

FACT SHEET

WHAT IS A DAMP PROOF COURSE?

In cavity wall construction damp proof courses prevent the movement of rainwater and ground moisture. If this is not done with skill, care and attention damp may compromise building components, reduce the thermal effectiveness and compromise the wellbeing of building occupants.

Repairing damage caused by dampness is invariably expensive and often distressing for the building occupants.

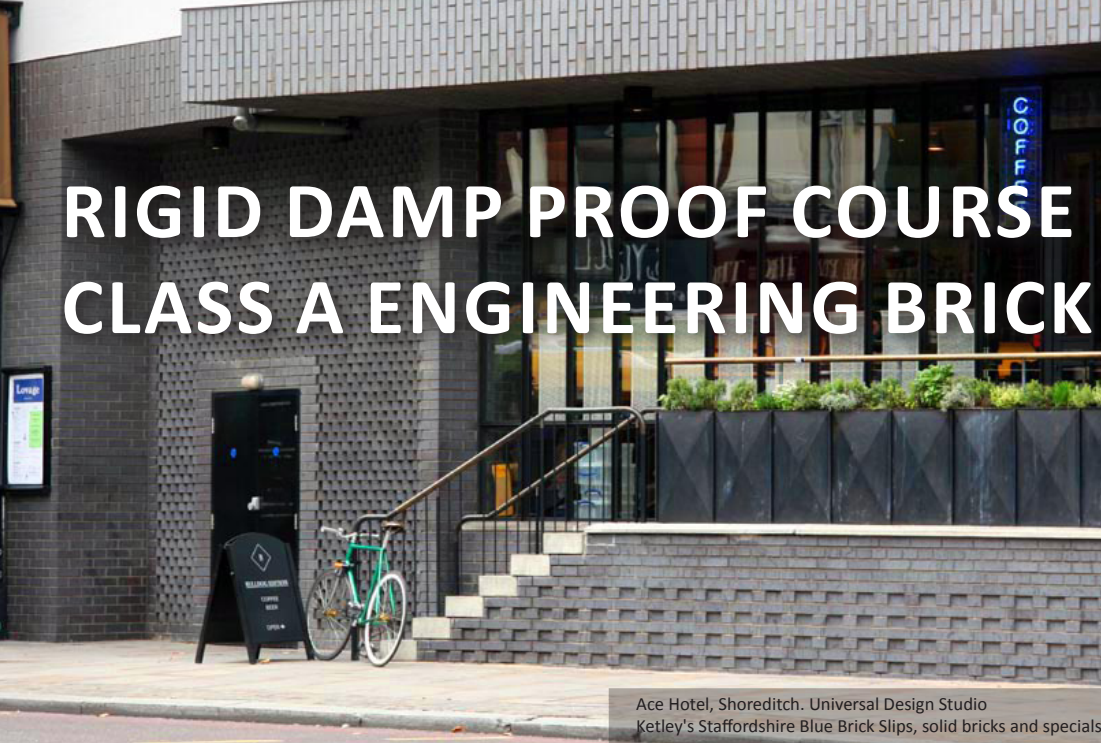
WHERE ARE DPCs REQUIRED?

- At the base of external walls, not less than 150mm above ground level.
- At the base of internal walls that are built off foundations rather than the ground floor slab.
- Vertically at jambs to openings in external cavity walls.
- Horizontally over openings in external cavity walls, where they are usually called cavity trays.
- Horizontally at window sill and door thresholds.
- Below copings and cappings for free-standing, retaining and parapet walls and chimney stacks.

PERFORMANCE CHARACTERISTICS

Performance Characteristics	Ref.	Clay Engineering Bricks	
		Class A	Class B
Compressive Strength (N/mm ²)	BS EN 772-1	125	75
Water absorption (%)	BS EN 772-7	4.5	7.0
Freeze Thaw Resistance	BS EN 771-1	F2	F2
Active Soluble Salts	BS EN 772-5	S2	S2

RIGID DAMP PROOF COURSE CLASS A ENGINEERING BRICK



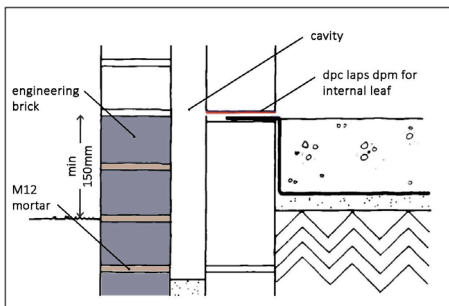
Ace Hotel, Shoreditch. Universal Design Studio
Ketley's Staffordshire Blue Brick Slips, solid bricks and specials

There are two main types of DPCs used in brickwork; **Flexible** and **Rigid**.

For **flexible DPCs** a thin layer of non-permeable material is sandwiched between mortar at least 150mm above the external ground level.

For **rigid DPCs** two courses of low water absorption bricks are bedded in a cement-rich (M12) mortar. Rigid DPCs provide a better resistance to overturning of the wall than do flexible DPC's. Rigid DPCs are also less reliant on the correct installation, which is the most common reason for failure in flexible DPC design.

TYPICAL DAMP PROOF COURSE DETAIL



WORKMANSHIP ISSUES WITH FLEXIBLE DPCs



The case for rigid DPCs with Engineering Bricks.

Class A Engineering Bricks have a water absorption of 4.5% by mass which make them the highest performing class of clay brick available in the UK.

Following the 2015 publication of *BS 85500: Flood Resistant and Resilient Construction — Guide to Improving the Flood Performance of Buildings*, testing of common building materials was carried out at HR Wallingford. **Class A Engineering Brick** was the only material tested which demonstrated complete resistance to water seepage when subject to a static level of 1m of water applied to the face for three days.

Ketley Brick Company Ltd

Dreadnought Works, Pensnett, Brierley Hill, West Midlands DY5 4TH

Tel 01384 78361

Email sales@ketley-brick.co.uk

Web www.ketley-brick.co.uk

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