LOWIE

BRICKS

WORKING WITH LOWIE BRICKS ON SITE

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INTRODUCTION

Lowie bricks are CE marked under both ceramic and concrete standards from EN 771 (EN771-1for clay, and EN771-3 for aggregate concrete masonry units), having achieved the key technical properties of both types, despite being an entirely new, patented, type of facing brick.

With any brick, there are potential risks if good site practice is not followed. Lowie bricks are designed so that they can be used in exactly the same way as clay or concrete bricks - any features that require different processing are outlined in this guide.

Please contact a member of the Lowie bricks team if you have any further questions, or if you would like to arrange a “toolbox talk” site visit.



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USABLE, FINISHED SIDES

Lowie bricks are treated with a specially developed moisture resistant coating. The coating is applied to the finished (or faced) sides which will be exposed to the elements. These usable sides are weather resistant, while the remaining uncoated sides are breathable, and have a higher rate of water absorption, for fast bonding with mortar.

ONLY THE FINISHED, COATED SIDES SHOULD BE LAID FACING OUTWARDS.

If uncoated sides of Lowie bricks are laid exposed to the elements, they will be prone to darkening from prolonged saturation, and discolouration over time. These effects are purely aesthetic - from a technical and structural perspective, there is no reason why uncoated sides cannot be laid facing out.

HANDMADE

STOCK

FINISHED





FINISHED

UNFINISHED





UNFINISHED

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USABLE, FINISHED SIDES

TUMBLED

LINEAR

FINISHED





FINISHED

UNFINISHED





UNFINISHED

- Every Lowie brick has 1 usable “stretcher” side
- At least 1 in 3 bricks have a usable “header” side
- Non-coated headers have a horizontal recessed marking to avoid confusion
- Do not lay non-coated sides facing outwards

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LOWIE BRICKS ARE SOLID

Lowie bricks are solid – this is a deliberate feature, with several advantages over frogged and perforated bricks.

- Solid bricks use approximately 25% less mortar.
- The greater surface area of the top and bottom faces increases the speed at which the bricks “grip” or bond with the mortar.
- Solid Lowie bricks can be laid either way up.



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USING LOWIE BRICKS BELOW DPC

Lowie bricks come with the best possible rating for durability (F2), meaning they have the technical properties to allow for use below the damp-proof course.

Any brick laid below the DPC will be susceptible to build up of moss and dirt, and darkening from prolonged saturation, and these effects can be more noticeable with any lighter coloured bricks.

We recommend treating Lowie bricks laid below the DPC with a hydrophobic masonry sealant for protection against these effects - this is only necessary from an aesthetic perspective; there is no structural or technical requirement for the treatment.



PROJECTION DETAILING



If any uncoated surfaces of Lowie bricks are laid exposed to the elements, such as the top of a projection detail, we recommend the use of a BD 1.3 with 50mm hydrophobic slurry treatment to top and bottom bed, to eliminate the risk of discolouration. Alternatively, treat the projected area with a hydrophobic masonry sealant.

As with use below the damp-proof course, this is simply to counteract the aesthetic impact of darkening due to exposure and is not necessary from a structural point of view.

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CUTTING LOWIE BRICKS

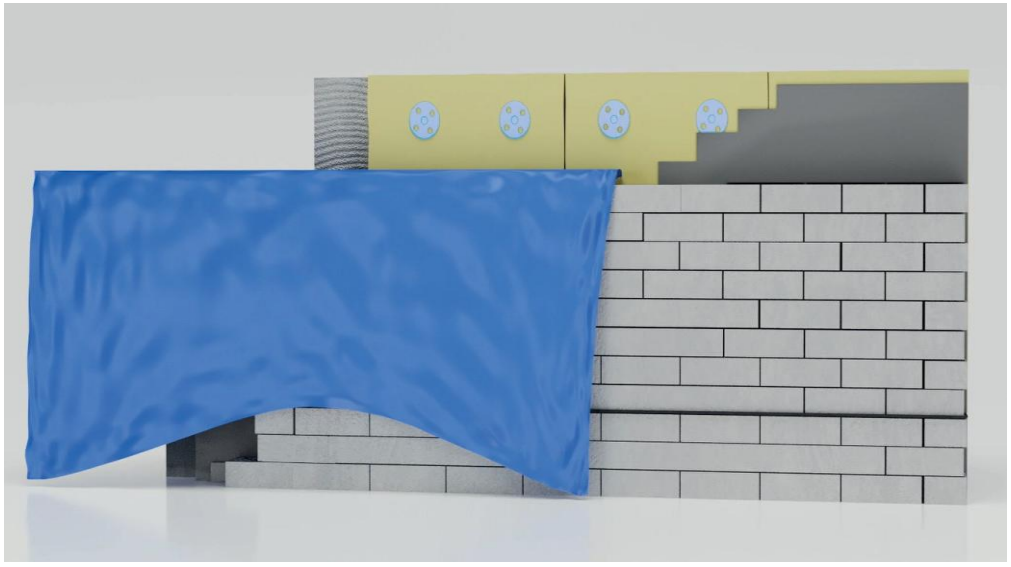
Cutting any bricks and blocks on site presents health risks from silica dust inhalation and this is no different for Lowie bricks.

