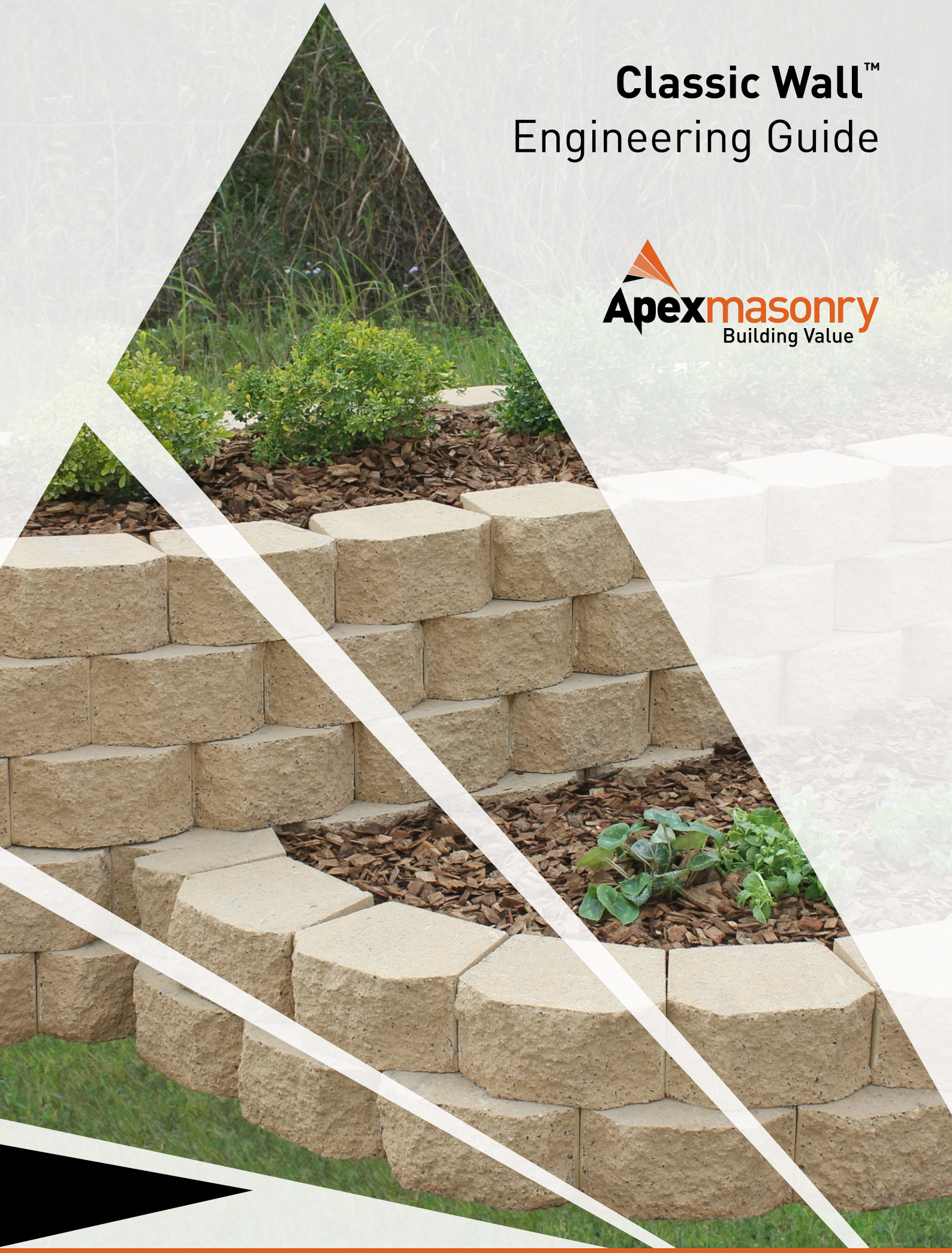
Classic Wall™
Engineering Guide

Apexmasonry
Building Value



CONSTRUCTION INFORMATION

UN-REINFORCED GRAVITY WALLS (See Fig 1)

Heights listed below are for gravity walls with no reinforcement. Walls can be constructed up to several metres if fully engineered as a geo-grid reinforced wall, cantilevered wall incorporating steel reinforcing and concrete core infill or No Fines Concrete Wall. To comply with most council requirements, please seek specific engineering advice for walls over 1 metre high, terraced walls, fences above walls, walls carrying vehicle traffic and any other special application.

Maximum Wall Heights For Classic Wall™ Gravity Retaining Walls

Maximum Wall Height	Surface Slope	Surcharge Load (kPa)	Drainage Depth	Required cohesion by soil (kPa)	
				Type 1	Type 2
625 mm	1:40	1	300mm	2	1
625 mm	1:4	1	300mm	2.5	1.5
750 mm	1:40	1	300mm	3	1.5
750 mm	1:4	1	300mm	3.5	2
875 mm	1:40	2.5	300mm	5.5	3.5
875 mm	1:4	2.5	300mm	6.5	3.5
1000 mm	1:40	2.5	300mm	7	4
1000 mm	1:4	2.5	300mm	8	4.5

Soil Type	Friction Angle	Description
Type 1	25˚	Soft and firm clay, fine sands, silty clays
Type 2	30˚	Stiff sandy/gravelly clays

CONSTRUCTION NOTE

1. Designed in accordance with AS4678-2000 using the method outlined in segmental gravity retaining wall document Ma53 produced by the Concrete Masonry Association of Australia (CMAA).
2. The heights for landscaping walls shall not exceed the values given in the table above. If higher walls are required, they shall be designed by a qualified & experienced engineer using either the software package or the following detailed tables.

