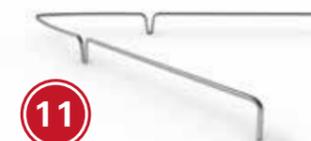
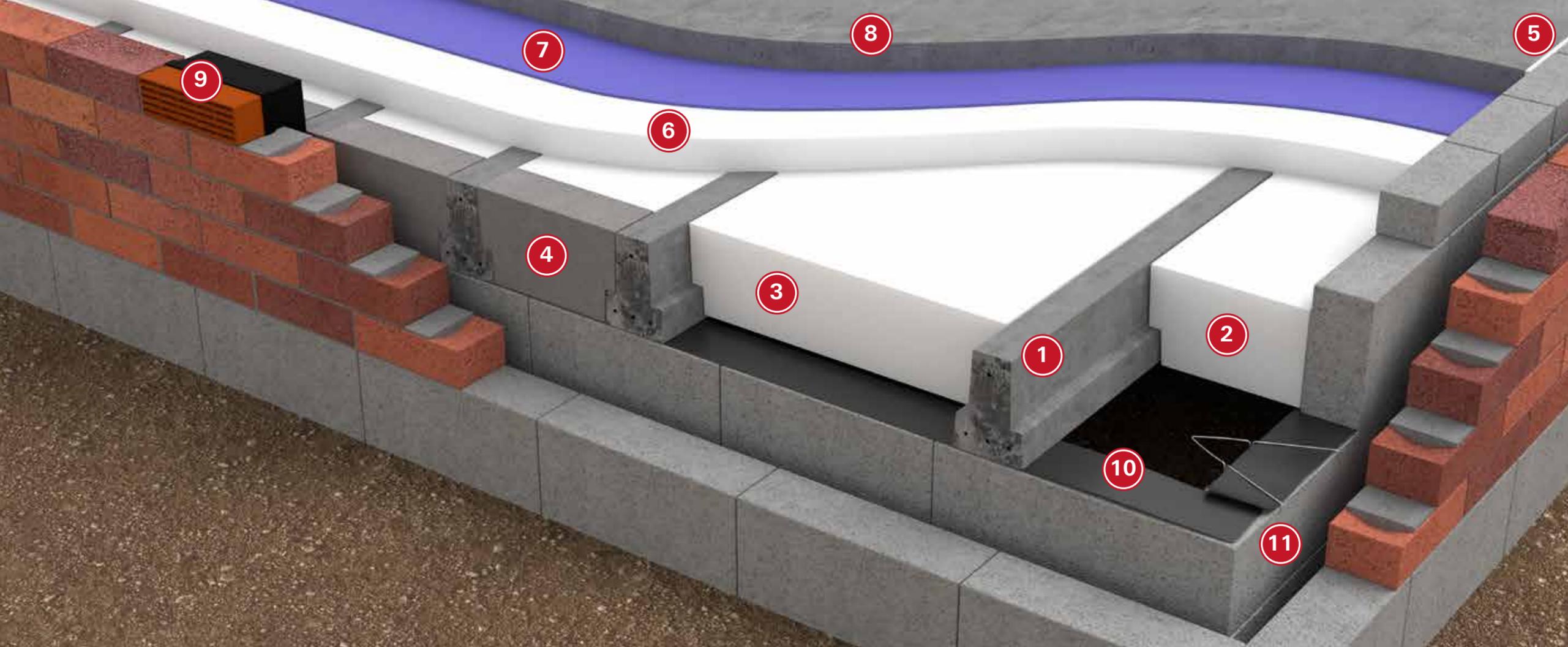


WARMFLOOR



Installation Guide





11 Warm Floor Clip
(supplied by Lynx Precast)



10 Damp Proof Membrane
(supplied by others to suit wall)

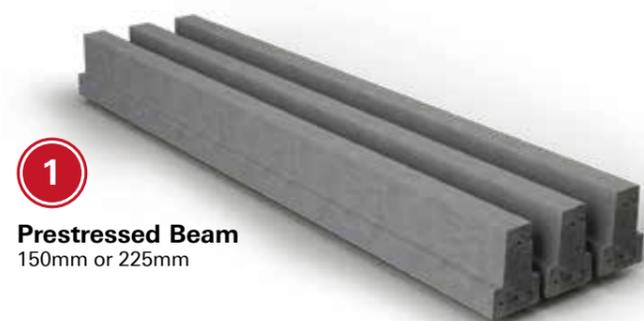


9 Air Brick / Vent
(supplied by others)

Product overview

The Lynx Warmfloor system is a cost effective highly insulated suspended floor system comprising Lynx T beams, EPS infill blocks and sheet insulation.

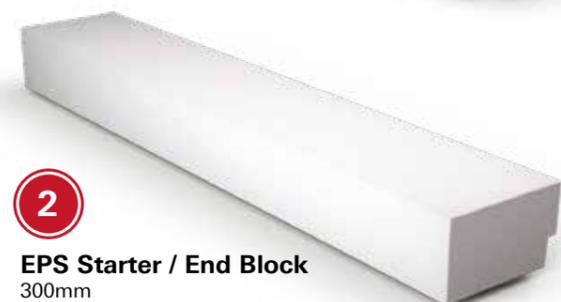
The system is BBA approved and when installed in accordance with the Lynx layout drawing and the following guide will satisfy current building regulations and NHBC standards.



