

Moreton & Flinders Retaining Walls

Installation Guide | March 2022



Installation tips

The step-by-step guide to build a Moreton or Flinders retaining wall.

Building with Moreton and Flinders

1

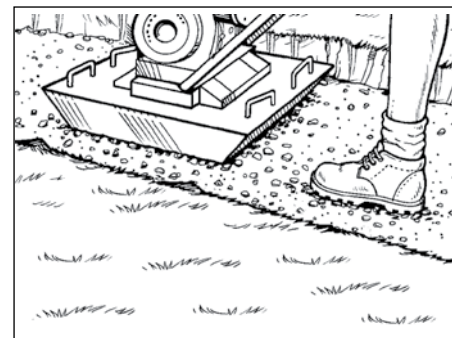
Permits

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

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.

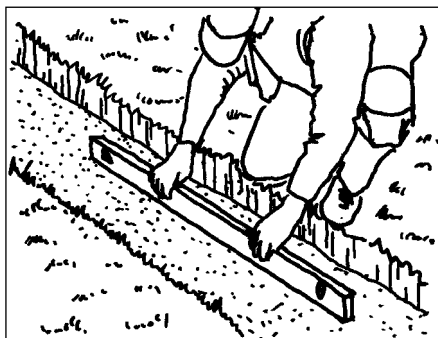


3

Levelling Pad (footing)

Build facing on a levelling pad, no less than 150mm thick and 300–600mm wide. It should consist of one of the following options:

- Compacted road base;
- 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;
- Lean-mix concrete with a compressive strength, at least 15 MPa.

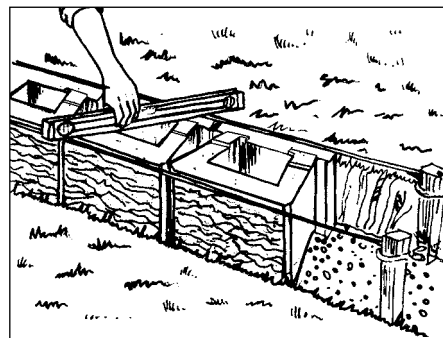


4

First Course

Place the first course on the levelling pad and tap into place ensuring blocks are level, front to back and side to side (check with a spirit level). 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).

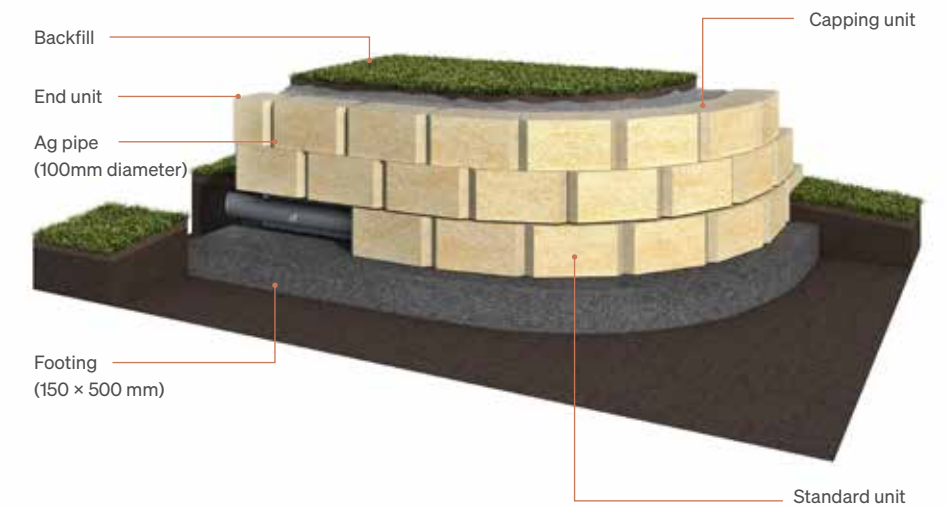
For walls up to 1 metre high, make sure at least 100mm of the first-course blocks are buried below the finished ground level. Allow 2mm for walls over 1m, and up to 3 metres high; these walls need to be engineered.



