Modular Wall systems

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Manufacturers of
Garden Wall Systems
Barrier Wall Systems

General Overview Only

Wall Type: **Contemporary, Traditional & Estate**
Wall Heights: **900mm – 3000mm** (for taller Walls see Barrier Wall Infomation)

This information is suitable for use in wind regions A,B & C of AS 1170.2-2002 SAA Loading Code. If you have any doubt about the wind region your wall will be in, get advice from your local building consent authority. It is the responsibility of the installer/owner to determine the wind region, terrain category and soil conditions. This publication is a guide only to help ascertain these factors and gain a general understanding of the different types of Modular Walls available.

About Us

At Modular Wall Systems (MWS) we design, manufacture and install modular walls for the Domestic and the Commercial markets with walls available from 0.9 meters in height to 4.5 meters and above for sound attenuation walls (higher walls are available upon request).

We flat pack MWS kits with DIY instructions and an installation DVD all over Australia.

We have brought together our 20 years of experience in the panel industry to make and fully manufacture the MWS wall system in house at our new Caringbah (NSW) production facility. With our ever expanding network of agents and installers we now have happy customers as far as New Zealand and Canada.

FINALLY - We are a customer driven business in the real sense, we pride ourselves on our standard of workmanship and finish. Any and all feedback is always encouraged.

Our Products

- **Contemporary:** **Available heights from 900mm – 2100mm**

  Contemporary walls have an overall panel thickness of 40mm and a 90mm top wall capping. Posts measure 150 (face) x 100 mm. Each standard panel has an effective coverage of 2.5 or 2.8 meters, post centre to post centre. The contemporary wall is the most cost effective of the 3 styles and most commonly used in domestic boundary/screening wall applications. This style of wall will also supply great sound reduction qualities.



Wall Panel 40mm thickness - Density of composite panel materials: 15.33kg m2

Post - 150 (width) x 100 (depth) x 0.95 mm BMT G550 (Table 1)
Post spacing's – 2500mm & 2800mm

- **Traditional:** **Available heights from 900mm – 3000mm**

Traditional walls have an overall panel thickness of 75mm and a 120mm top wall capping. Posts measure 250mm (face) x 150 mm (depth) and designed around a rendered brick in width. Each standard panel has an effective coverage of 2.6, 2.9 or 3.2 meters, post centre to post centre. The Traditional wall is most commonly used were a true rendered masonry wall look is desired or in a commercial security/sound wall application. The wall has superb sound reduction qualities (National Acoustic Laboratory tested).



Wall Panel 75mm thickness - Density of composite panel materials: 15.49kg m2

Post - 250 (width) x 150 (depth) x 0.95 mm BMT G550 (Table 2)
Post spacing's – 2600mm, 2900mm & 3200mm

- **Estate:** **Available heights from 900mm – 3000mm**

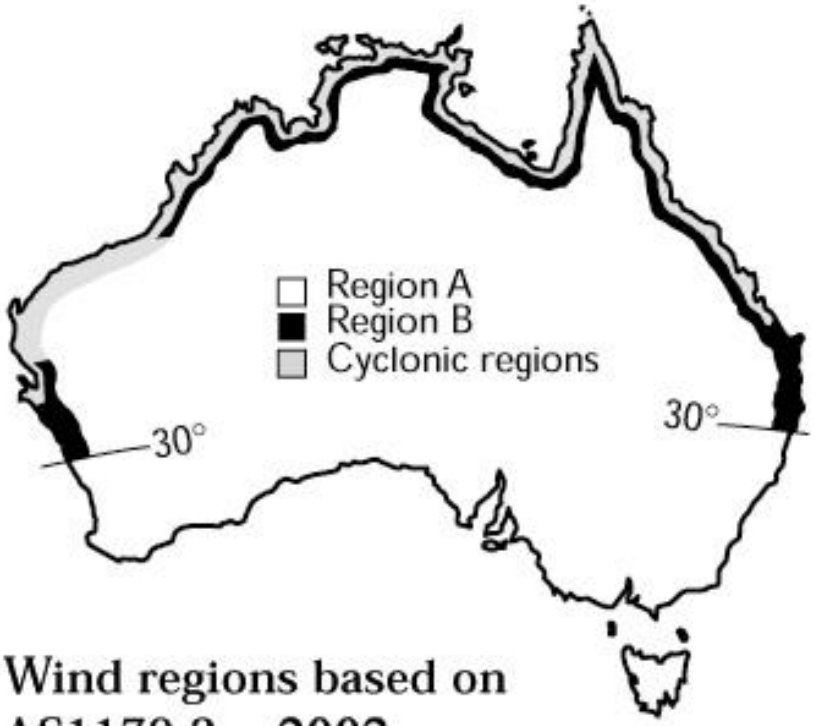
Estate walls have an overall panel thickness of 75mm and a 120mm top wall capping. Posts measure 350 (face) x 235 mm. Each standard panel has an effective coverage of 2.7, 3.0 or 3.3 meters, post centre to post centre. The Estate wall is most commonly used were a true 'Grand' rendered masonry wall look is desired. The post face is equivalent to a brick & a half in width. The wall has superb sound reduction qualities (National Acoustic Laboratory tested)



