

You will need...

- Gloves to protect your hands
- Shovel
- Eye protection eg. goggles
- A spirit level to lay units level
- Drainage material eg. 12-20mm clean, free draining granular material such as gravel or blue metal
- Stakes and string
- Agricultural drain eg. 100mm diameter subsoil pipe)
- Gardenwall® units
- Wheelbarrow
- Coarse sand for the levelling pad
- Hammer
- Small broom
- Mechanical plate compactor (optional)

Safety tips

1. Check your equipment.
2. Ensure that you read the operating manuals of all equipment including hired equipment such as plate compactors and cutting equipment.
3. Check the condition of hand tools such as hammers etc, to make sure that they are in a safe working order before use.
4. Always operate equipment according to the manufacturer's instructions and wear the appropriate safety clothing listed by the manufacturer.

1. Check with your local council

You should consult with your local council for design regulations prior to the construction of your wall. Councils generally require, and we recommend, that walls greater than 0.5 metres in height and walls located near loading such as a house or a car be designed and certified by a suitably qualified engineer. Boral shall have no responsibility for walls manufactured other than in accordance with the specifications and recommendations contained in this guide.

Each council has different requirements so it is important you check with your local council before starting.

2. Locate your wall

Mark out the ground where your wall will be located (either by marking with stakes and a string line or by marking a line on the ground with spray paint).

3. Calculate how many blocks are required

Measure the proposed wall height and length. (Remember Gardenwall® is suitable only for walls under 1.0 metre high). Using the following table, calculate the approximate number of blocks you will need.

Let's work through an example: my wall is to be 3m long and 625mm (62.5cm) high.

Tips on calculating blocks: To work out the number of blocks without the table just multiply your m² measurement for the wall (wall height x wall length) by 27 units per m².

It is often worth adding some extra blocks to allow for any mishaps (usually adding an extra 5% will cover you). Don't forget when ordering to specify colour and the type of units required.

4. Prepare the site

Dig a shallow trench approximately 130mm (13cm) deep and 350mm (35cm) wide.

Remove any roots and soft earth.

Fill the trench with coarse sand.

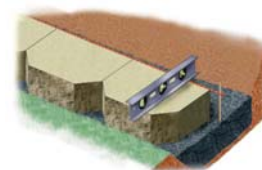
Compact and level the sand until it forms a 100mm (10cm) levelling pad. Compact by either manually tamping or using a mechanical plate compactor.



5. Lay the first course

Remove the retaining lip on the base of the unit (this makes levelling the first course much easier). To remove lip place at an angle on the ground and strike the lip firmly with a hammer. Wear eye protection (such as safety goggles) whilst doing this. Remove the lip on enough units to lay the **first course only**.

Place blocks side by side on the levelling pad using a string line along the back of the units for alignment.



Level each unit side to side and front to back using your spirit level. Install the agricultural drain behind the first course and surround with gravel or to the manufacturer's specification.

Tips for setting the first course: Spend time on making sure the units are level, otherwise all ensuing courses and ultimately the entire wall will not be level.

6. Backfill and compact

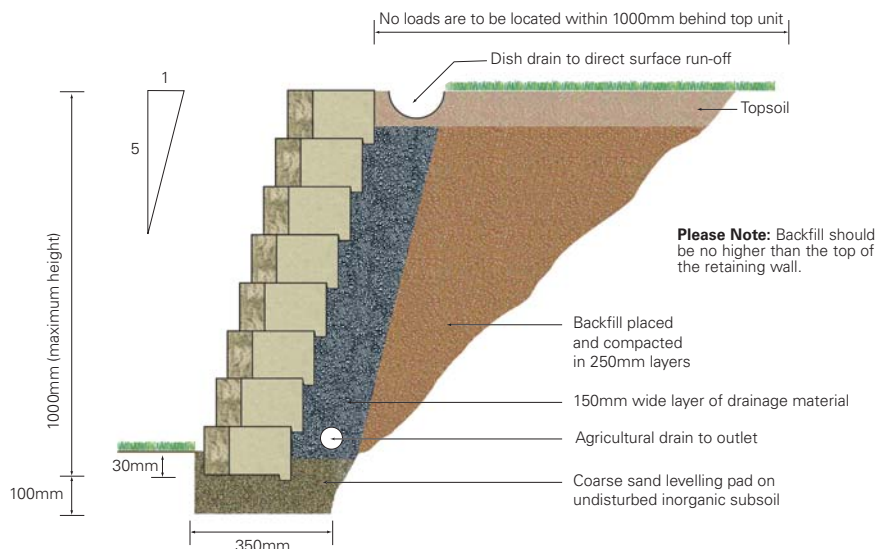
Place drainage material (12-20mm sized gravel) to 300mm (30cm) wide behind your first course.

Shovel and compact your backfill (existing site soil) behind the drainage material.

Please note: Backfill should be no higher than the top of the retaining wall (please see Typical Wall Section diagram below).

Tips for backfilling: Do ensure you place drainage material behind the wall and compact the site soil. If you don't you may find water will build up behind your wall and start to push it over.

Typical Wall Section



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7. Additional courses

Sweep the top of the previous course clean. Place the next course of Gardenwall® units in a running bond pattern (ie. with the vertical joints from the first course units halfway across the second course units).



Pull the units towards the face of the wall until the lip locks behind the units below.

Shovel the drainage material and the backfill behind the second course of units (as per step 6).

Lay your third course of units and, like previous courses, place drainage material and backfill behind the wall (you don't have to compact the backfill every course but it should be done at least every alternate course ie. in 250mm (25cm) horizontal layers).

Continue stacking units, placing drainage material and compacting backfill until your wall is complete.

8. Relax and admire your work

Tips for building curves: When building to the maximum height of 1.0 metre, it is necessary to start at a 1.0 metre radius. This will ensure all additional courses fit neatly.

Also, when building curves, to maintain an even space between units, remove 50mm from each end of the lip of the unit by striking it with a hammer.



It is recommended eye protection is worn when doing this.

Tips for finishing the wall: In areas of vandalism it is recommended that the top units are secured using a construction adhesive such as Liquid Nails. Sealing the constructed Gardenwall® is recommended to reduce dirt build up and for ease of cleaning.

1. Pick the wall length closest to yours.

Wall Height (mm)	Approximate Wall Length						
	1.5m approx	3m approx	5m approx	6m approx	7.5m approx	9m approx	
125mm	1 course	5	10	15	20	25	30
250mm	2 courses	10	20	30	40	50	60
375mm	3 courses	15	30	45	60	75	90
500mm	4 courses	20	40	60	80	100	120
625mm	5 courses	25	50	75	100	125	150
750mm	6 courses	30	60	90	120	150	180
875mm	7 courses	35	70	105	140	175	210
1000mm	8 courses	40	80	120	160	200	240

2. Find your wall average height.

3. Where your length column intersects with the height row is the approximate number of blocks you need eg. 50 blocks.

Please note: Gardenwall® is only suitable for walls under 1.0 metre high, less in silty or clayey soils and sites with high water run-off.