

Elite Blocks – White Goods Storage – Foundation Design Requirements

The following information regarding foundations are relative to Elite single skin Legato walls with a maximum height of 4.8m (6 Blocks). The wall is designed as a barrier to enclose loose waste, and to act as a fire barrier. It should be noted that the wall is not designed to retain the white goods in the event of a sudden collapse or instability of the stacked white goods. The walls should be constructed in accordance with the 'White Goods Storage Bays – Design Guidance Notes' available on the Elite website.

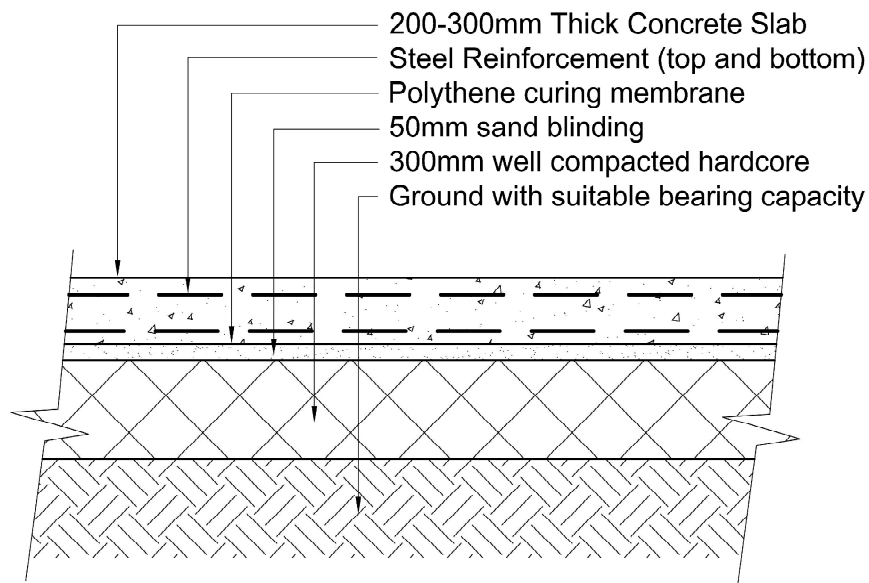
1. Support of the Wall – Ground Conditions:-

A well designed wall is only as good as the ground that it is supported on. If the wall is insufficiently supported due to bad ground conditions then partial or total collapse of the wall could occur. It is important that the ground is assessed by a suitably qualified person to ascertain its allowable bearing capacity. A guide as to allowable bearing pressures are shown overleaf.

Description	Safe bearing capacity ¹ kN/m ²	Field description/notes
Strong igneous rocks and gneisses	10 000	Footings on unweathered rock Beware of sink holes and hollowing as a result of water flow
Strong limestones and hard sandstones	4000	
Schists and slates	3000	
Strong shales and mudstones	2000	
Hard block chalk	80–600	
Compact gravel and sandy gravel ²	>600	Requires pneumatic tools for excavation
Medium dense gravel and sandy gravel ²	200–600	Hand pick – resistance to shovelling
Loose gravel and sandy gravel ²	<200	Small resistance to shovelling
Compact sand ²	>300	Hand pick – resistance to shovelling
Medium dense sand ²	100–300	Hand pick – resistance to shovelling
Loose sand ²	<100	Small resistance to shovelling
Very stiff and hard clays	300–600	Requires pneumatic spade for excavation but can be indented by the thumbnail
Stiff clays	150–300	Hand pick – cannot be moulded in hand but can be indented by the thumb
Firm clays	75–150	Can be moulded with firm finger pressure
Soft clays and silts	<75	Easily moulded with firm finger pressure
Very soft clays and silts	Nil	Extrudes between fingers when squeezed
Firm organic material/medieval fill	20–40	Can be indented by thumbnail. Only suitable for small-scale buildings where settlements may not be critical
Unidentifiable made ground	25–50	Bearing values depend on the likelihood of voids and the compressibility of the made ground
Springy organic material/peats	Nil	Very compressible and open structure
Plastic organic material/peats	Nil	Can be moulded in the hand and smears the fingers

2. Foundations/Slabs:-

It is recommended that the walls be constructed on a continuous concrete foundation or slab that has been designed to suit the ground conditions as noted above. Guidance as to the pressure exerted on the ground can be provided by Elite to allow clients to ensure that the walls are adequately supported. An example of a suitable ground slab is shown below:-



Typical External Slab

3. Foundation/Slab Inspection:-

It is recommended that the foundation/slab be inspected on a fortnightly basis for any signs of settlement or cracking. If any signs of settlement or movement is apparent then the wall should be immediately cordoned off and a suitably qualified engineer consulted.