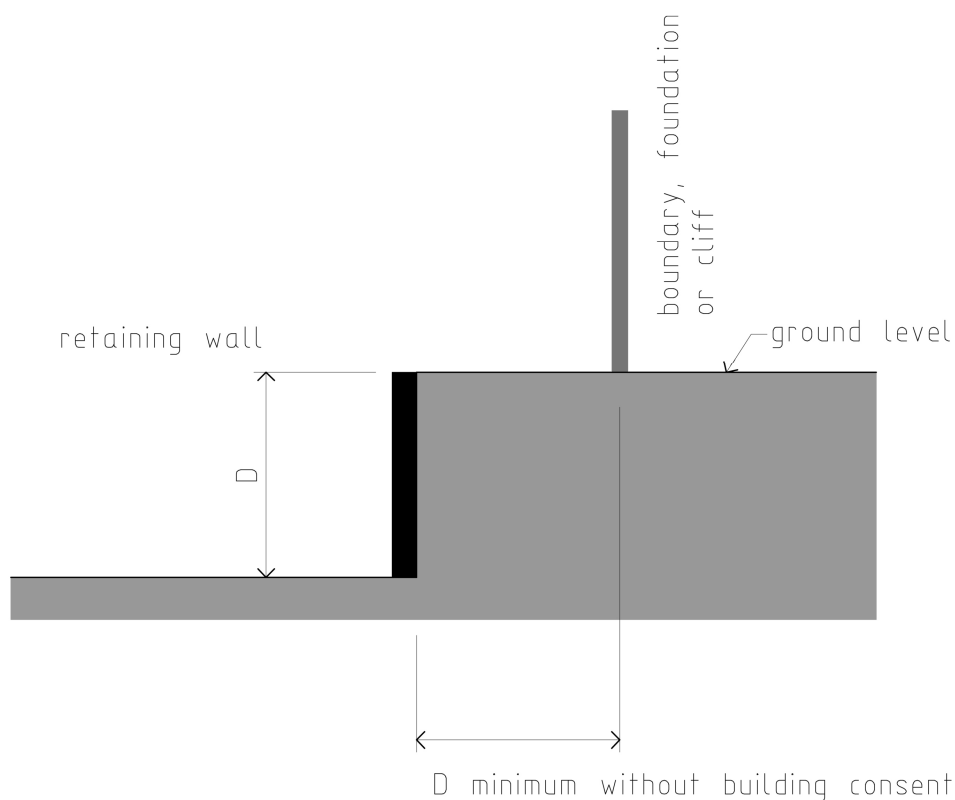
- (b) For retaining walls supporting fill, the minimum setback distance to the base of the retaining wall shall be at least equal to the maximum height of the retaining wall (see Figure 17.3).

**Figure 17.3 Fill supported by retaining wall (elevation view)**



- (c) (i) For retaining walls supporting a cut there shall be no minimum setback distance, provided that the retaining wall has been granted building consent.
- (ii) For retaining walls supporting a cut that have not been granted building consent, the minimum setback distance to the top of the retaining wall shall be at least equal to the maximum height of the retaining wall (see Figure 17.4).

**Figure 17.4 Cut supported by retaining wall (elevation view)**



## (ii) Scale Thresholds:

Earthworks shall not, within any consecutive 2 year period, exceed either the 'Change in ground level' threshold or the 'Volume of excavation and fill' threshold listed in Table 17.5 for the area or zone in which they are located. Note that Urban Landscape Conservation Areas (ULCAs) and Landscape Management Areas (LMAs) form overlays over planning zones. In these areas the thresholds specified in the table for ULCAs or LMAs, rather than those for the underlying planning zone, will apply. Where a site is partially covered by a ULCA or LMA, earthworks permitted in the remainder of the site shall be calculated based on the total area of the site, including the ULCA or LMA.

**Table 17.5**

Zone/area	Site size	Change in ground level	Volume of excavation and fill
Rural Zone	≤10ha	2.0m	200m <sup>3</sup>
	>10ha	2.0m	20m <sup>3</sup> /ha. Total volume of permitted earthworks may be carried out at any location within the site.
All other zones	≤2ha	1.5m	100m <sup>3</sup>
	>2ha	2.0m	200m <sup>3</sup>
Landscape Management Areas (LMAs)	Any	2.0m	200m <sup>3</sup>
Urban Landscape Conservation Areas (ULCAs)	Any	1m	10m <sup>3</sup>

## (iii) Distance from Water:

Earthworks shall not exceed 1m<sup>3</sup> in volume or 25m<sup>2</sup> in area in any of the following locations:

- (a) Within 20m of any natural surface water body with a clearly defined bed and a continual flow, or any wetland identified in Schedule 25.4 or in Schedule 9 or 10 of the Regional Plan: Water for Otago as it is at 1 July 2010, in the Rural Zone. If a wetland is marked on more than one of these schedules, the more extensive boundary of that wetland applies.
- (b) Within 7m of any natural surface water body with a clearly defined bed and a continual flow, or any wetland identified in Schedule 25.4 or in Schedule 9 or 10 of the Regional Plan: Water for Otago as it is at 1 July 2010, in any other zone. If a wetland is marked on more than one of these schedules, the more extensive boundary of that wetland applies.
- (c) Within 7m of the mean high water springs in any Residential or Activity Zone.