1 Prestressed Beam
150mm or 225mm



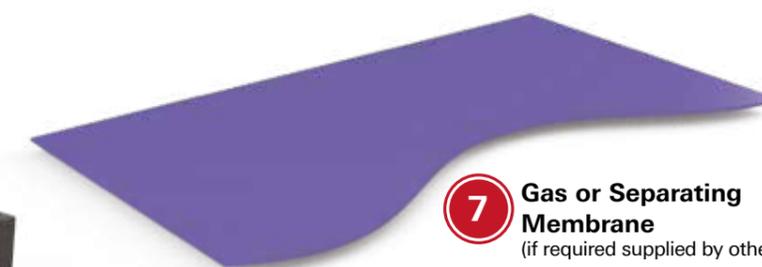
3 EPS Infill Block
540mm
EPS Infill Block
340mm



2 EPS Starter / End Block
300mm



4 Lightweight Concrete Closure Block
540mm
Lightweight Concrete Closure Block
340mm



7 Gas or Separating Membrane
(if required supplied by others)



5 EPS Perimeter Edge Strip
30mm x 75mm x 1200mm



6 EPS Structural Grade Oversheet
2400mm x 1200mm depth
varies dependant on U-values

8 Structural Concrete Topping
Nominal 75mm supplied by others
Refer to specification on pages 10 and 11

1 PREPARATION



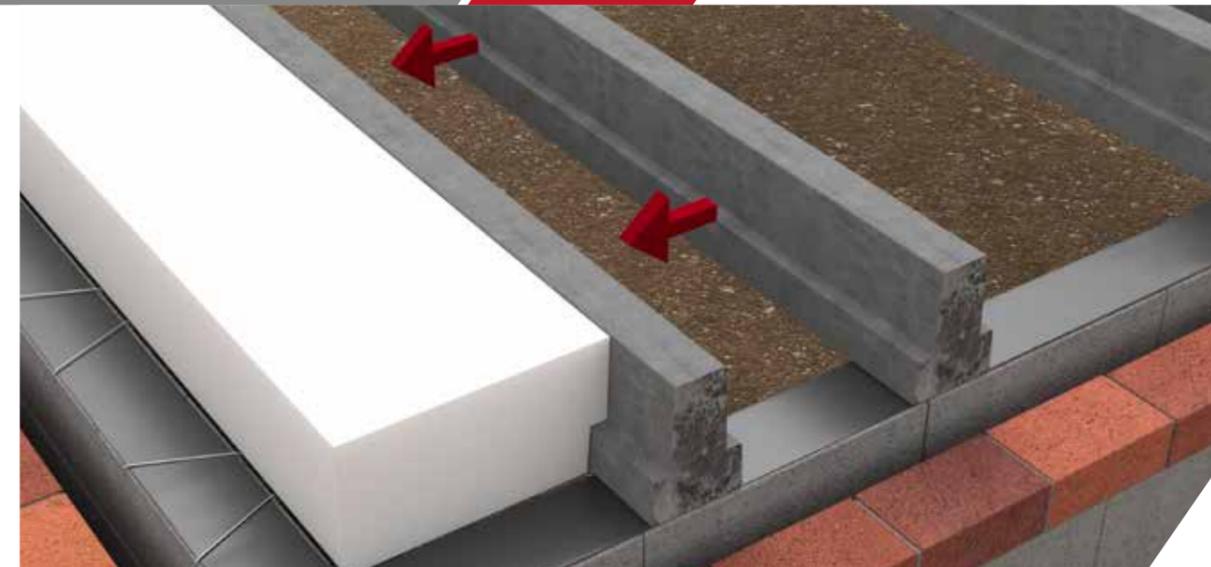
1. Prior to any installation, check that the bearing walls (on which the beams sit) are at the correct height and free of any debris.
2. The bearing walls are to be built up to the soffit level of the beams.
3. Ensure the internal ground level provides sufficient clearance from the soffit of the flooring system (min. 150mm).
4. Roll the damp proof course out over the inner leaf and any intermediate supporting walls.
5. Space the warm floor clips on top of the damp proof course along the length, ready to receive the starter blocks.