Wall Panel - 75mm thickness - Density of composite panel materials: 15.49kg m2

Post - 350 (width) x 235 (depth) x 0.95 mm BMT G550 (Table 3)
Post spacing's – 2700mm, 3000mm & 3300mm

Wind Regions



Wind regions based on AS1170.2— 2002

Wind region A is wind speeds up to 41ms (W41)
Wind region B is wind speeds up to 54ms (W54)
Wind region C is wind speeds up to 58ms (W58)

Terrain Categories

Determine Your Terrain Category
Select the terrain category that best describes the area in which your wall will be. If you want to build on the top of a hill, adjacent to an escarpment, on a ridge, or in terrain category 1, you may need engineering advice beyond the scope of this publication.

3.1 Terrain Category 2 (TC 2): Open terrain including sea coast areas, airfields, grassland with few well-scattered obstructions, such as isolated trees and uncut grass, having heights from 1.5 m to 10.0 m.

3.2 Terrain Category 2.5 (TC 2.5): Terrain with few trees, isolated obstructions, such as agricultural land, cane fields or long grass, up to 600 mm high. This category is intermediate between TC 2 and TC 3 and represents the terrain in developing outer urban areas.

3.3 Terrain Category 3 (TC 3): Terrain with numerous closely-spaced obstructions having the size of houses. The minimum density of houses and trees shall be equivalent of 10 house-size obstructions per hectare. Substantial well-established trees shall be considered as obstructions

WIND REGION INSTALLATION TABLE 1: Modular Wall System –
TABLE 1 Garden Wall System – **CONTEMPORARY**
Post section = 150 mm width x 100 mm depth

Wall Height (millimetres)	Terrain Category	Wind Region A	Wind Region B	Wind Region C (2.5 post centres only)
900 *See notes below	TC 2.0	Yes	Yes	Yes *2.5m centre
	TC 2.5	Yes	Yes	Yes *2.5m centre
	TC 3.0	Yes	Yes	Yes *2.5m centre
1200 *See notes below	TC 2.0	Yes	Yes	Yes *2.5m centre
	TC 2.5	Yes	Yes	Yes *2.5m centre
	TC 3.0	Yes	Yes	Yes *2.5m centre
1500 *See notes below	TC 2.0	Yes	Yes	Yes *2.5m centre
	TC 2.5	Yes	Yes	Yes *2.5m centre
	TC 3.0	Yes	Yes	Yes *2.5m centre
1800 *See notes below	TC 2.0	Yes	Yes	Yes *2.5m centre
	TC 2.5	Yes	Yes	Yes *2.5m centre
	TC 3.0	Yes	Yes	Yes *2.5m centre
2100 *See notes below	TC 2.0	Yes	Yes	No
	TC 2.5	Yes	Yes	No
	TC 3.0	Yes	Yes	No

* ALL CONTEMPORARY POSTS IN WIND REGION C MUST BE CORE FILLED TO A MIN. 100MM ABOVE NOMINAL GROUND LEVEL – see MWS installation manual

TABLE 2 Garden Wall System – **TRADITIONAL**
Post section = 250 mm width x 150 mm depth

Wall Height (millimetres)	Terrain Category	Wind Region A	Wind Region B	Wind Region C (2.6 post centres only)
900	TC 2.0	Yes	Yes	Yes *2.6m centre
	TC 2.5	Yes	Yes	Yes *2.6m centre
	TC 3.0	Yes	Yes	Yes *2.6m centre
1200	TC 2.0	Yes	Yes	Yes *2.6m centre
	TC 2.5	Yes	Yes	Yes *2.6m centre
	TC 3.0	Yes	Yes	Yes *2.6m centre
1500	TC 2.0	Yes	Yes	Yes *2.6m centre
	TC 2.5	Yes	Yes	Yes *2.6m centre
	TC 3.0	Yes	Yes	Yes *2.6m centre

