



Using Aircrete Blocks as infill in Domestic Beam & Block Floors

On 15th June 2022 the new Part L of the Building Regulations came into effect for new and existing dwellings, to move towards the Future Homes Standard for new homes in 2025. Amongst the changes, the maximum notional floor u-value for new dwellings within SAP was 0.25W/m²K and this is now 0.18W/m²K. For extensions to existing dwellings, the maximum allowable floor u-value is now lowered from 0.22W/m²K to 0.18W/m²K.

Lower figures can be achieved partly by exploiting the low conductivity values of aircrete, 0.15 - 0.18W/mK. At 7kg per block for 3.6N/mm² Standard blocks and 10kg per block for 7.3N/mm² High Strength blocks, an aircrete block and pre-stressed concrete

beams will be much lighter than a similar size aggregate masonry floor due to the blocks' aerated concrete composition.

Celcon Standard and High Strength blocks are covered by Agrément Certificate 05/0475, which deems them suitable for use between proprietary beams in domestic ground and intermediate floors, in conjunction with a reinforced screed. Aircrete also meets the requirements of Part E of the Building Regulations for intermediate floors and features in the NHBC Standards. Please note: due to their low weight and density, aircrete blocks are not suitable for separating floors in flats.

Fig. 1 Typical Ground Floor Construction

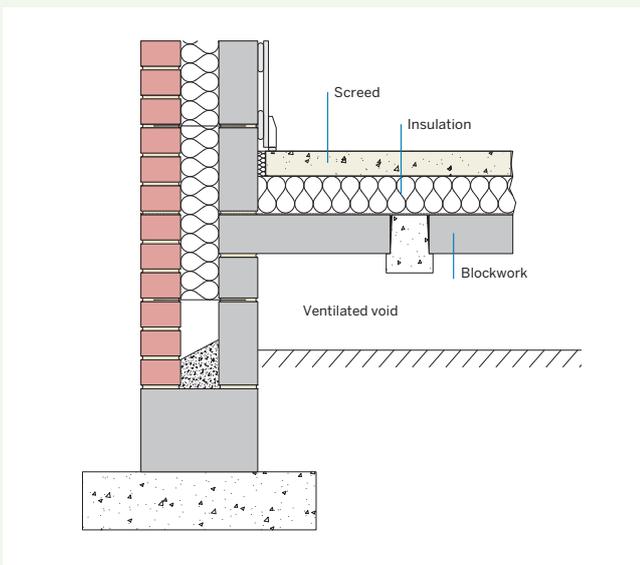
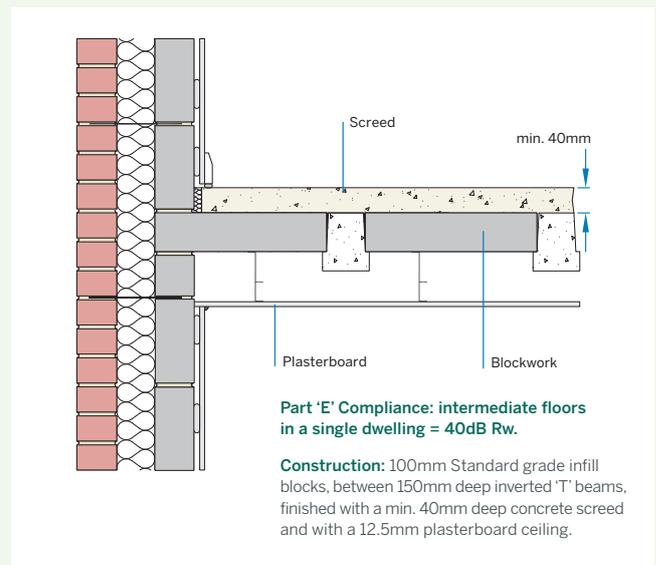


Fig. 2 Typical Intermediate Floor Construction



Infill Blocks	Insulation	P/A Value	U-Value	Thickness Required (mm)
Celcon Standard	Jablite EPS 70 (0.038W/mK)	0.40 / 0.50 / 0.60 / 0.70	0.18W/m²K	140 / 140 / 145 / 150
Celcon Standard	Kingspan TF70 (0.023W/mK)	0.40 / 0.50 / 0.60 / 0.70	0.18W/m²K	80 / 85 / 85 / 85
Celcon Standard	Kooltherm K103 (0.018W/mK)	0.40 / 0.50 / 0.60 / 0.70	0.18W/m²K	70 / 70 / 75 / 775
Celcon High Strength	Jablite EPS 70 (0.038W/mK)	0.40 / 0.50 / 0.60 / 0.70	0.18W/m²K	145 / 145 / 150 / 150
Celcon High Strength	Kingspan TF70 (0.023W/mK)	0.40 / 0.50 / 0.60 / 0.70	0.18W/m²K	80 / 85 / 85 / 90
Celcon High Strength	Kooltherm K103 (0.018W/mK)	0.40 / 0.50 / 0.60 / 0.70	0.18W/m²K	70 / 75 / 75 / 775