Aggregate Concrete Blocks

CONCRETE BLOCK ASSOCIATION

UHB - The Universal Housing Block

Data Sheet 5
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Introduction

The UHB concept is based on a single block selected from a range of 100mm thick solid (Group 1) aggregate blocks so as to meet the precise needs of your specific design. The selection process is simple and once made at the design stage arranging the supply of blocks and the subsequent site management of blocks are both completely straightforward. With only a single block type on site there is, of course, no risk that blocks are used for the wrong application.

Not only does the UHB concept make life easier for the site construction team, it also removes any monitoring problems for Building Control who have no need to check that the correct blocks have been used for specific applications.

For most, if not all housing sites, the UHB concept allows the selection of just one block, which can be used for all block applications.

Applications include:

- External walls (above & below dpc)
- Partitions and internal walls (inc. sound resisiting)
- Separating walls (cavity and solid)
- Floors (ground and intermediate)

As the UHB concept is based on aggregate blocks, it brings with it the major benefits of reliable party wall performance, an excellent background for all finishes (particularly a good key for plaster/render) and a good solid background for fixings.

The majority of house designs with low elemental U values and all the most energy efficient designs require a layer of insulation material to enhance wall and floor thermal performance. It is easy to insulate to the required level with UHB using any of the commonly available insulation materials and cold bridges at wall/floor junctions and around openings can be handled easily at the design stage.

Depending on the location of the site and whether the dwelling is detached or not, there is a basic choice between a lightweight aggregate UHB (LA-UHB) and a dense block UHB (DA-UHB). Other construction details will dictate the strength of the unit and density required.

The following guidance to block selection will aid the selection process:

Block specification:

LA-UHB 100mm thick/ density 1350-1600kg/m^3

DA-UHB 100mm thick/ density 1800 kg/m^3 min in England and Wales and 1990 kg/m^3 min in Scotland.

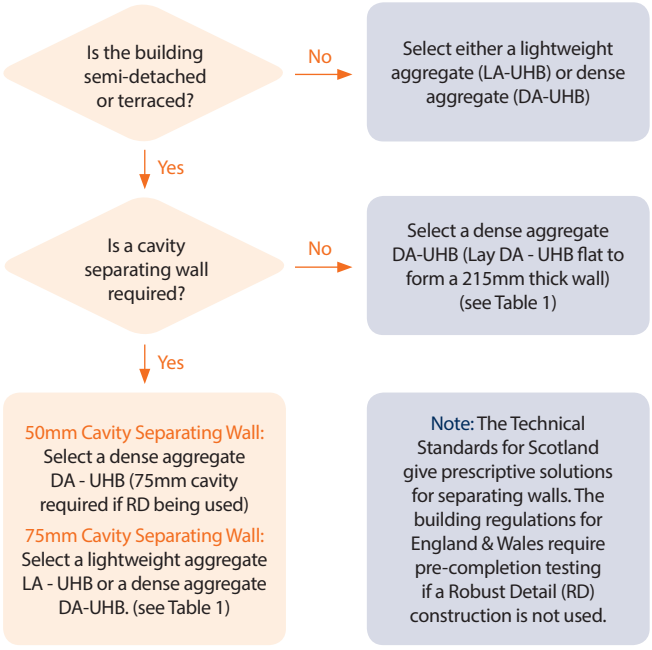

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Table 1 gives guidance on specifications necessary to satisfy regulatory requirements. It is recommended that the table is used so as to arrive at an appropriate UHB specification by the quickest route.

Application	Lightweight Aggregate UHB LA- UHB 3.6N/mm²	7.3N/mm²	Dense Aggregate UHB DA- UHB 3.6N/mm²	7.3N/mm²	Finish
EXTERNAL WALLS					
(above dpc) *Outer leaf*	●	●	●	●	Render/cladding
Inner leaf: (1 or 2 storey)	●	●	●	●	Any
(3 storey)		●		●	Any
(below dpc) *Outer leaf*		●	●	●	Not applicable
Inner leaf: (1 or 2 storey)	●	●	●	●	Not applicable
(3 storey)		●		●	Not applicable
PARTITIONS & INTERNAL WALLS (including sound resisting)					
	●	●	●	●	Any
SEPARATING WALLS - Walls in England & Walls will be subject to pre-completion testing unless otherwise indicated					
Cavity *50mm cavity:* (1 or 2 storey)	●		●	●	Plaster/drylining (1)
(3 storey)				●	Plaster/drylining (1)
75mm cavity (only in England & Wales): (1 or 2 storey)	●	●	●	●	Plaster/drylining (2)
(3 storey)		●		●	Plaster/drylining (2)
Solid *100mm blocks laid flat:* (1 or 2 storey)			●	●	Plaster/drylining
(3 storey)				●	Plaster/drylining
FLOORS					
Ground	● (Flooring grade) (3)	●	● (Flooring grade) (3)	● (Flooring grade) (3)	Any
Intermediate	● (Flooring grade) (3)	●	● (Flooring grade) (3) (4)	● (4)	Any

(1) If a step and/or stagger of at least 300mm exists, drylining may be used as an alternative to a plaster finish. **(2)** Constructions are Robust Details not requiring pre-completion testing, (drylined finish requires a parge coat to be applied first). **(3)** Tested for transverse load capacity. **(4)** Suitable for meeting Regulation E2 of the Building Regulations for England & Wales.

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