2 PRE-INSTALLATION



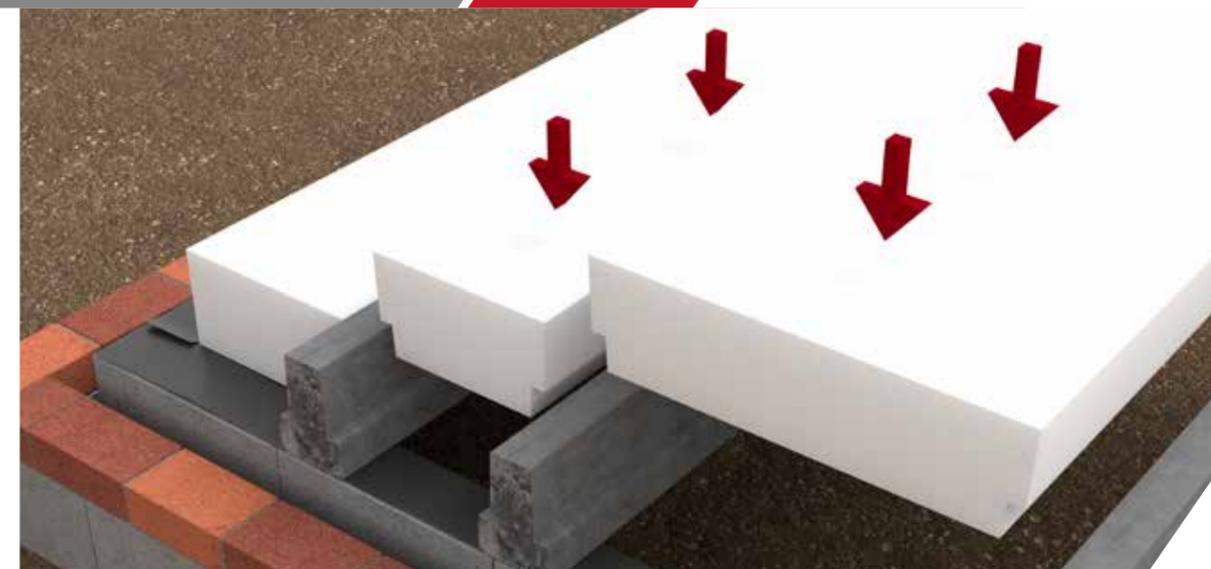
1. The beams and EPS components will be delivered on separate vehicles. On both occasions, a check against the delivery ticket is required to ensure that all units have been delivered and free from any damage.
NB. In the event of multiple house types, the beams will be colour coded into plots to help identify when sorting, ready for the installation.
2. Please ensure beams and blocks are laid in strict accordance with the layout drawing supplied. The spacing of the beams is calculated to cater for the design load/span.
3. It may be prudent to familiarize yourself with the components and terms used within the installation guide.

3 INSTALLATION Starter



1. Begin by placing the beams into the correct bay and, as accurately as possible, space them out with the aid of a 'spacing template' or tape measure to suit the layout drawing.
2. Place the first starter block onto the clips.
3. Continue installing the row of starter blocks until it is not possible to place a full piece.
4. Measure the remaining distance from the last full block to the inside face of the inner leaf block.
5. Cut the desired length using a handsaw from a starter block and infill to complete the run.
6. Always retain the offcuts to utilize in other parts of the layout/other plots.
7. To omit any chance of creep, it is advised to push the beam in, towards the block, to give a 'snug' fit.
8. DO NOT fit EPS infill blocks over load-bearing walls.
9. Cut block length no less than 300mm positioned at the edge of the floor.

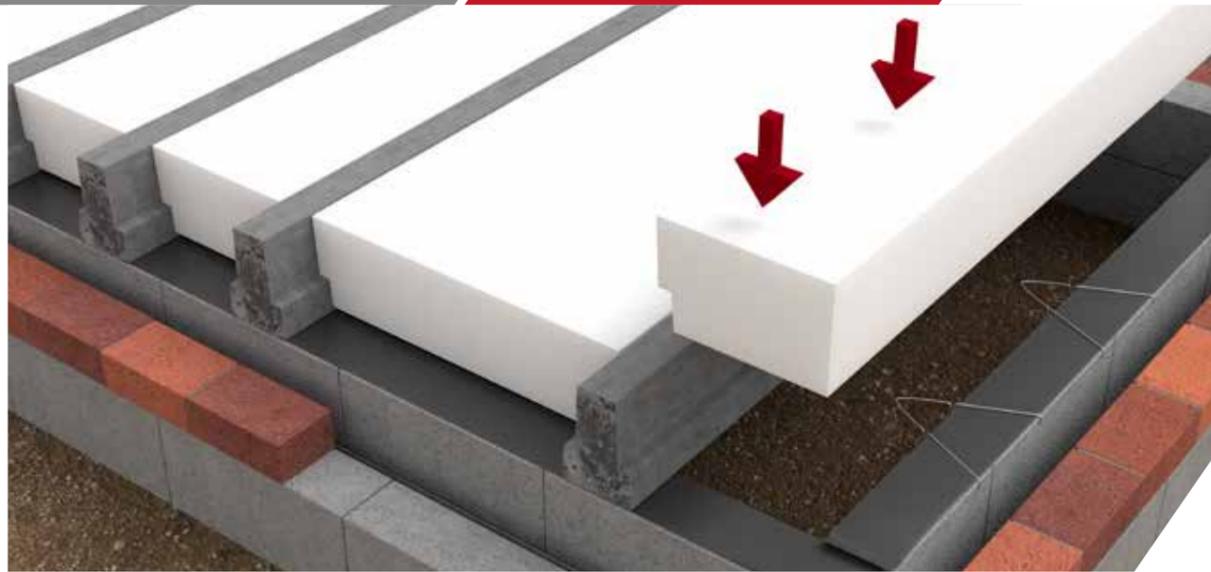
4 INSTALLATION Infill



1. Complete laying all beams in accordance with the layout drawing.
2. Place remaining infill blocks between beams.
3. As with the starter blocks, cut the desired amount off a full length unit (or utilize an existing offcut) to complete the run.
4. Any pipes/penetrations within the floor can easily be accommodated by cutting with a handsaw.

