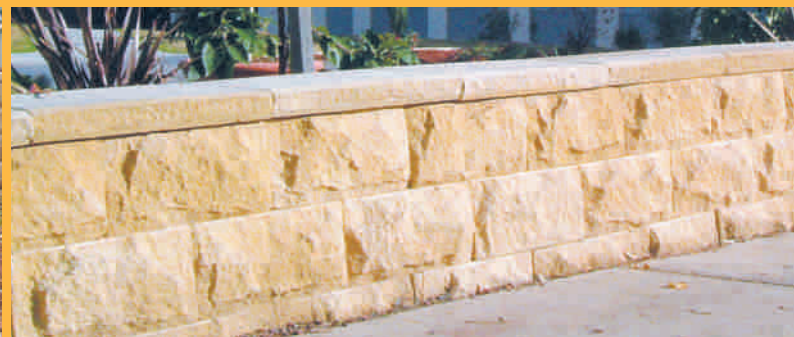
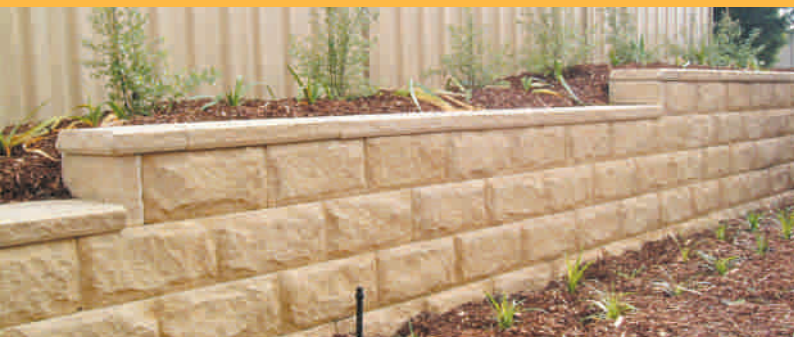


ECS MASONRY

Erosion Control Systems Pty Ltd

Boulderstone[®]

Retaining Wall System



Details & Dimensions:

Product:	Description:	Nominal Dimensions	Code:	Weight/ unit:	No/ M2:	Units/ pallet:
Blocks						
	Split face 225 unit	200 x 440 x 225	3500	26.5	11.35	60
	Bolstered 225 unit	200 x 440 x 225	3600	26	11.35	60
Cornerstones						
	Left hand split cornerstone	200 x 380 x 160	3381	21.5		32
	Right hand split cornerstone	200 x 380 x 160	3382	21.5		32
	Universal Bolstered cornerstone	200 x 380 x 140	3360	19.5		64
Capping Units						
	440mm capping unit	65 x 440 x 320	5440	16.0	2.3/lin m	84
	200mm capping unit	65 x 200 x 230	5103	5.3	5/lin m	270



Installation information

Construction guidelines....

Typical walls up to 1.0m in height

Check with your local council to see if there are any regulations relating to your proposed building works. Ensure that all relevant building codes are adhered to.

Constructing the footing:

Excavate a trench 200mm deep and 600mm in width. Fill with a well-graded crushed rock and compact with a mechanical vibrating plate to achieve footing at least 150mm thick. Ensure the footing is well compacted and level.

Laying the base course:

Use a string line when constructing a straight segment of wall. When building a curved segment of wall, use a piece of bent conduit to create the shape you desire, then mark the shape on the ground using spray paint. Placing a 10-20mm bedding layer of mortar on the crushed rock footing will make it easier to level the first course.

Beginning at the lowest point, place units and tap into position using a rubber mallet. Make sure that every block is level from front to back and side to side using a spirit level. This will give the wall a professional look.

Placing drainage material:

Place a 90-100mm drainage pipe adjacent to the back of the first course and ensure it has the required fall to carry the water away to the desired drainage point. Fill the block cavities with crushed rock (FCR Class 2), wet the block in-fill and compact after completion of each course.

Lay geotextile filter cloth to encapsulate the drainage zone. This prevents migration of retained earth into the drainage layer. Using 20mm angular clear stone, create a 300mm drainage layer behind the wall (not scoria).

Installing remaining courses:

Sweep excess crushed rock from the top of the first course of blocks. Insert the plastic keys into the square recesses on the top face of the blocks, orienting the keys as per figure 1 to achieve the desired setback. Place the next course of blocks, ensuring vertical joints are appropriately offset to the course below. Fill the block cavities in the same way as for the base course and continue creating the drainage layer behind the wall in 200mm lifts. Continue this process for all remaining courses.

Finishing off the wall:

When the last course has been installed, place capping units on the top course of blocks, affixing them in place with either masonry adhesive or mortar.

Maximum wall heights....

The maximum wall heights listed below are for gravity walls with no reinforcement. Walls can be built up to several metres if fully engineered as a geo-grid reinforced wall or a canterlievered wall incorporating steel reinforcing and concrete core infill. An engineers design is usually required for walls over 1m in height, walls on a boundary or walls with a surcharge.

Walls 1000mm & under

Gravity wall

Wall Setback:	Offset per course:	Maximum wall height:
1:40	5mm	800mm
1:8	25mm	1000mm

Walls over 1000mm (indicative)

No-fines concrete backed wall

Wall Setback:	Depth of no-fines concrete:	Maximum wall height:
1:8	300mm	1200mm
1:8	350mm	1400mm
1:8	500mm	1600mm

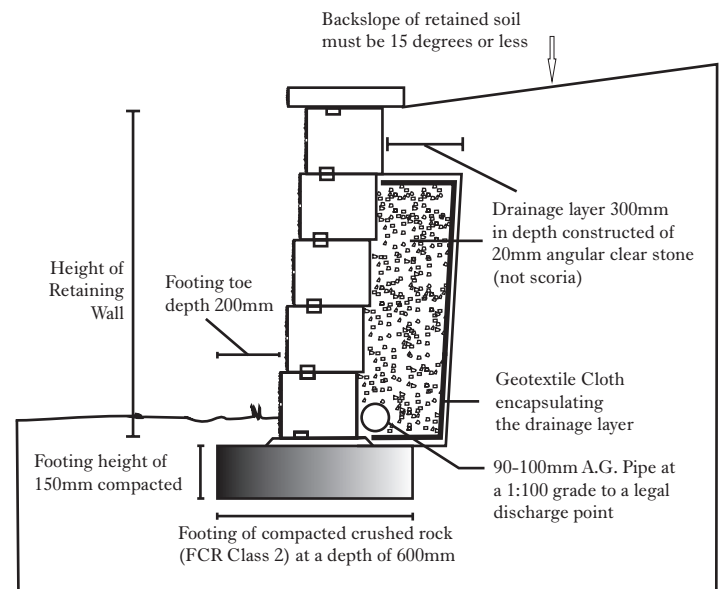
Note: This table is a guide, all retaining walls over one metre in height need to be designed by a qualified engineer.

Geo-grid reinforced walls

Contact us for further information on design and construction.

General Notes:

1. Designed in accordance with AS4678-2002 & AS4678-2002 Amdt No 1 July 2003, for a Class A retaining walls.
2. Retaining wall height is measured vertically from the base of the bottom course to the level of retained infill soil.
3. Crushed rock footing must be embedded in undisturbed natural soil of 100kPa bearing capacity, and if clay, of cohesion >15kPa.
4. No excavation is to be made within a lateral distance in-front of the wall equal to its height.
5. Bottom course is to be embedded 100mm below final ground level



Drawing not to Scale

