

Wienerberger Technical Guidance

LIME LEACHING

Lime leaching is caused where excess water flows through cementitious material. Water can dissolve calcium hydroxide (free lime) which is then deposited on the brick face. The calcium hydroxide is a soluble form of lime which is created as Portland cement hydrates.

The source of the lime may be the cement from mortar joints, or it may come from concrete or cast stone elements, for example a coping above a brick wall, or a floor slab built into the brickwork.

Lime material washed from mortar joints can be due to lack of adequate protection against rainfall during construction.

The leaching is often seen 'dribbling' from weep holes or fine separation cracks between brick and mortar joints. The calcium hydroxide reacts with carbon dioxide in the air, producing a hard crystalline formation of calcium carbonate.

Although white in appearance, the staining is distinctly different to the soluble salt deposits (efflorescence) which can sometimes appear on brickwork. The initial staining can be removed with water and brushing before it carbonates, but once reaction has taken place an acid solution will be necessary to break down the material.

Proprietary brickwork cleaners tend to be hydrochloric acid based (diluted to the manufacturers recommendations) and appropriate care in handling and protection must therefore be followed. It is important that brickwork is pre-wetted prior to application of any chemical cleaning solution. Only small areas should be treated at any one time. We would also advise that a small, discreet test area should be treated initially. The proprietary cleaning solution manufacturers' recommendations should be followed after the pre-wetting. Although there is a detrimental effect to the aesthetics of the wall, bricks are not affected with regards to durability or structure.