5 INSTALLATION

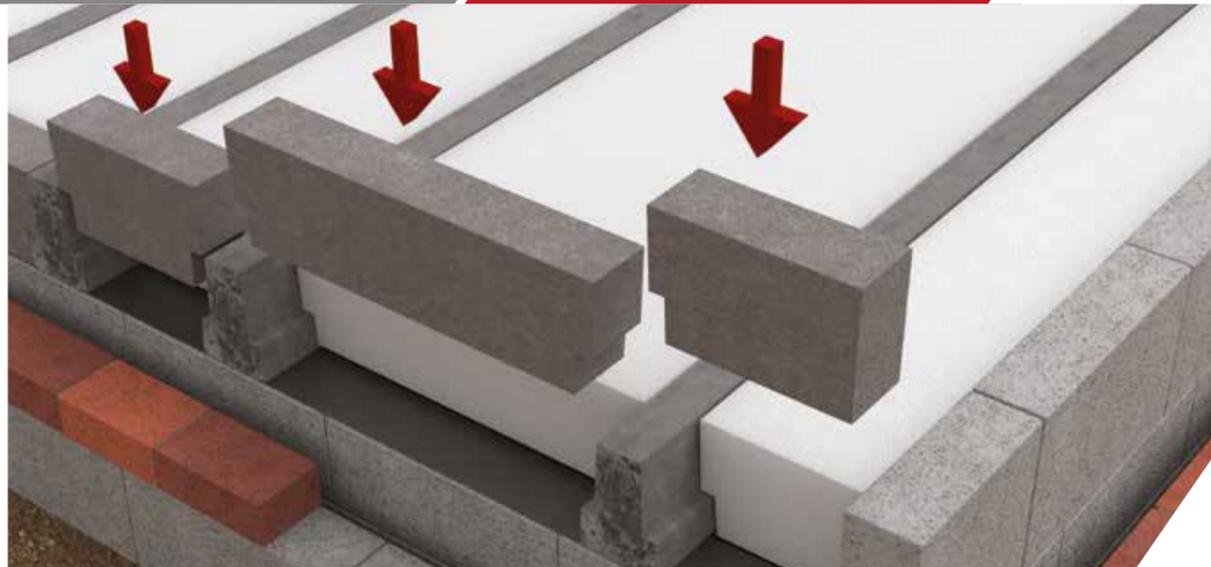
End / Finishing Block



1. The layout should correspond with the drawing.
2. There is every chance slight creep will occur and the remaining 'cut' to the side wall may differ slightly than that shown on the layout drawing.
3. Measure the required distance to achieve the correct width and, with the aid of a handsaw, cut the end block to suit.
4. Place the clips in position and install the remaining blocks to the row and repeat as above with regards to finishing.

6 INSTALLATION

Concrete Closure Blocks



1. The concrete closure blocks are manufactured to correspond with the width of the EPS blocks.
2. Place a bed of mortar on the walls in between the beams and place the closure block ensuring the top of the block is level with the top of the beams.
3. Once all the closure blocks are in place the end closure block will need to be cut (with the aid of a cut off saw) to suit the site dimensions.

