



INFORMATION SHEET NO. 22

RETAINING WALLS

A retaining wall is a wall which holds back or supports soil when the natural ground level has been altered.

When a person 'cuts' into the natural ground level, the soil on the high side is to be prevented from collapsing with the use of a wall.

Alternatively when a person 'fills' or provides extra soil where the natural ground slopes downwards, (to make it level) then the additional fill needs to be prevented from moving further down the incline. This again is achieved with the use of a wall.

Fences are not to be used as retaining walls unless designed as such by a structural engineer. Steel, brush, or similar type fences are not to be used to retain soil.

The Development Act requires the building owner to consult with adjoining property owners where it is deemed that the work may affect adjoining land (i.e. 200mm or more of fill or cutting near the boundary).

Responsibility

The owner who alters the natural lie of the land is responsible to provide a retaining wall. However, where both property owners alter the land, they would be jointly responsible.

Altering the land includes cutting into (excavating and taking soil away) or filling (adding and importing soil).

The sharing of costs is to be negotiated between the affected property owners (i.e. a Civil Matter). Refer to examples on page 3.



Location of Wall

Should a property owner require a wall to be built on the boundary, the wall itself should be entirely on one side with the outside face of the wall on the boundary. Alternatively if both neighbours share the wall equally, the wall should be built straddling the boundary. A wall may also be constructed away from the boundary.

Retaining walls are not to be constructed over easements or public land.

Building Code of Australia

The Building Code of Australia (BCA) is a document utilized in the assessment of applications for Building Rules Consent. It contains objectives, performance requirements and detailed provisions that will satisfy the performance requirements (called deemed-to-satisfy provisions).

The Objective is to –

- a) Safeguard people from injury caused by structural failure; and
- b) Safeguard people from loss of amenity caused by structural behaviour; and
- c) Protect other property from physical damage caused by structural failure.

A building or structure is to withstand the combination of loads and other actions to which it may be reasonably subjected.

Earthworks need to be carried out safely and avoid potential damage to adjoining structures and property through the soil collapsing or subsiding during building works. Exceptional site conditions (including the effects of torrential rain) may need special consideration. The characteristics of a site are individual and the BCA requirements are general requirements for normal site conditions. Further advice in relation to the requirements of the BCA and associated Australian Standards should be sought from appropriately qualified professionals.

It is always recommended that a structural engineer be engaged to design a retaining wall and supporting footings regardless of the size, height or type of wall.

Retaining walls must be provided where the slope ratio is more than that described in BCA Table 3.1.1.1 – Unprotected Embankments or where the soil type is not described (i.e affected by fill, trees etc as determined by a soils engineer).

Embankments that are to be left exposed at the end of the construction works must be stabilized by vegetation or similar works to prevent soil erosion.

Terraced Walls

Some owners may not wish to construct a large wall but rather a series of smaller walls to terrace their garden. In this instance the distance apart of the walls is recommended to be twice their height to form a slope of 1 in 2. (i.e. a 1 metre wall should be built every 2 metres). If the walls are less than one metre in height in this instance they do not require council approval.

If the spacing of the walls are closer together, there may be surcharge loads imposed by the higher wall on the wall below that need to be considered in the structural design. The height of the wall will be considered from the bottom of the lower wall to the top of the higher level wall, and if the total height is over one metre will require Development Approval.

Council Approval

A Development Application is to be submitted where the height of the retaining wall reaches one metre or more. (this includes moss rock retaining walls, dry stone walls or any other method of supporting soil).

Information that must be submitted with a Development Application

1. A completed application form signed and dated.
2. Payment of relevant fees.
3. Declaration of Applicant (in relation to power lines) (not required if retaining wall is less than 2m in height).
4. A current copy of the Certificate of Title for the property (not more than 12 months old). Please check your Certificate of Title for easements and registered encumbrances.
5. A copy of the builders Indemnity Insurance Certificate (if valued \$12,000 or more).
6. Proof of payment of the Construction Industry Training Board Levy (if over \$15,000).