1800	TC 2.0	Yes	Yes	Yes *2.6m centre
	TC 2.5	Yes	Yes	Yes *2.6m centre
	TC 3.0	Yes	Yes	Yes *2.6m centre
2100	TC 2.0	Yes	Yes	Yes *2.6m centre
	TC 2.5	Yes	Yes	Yes *2.6m centre
	TC 3.0	Yes	Yes	Yes *2.6m centre
2400	TC 2.0	Yes	Yes	No
	TC 2.5	Yes	Yes	No
	TC 3.0	Yes	Yes	Yes *2.6m centre
2700	TC 2.0	Yes	Yes	No
	TC 2.5	Yes	Yes	No
	TC 3.0	Yes	Yes	No
3000 *see 3000mm specific wall installation instructions on page 13 of the installation manual	TC 2.0	No	No	No
	TC 2.5	*Yes	*Yes	No
	TC 3.0	*Yes	*Yes	No

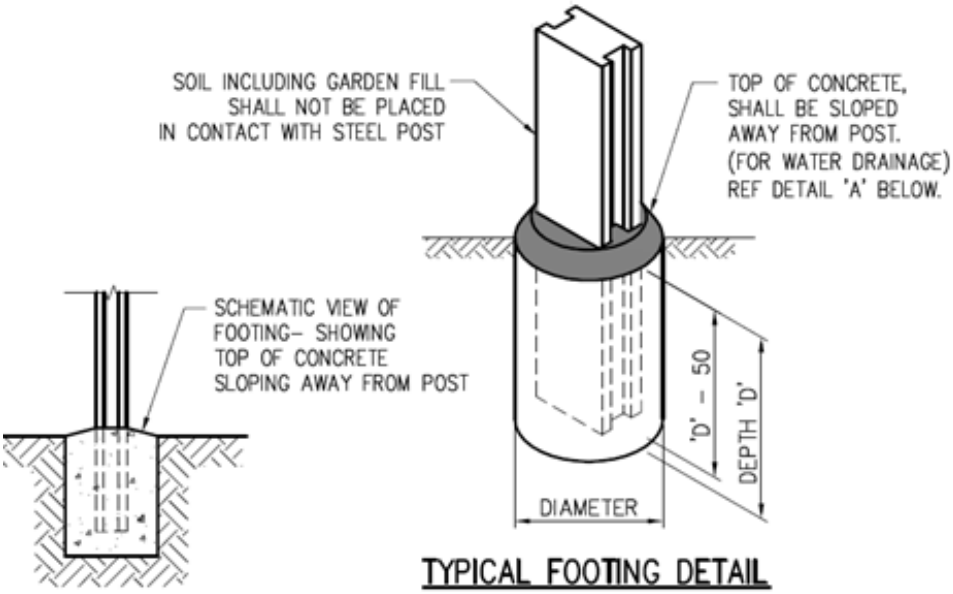
TABLE 3 Garden Wall System – **ESTATE**
Post section = 350 mm width x 235 mm depth

Wall Height (millimetres)	**Terrain Category**	**Wind Region A**	**Wind Region B**	**Wind Region C**
900	TC 2.0	Yes	Yes	Yes *2.7m centre
	TC 2.5	Yes	Yes	Yes *2.7m centre
	TC 3.0	Yes	Yes	Yes *2.7m centre
1200	TC 2.0	Yes	Yes	Yes *2.7m centre
	TC 2.5	Yes	Yes	Yes *2.7m centre
	TC 3.0	Yes	Yes	Yes *2.7m centre
1500	TC 2.0	Yes	Yes	Yes *2.7m centre
	TC 2.5	Yes	Yes	Yes *2.7m centre
	TC 3.0	Yes	Yes	Yes *2.7m centre
1800	TC 2.0	Yes	Yes	Yes *2.7m centre
	TC 2.5	Yes	Yes	Yes *2.7m centre
	TC 3.0	Yes	Yes	Yes *2.7m centre
2100	TC 2.0	Yes	Yes	Yes *2.7m centre
	TC 2.5	Yes	Yes	Yes *2.7m centre
	TC 3.0	Yes	Yes	Yes *2.7m centre

