

Klinker™ Series

HOW TO BUILD USING KLINKER

2017

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 1.0m 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 installed other than in accordance with the specifications and recommendations contained in this brochure.

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. Multiply your wall height by the wall length to get a m² measurement.

Lastly multiply your m² measurement by the number of Klinker 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 the type of units required.

Please note: Maximum number of courses is 5, in good soil.

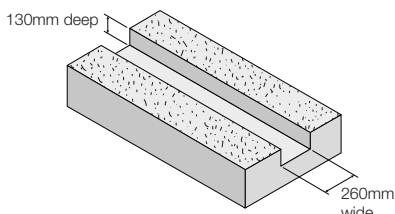
Backfill is to consist of good soil, including gravels, sandy gravels and crushed sandstone.

4. Prepare the site

Dig a shallow trench approximately 130mm (13cm) deep and 260mm (26cm) wide. (See Diagram A)

Diagram A

Remove any roots and soft earth.



Fill the trench with coarse sand or road base, compact and level until it forms a 100mm (10cm) levelling pad. (See Typical Wall Cross Section on page 2)

Compact by either manually tamping or using a mechanical plate compactor.

5. Lay the first course

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 subsoil pipe behind the first course and surround with gravel. (See Diagram B)

Use filter fabric over the subsoil pipe if there are likely to be problems with silt entering the subsoil pipe.

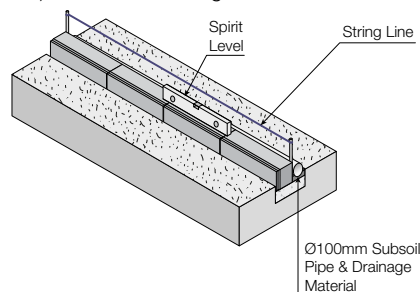
Tip: Spend time on making sure the units are level, otherwise all ensuing courses and ultimately the entire wall will not be level.

6. Backfill and compact

Place drainage material (12-20mm sized gravel) to 150mm (15cm) wide behind your first course. (See Diagram B)

Diagram B

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 Cross Section on page 2).

Backfill consisting of heavy clays or organic soils are not recommended due to water holding properties.

Tip: 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.

7. Additional courses

Sweep the top of the previous course clean. Scribe a line 25mm back from the front top edge along all Klinker units in the first course. (See Diagram C)

Run a zig-zag line of construction adhesive along the top of the Klinker units, from the scribed line to the back of the units. The zig-zag line is to be approximately 25mm from point to point. (See Diagram C)

Tip: Do ensure the construction adhesive is not applied closer than 25mm to the top front edge of the Klinker unit, otherwise there is a risk that the construction adhesive will become visible once the next course is installed.

Diagram C

Place the next course of Klinker units in a bonding pattern that ensures the Klinker units overlap the units below. (See Diagrams D & E)

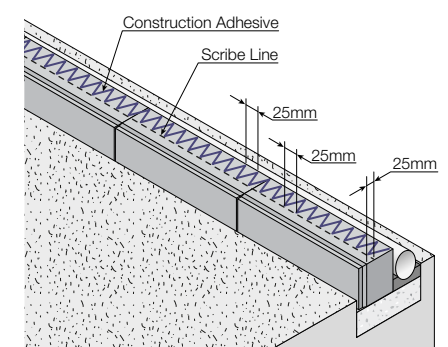
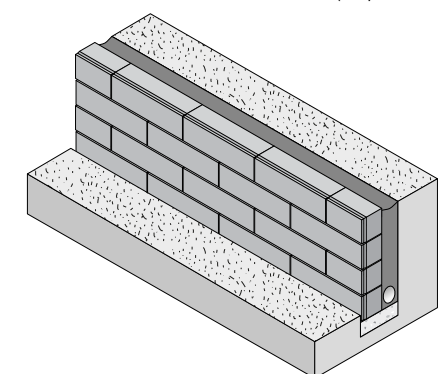


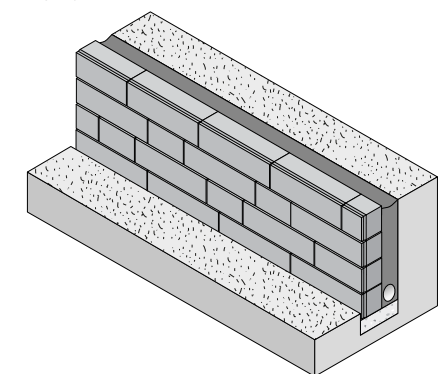
Diagram D

Diagram E

Shovel the drainage material and the backfill behind the second course of units (as per



step 6).



