Guidelines

Interbloc™ Cantilever Wall

The inherent flexibility of the Interbloc[™] system mean there are many ways to engineer a wall depending on the unique requirements of a given project. The following info sheet provides information and design guides for an Interbloc[™] Cantilever Wall. The information contained in this information sheet is designed first and foremost to be demonstrative of the capabilities of Interbloc[™] walls. Each project will require specific design work by a suitable qualified professional.

Interbloc™ Cantilever Wall

A Interbloc[™] Cantilever Wall consists of vertically reinforced block elements anchored into a concrete foundation. This concrete foundation is usually a substantial element cast into excavated ground at the base of the walls. The tendency of the wall to "tip over" is resisted by the foundation element by moving the point of overturning further out from the wall face. The foundations can also extend back into the retained material and this assists resistance to over-turning by resisting the foundations tendency to rotate.

Interbloc™ Cantilever Walls can incorporate tie backs [see information sheet 'Interbloc Tie Back Wall'] into the design which further resist over turning and help reduce foundation sizes, however it is important to take into account the practicalities of the project when choosing between these two wall types.

Interbloc[™] Cantilever Walls are often used in retaining existing ground along boundary lines, as walls supporting bulk material storage (i.e fertiliser bunkers) where tie back installation is not appropriate or possible.

"What sets this product apart it...the ability to vertically reinforce after placement to increase out of plane bending capacity. This means the wall system is not limited by it gravity capacity, but can be reinforced to perform in a very similar manner to traditional reinforced concrete walls."

Blueprint Consulting Engineers 2012

The following table provides a guide on the footing requirements and corresponding load capacities of a Interbloc™ Cantilever Wall.

Earth Pressures Ka

No Seismic Loads

Good Ground Conditions
Backfill Density 18kN/m³
Backfill Friction Angle 30 degrees
Backfill Slope 0 degrees
Friction Angle 30 degrees
Wall Friction Included 20 degrees

Surcharge	Wall Angle (Slope into Retaining)	Level Backfill								
				Block Inclinded Height						Ка
				1200	1800	2400	3000	3600	4200	
0 kPa	0 deg	Footing	W	700	800	1050	1400	1750	2150	0.3
			D	150	200	225	250	300	350	
			L	50	150	300	500	600	800	
		Wall	Rebar	-	12	12	12	16	25	
			Spacing	-	1200	1200	600	600	600	
	5 deg	Footing	W	700	800	900	1200	1500	1900	
			D	150	175	200	225	225	300	
			L	50	100	200	450	600	800	0.26
		Wall	Rebar	-	-	12	12	16	20	
			Spacing	-	-	1200	600	600	600	
5 kPa	0 deg	Footing	W	750	950	1250	1550	1950	2350	
			D	200	225	250	275	300	350	0.3
			L	100	200	400	700	700	900	
		Wall	Rebar	-	12	12	16	20	25	
			Spacing	-	1200	1200	600	600	600	
	5deg	Footing	W	700	800	1100	1400	1750	2100	
			D	175	200	200	275	300	325	0.26
			L	50	150	250	600	600	800	
		Wall	Rebar	-	-	12	12	16	25	
			Spacing	-	-	1200	600	600	600	
10kPa	0 deg	Footing	W	850	1100	1425	1750	1950	2500	
			D	175	200	250	275	300	350	
			L	200	300	400	600	700	1100	0.3
		Wall	Rebar	12	12	12	16	20	25	
			Spacing	1200	1200	600	600	600	600	
	5 deg	Footing	W	800	1050	1250	1600	1900	2300	
			D	150	200	225	225	300	350	0.26
			L	100	200	400	400	700	800	
		Wall	Rebar	-	12	12	16	20	25	
			Spacing	-	1200	600	600	600	600	