Arranging off site cutting where possible is recommended – but in cases where additional cuts are required during the construction program it may not be practical or cost effective. When on site cutting is unavoidable, dust masks with a minimum FFP3 rating must be worn, and water-based dust suppression systems should be employed.

A risk assessment should be conducted before any on site cutting.



STORAGE AND PROTECTION, BEFORE, DURING AND AFTER CONSTRUCTION.



Laying bricks that are wet or saturated can cause a number of problems and the best solution is always to keep them dry before, during and after construction.

When taking delivery of a new consignment of Lowie bricks, packs should be placed on hard-standing surfaces and stored on pallets, free from contact with groundwater - Lowie bricks are supplied shrink wrapped and on pallets as standard. For packs that are to be stored on site before laying, we recommend opening the packaging at the sides to allow air to access the bricks, while keeping them protected from rainwater.

To prevent moisture build up in the cavities, walls that are under construction should be covered over at the end of the day with a waterproof membrane – wet wood should not be used in this instance as this can result in staining. Cavities should be kept clear of debris to avoid moisture bridging.

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CLEANING LOWIE BRICKS

Lowie bricks can be jet washed and non-metal brushes can be used to remove deposits.

As with any jet washing task, we recommend testing the pressure and distance from the wall in a small, less visible area first.

In line with advice from clay brick manufacturers, we do not recommend the use of any acid cleaning products with Lowie bricks.



WASTAGE

Any defective Lowie bricks (chipped, broken or hairline cracks) should be put to one side and not built into the wall.

The expected amount of wastage with Lowie bricks in standard construction is no more than 5%. If a greater percentage is discovered this should be reported to a member of the Lowie bricks team as soon as possible. Any defective bricks (chipped, broken or hairline cracks) should be put to one side, and a Lowie representative will investigate the cause of the damage. Waste can include defects in production & damage caused during transport to site. We do not accept liability for damage caused during the transport of goods on site.

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COLOUR CONSISTENCY AND MIXING PACKS



Lowie bricks have extremely high levels of colour consistency compared with kiln-fired clay bricks, however there may be subtle variations in between production batches.

To avoid colour banding, it is recommended to mix from 3-5 different packs.

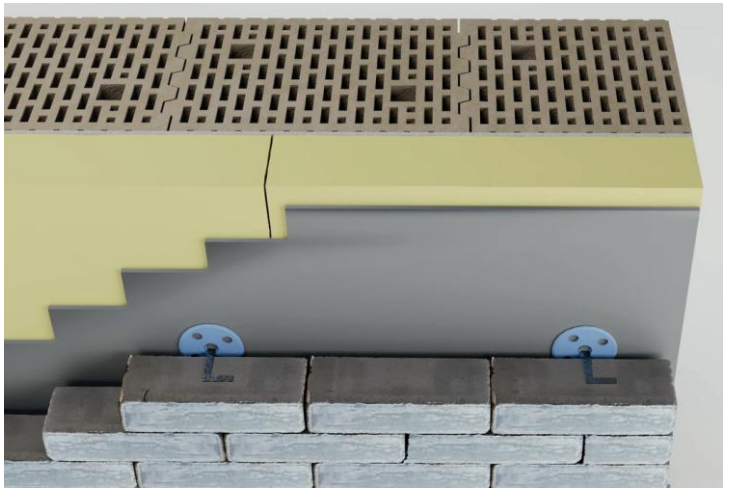
In the case of multiple deliveries, we recommend mixing from packs from different deliveries.

