

Movement joints below dpc

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Question

Should movement joints in external walls extend below the dpc?

Considerations

- NHBC Standards Clause 6.1.3 says "Any movement joints should continue from those provided in the substructure to the superstructure. Movement joints may be needed in the superstructure where none are required in the substructure - however suitable allowance should be made for relative movement".
- Movement in masonry can be caused by a number of factors including changes in temperature, changes in moisture content and differential ground movement.
- The orientation of a wall in relation to the sun will have an effect on the degree of thermal movement that will take place.
- PD 6697 - Recommendations for the design of masonry structures to BS EN 1996-1-1 and BS EN 1996-2 gives guidance on the provision of movement joints.

Answer

It is the designer's responsibility to ensure movement joints are designed to suit the actual layout and design of the structure. The following should be taken into consideration:

- 1 Where the dpc is less than 600 mm above ground level, movement joints for expansion do not generally need to extend below the dpc.
- 2 Where the dpc is more than 600 mm above ground level, consideration should be given to continuing the expansion joint through the masonry below the dpc.
- 3 Where the movement joint is provided for vertical differential ground movement, for example:
 - a) at major changes in foundation levels, or
 - b) between foundations of different designs, or
 - c) at variations in the height of the building, the movement joint should continue through the masonry below the dpc.