

APPLICATION & CONSTRUCTION

BUILDING WITH BLUE FACING BRICKS



Blue bricks have gained popularity over recent years and are now used for prestigious buildings rather than civil engineering. However additional care and consideration is required when building with them to achieve a good aesthetic finish.

The following guidance is intended to help you achieve the best finish possible as failure to act on the guidance may result in unsatisfactory finish which can be entirely avoided.

The issues you can avoid are;

- A patchy finish which is costly and difficult to rectify
- Peacocking or picture framing
- Staining
- Floating during laying

For best results ensure bricks are batched for large projects. Speak with an Ibstock Representative as soon as possible.

BLENDING

Due to the reducing atmosphere in the kiln which creates the blue sheen, absolute uniformity of colour is not guaranteed. Therefore blending bricks is of paramount importance.

BS 8000: Part 3: Workmanship on Building Sites states;

“To achieve a good blend, units should be loaded out from at least three packs. It is advisable to draw from the packs in vertical rather than horizontal slices.”

It is important when constructing large expanses of blue brick to mix bricks thoroughly between packs and deliveries to minimise the clustering of tone and shade variation.



Blend from a minimum 3 packs.

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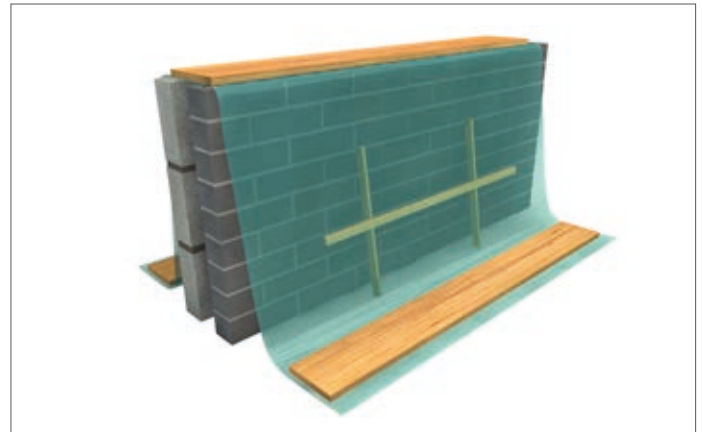
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PROTECTION

To prevent unnecessary staining and 'peacocking'
BS 8000: Part 3: Workmanship on building sites states;

"Cover the tops of newly built brick and block masonry and at all times when work is not proceeding!"

The brickwork should be covered leaving a ventilation space between it and polythene sheeting. If the sheeting rests against brickwork "sweating" can occur resulting in staining. If the perforations become filled with water the reservoir effect will allow free lime to leech from mortar joints causing lime staining and 'picture framing'.



LIME STAINING, PEACOCKING AND PICTURE FRAMING

Lime staining, sometimes referred to as lime leeching, emanates from the mortar joints when the brickwork is saturated. Unlike efflorescence it does not disappear when wet but can build up over time and calcifies into unsightly white deposits. Protecting brickwork from rainfall during and soon after construction will prevent this.

On-going cases of lime leeching occur where detailing has omitted damp proof material from the top of freestanding walls or tanking from earth retaining walls allowing continued water percolation through brickwork.

Ibstock's Technical Information Sheet B5, provides more information and guidance on lime staining.

As cementitious fines leech into the outer face of blue bricks it causes light diffraction through a very thin surface layer of colloidal silica or cementitious material. This is referred to as picture framing and is difficult to remove if allowed to occur.

If brickwork has been subject to weathering with no protection whatsoever the build-up of silica fines can create multi coloured stains caused by light diffraction. When this extends across the entire brick face it is often referred to as 'peacocking'.

Ibstock's Technical Information Sheet B4 gives more guidance on peacocking.



Brick Staining



Peacocking

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SCAFFOLD RASH

Scaffold rash is caused when cementitious droppings gather on scaffold planks and are not cleaned off before the end of a day. Using scaffold sheeting to protect the brickwork from the elements will minimise staining between scaffold lifts.

FLOATING

Floating is the term for bricks that do not absorb much of the water from the mortar mix and tend to sit on top of wet mortar when laid particularly heavier bricks like blues which squeeze water out of the mortar. Blue bricks have water absorption of about 7% or less and can float on the mortar when laid. The simple solution to this is to reduce the amount of water in the mortar mix making it slightly stiffer when first laid.

MORTAR SMUDGING

Mortar snots should be removed as work proceeds.

Newly laid mortar should not be pointed until it has started to cure and is quite firm. The density of the bricks can cause pointing problems if attempted too soon allowing it to potentially foul the brick face and cause 'picture framing'.

INCREASING THE HEIGHT IN A LIFT

To increase the amount of brickwork which can be laid in one lift we recommend avoiding the use of retarders in the mix and increasing the amount of cement from a M4 to a M6 to increase the strength of the mortar more quickly in order that the lower beds of mortar can support those above without squeezing out from between the bricks. Air entrainers or plasticisers can still be used to increase workability.

VISUAL ASSESSMENT

Prior to construction, the manufacturer should provide, upon request, a reference panel sufficiently representative of the required bricks. This should be built on site and should be to a size agreed by all parties but not less than 1m², and be constructed using the intended mortar colour, joint profile and bond of the finished building.

As with all brickwork the distance recommended in PAS 70 for viewing brickwork is 3m.

Ibstock's Technical Information Sheet B12 contains more information on visual assessment.

REMEMBER

Blue brick is difficult to tint due to the sheen achieved during a reduction firing. Generally if tinting is undertaken the entire elevation is treated to blend not only the colour but the sheen. This obviously entails a large cost. Always remember prevention is better than cure.

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