

Guide to Retaining Walls



CITY OF
MITCHAM

Development Approval

If you propose to construct retaining walls, Development Approval is required when:

- The retaining wall retains a difference in ground level exceeding one metre or, two retaining walls or a series of retaining walls, are used together in a tiered fashion to retain an overall difference in ground level exceeding one metre (see Tiered Retaining Walls section for further information).
- The total height of a retaining wall with fence above exceeds 2.1m (measured to the lowest side).
- The property is a State or Local Heritage Place.
- The property is in a Hills Face Zone; Designated Subzone, flood zone or overlay delineated by the Planning & Design Code.

Who is Responsible?

The owner of the property who alters the natural lay of the land is responsible to either stabilise the site by creating an appropriate landscaped batter or by providing a retaining wall. However, where both property owners agree to alter the land along a shared boundary, they would be considered jointly responsible. The apportioning of

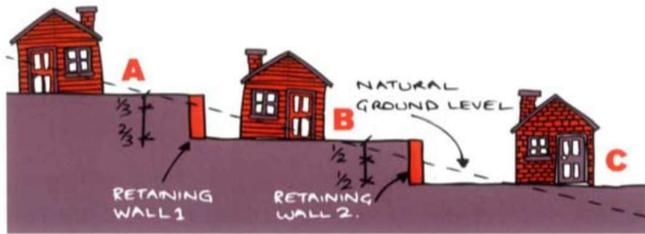


responsibility and cost is a matter between the affected parties which may require legal opinion to decipher and determine. Council does not have powers to determine who pays costs associated with fencing and retaining walls. If you and your neighbour are unable to agree on sharing of costs, you should contact the Legal Services Commission of SA Legal Help Line on 1300 366 424 for further advice.

Sharing Costs of a Retaining Wall

It is generally more practical and economical to construct one retaining wall between two properties (as shown in Example 1), instead of each owner constructing separate retaining walls (as shown in Examples 2 and 3). Property owners should therefore discuss their proposals to excavate, fill and retain along boundaries with their neighbours.

Example 1



Retaining Wall 1:

Owner A will be responsible for one third of the cost of retaining wall 1

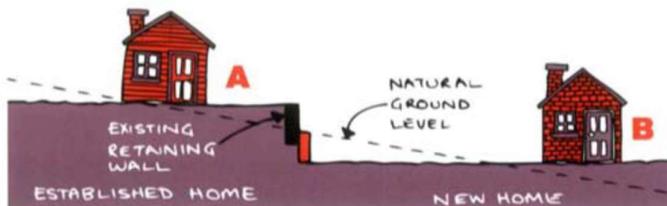
Owner B will be responsible for two thirds of the cost of retaining wall 1

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

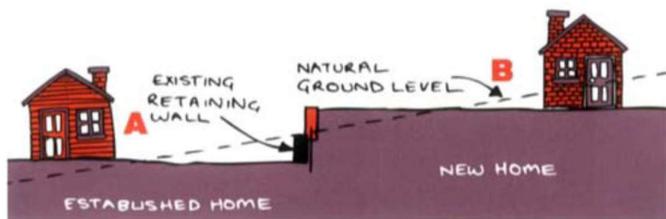
Example 2



Although it is generally more practical and economical to construct one retaining wall between the two properties, this may not be possible. In this example Owner B will have to construct a retaining wall that can support their proposed excavation as well as Owner A's existing retaining wall.

Note that in this example, Owner A's existing retaining wall should have been built to allow for some excavation on the adjoining property without affecting the stability of the retaining wall.

Example 3



Owner B will have 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. You should speak to an engineer about this.

Fences Located on Retaining Walls

If a fence is proposed to be located on top of a retaining wall, Development Approval is required to be obtained if the total height (measured from the lowest level of the retaining wall to the highest point of the fence) exceeds 2.1 metres. Likewise, in the case of a brick or masonry fence located on top of a retaining wall if the total height exceeds 1 metre.

Tiered Retaining 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.

Types of Retaining Walls

Moss rock/dry stone/modular block retaining walls

Generally limited to a maximum height of two metres and will require an engineer to certify the suitability of the location and design proposed (not recommended in shared boundary situations). Any reinforced stone construction requires substantial anchorage at the base of the wall, usually embedded 300 into the natural ground to reduce slippage. The slope of the wall repose distance from base to top from vertical) is an important part of the construction, typically 4:1 (for two metre high wall the distance of repose needs to be at least 1/2 metre).

Concrete sleeper/hot rolled steel section configured retaining wall

The configuration is popular because of its ease of construction and cost effectiveness. Vertical steel sections are placed into suitable concrete filled piers at spacings to suit the concrete sleeper length. In a boundary situation the fence posts can be directly site welded to the uprights to ease the fence installation.

Drainage of retaining walls

When you are considering walling types, the success or otherwise will largely be dependent on establishing an adequate free drainage system. Many retaining walls fail either due to the use of inappropriate construction materials or the build-up of surface drainage water behind the constructed wall resulting in hydrostatic pressure destabilising the wall.

An agricultural pipe (Ag Pipe) is commonly used at the base of retaining walls to disperse this water build up. Please note, it is good practice to connect both ends of the ag pipe to a stormwater system to prevent any excess water flowing onto any neighbouring properties.

Development Application Information Required

When you lodge a development application for a retaining wall, the following should be submitted to Council via the PlanSA website www.plan.sa.gov.au :

- A signed Powerline Declaration Form.
- A copy of the Builder's Indemnity Insurance (if work exceeds \$12,000).
- Evidence of payment of the Construction Industry Training Levy (if work exceeds \$40,000).

Copy of plans showing the proposal. These plans should be to scale (metric), and should clearly show the following information where applicable:

Site Plan

- Minimum scale 1:200, with 1:100 preferred
- North point
- Boundaries and dimensions of the site
- Location of proposed retaining wall, size and nature of existing and proposed structures, showing setbacks from boundaries and other buildings on the site
- Location of any significant trees on site or on adjoining land that may be affected by the work, or that might affect the work proposed

Elevation Plan

- Elevations of the retaining wall.

Support Details

- Schedule of building materials, finishes and colours.

Building Information

- An engineer's structural design and calculations.
- The location and extent/height of any proposed cut/fill.

The information provided in this brochure is only intended as a guide. All applications will be considered on their individual merits and therefore situations may vary. If you have any development enquiries please contact City of Mitcham, Development Services on 8372 8888 or email development@mitchamcouncil.sa.gov.au