2400	TC 2.0	Yes	Yes	Yes *2.7m centre
	TC 2.5	Yes	Yes	Yes *2.7m centre
	TC 3.0	Yes	Yes	Yes *2.7m centre
2700	TC 2.0	Yes	Yes	No
	TC 2.5	Yes	Yes	No
	TC 3.0	Yes	Yes	No
3000 *see 3000mm specific wall installation instructions on page 13 of the installation manual	TC 2.0	No	No	No
	TC 2.5	*Yes	*Yes	No
	TC 3.0	*Yes	*Yes	No

Footing Detail:

This information is suitable for wind region A, B & C - terrain categories 2, 2.5 & 3



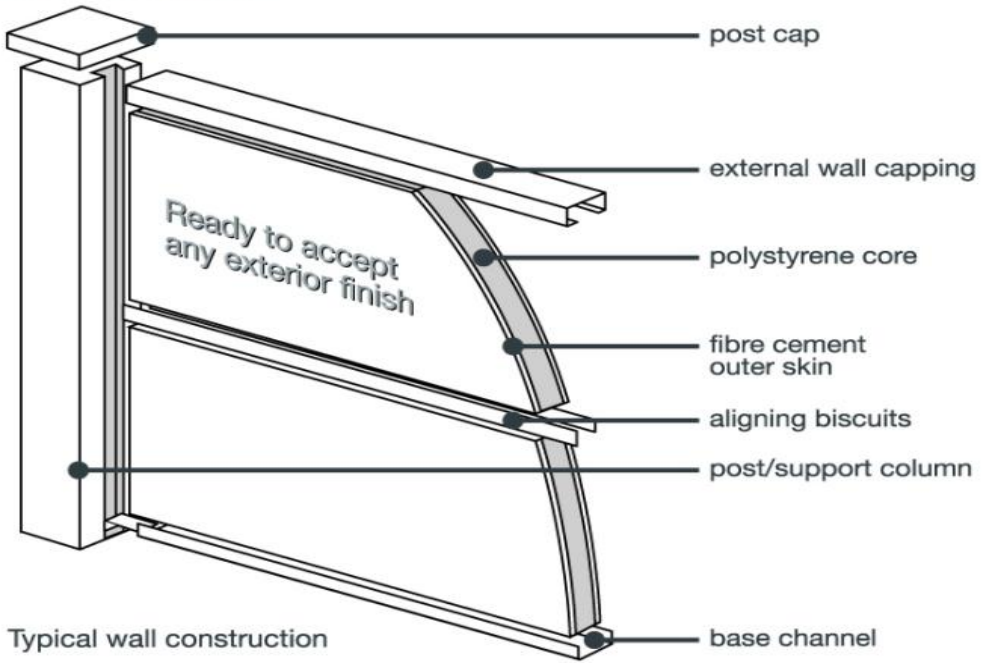
TYPICAL FOOTING DETAIL

Footing Table:

If you want to build on the top of a hill, adjacent to an escarpment, on a ridge, or in terrain category 1, you may need engineering advice beyond the scope of this publication.

Wall height	Hole depth (D) into firm earth or clay (cohesive) A & B	C	Hole depth (D) Into sand (cohesion less), soft clay or loose earth A & B	C	Hole diameter - will vary between Contemporary, Traditional and Estate post sizes
900mm	450mm	650mm	550mm	800mm	Post Hole diameter should be your post width plus 50mm minimum
1200mm	550mm	750mm	650mm	900mm	Post Hole diameter should be your post width plus 50mm minimum
1500mm	600mm	900mm	700mm	1000mm	Post Hole diameter should be your post width plus 50mm minimum
1800mm	650mm	1000mm	800mm	1100mm	Post Hole diameter should be your post width plus 50mm minimum
2100mm	700mm	1100mm	900mm	1200mm	Post Hole diameter should be your post width plus 50mm minimum
2400mm	800mm	1200mm	1000mm	1300mm	Post Hole diameter should be your post width plus 50mm minimum
2700mm	900mm	N/A	1100mm	N/A	Post Hole diameter should be your post width plus 50mm minimum
3000mm *see 3000mm specific wall installation specs in the MWS installation manual	1000mm	N/A	1200mm	N/A	Post Hole diameter should be your post width plus 50mm minimum

Typical Cross Section



Typical wall construction