7 INSTALLATION

Screed Rail and Top Sheet

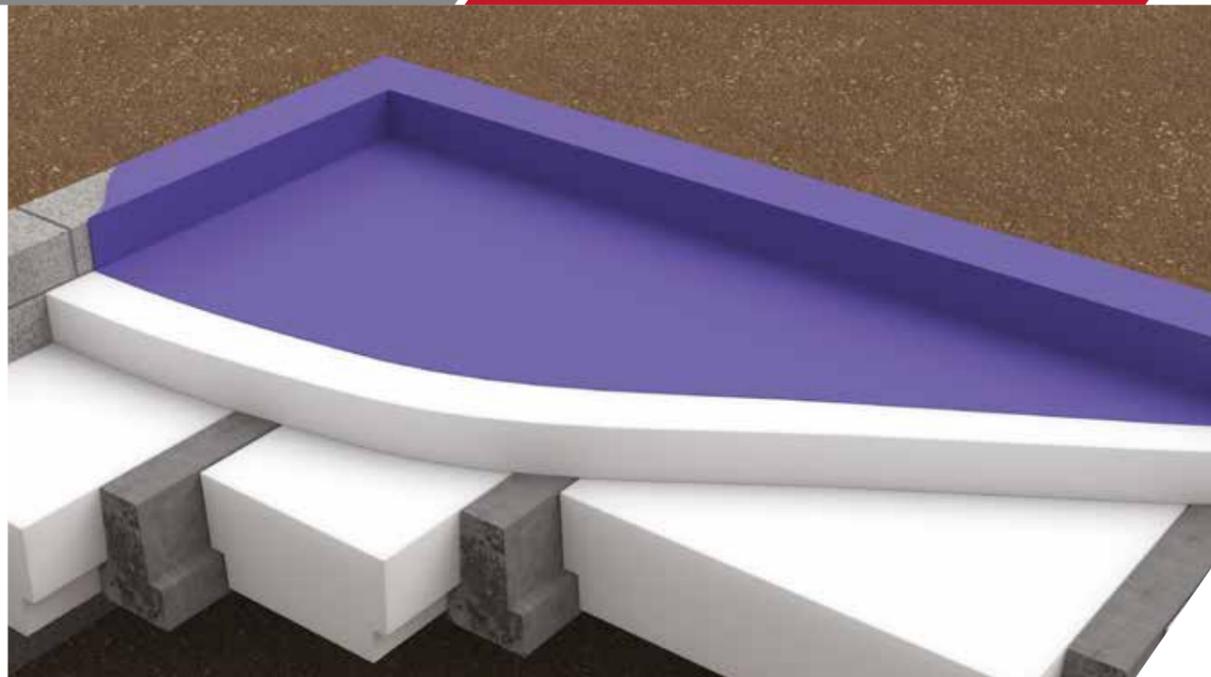


1. Install brick or block courses to bring the perimeter and any internal walls up to finished floor level.
2. These walls are used as a screed rail to ensure the concrete topping is laid to the required depth.
3. When walking over the floor take care to walk on the beams only or lay boards to protect the EPS blocks.



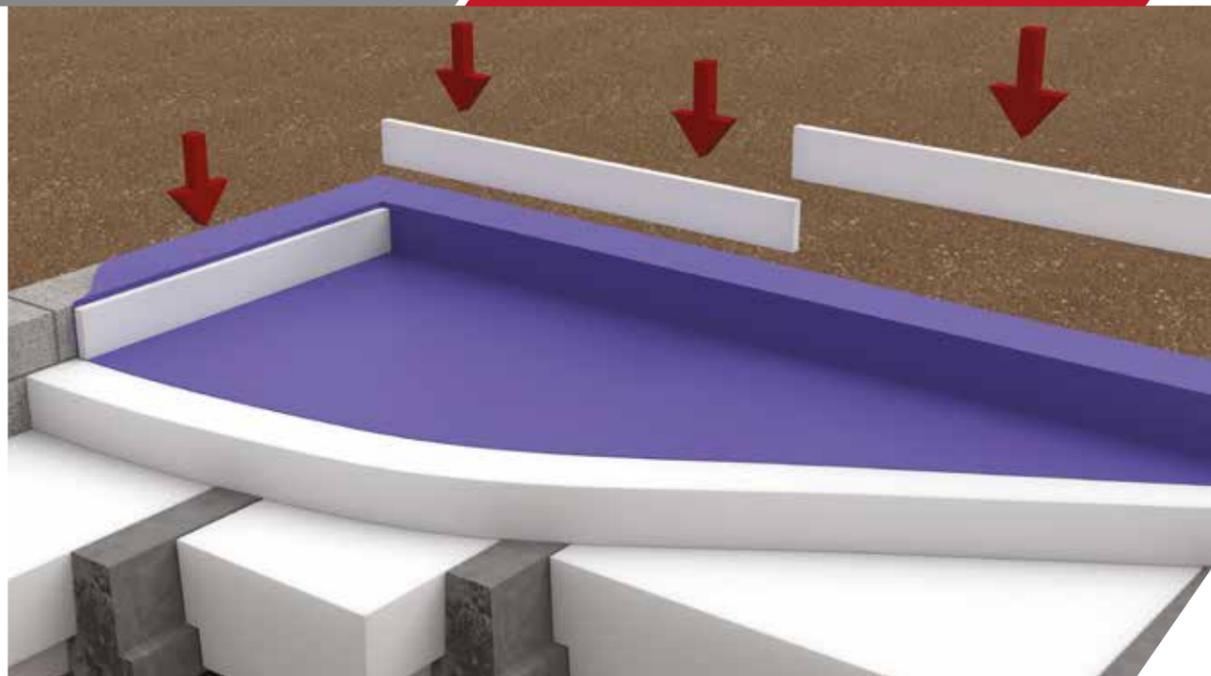
4. The top sheets are supplied in packs. Sheet sizes 2400mm x 1200mm. The number of sheets per pack depends on the thickness.
5. Once all possible full units are placed, measure and cut down to infill and complete the floor.

