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CLAY BRICK & PAVER
MANUFACTURER'S ASSOCIATION

Clay Brick Cleaning & Maintenance Guide

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Canterbury ClayBricks · Clay Bricks Ltd · BRICKWORKS · Midland Brick NZ · PGH

This manual outlines the steps required to reduce the need for cleaning & maintenance of brickwork.

This manual is a guide only, and it is important to discuss any concerns with your bricklayer and/or brick supplier if you are unsure. Bricks and mortar vary in nature because they are derived from naturally occurring products from varying sources. There may be more than one acceptable solution for any situation.

Cleaning Brickwork

NEW BRICKWORK

Getting it right from the start. It is important to keep bricks clean and dry before the laying process. Store bricks off the ground, external factors like mud, clay and ground water can contaminate the finished result even if they appear clean once laid.

- During the laying process it is best to keep bricks clean as you go as mortar stains will dry and the longer left the harder they will be to clean. Cover unfinished work and stored bricks at the end of the day.
- Keep gutter overflow directed off brickwork until final downpipes are installed.
- When removing mortar smears avoid using hydrochloric acid to clean bricks. There are a number of modern cement treatment cleaners on the market that are more environmentally friendly and less harmful to the brickwork and bricklayer alike.
- Avoid the use of water blasters as these can damage the surface of the brick and mortar. They should only be used by experienced clay brick cleaners.
- Once bricks are laid, this is the finished product so should be protected from other trades and external sources.

OLD BRICKWORK

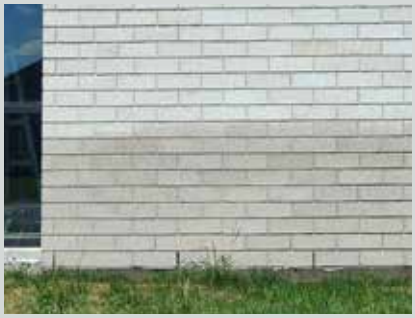
Sand and soda blasting can cause permanent damage to the surface of the brickwork. Consult professionals before attempting.

- Avoid water blasters as these can damage the surface of the brick and mortar. Consider store bought removers Wet and Forget or similar. Always trial a test patch and allow to dry before tackling full project.

MAINTENANCE

Brickwork requires minimal to no maintenance but there are a few things to check to keep the veneer looking its best.

- Make sure landscaping/gardens and hard surfaces are kept below bottom edge of brick as brickwork will absorb ground water and salts from these sources.
- Ensure weepholes are not blocked.
- If brickwork does become dirty, consider a light wash with an acid free cleaning agent. Use correct cleaner for the application.
- For brickwork that will be painted or plastered you will need to refer to the applicator or paint supplier.
- Avoid garden sprinklers that are directed at the brickwork. These can carry harmful ground salts that can be very difficult to remove.



Stain Removal

EFFLORESCENCE

Appears as a white powdery substance on the bricks and mortar. This is derived from soluble salts in the mortar. Soluble salts can occur from a number of sources, mortar, soil or fill in contact with the wall, sea spray, ground water from garden sprinklers and concrete. The salt laden water is absorbed by the brick and evaporates leaving behind the residue.

Most efflorescence will naturally disappear over time, however its removal can be accelerated.

Methods:

- In mild cases use a damp cloth to wipe off. Cleaning the cloth regularly with clean water. Do not hose down or use wet sponge as this will likely push salts further back into the brick.
- Brushing with a stiff dry brush. Use a dust pan or vacuum cleaner to collect salts as this will stop salts from re-entering.
- Use G.A.R (green acid remover) or CT Cleaner. Follow manufacturers instructions on use.

LIME RUN

Lime run (LR) can sometime be confused with efflorescence. They are similar in nature but source and treatment can be different.

LR is derived from soluble calcium salts found mainly in concrete and mortar. LR requires an ongoing available source of water and calcium to occur. The calcium laden water will seep from a crack or pinhole in the masonry and follow a path down the brickwork. These mobilized salts will over time react with carbon dioxide and form a hard, crusty calcium carbonate deposit.

Methods:

- To avoid the likelihood of this happening follow trade practices in our technical documents. In particular avoid these situations; concrete filled columns, landscaping soils built up onto or behind brickwork, leaking waterworks etc.

VANADIUM

Appears as a yellow/green-ish stain that can also appear as reddish-brown stain. It is a naturally occurring mineral and is not a defect in the brick. These stains normally weather away by themselves but if they don't they can easily be removed. Generally appearing immediately after or during the laying process. Allow the brickwork to dry before cleaning as the salts will be being carried with water from the whole way through the brick.

Do not use acids to remove. Acid can burn vanadium stains and make it harder to remove.

Methods:

- To remove use MVR remover (Manganese Vanadium Rust Remover) or similar. Follow application method.
- Apply 4% Sodium Hypochlorite (Janola) with water and spray or brush onto stain.

CBPMA STRONGLY RECOMMEND NOT TO USE HYDROCHLORIC ACID TO CLEAN BRICKWORK.

Stain Removal

MANGANESE

Appears as a brownish stain. Manganese is a mineral that is sometimes added to clay bricks and it is also naturally occurring in clay. Generally appearing after the laying process is finished and the bricks have dried out.

Methods:

- Do not use acids to remove.
- To remove use MVR remover (Manganese Vandium Rust Remover) or similar. Follow application method.

PAINT/GRAFFITI

Paints can be removed from brickwork. It is best to treat as soon as possible before paints get a chance to harden.

Methods:

- Try using store bought paint removers.
- Some paints can be removed by softening with a propane torch and then scraping and brushing off or burn paint to a char and brushing off.
- Consider using a specialist company who are experts in the field of paint removal.

IRON OXIDE (RUST)

Rust can be the result of using hydrochloric acid on clay bricks.

Methods:

- This may be able to be removed by applying a solution of 1 part phosphoric acid to 4 parts of water. Allow up to 24 hours for it to work. It may need a couple of applications.

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Stain Removal

COPPER AND BRONZE

Sometimes clay brick veneer may be in close proximity to metals such as copper or bronze. Water washing over these metal surfaces can result in a bluish-green stain appearing on the surface of the bricks.

Methods:

- These stains may be removed using a solution of 1 part acetic acid (80% or stronger): 1 part hydrogen peroxide (30%-35%strength): 6 parts water.

TIMBER RESIN STAIN

These usually arise from water spreading tannin or resin stains on the wall, particularly from hardwoods. The stains are usually brown or grey and are present on both bricks and mortar.

Methods:

- Normally timber stains will be removed by scrubbing with a solution of 20-40 grams oxalic acid per litre of hot water. Neutralise the wall after this treatment.
- Where the stain is not removed apply a bleaching solution containing sodium hypochlorite and allow it to dry on the wall.

Treating Brickwork

- Sealing and treating brickwork can be done to solve an issue or change the look. Normally not recommended but in certain circumstances i.e. excessive moisture, it can be done.
- Sealing brick to repel water use Aqualux or similar, see manufacturers instructions. Try a test patch first to make sure you have no adverse effects. Avoid using silicones that put a physical barrier/coating over the brick as the brickwork will trap salts behind this barrier.

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