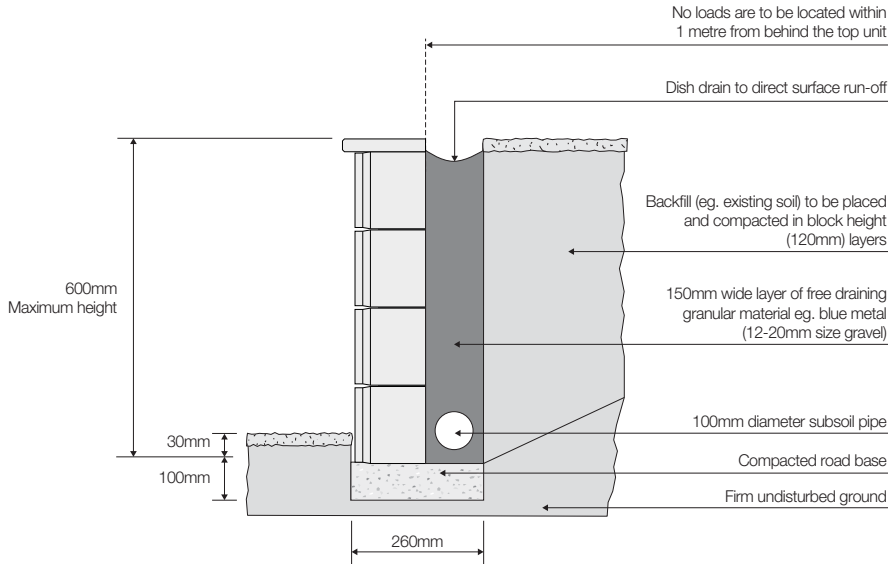
Lay your third course of units and, as per previous courses, place drainage material and backfill behind the wall (you don't have to compact the backfill every course but it should be done at least every alternate course (ie. in 120mm (12cm) horizontal layers). Continue stacking units, placing drainage material and compacting backfill until your wall is complete.

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Typical Wall Cross Section

Please note: Backfill should be no higher than the top of the retaining wall.



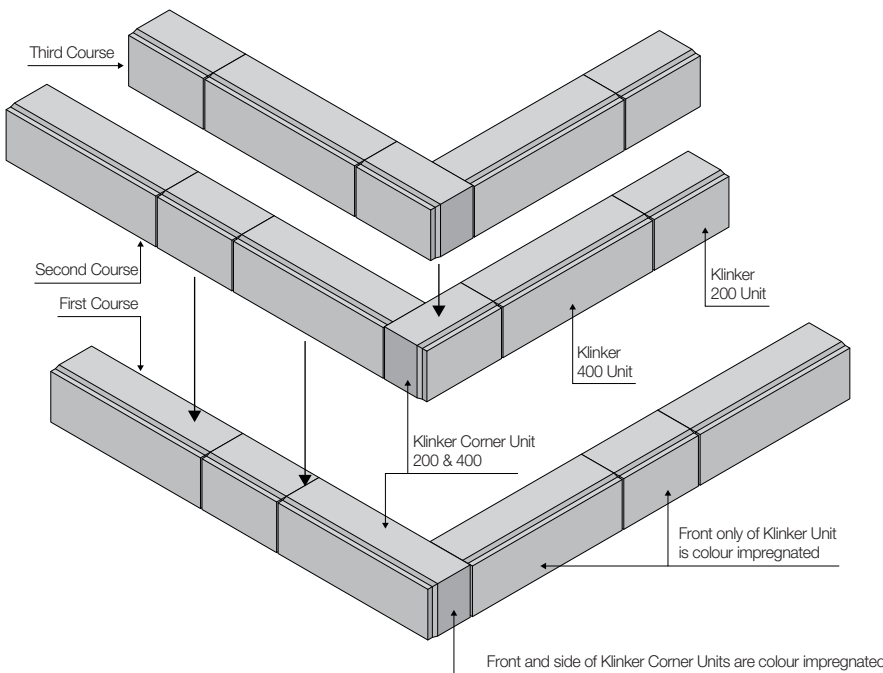
Block Safety Information

Unit	Weight kg	Dimensions (WxHxD) mm
200	5.6	200x120x110
400	11.1	400x120x110

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.

Constructing corners



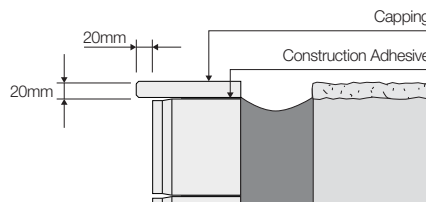
You will need...

- 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)
- Klinker units
- Caps
- Wheelbarrow
- Coarse sand or road base for the base levelling pad
- Construction adhesive
- Hammer
- Small broom
- Mechanical plate compactor (optional)

Capping

Apply construction adhesive. (See step 7 and Diagram C)

Place the capping on the construction adhesive, ensuring the bevelled front of the cap is overhanging the front of the Klinker units by 20mm.



For more information contact **1300 134 002** or visit www.boral.com.au

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