

# Retaining walls

July 2017



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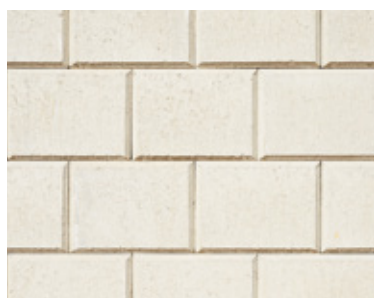


# Heathstone®

- ✓ STRAIGHT WALLS
- ✓ CURVED WALLS
- ✓ CORNERS
- ✓ STEPS

MAX. WALL HEIGHT 810mm

Heathstone's mortarless design is ideal for low, vertical landscaping walls in garden and communal areas. It is often used to separate and highlight entertaining areas, BBQ areas, paths, garden beds, hedges, or to create and differentiate levels. Heathstone® is also suitable for constructing steps, planter boxes and for curved walls.



Limestone

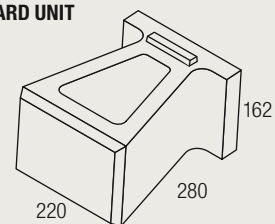


Golden Sand

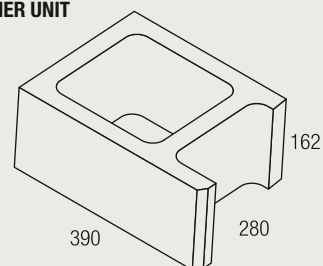


Steel Grey

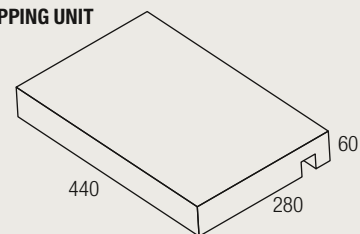
## STANDARD UNIT



## CORNER UNIT



## CAPPING UNIT



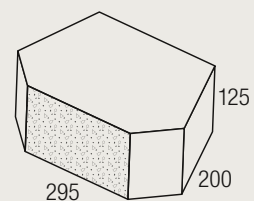
Limestone

# Gardenwall

- ✓ STRAIGHT WALLS
- ✓ CURVED WALLS
- ✓ STEPS

MAX. WALL HEIGHT 800mm

27.1 blocks/m<sup>2</sup>



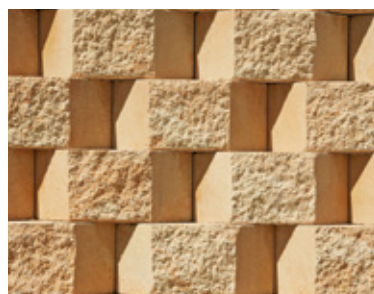
Limestone



Parchment



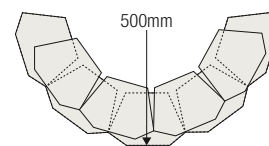
Harvey Blend



Golden Sand

## ✓ TIP

When building to the maximum height of 800mm, it is necessary to start at a 500mm radius. This will ensure all additional courses fit neatly.



Golden Sand



Parchment

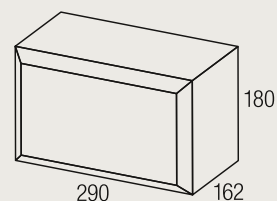


# Landscape block

- ✓ STRAIGHT WALLS
- ✓ CURVED WALLS
- ✓ CORNERS
- ✓ STEPS

This simple, solid, bevelled concrete block is ideally suited for raised garden beds, low walls, low retaining walls, screen walls, planter boxes, garden edging, BBQs and many other similar applications. Compared to other similar products it is lighter, easier and safer to handle.