8 INSTALLATION Damp / Gas Membrane If Required



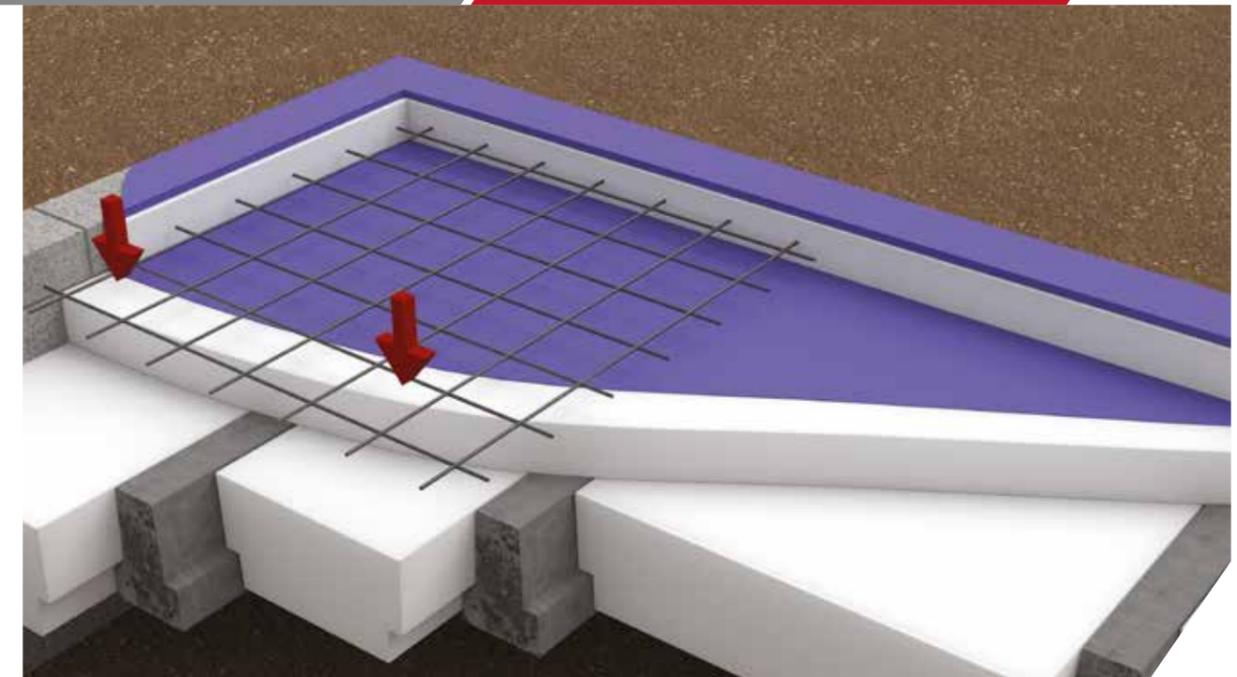
1. If a membrane is required it should be specified and laid in accordance with the manufacturer's or architect's instructions.
2. The membrane should be pulled tight to ensure that any folds, ripples or creases are removed and that the membrane lies flat over the floor construction.
3. Care should be taken to make sure the membrane follows the floor at the floor/wall junction to maintain the full depth of topping at the edges.

9 INSTALLATION Isolating Edge Strip

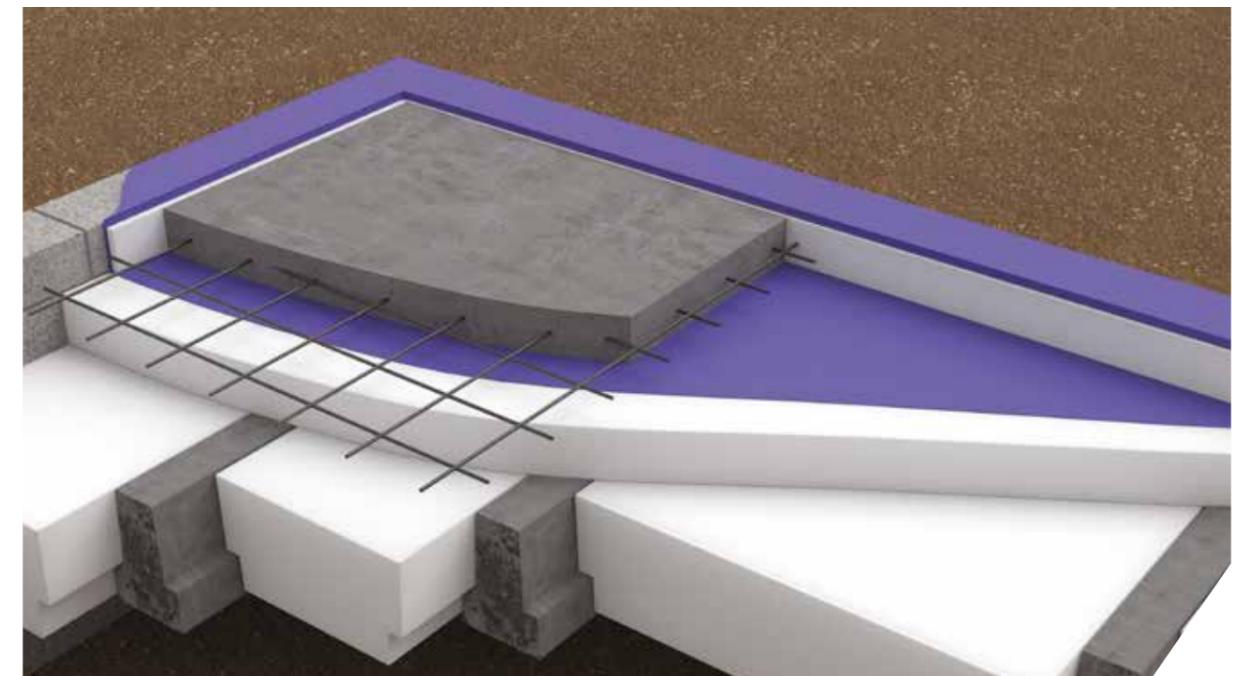


1. The EPS edge strips are required throughout the perimeter and to any internal walls of the building to eliminate cold bridging between the walls and concrete topping.

