

**Modular Wall**  
systems

*Manufacturers of*  
Garden Wall Systems  
Barrier Wall Systems

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## General Overview Only

**Wall Type:** Barrier  
**Wall Heights:** 3000mm – 4500mm (4500mm + upon request)

**Acoustic report** available upon request or downloadable from our web site [www.modularwalls.com.au](http://www.modularwalls.com.au)

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.

- **3.0m – 4.5m high wall, post to be MWS barrier post - 150 (width) x 250 (depth) x 0.95 mm BMT G550**
- **Wall Panel - 75mm** -Density of composite panel materials: 15.0kg m2

### **1. 3.0m - 4.5m height wall using MWS Barrier post 250 (depth) x 150 (width)**

For: -

- 1) Post height (out of ground) = 3.0 - 4.5m.
- 2) Post spacing = 2.5 or 2.8m spacings
- 3) Wind Region = A & B (C upon request)
- 4) Terrain category = 2.5, 3.0 (TC2 advice upon request)

**Concrete fill free ends of wall posts only as per instructions below**

**Structural strengthening** (e.g., partial concrete filling of the post) will be required for a distance from the free end for four times wall height, i.e., 4 x 4.5m (post height out of ground) = 18m. Therefore the posts for the first 18m from each free end should be concrete filled to a level out of the ground as indicated on the footing table. Example- a 100m long straight wall would only require the first 7 posts on each end of the wall to be partially concrete filled.



## Wind Regions

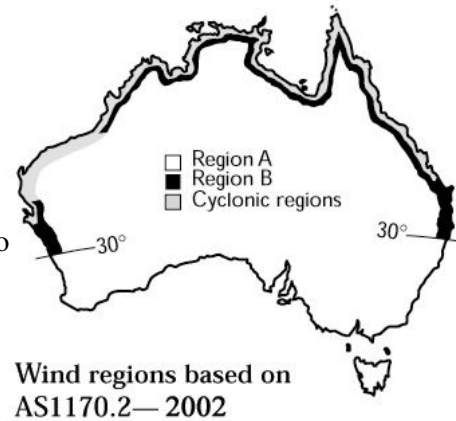
**Wind Class [Regions A & B (non cyclonic), Region C (cyclonic)]**

**Wind region A** - with ultimate limit state design gust wind speeds up to

50 meters/second or 180kph.

**Wind region B** - up to 50 meters/second or 180 kph

**Wind region C** - up to 60 meters/second or 216 kph



## Topographic Class - T1, T2, T3, T4, T5

The Topographic class determines the effect of wind on a house because of its location on a hill, ridge, or escarpment and the height and average slope of the hill, ridge or escarpment.

Please consult MWS for help in determining your topographic class.

## Shielding Class – FS (full shielding), PS (partial shielding), NS (no shielding)

**FULL SHIELDING (FS)** - Typical suburban developments greater or equal to 10 houses or similar size obstructions per hectare.

**PARTIAL SHIELDING (PS)** - This applies to intermediate situations where there are least 2.5 houses, trees, sheds or similar size obstructions per hectare. Wind regions C & D, heavily wooded areas will be classed as having partial shielding.

**NO SHIELDING (NS)** - This applies when there are no permanent obstructions or where there are less than 2.5 obstructions per hectare. An example of this could be the first 2 rows of housing abutting open parklands, airfields or coast line.

## Determine Your Terrain Category

Terrain Categories - TC1, TC2, TC2.5, TC3

Choose the terrain category that best describes the area in which your Modular wall will be installed. If you are unsure of your terrain category or are planning on building a wall on the top of a hill or the edge of a cliff or in terrain category 1 etc, please contact us directly for specific engineering advice.

**CATEGORY 1 (TC1)** Exposed and open areas with very few obstructions. This is not a common terrain category and exists only in flat, plant and treeless plains of at least 10km in width

**CATEGORY 2 (TC2)** Open Terrain such as sea coasts, airfields, open fields and paddocks, grassland with few scattered obstructions, such as isolated trees and uncut grass, having heights from 1.5 to 10m.