Your tool checklist

- String line
- Tape measure
- Walling units
- Compaction tool
- Shovel
- Spirit level
- Wheelbarrow
- Agriculture drain pipe
- Pegs or stakes
- Broom
- Gloves and eye protection
- Saw (to cut blocks if required)
- 10–20mm crushed stone
- Crushed rock (for base)

Retaining wall elements



5

Drainage and Backfill

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

Backfill behind the drainage layer with selected backfill material in a maximum of 200mm layers. Compaction rate of 95% must be achieved (use only hand operated plate compactors within 1 metre from the back of the wall). Do not use expansive clays to backfill. Be careful not to mechanically compact too close to the wall.



6

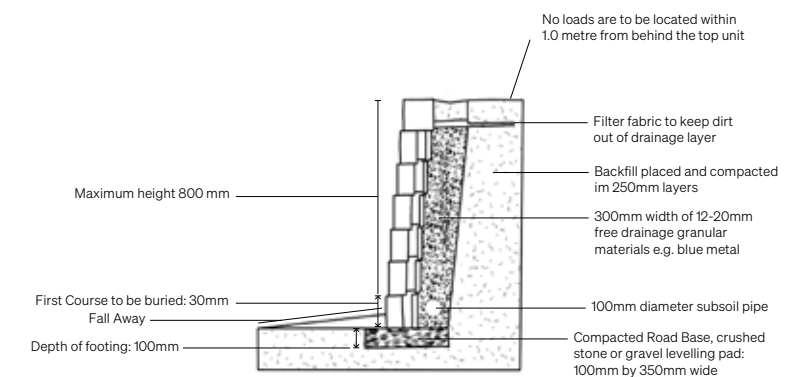
Laying Additional Courses

Clean any debris from the top of the wall to ensure the next block sits perfectly. Ensure each block is filled with free draining material, and place next course on top. Place the drainage material behind the blocks to 300mm. Stack units, placing drainage aggregate and compact backfill for each block layer until the wall is complete.

7

Maximum Wall Height

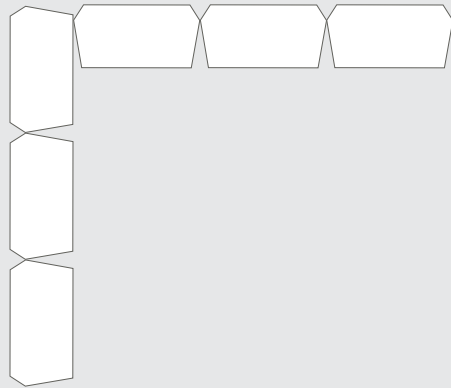
This information should be viewed as a guide only. The particular circumstances of retaining wall projects vary significantly in ways that often dictate the use of particular materials and techniques to address challenges presented by those circumstances. Austral Masonry recommends you to ensure that you obtain appropriate professional advice tailored to your circumstances before commencing retaining wall projects.