19 blocks/m<sup>2</sup>



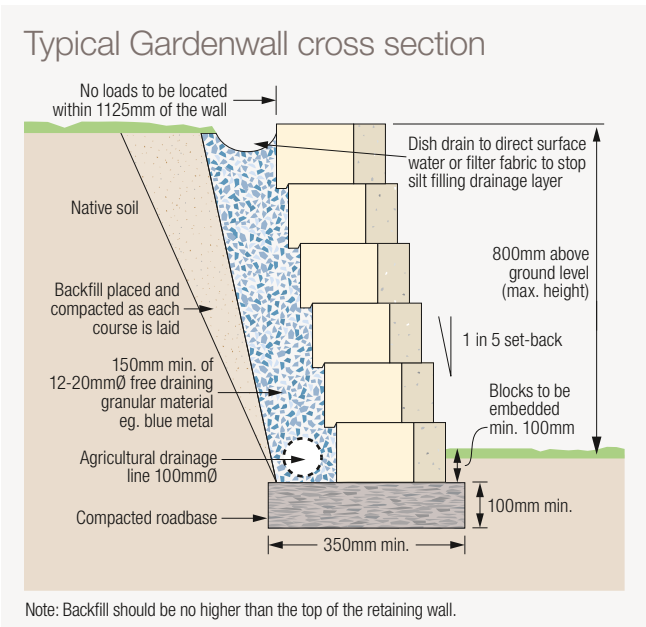
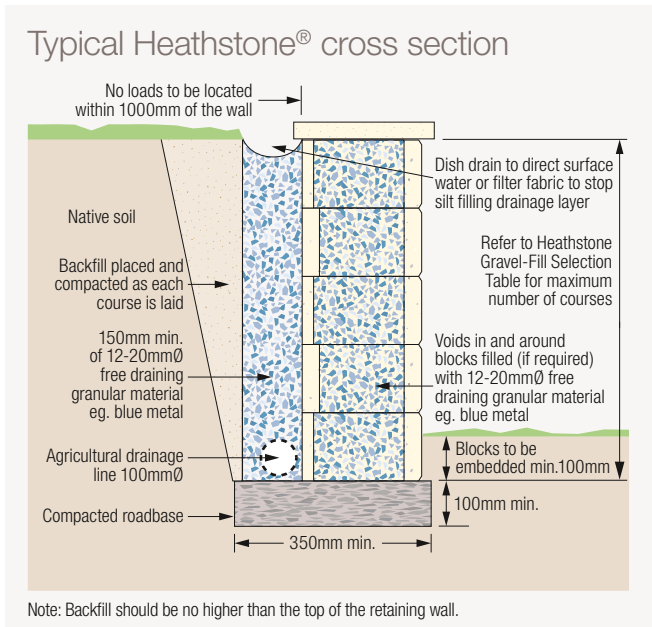
Limestone



Limestone

# How to build your retaining wall

The instructions on these two pages are relevant for the construction of most types of retaining walls. For technical detail more specific to Heathstone®, refer to our Heathstone® brochure in branch or online.



## Heathstone® maximum wall heights

	MAXIMUM COURSES	
	For walls without gravel fills to all voids and cores	For walls with gravel fills to all voids and cores
Poor soils – including sands, gravelly clays, sandy clays and silt clays	2 (324mm)	3 (486mm)
Average soils – including well graded sands and gravelly sands	3 (486mm)	4 (648mm)
Good soils – including gravels, sandy gravels and crushed sandstone	4 (648mm)	5 (810mm)

**Good to know before you start**

- Retaining walls should not be installed above their maximum specified height or into cuttings where the base soil or backfill is not firm, or is of expansive clay.
- Never install where surcharge loading (eg. buildings, driveways) will be located within one metre of the wall. Councils in general require walls - over 500mm in height and/ or where there is loading, such as a car or house near the retaining wall, be designed and certified by a suitably qualified engineer.
- This is general information and should be viewed as a guide only. Midland Brick recommends you obtain building advice before commencing works.
- Please note, the width of blocks may vary by  $\pm 3\text{mm}$ . All weights and number of units per square metre are approximate only. Tested to Australian Standard AS4455.

**You will need...**

- To check as you go
- Gloves to protect your hands
- A 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
- An agricultural drain (eg. 100mm subsoil pipe)
- A wheelbarrow
- Coarse sand for the leveling pad
- A hammer
- A small broom
- A mechanical plate compactor (optional)

## 1. Check with your local council

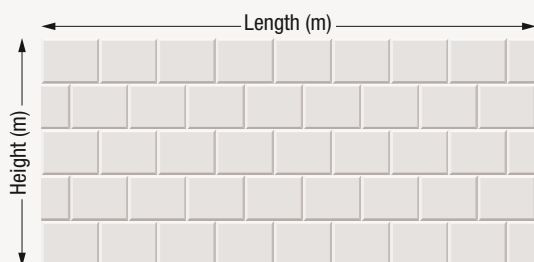
You should consult with your local council for design regulations prior to the construction. Councils generally require, and we recommend, retaining walls higher than 500mm and walls located near surcharge loading such as a house or a roadway be designed and certified by a qualified engineer.

## 2. Calculate how many blocks required

To calculate the approximate number of blocks, use our online blocks calculator, or multiply the length by the height to determine the area (m<sup>2</sup>) then simply multiply m<sup>2</sup> by the number of units per m<sup>2</sup>.