## (iv) Groundwater Protection Zones:

Within Groundwater Protection Zones as shown on District Plan Maps 6, 7, 8, 27, 28, 29, 30, 41, 42 and 53, excavations other than those required for roading or foundations for buildings shall not exceed 250mm in depth or 10m<sup>3</sup> in volume.

## (v) Distance from Water and Waste Infrastructure:

Earthworks shall be located at least 1.5m from the centreline of any Council-owned stormwater or foul sewer line, and at least 2.5m from the centreline of any Council-owned water mains.

- (vi) Distance from High Voltage Transmission Lines and Support Structures
- (a) Except for earthworks for new and/or existing network utilities, earthworks shall be located at least 12m from the closest visible edge of the foundation of a high voltage transmission line support structure as shown on District Plan Maps 4-6, 8-10, 16-19, 29-32, 45-47, 49 & 53.
  - (b) Except for earthworks for new and/or existing network utilities, earthworks that result in an increase in ground level shall be located at least 12m from the centreline of a high voltage transmission line as shown on District Plan Maps 4-6, 8-10, 16-19, 29-32, 45-47, 49 & 53.

#### **Rule 17.7.4 Controlled Activities** (*Policy 17.3.9*)

Except as specified in Rules 17.7.1, 17.7.2(i) and 17.7.5, earthworks shall be controlled activities in the following circumstances:

- (i) The earthworks do not comply with Rule 17.7.3(iv) 'Groundwater Protection Zones'.

These earthworks are controlled in respect of:

- (a) The nature and extent of the proposed work and the degree to which it may disturb the protective mantle over the Groundwater Protection Zone as identified on District Plan maps.
- (b) The extent to which the proposed works may increase the risk of groundwater contamination.

Conditions that may be imposed include, but are not limited to:

- (c) Minimising any adverse effects resulting from the disturbance of the protective mantle over the Groundwater Protection Zone.
- (d) The control of storm water run-off from the site and the reduction to an acceptable level of any silt, sediment or contaminant prior to entering any storm water pipes, drains, channels or soakage systems.
- (e) The control of vehicle movements and access to and from the site in relation to the earthworks operation.

- (ii) The earthworks do not comply with Rule 17.7.3(i) Minimum Setback Distance, with respect to the distance of cut from:

- Property boundary; and/or

With respect to the distance of cut or fill from:

- Foundation of any existing building.
- The top or toe of any cliff (i.e. existing slope with an average gradient of over 63° or 1 to 2 horizontal to vertical ratio).

These earthworks are controlled in respect of:

- (a) Design and engineering of retaining structures and earthworks.
- (b) Effects on the stability of land and buildings.
- (c) Effects on the surface flow of water and on flood risk.
- (d) Effects on underground utilities.

Conditions that may be imposed include, but are not limited to:

- (e) Maximum slopes of cut and fill batters.
- (f) Supervision and monitoring requirements for: retaining wall construction; standard earthworks construction; earthworks construction to NZS 4431:1989.

- (g) Measures to control flooding and erosion.
  - (h) Set-back distances from easements for underground services.
  - (i) Time to completion of works.
- (iii) The earthworks do not comply with Rule 17.7.3(ii) Scale Thresholds, but do not take place within any Urban Landscape Conservation Area (ULCA) or Landscape Management Area (LMA), and do comply with the following standards:
- (a) Scale Thresholds:  
Earthworks shall not, within any consecutive 12 month period, exceed either the 'Change in ground level' threshold or the 'Volume of excavation and fill' threshold listed in Table 17.6 for the area or zone in which they are located. Where a site is partially covered by a ULCA or LMA, the site size shall be taken to be the total area of the site, including the ULCA or LMA.

**Table 17.6**

Zone/area	Site size	Change in ground level	Volume of excavation and fill
Rural Zone	≤10ha	2.5m	1000m <sup>3</sup>
	>10ha	2.5m	100m <sup>3</sup> /ha. Total volume of earthworks may be carried out at any location within the site (subject to controls on earthworks in ULCA's and LMA's).
All other zones	Any	2.0m	250m <sup>3</sup>

- (b) Compliance with the Historic Places Act 1993:  
If the earthworks require an archaeological authority under the Historic Places Act 1993, the archaeological authority has been granted.
- (c) Compliance with recommendations of archaeological assessment:  
If the earthworks are to be located in an area where archaeological material is considered likely to be found (e.g. due to the history of the site and/or the presence of recorded archaeological sites within 100m of the earthworks), an archaeological assessment has been carried out by a suitably qualified person, and the proposal complies with the recommendations of the archaeological assessment.
- (d) Compliance with recommendations of tangata whenua:  
If the earthworks would affect a cultural site, tangata whenua have been notified and consulted with, and the proposal complies with any recommendations made by tangata whenua in relation to effects on the cultural site.

