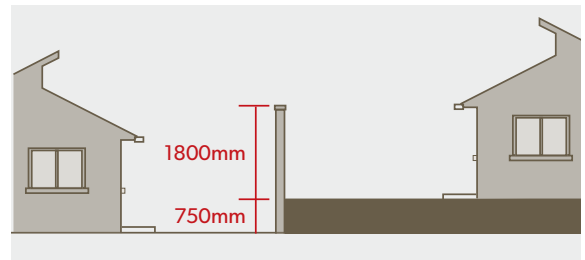
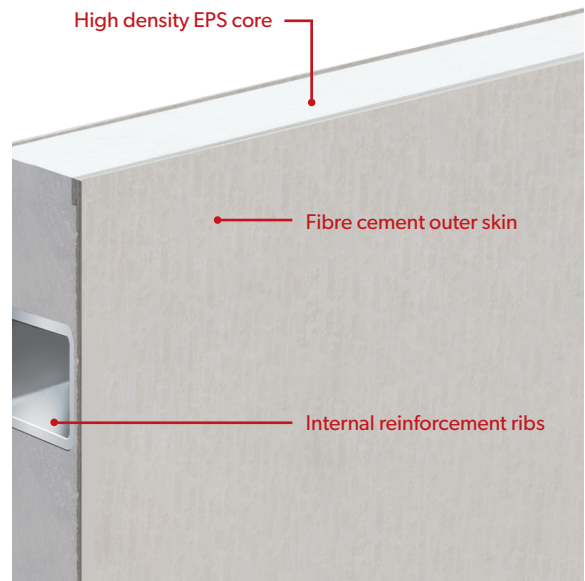


TerraFirm75™ – Retaining Panel

FEATURES

- Ideal for stepped blocks
- Fibre cement outer skin
- High density EPS core
- Internal reinforcing ribs
- TerraFirm75™ panel to be used with Vogue, Estate, Barrier and Guardian wall types only
- Fast, hassle free installation

The TerraFirm75™ panel utilises a high density core material combined with internal strengthening ribs to resist the forces of nature. No need for an expensive stand-alone block retaining wall with a fence on top. Combine a Modular Wall with the TerraFirm75™ retaining panel to maintain a continuous look.



	TerraFirm™75 Retaining Panel
Wall Styles	Vogue, Estate, Barrier, Guardian
Outer Skin	4.5 mm FC Sheet
Panel Core	HD EPS + Reinforcement Ribs
Available Lengths (mm)	2400
Available Widths (mm)	600, 900, 1200
Thickness (mm)	75
Density (kg/m ²)	15.90
Soil Retention (mm) non surcharged loads	750
Rw	28
Compatible Wall Systems	VogueWall EstateWall BarrierWall GuardianWall

Panel Structural Analysis (General):

Rankine Analysis, based on the following assumptions:

1. Horizontal backfill surface (less than 1:10 batter ratio)
2. Earth pressure acts perpendicular to the wall
3. Vertical wall (with respect to retained soil)
4. Smooth wall (no friction with soil i.e. Effective Cohesion = 0kPa)
5. Homogeneous, free-draining granular backfill only against rear of wall - Non surcharged load
6. Wall is located significantly above the water table (i.e. groundwater)
7. Actual wall pressure developed is indeterminately between KR and KA

Factor	Symbol	Units	Value	Notes
Unit Weight of Free-Draining Gravel Backfill	γ_s	kN/m ³	18.9	Typical of medium density sands
Vehicular/Pedestrian Surchage	q	kN/m ²	3.591	Live pedestrian loads only
Angle of Internal Friction			33	Typical of medium density sands
Retained Soil Height	H_s	m	0.75	
TerraFirm75™ Ultimate Load		kN/m		
Lateral Earth Pressure Coefficient (Active)	K_A		0.29	(Not used)
Lateral Earth Pressure Coefficient (Passive)	K_P		3.39	(Not used)
Lateral Earth Pressure Coefficient (At Rest)	K_R		0.46	*Key design input (for rigid wall)
Lateral Earth Pressure Coefficient (Earthquake)	K_E		0.34	
Lateral Earth Pressure - Soil	P_S	kN/m	2.4	$0.5 \times \gamma_s \times H_s \times K_R$
Lateral Earth Pressure - Pore Water	P_W	kN/m	0	
Lateral Earth Pressure - Surchage	P_Q	kN/m	1.2	$q \times H_s \times K_R$
Lateral Earth Pressure - Earthquakes	P_E	kN/m	1.4	$0.375 \times \gamma_s \times H_s \times K_E$
Resultant Lateral Earth Pressure	R	kN/m	5.0	
TerraFirm 75™ Ultimate Load		kg	1377.5	avg.load testing by MWS (mass)
Factor of Safety		kN/m	5.8	avg.load testing by MWS (pressure)
Panel Length	C	m	2.4	
Post Type				Vogue, Estate or Barrier
Factor of Safety	FoS		1.2	

This analysis is of a general nature and is limited to the structural stability of the panel to withstand the prescribed soil conditions and the height listed. 'Tuning' of the wall geometry to the specific site conditions shall be undertaken by the manufacture prior to construction. Consideration of the post and foundation capacity against overturning, sliding, bearing and settlement shall be conducted separately.

- Max retaining height of 750mm if the criteria above is met.
- Should be read in conjunction with our TerraFirm 75™ installation guide (available on request)