

Wienerberger Technical Guidance

LIME BLOWING

Limestone particles are sometimes present in brick making clays but are normally rendered harmless by grinding in the early stages of manufacture.

They originate from the presence of calcium carbonate particles (frequently fossil fragments) in some brick-making clays. These particles decompose during the firing process and form quicklime. Occasionally larger particles (>1mm) are retained within the process and expand when coming into contact with water, forming calcium hydroxide.

Pitting of the surface can occur when remaining lime particles are sufficiently wetted causing expansion. For particles deep inside the brick, the pressure generated by this expansion is not sufficient to cause any damage. When close to the surface however, the resultant stresses lead to the outer face being disturbed. A small sliver of the brick surface may be dislodged exposing the lime particle below.

Lime blowing is not progressive and once the particle of lime has become wet and 'blown', the remaining brick structure is completely stable. Lime blowing is not progressive and is typically found to reach its peak shortly after it is first observed. The white particles weather down fairly quickly and become a visually acceptable part of the structure.



REMEDICATION

Unless the lime blows exceed 2mm in size when viewed at a distance of 3m, it is advised that they are left alone – from experience, any remedial treatment on small lime blows does not improve the cosmetic appearance of the brickwork.

In severe or highly conspicuous instances, remedial treatment may be carried out by tinting over the holes with a matching pigment (see 'Tinting of Brickwork' for more information). For larger lime blows, the material can be drilled out and repaired with a filling medium. The entire brick, including the repaired blow, is then tinted to match the adjacent brickwork.