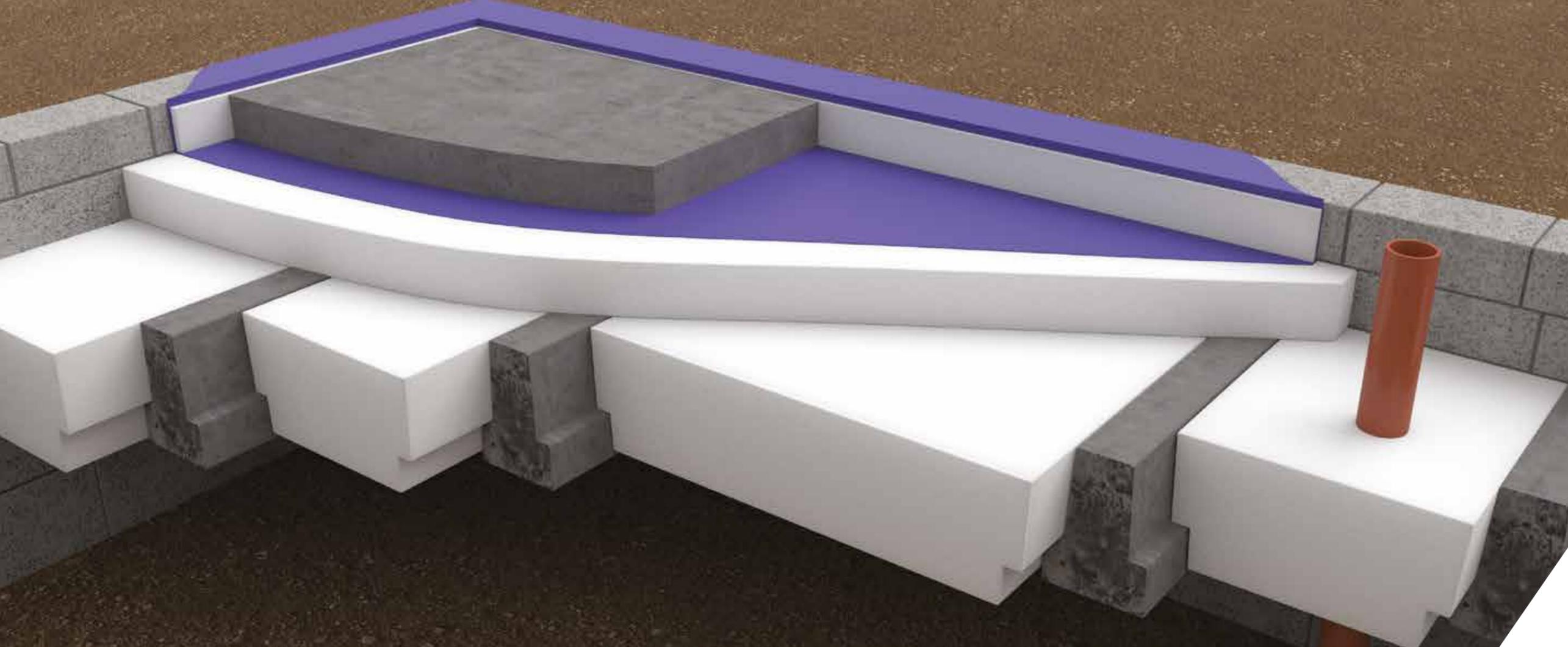
10 INSTALLATION Structural Concrete Topping



1. Mesh shown is indicative only. Please refer to pages 10 and 11 structural concrete topping specification.



2. Carefully pour the specified structural topping (see topping specification details on pages 10 and 11) to the required depth/height ensuring the EPS blocks and top Sheet are not disturbed during the flow of the concrete. It is advised to distribute the concrete in smaller amounts to help protect the flooring system from any damage or overloading.
3. Ensure that the minimum air temperature is 3.0°C and rising prior to laying of the concrete and if frost is likely the concrete is protected by means of a frost blanket or similar.
4. Laying during periods of high temperatures or wind can have a significant detrimental impact on the quality of the concrete slab. The use of effective curing practices will help prevent cracking through premature drying. Concrete should not be poured during rain as it will have a detrimental effect on the aesthetic appearance of the finish and can cause fibres to be exposed on the surface. If rain is forecast then a protective cover should be placed over the concrete after placement.



Structural Concrete Topping Specification Details

Please note, the dosage rates for the steel and polymer fibres include 15% additional fibres and are designed to give the minimum required residual flexural tensile strength of concrete toppings with steel and macro-polymer fibres.