WALL TIES

For UK metric format Lowie bricks (215 x 65 x 102.5mm) in standard cavity wall installation, there should be a minimum of 2.5 wall ties per m^2.

Horizontal spacing should not exceed 900mm and vertical spacing should not exceed 450mm.

For Lowie bricks with a depth of 80mm, such as the Linear format (240 x 40 x 80mm) the requirement is increased to 5 wall ties per m^2



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MOVEMENT JOINTS & BED JOINT REINFORCEMENT

Lowie bricks, with their unique composition, experience a different rate of hygrometric shrinkage and expansion compared with clay bricks.

This means that vertical movement joints are required every 6 meters with Lowie bricks, although this can be extended to every 8 metres under certain conditions. This is the same as the requirement for concrete bricks, whereas with clay bricks they are required every 10-12 metres.

Type of Masonry	Distance Between Movement Joints by Eurocode 6-2	Hydrometric Shrinkage / Expansion
Lowie bricks	6-8 M	≤0.45 MM/M
Concrete bricks	6-8 M	≤0.45 MM/M
Clay bricks	10 -12 M	≤0.1 MM/M

Horizontal Movement Joints

For buildings up to 4 storeys or 12m high (whichever is the lower) horizontal movement joints are not required. For buildings over 4 storeys high, NHBC guidance advises that horizontal movement joints should be included every 2nd or 3rd floor for clay bricks. This is the same for Lowie bricks – horizontal movement joints should be included at every 2nd or 3rd floor for any building over 4 storeys or 12m high.

Free Consultation Service

Lowie offer a free consultation service regarding the positioning of movement joints.
Our in-house structural engineers are trained to provide expert advice on the placement of movement joints, considering the aesthetic impact as well as the technical requirements.

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MOVEMENT JOINTS & BED JOINT REINFORCEMENT CONT.

Disguising Movement Joints – Colour Matching Sanded Silicone

Movement joints can be made to blend in with standard mortar joints by filling the gap with a colour matching silicone. There are structured, pre-sanded silicone products available, which emulate the texture of mortar as well as the colour.

The below picture of a diagonal movement joint demonstrates how the use of colour matching, structured, pre-sanded silicone can make the movement joint indistinguishable from the standard mortar joints.

Please speak to a member of our team for recommendations of colour matching sands, silicone and mortar to compliment all products in our range.





CONTACT US

If you have any questions relating to any of the topics in this document, please don't hesitate to contact our team.

For further education on Lowie bricks "The Brick Revolution CPD" is presented monthly in our showroom. Please use the email address below to book yours.

We look forward to welcoming you!

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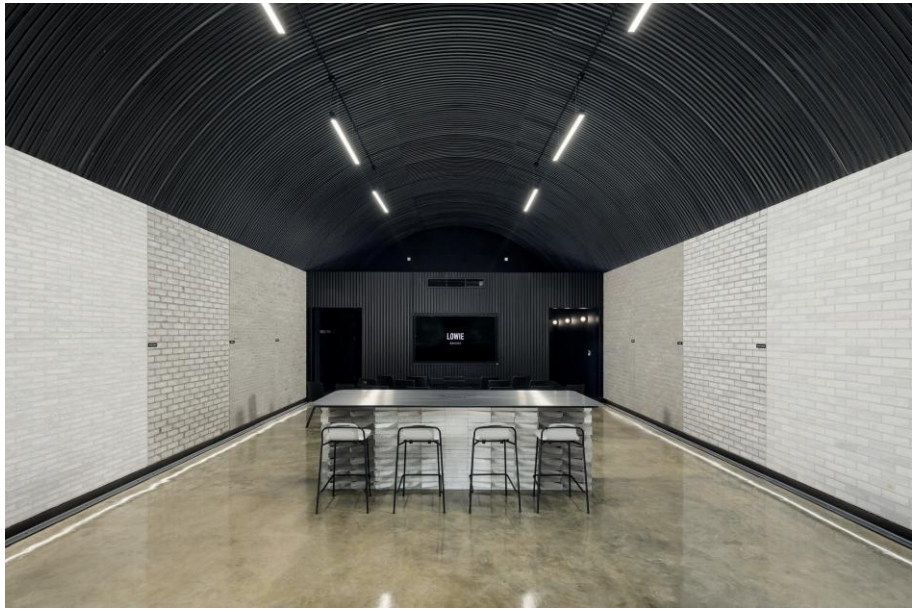



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