

## SITE PRACTICE AND TROUBLESHOOTING CRACKS IN BRICK FACE (FIRECRACKING)



Fire-cracks in clay brick. Cracks do not extend into the mortar joint suggesting their presence when built in.

### WHAT IS FIRECRACKING?

Dependant on clay and the manufacturing process, the finished appearance of clay brick products will vary greatly. Some bricks may contain cracks of varying degree (sometimes referred to as fire-cracks) as an inherent feature created during the manufacturing process. They may take the form of fine crazing on the brick surface, or larger cracks found on the body or face of the product.

### CAUSE & EFFECT

Surface tensions during the manufacturing process caused by temperature fluctuations create fine cracks or crazing and are an inherent feature of many products.

Although they can extend into the brick body the product remains durable as it has undergone the firing process during their presence.

Fire-cracks are usually visible on the product as delivered, however, they can be masked by the texture and surface sands used in the manufacturing process becoming visible after bricks are laid as a result of natural weathering of exposed brickwork.

Generally on 'stock' bricks the best side can be selected as the fair face.

**The appearance of brickwork will vary significantly with the type of clay brick chosen.**

The appearance of brickwork is not covered in BS EN 771-1 since it is not performance related. However, BSI have published PAS 70, A Publicly Available Specification which is intended to cover aspects of aesthetics.

The PAS includes the recommendations that all brickwork should be viewed from approximately 3 metres away, and deliveries of bricks should be compared to a reference panel agreed by all parties at the start of work, thought to be representative of current production and quality. The 'aesthetic characteristics' should be assessed upon delivery.

NHBC guidelines suggest 10m as a viewing distance, cracks should not be 'significant' and brickwork viewed as a whole and not on an individual basis.

During construction, bricks with questionable 'defects' should be put aside by the builder for inspection by the manufacturer or, often with Stock bricks, the most desirable face can be selected by the bricklayer to be the stretcher or header on show.

However, the presence of such cracks is not detrimental to the brickwork performance. They will not increase in size or affect the durability of the brickwork.

If there is doubt as to whether cracking in brickwork is due to surface fire-cracks or structural movement always consult the manufacturer or a structural engineer.

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