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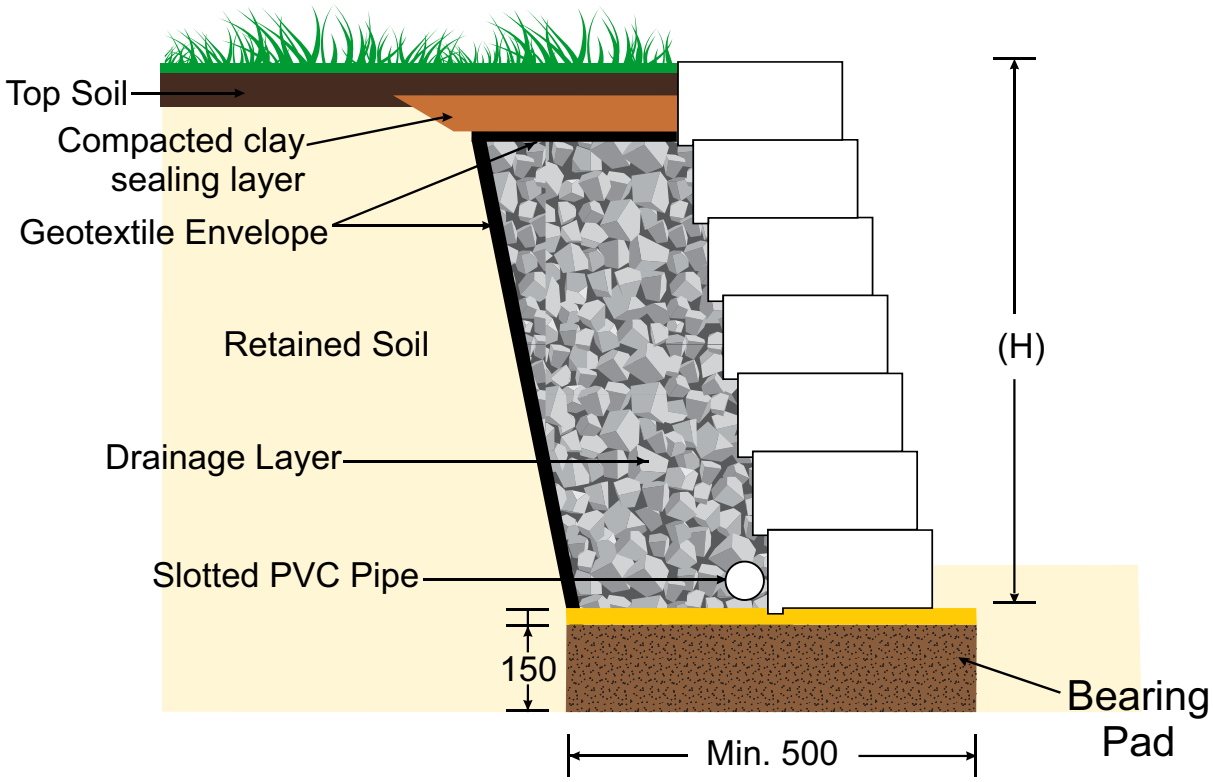

FOUNDATION

The foundation material shall be compacted with several passes of a mechanical plate vibrator. If significant variations in the foundation material are found, soft spots or excess ground water; the material shall be removed. This removed material will be replaced and compacted in layers of maximum 150 mm thick. Any softened or loosened material shall be removed and trenches shall be dewatered prior to construction.

BEARING PAD

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

Option A

Compacted crushed rock, well-graded and of low plasticity (without clay content), compacted by a plate vibrator; or

Option B

Cement stabilized crushed rock, with an additional 5% by mass of GP Portland cement thoroughly mixed, moistened & compacted by a plate vibrator; or

Option C

Lean-mix concrete with a compressive strength of not less than 15 Mpa.

TOP COURSE FIXING

While not required, it is recommended that the top course be fixed to the one below to prevent lifting or movement. A flexible two-part epoxy based adhesive is recommended (such as Epirez 8242), as well as allowing for drainage between the top course blocks to prevent water pressure build up.

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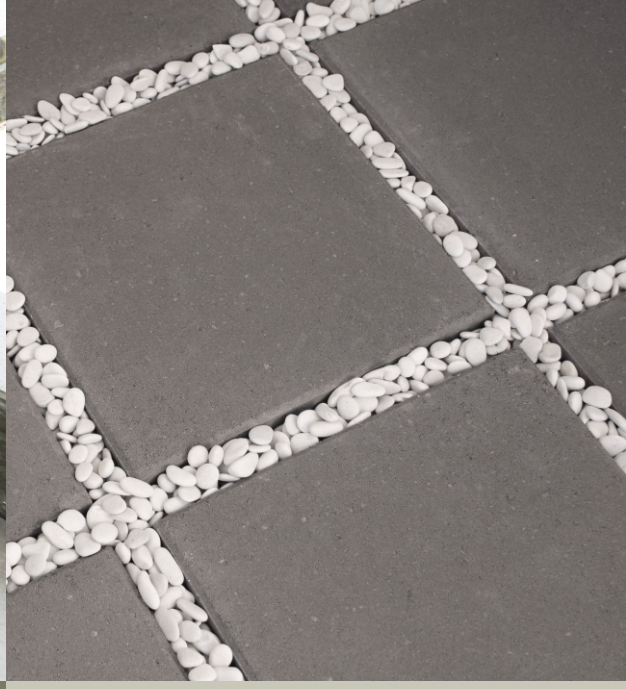

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COLOUR VARIATION

Due to the changes in raw materials, variation in colour can occur. When ordering your product, order all elements of your project together to reduce the possibility of colour variation. We do not guarantee different batches will be the same colour.

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