# HOW TO LAY RETAINING WALLS

The GB Moreton retaining wall blocks are an ideal choice for retaining walls in gardens, other residential applications and commercial projects. The interlocking and dry stacked nature of the Moreton blocks, makes them easy to install for the "Do It Yourself" landscaper, while their sheer and connection strength provides confidence on larger jobs. No matter what the project, the result is always an attractive and low maintenance retaining wall. The flexibility of the system provides tremendous scope, from edging to terraces, straight walls to curves.

**Note:** For commercial projects, terraced walls, fences above walls and other specialised applications, engineering and/or council guidelines may need to be followed. Please consult with regulating council for local design requirements prior to the commencement of any retaining wall. Councils may request walls over 0.5m in height and / or where a surcharge exists (e.g. driveway, house, fence or other structure) be designed and certified by a suitably qualified consulting engineer.

## Your Checklist

- ☐ String line
- ☐ Tape measure
- ☐ Walling units
- ☐ Compaction Tool
- ☐ Shovel
- ☐ Spirit level
- ☐ Wheel barrow
- ☐ Agriculture Drain Pipe
- ☐ Pegs or stakes
- ☐ Broom
- ☐ Gloves & eye protection
- ☐ Mitre saw (to cuts blocks if req'd)
- ☐ 10-20mm Crushed stone (back fill)
- ☐ Crushed rock (for base)

## Estimating materials

| Calculate number of Moreton blocks required | | | | | | |
|---|---|---|---|---|---|---|
| **No. blocks high** | **Length of wall (metres)** | | | | | |
| | 2m | 4m | 6m | 8m | 10m | 12m |
| 1 course | 6 | 11 | 16 | 21 | 26 | 32 |
| 2 courses | 11 | 22 | 32 | 42 | 52 | 63 |
| 3 courses | 16 | 32 | 47 | 62 | 78 | 94 |
| 4 courses | 21 | 42 | 63 | 83 | 104 | 125 |
| 5 courses | 26 | 52 | 78 | 104 | 130 | 156 |
| 6 courses | 31 | 62 | 93 | 124 | 156 | 186 |

**Calculating Block Quantities – Example wall (Includes waste)**
10m long x 4 courses high

10m long x 0.8 m high = 8m2 x 13 blocks per m2 = 104 blocks required overall

**Less** 10 Lineal metres x 2.6 capping blocks / metre = 26 capping blocks

Blocks required for complete job = 78 Moreton Blocks

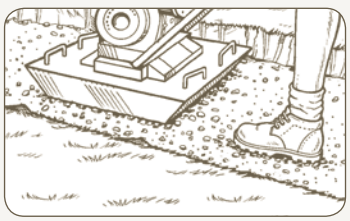
+ 26 Moreton Capping Blocks

## Step 1: Permits

Check with your local council to ensure all local Building Codes are complied with.

## Step 2: Foundation

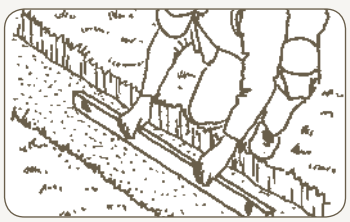
The foundation material shall be compacted by several passes of a mechanical plate vibrator. Where there are significant variations of foundation material or compaction, soft spots, or where there is ponding of ground water, the material shall be removed, replaced and compacted in layers not exceeding 150mm. Trenches shall be dewatered and cleaned prior to construction, such that no softened or loosened material remains.



## Step 3: Bearing Pad

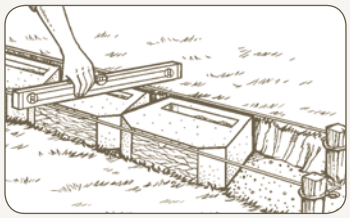
The facing shall be built on a bearing pad, not less than 150mm thick & 600mm wide, consisting of one of the following options:

- Compacted crushed rock, well-graded and of low plasticity (without clay content), compacted by a plate vibrator;
- Cement-stabilized crushed rock, with an additional 5% by mass of cement thoroughly mixed, moistened and compacted by a plate vibrator; or
- Lean-mix concrete with a compressive strength of not less than 15 MPa.



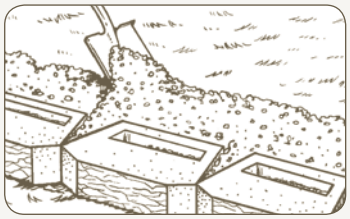
## Step 4: First Course

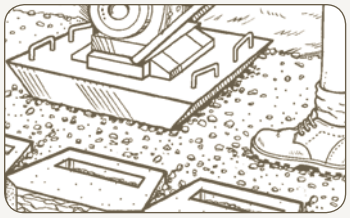
Spread 25mm of metal dust with an additional 5% by mass of cement over the compacted base. The first course is now bedded into the metal dust. The use of a level and string line is recommended to ensure the first course is laid correctly. Ensure each block is also well filled with free-draining material (eg. crushed rock aggregate / blue metal).



## Step 5: Drainage and Back Fill

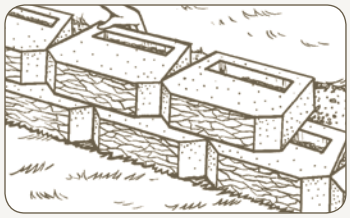
Place 100mm diameter PVC agricultural pipe with sock behind the wall, with a 1 in 100 fall. Backfill behind the courses of blocks to a width of approx. 200mm – 300mm using 10-20mm free draining material (eg. crushed rock aggregate / blue metal). Ensure each block is also well filled with free-draining material.





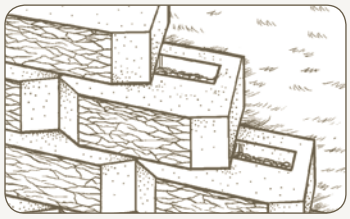
## Step 6: Laying Additional Courses

Lay the next course and subsequent courses to a string line following the same procedure, as outlined in step 4, cleaning the top of the blocks, filling the block cores and backfilling behind the blocks to a maximum of one block high, at a time (as per step 5).



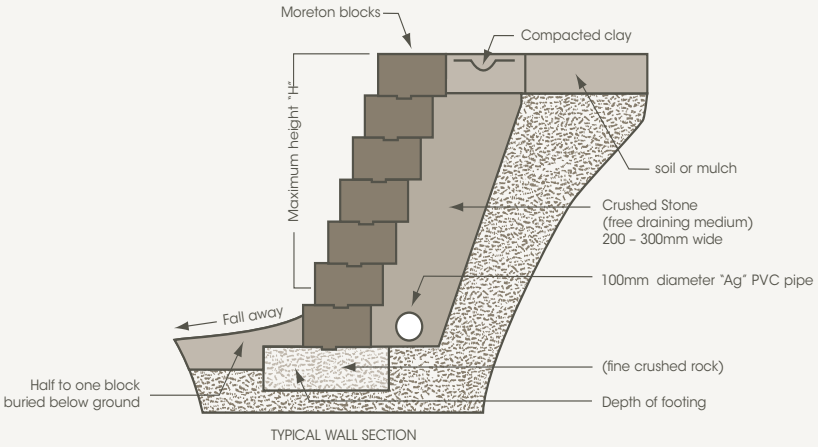
## Step 7: Capping Units

When a Moreton capping block is laid as the final course no adhesive fixing is necessary.



## Cross Section of a finished wall

**Warning:** Vehicle and machinery traffic should be allowed no closer than one metre behind the wall.



TYPICAL WALL SECTION