These earthworks are controlled in respect of:

- (e) Effects from noise, dust and vibration.
- (f) Effects on any archaeological or cultural site.
- (g) Effects from the release of sediment beyond site boundaries, including transport of sediment by stormwater systems.
- (h) Visual effects.



For earthworks that were not granted an earthworks permit prior to 1 July 2010 and that do not form part of a project that was granted building consent on or after 1 July 2010, the Council's control will also extend to the following matters:

- (i) Design and engineering of retaining structures and earthworks.
- (j) Effects on the stability of land and buildings.
- (k) Effects on the surface flow of water and on flood risk.
- (l) Effects on underground utilities.

Conditions that may be imposed include, but are not limited to:

- (m) Measures to control noise, dust and vibration.
- (n) Conditions relating to compliance with an archaeological authority and/or archaeological assessment.
- (o) Conditions to implement recommendations from tangata whenua in relation to cultural sites.
- (p) Compliance with an Accidental Discovery Protocol.
- (q) Measures to control sedimentation.
- (r) Measures to minimise adverse visual effects, e.g. requirements for revegetation and/or landscaping.

For earthworks that were not granted an earthworks permit prior to 1 July 2010 and that do not form part of a project that was granted building consent on or after 1 July 2010, conditions that may be imposed also include, but are not limited to:

- (s) Maximum slopes of cut and fill batters.
- (t) Supervision and monitoring requirements for: retaining wall construction; standard earthworks construction; earthworks construction to NZS 4431:1989.
- (u) Specific measures to control flooding and erosion.
- (v) Set-back distances from easements for underground services.
- (w) Time to completion of works.

### **Rule 17.7.5 Discretionary Activities (Restricted) (Policy 17.3.9)**

Except as specified in Rules 17.7.1 and 17.7.2(i), earthworks shall be discretionary (restricted) activities in the following circumstances:

- (i) The earthworks do not comply with Rule 17.7.3(i) Minimum Setback Distance, with respect to the distance of fill from the property boundary.

The Council's discretion under this rule is restricted to:

- (a) Adverse effects on the amenity of neighbouring properties.

For earthworks that were not granted an earthworks permit prior to 1 July 2010 and that do not form part of a project that was granted building consent on or after 1 July 2010, the Council's discretion will also extend to the following matters:

- (b) Design and engineering of retaining structures and earthworks.
- (c) Effects on the stability of land and buildings.
- (d) Effects on the surface flow of water and on flood risk.
- (e) Effects on underground utilities.

In assessing these effects, the Council will have regard to the matters in 17.8.1 and 17.8.2.

- (ii) The earthworks do not comply with either Rule 17.7.3(ii) Scale Thresholds or Rule 17.7.4(iii).

The Council's discretion under this rule is restricted to:

- (a) Adverse effects on the amenity of neighbouring properties.
- (b) Effects on visual amenity and landscape.
- (c) Effects on any archaeological site and/or any cultural site.
- (d) Effects on the transportation network, caused by the transport of excavated material or fill.
- (e) Effects from the release of sediment beyond site boundaries, including transport of sediment by stormwater systems.
- (f) Cumulative effects relating to any of these matters.

For earthworks that were not granted an earthworks permit prior to 1 July 2010 and that do not form part of a project that was granted building consent on or after 1 July 2010, the Council's discretion will also extend to the following matters:

- (g) Design and engineering of retaining structures and earthworks.
- (h) Effects on the stability of land and buildings.
- (i) Effects on the surface flow of water and on flood risk.
- (j) Effects on underground utilities.

In assessing these effects, the Council will have regard to the matters in 17.8.1 to 17.8.6.

- (iii) The earthworks do not comply with Rule 17.7.3(iii) Distance from Water.

The Council's discretion under this rule is restricted to:

- (a) Sedimentation of the nearby surface water body/bodies or coastal water.
- (b) Inundation or erosion of land caused by the alteration of the direction, rate or depth of flow of the nearby surface water body/bodies.

In assessing these effects, the Council will have regard to the matters in 17.8.6 and 17.8.7.

- (iv) The earthworks do not comply with Rule 17.7.3(v) Distance from Water and Waste Infrastructure.

The Council's discretion under this rule is restricted to effects on the integrity of water, stormwater and/or foul sewer reticulation.

In assessing these effects, the Council will have regard to the matters in 17.8.8.

- (v) The earthworks do not comply with Rule 17.7.3(vi) Distance from High Voltage Transmission Lines and Support Structures.

The Council's discretion under this rule is restricted to:

- (a) Any effects on the integrity of the transmission line.
- (b) Volume, area and location of the works, including temporary activities such as stockpiles.
- (c) Timing of the works.
- (d) Site remediation.
- (e) The use of mobile machinery near the transmission line which may put the line at risk.
- (f) Compliance with the NZ Electrical Code of Practice for Electrical Safe Distances 34:2001.

In assessing these effects, the Council will have regard to the matters in 17.8.9.