Plans and Documentation (3 copies with at least one copy being A3 or smaller)

7. Site plan indicating the location of the wall, other buildings on the site, septic tanks and any easements, drawn to a minimum scale of 1:200.
8. Elevations showing materials and height of the wall.
9. Construction details of how the wall will be constructed.
10. Engineers design data and calculations for the footing and wall.
11. Details of the barrier required at the top of the wall.

Where a retaining wall creates a change in level of 1 metre or more, a suitable barrier or balustrade is also required that complies with the Building Code of Australia Part 3.9.2.

Once an initial assessment of an application and site inspection has been undertaken, assessing officers may request further information.

Should development on the subject site be bound by **encumbrances** (refer to the Certificate of Title) approval from the encumbrance administrator will be required prior to lodging with Council. The encumbrance administrator may need to stamp the plans to be submitted to Council. Permission may also be required from the Strata or Community Corporation if the property is Strata or Community Titled.

Should there be any **easements** on the site, no structures or fill may be placed over the easement without the approval of the easement authority (refer to the Certificate of Title).

Example 1

Retaining Wall 1:

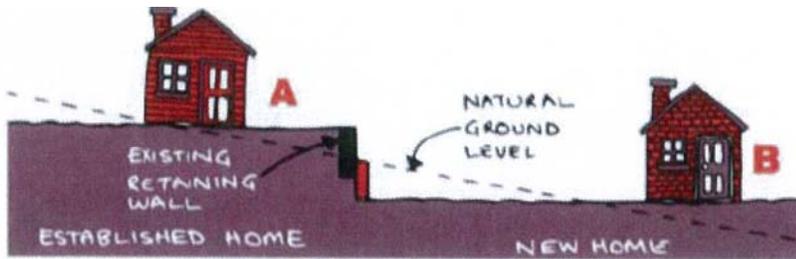
- Owner A will be responsible for one third of the cost of retaining wall 1.
- Owner B will be responsible for two thirds of the cost of retaining wall 1.

Retaining Wall 2:

- Owner B will be responsible for half the cost of retaining wall 2.
- Owner C will be responsible for half the cost of retaining wall 2.



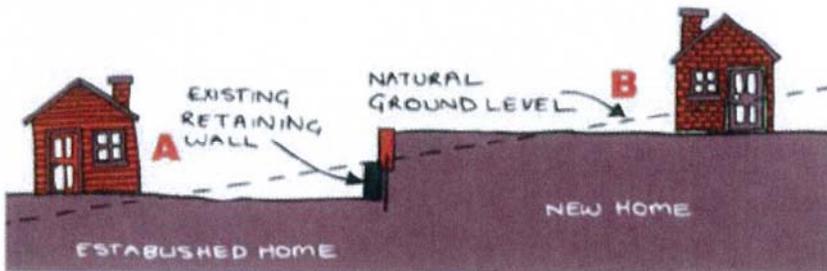
Example 2



Owner B will be required to construct a retaining wall that can support their proposed excavation as well as Owner A's existing retaining wall.

Note: Owner A's existing retaining wall should have been designed to allow for some excavation on the adjoining property without affecting the stability of the retaining wall.

Example 3



Owner B will need to construct a retaining wall that can support their proposed fill without overloading the existing retaining wall.

This may, for example, require piers founded below the level of the existing retaining wall. The advice of a Structural Engineer is required in this instance.

It is important to discuss your proposed site works and landscaping plans with your neighbor to ensure any work on the boundary can be coordinated and retaining walls can be designed appropriate for the use and intended loads.

Neighbour Disputes

Council does not have powers to determine who pays costs associated with fencing and retaining walls. If you and your neighbor are unable to agree on sharing of costs, you should contact the Community Mediation Services for information and advice on 08 8350 0376 or 08 8384 5222. Community Mediation Services are funded by the State Attorney-General's Department.

Acknowledgements: Images courtesy of Cement Concrete & Aggregates Australia (CCA) and as published in 'Building Today – Retaining Walls' (1997) Cement & Concrete Association of Australia.

*Please note the information contained herein is intended as a guide only.
Further clarification may be obtained by contacting the Council on 8525 3200.*