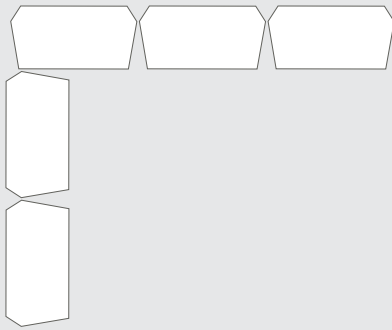
Installing corners

External corners

Even corners



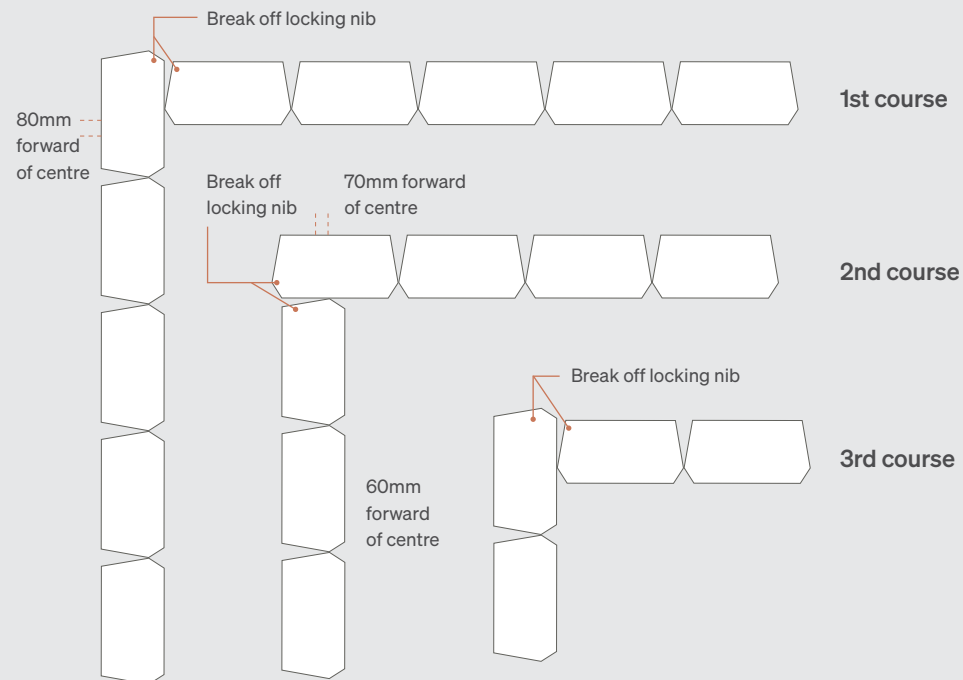
Odd corners



When creating a corner

Locking lug to be chipped off at wall block next to external corner to fit the next courses corner unit in place.

Internal corners



Installing curved walls

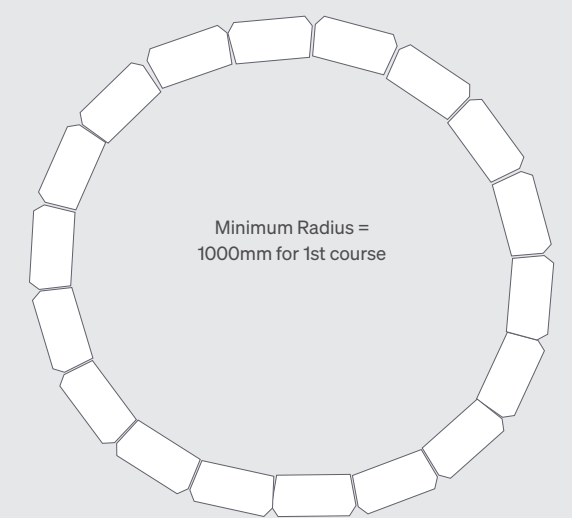
Circular walls

These blocks can be used to create circular walls with ease. Make sure to plan out the laying of the blocks by plotting the first course before getting started. Pay careful attention to spacing of the blocks as you lay them to ensure the circles angle allows full blocks to be laid around the circumference of the wall.

When creating a circular wall

- The smallest circle achievable should be composed of 18 blocks. This is for the top course.
- If there are two courses below the top course the first course of a three course wall needs 8mm gaps between blocks which will act as weep holes.
- The middle course needs a 4mm gap between each block.
- Where a 12mm set back can be achieved the radius decreases by 24mm and circumference by 76mm for the course above.
- Larger radius walls will have more units per course to share the gap required for the larger circumference.
- The 10mm set back between each course increases as curves get tighter. Tight curves will need nibs and cores trimmed for 12mm set back.
- The wall circumference will be larger at its base compared to the top.

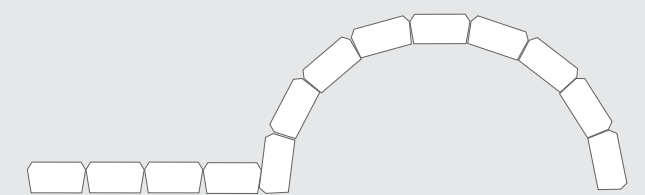
Circular wall layout



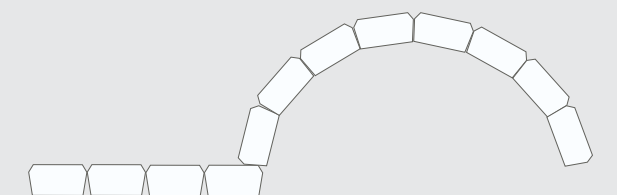
Straight walls with curved sections

Moreton blocks can be used to create circular walls with ease. Make sure to plan out the laying of the blocks by plotting the first course before getting started. Pay careful attention to spacing of the blocks as you lay them to ensure the circles angle allows full blocks to be laid around the circumference of the wall.

1st course



2nd course



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