**CATEGORY 2.5 (TC2.5)** Terrain with few isolated obstructions and trees such as agricultural land, cane fields or long grass. This is an intermediate class in between TC2 and TC3 and represents the terrain in developing outer urban areas.

**CATEGORY 3 (TC3)** This terrain category has numerous closely spaced obstructions such as suburban housing. (3.0 meters to 5.0 meters high)

**WIND REGION INSTALLATION GUIDE: Modular Wall System – BARRIER WALLS**

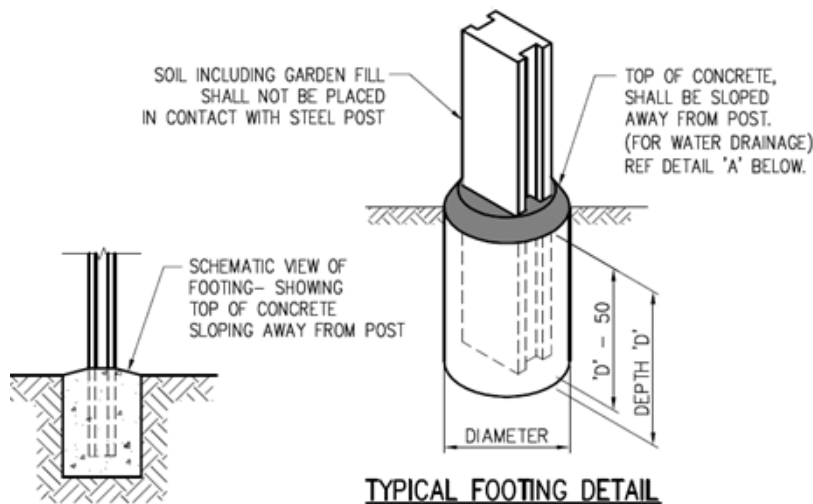
Traditional post type: 250mm (width) 150mm (depth)

Barrier post type: 150mm (width) 250mm (depth)

<u>Wall Height (millimetres)</u>	<u>Post Type</u>	<u>Terrain Category</u>	<u>Wind Region</u>	<u>Wind Region</u>
			<u>A</u>	<u>B</u>
3000	Traditional or Barrier	TC 2.0	upon request	upon request
	Traditional or Barrier	TC 2.5	Yes	Yes
	Traditional or Barrier	TC 3.0	Yes	Yes
3300	Barrier	TC 2.0	upon request	upon request
	Barrier	TC 2.5	Yes	Yes
	Barrier	TC 3.0	Yes	Yes
3600	Barrier	TC 2.0	upon request	upon request
	Barrier	TC 2.5	Yes	Yes
	Barrier	TC 3.0	Yes	Yes
3900	Barrier	TC 2.0	upon request	upon request
	Barrier	TC 2.5	Yes	Yes
	Barrier	TC 3.0	Yes	Yes
4200	Barrier	TC 2.0	upon request	upon request
	Barrier	TC 2.5	Yes	Yes
	Barrier	TC 3.0	Yes	Yes
4500 4500+ upon request	Barrier	TC 2.0	upon request	upon request
	Barrier	TC 2.5	Yes	Yes
	Barrier	TC 3.0	Yes	Yes

**Footing Detail:**

This following information is suitable for wind region A&B, terrain categories 2.5 & 3 (TC2 advice upon request)



**Footing Table:**

<b><u>Wall Height (millimetres)</u></b>	<b><u>Hole depth (D) into firm earth or clay (cohesive)</u></b>	<b><u>Hole depth (D) into sand (cohesion less), loose earth or viscous clay</u></b>	<b><u>Hole diameter</u></b>	<b><u>Concrete filling of posts (free ends as per formula on sheet 1). Dimensions indicate the internal level above nominal ground level that post should be concrete filled to.</u></b>
3000	1000mm	1200mm	450mm	600mm
3300	1100mm	1300mm	450mm	700mm
3600	1200mm	1400mm	450mm	800mm
3900	1300mm	1500mm	450mm	900mm
4200	1400mm	1600mm	450mm	1000mm
4500	1500mm	1700mm	450mm	1100mm
4500+	upon request			