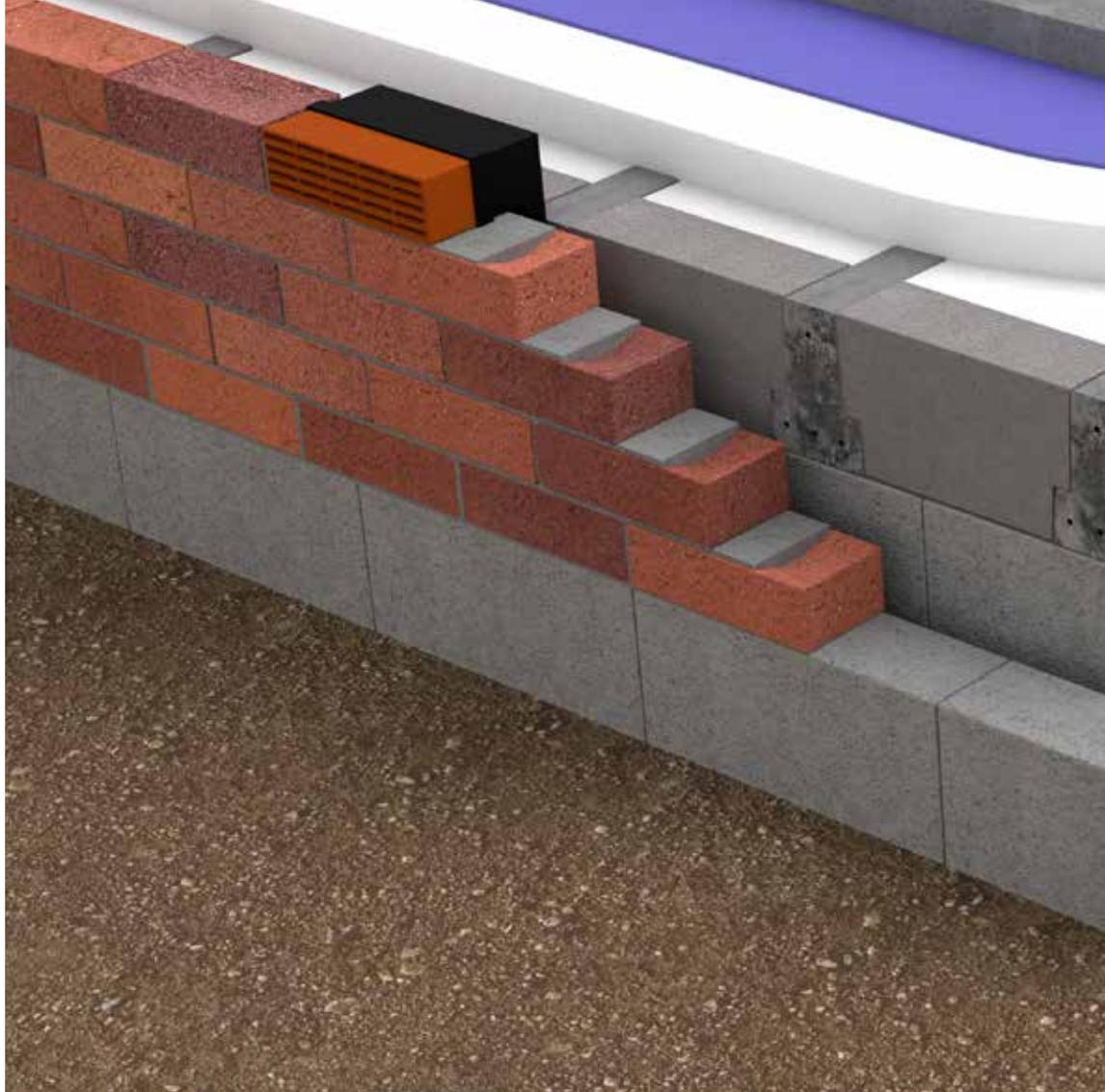
The following structural concrete toppings are approved for use by the BBA. In all cases selection of the structural topping should be approved by the guarantor.

Concrete:

Standard Concrete: 65mm min depth (above services)	C28/35 with maximum aggregate size 20mm and reinforcement selected from the options below. Slump should be Class S3 (100 to 150mm) or S4 (for spot samples taken from initial discharge, 140 to 230mm). Aggregate to comply with BS EN12620: 2013.
Self Compacting Concrete: 65mm min depth (above services)	C28/35 with maximum aggregate size 10mm and reinforcement selected from the options below. Slump flow class should be SF1 (550 to 650mm) or SF2 (660 to 750mm). The sand content should be greater than 45%. Aggregate to comply with BS EN1260:2013.

Reinforcement:

Steel Mesh	One layer of A142 mesh (to BS 4483:2005) with a characteristic yield strength of 500N/mm ² set at mid-point to the depth of the concrete topping.
Steel Fibres	Novomesh B&BA: Dosage rate 17.5kg/m ³ , steel flat end, steel fibres, 50mm long, 1mm diameter, tensile strength of 1150N/mm ² .
Steel Fibres	Adfil SF86: Dosage rate 7.5kg/m ³ , 60mm long, 0.75mm diameter, modulus of elasticity of 200000N/mm ² , tensile strength of 1225N/mm ² .
Macro-Polymer	Novomesh B&BA: Dosage rate 3.84kg/m ³ , continuously deformed, 60mm long, 0.56mm diameter, modulus of elasticity of 7000N/mm ² , tensile strength 600N/mm ² .
Macro-Polymer	Durus Easy Finish: Dosage rate 2.5kg/m ³ , 40mm long, 0.7mm diameter (equivalent), modulus of elasticity of 6000N/mm ² , tensile strength of 470N/mm ² .



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