### How to calculate your wall area

This area is simply calculated by:  
Length (m) x Height (m) = Area (m<sup>2</sup>) for basic square or rectangular spaces. (Where m = metres).

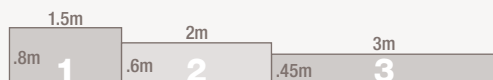


### TIP

It is often worth ordering extra blocks to allow for cutting (usually an extra 5%). And don't forget to specify colour and type of units required.

Example: (A) Gardenwall 0.7m high x 10m long  
= 7m<sup>2</sup> x 27.1 blocks = 190 blocks + 5% = 200

### For odd shapes break your area into sections



1. 1.5m x 0.8m = 1.2m<sup>2</sup>

2. 2.0m x 0.6m = 1.2m<sup>2</sup>

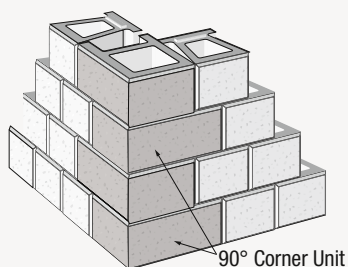
3. 3.0m x 0.45m = 1.35m<sup>2</sup>

**Total = 3.75m<sup>2</sup>**

### Heathstone corner units

To calculate the number of Heathstone corner units, simply count the number of courses (max 6) you intend laying and multiply by the number of 90-degree corners your retaining wall requires.

For capping units, multiply the total length (m) of the wall by 2.27.



## 3. Prepare the site

Thoroughly level and prepare the area for the base or foundation course. Remove any roots, debris or soft earth. Create a shallow trench by levelling the ground and tamping down the earth to a flat and level finish. Compact by either manually tamping or using a mechanical compactor. Fill the trench with coarse sand or road base if required, then compact and level until it forms a 100mm levelling pad (so that your first course will be partially sunken).

## 4. Locate your wall

Mark out the location with stakes and a string line or a line on the ground with spray paint. Take caution when building near boundary fences. Never install where surcharge loading (eg. buildings, driveways) will be located within 1 metre of the wall.

## 5. Lay the first course

Place blocks side by side and align on the levelling pad using a string line along the back of the units. Level each unit side-to-side and front to back using your spirit level.

We recommend you place black builders plastic along the back of the wall. This will help reduce the flow of water draining through to the front and cut down the effect of efflorescence (harmless white powdery deposit).

If required, install appropriate agricultural drainage behind the first course and surround with gravel or to specifications provided by a qualified engineer. Agricultural drains may be required if soil has poor drainage.

### TIP

Spend time on levelling the first course units otherwise all following courses and ultimately the entire wall will not be level.

## 6. Backfill and compact

If required, place drainage material (12-20mm sized gravel) to 150mm wide behind your first course. Shovel and compact the backfill (existing site soil) behind the drainage material. Please note: Backfill should be no higher than the top of the retaining wall (see Gardenwall Cross Section).

### TIP

Make sure the backfill/site soil is good draining soil and compacted well. If you don't, you may find water will build up behind your wall and weaken the construction.

## 7. Additional courses

Sweep the top of each course clean. Place the next course in a half bond pattern (ie. with the vertical joints from the previous course halfway across the next course units).

Continue laying each following course as previous half bond. You will need to backfill at least every alternate course. Continue stacking units and backfilling until complete.

For more information about Midland Brick



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Visit our website at **midlandbrick.com.au**



Drop into a Midland Brick Selection Centre or Reseller

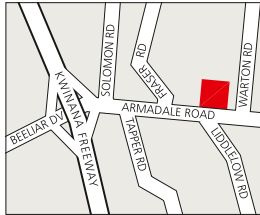
## Selection Centres



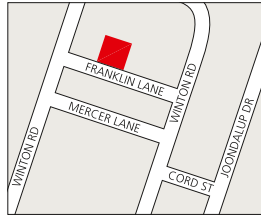
Selection Centre & Yard



Selection Centre



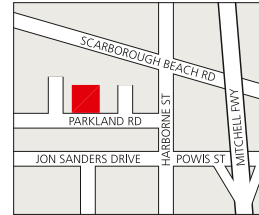
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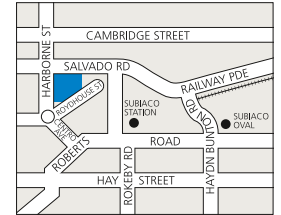
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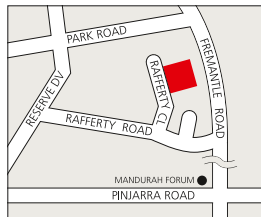


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