

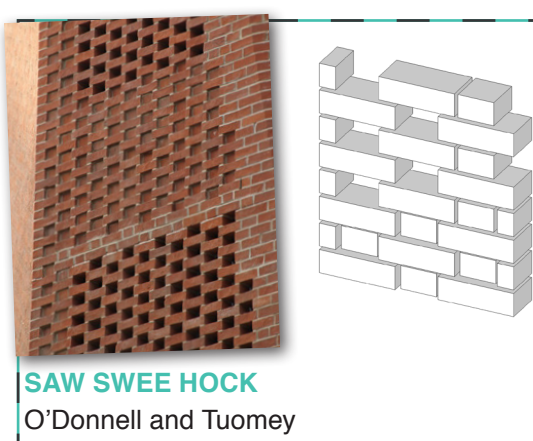
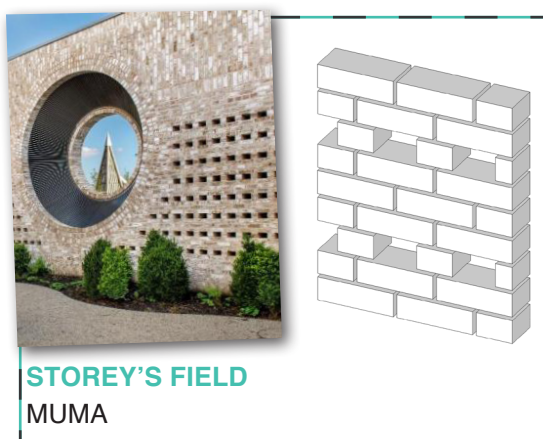
# HIT AND MISS BRICKWORK

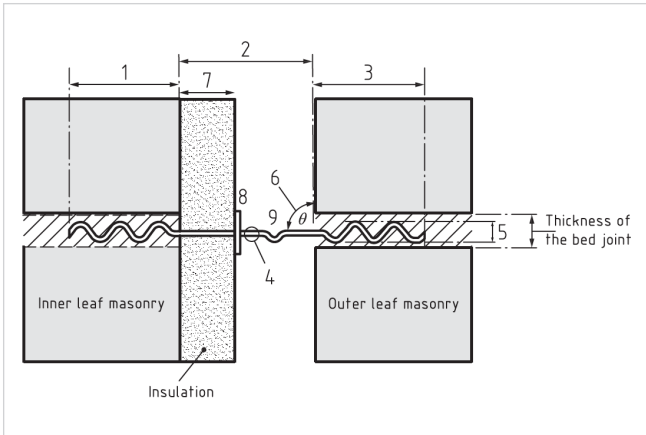
Last updated: February 19

## BDA Design Note 02

### BDA TOP TIPS

1. Consult a structural engineer when bricks are laid in an unconventional bond.
2. Consult with the manufacturer to confirm that the brick specification is suitable for the intended design.
3. Perforated or frogged bricks should be avoided as all faces will be visible, unless approved by the manufacturer.
4. Avoid locating hit and miss panels where it may be possible for the general public to climb them.
5. A site reference panel should be constructed, prior to starting, to agree product quality, design details and workmanship.





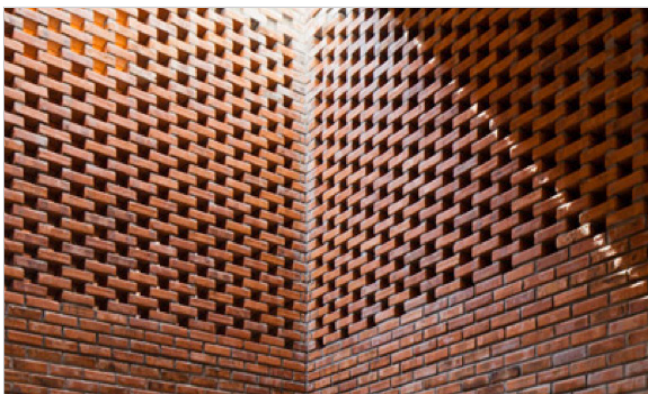
*Standard cavity wall build up from PD6697*

Hit and miss brickwork has not been subject to much structural analysis, although the initial results appear to show that wind loads are much reduced. There is an almost infinite amount of setting out possibilities but as a general principle the panel will be less structurally sound than standard brickwork. Engineers should exercise caution and avoid imposing loads on to hit and miss sections.

#### DETAILING CONSIDERATIONS

The allowable overlap will depend on several parameters that dictate the wall's ability to provide sufficient robustness and bending resistance including:

- wall thickness
- unit size
- masonry bond strength
- spanning distances



*Working to whole brick dimensions will avoid cuts.*

BS EN 1996-1-1 should be consulted to ensure that the structural performance of the hit and miss panel is acceptable.

The amount of overlap should allow for the sufficient embedment and mortar cover for wall ties.



*Hit and miss brickwork broken up in to smaller sections by the introduction of beams.*

#### DESIGN CONSIDERATIONS

Due to the absence of definitive testing, hit and miss panels should be supported on at least three sides. By ensuring that the sections left out of a hit and miss panel are multiples of whole bricks, standard setting out dimensions can be used and cuts avoided.

When design calculations fall outside of the allowable limitations there are a number of options to achieve an acceptable result. The hit and miss panel can be split in to a number of smaller areas, with brick piers and beams used to provide additional strength.

Using a stronger mortar mix may also have a beneficial result on structural stability but care must be taken to ensure the mix is compatible with the brick specification.

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