

Guidance Notes

Peacocking

June 2008

Cause and Effect

The term ‘peacocking’ is specific to blue bricks and is a discoloration of the surface, resembling a petrol stain, which results in an overall darkening effect. This is caused by a reaction between silicate minerals in the clay and water; the iridescence is caused by light refraction through a very thin layer of silica.

It does not affect every individual brick produced, but all manufacturers’ Blue products can be affected from time to time, (basically because blue bricks are generally made from raw materials from the same geological period e.g. Etruria Marl). The clays would naturally produce a red fired unit but through controlled variation in the kiln atmosphere (reduced oxygen) chemical conversions produce the colour change.

The ‘peacocking’ effect is not harmful to the durability of the bricks but, whilst the effect tends to tone down with weathering, it will not weather away.

Independent Laboratory research has confirmed that the risk of ‘peacocking’ is minimised if the brickwork is kept as dry as possible during the construction period and particularly during the mortar curing phase. ‘Peacocking’ is worsened where water flows through an alkaline environment, such as mortar, saturating the bricks. So, as with any brickwork, the requirement for protective measures to be adopted in accordance with good site operations and the Code of Practice for Masonry (BS5628 : Part 3 : 2005), must be given emphasis.

Under normal circumstances, a cleaning operation with a proprietary brickwork cleaner would not have a detrimental effect on the surface of a blue brick.

References:

- (1) BS 5628: Part 3: 2005

For further guidance on peacocking or for information on any aspect of brickwork detailing, please consult our Design Services Department.

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