

Mortar and Pointing Specification

Refurbishment and external alterations to an existing farmhouse, part demolition and conversion of an existing barn to form a residential dwelling and associated works

Located at:

Silver Hill Farm, Lower Lane, Rochdale

Date: July 2025
Our Ref: 1517/MPS
Revision:

Introduction

This mortar and pointing specification has been produced to accompany an application being made to the local planning authority for approval of details reserved by a condition in relation to listed building consent 22/00999/LBC.

The works comprise the refurbishment of, and external alterations to an existing farmhouse, part demolition and conversion of an existing barn to form a residential dwelling and associated works. The development received consent on 02/09/2024, this document seeks to address a number of the conditions that have been attached to the associated listed building consent concerning the works to the listed farmhouse and associated barn, particularly Condition 03 which states:

'Before their use on site, samples of all the materials to be used in the construction of the external surfaces of the development hereby permitted shall been approved in writing by the local planning authority. Details shall include but not limited to door and window details, sample bricks and panels, mortar specification, details of window surrounds (including thickness), PV panels, paint colours for doors and canopies and rainwater goods. The development shall be carried out and thereafter maintained in accordance with the details approved unless otherwise agreed in writing by the Local Planning Authority.'

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Mortar shall be of the mix proportions necessary to achieve adequate strength and durability as well as being suitable for the type of masonry that is to be used which in this case is natural stone, as well as a small proportion of brick which is to be used in the external wall construction of new extension to the barn.

All masonry shall be capable of supporting the intended loads and have appropriate resistance to the adverse effects of freeze/thaw and providing an adequate-resisting structure. All masonry is to be laid on a full bed of mortar with all perpends being solidly filled. Joints should be filled to reduce the risk of rain penetration and dampness in the wall. Solid mortar bedding and fully filled perpends are particularly important where the cavity is to be fully filled with insulation. Work is to proceed with mortar being struck off from all joints, any cavities within the wall, including any cavity trays, within the external walls are to be kept clear of mortar droppings. Masonry shall not be laid in cold weather unless suitable precautions are taken set out within the latest NHBC Standards.

Different types of masonry require different strength mortar mixes. Some parts of the building, such as below the DPC, chimneys and copings, may require a different mix to the main walling. It is essential the mix is correct for the application; recommended mortar mixes are given in within the latest NHBC Standards. Generally older buildings will function well if they are allowed to work as originally intended; the mortar should be relatively permeable and allow moisture to pass through and evaporate from the surface i.e. enabling the building to 'breathe'. In order to achieve this it is proposed that a lime-based mortar be used for the project. The proposals are to incorporate a mortar mix consisting of lime and sand:

- Limes should conform to BS EN 459.
- Sand and aggregate from natural sources should conform to BS EN 13139.

The mortar mix is to be 1-part Natural Hydraulic Lime 3.5 (NHL 3.5) to 3 parts sand (aggregate); cement is not to be used within the mortar mixture. The sand/aggregate is to consist of 1.5-parts 5mm down sand and 1.5 parts of 2mm down sand. Sands should be well-graded; as a rule of thumb for pointing, the maximum size of aggregate should be no bigger than one third of the joint width. Sands, which contain a clay or silt content of more than 4% should be avoided, as these will inhibit the contact between lime binder and aggregate. Sands which have a high fines content should be avoided as the larger surface area of these will require more water to be used in the mixing, this higher water content will induce shrinkage and can affect flexural and compressive strengths. Monogranular sands should be avoided as they will possess poor workability qualities and will inhibit good vapour exchange i.e. the ability to breathe. There are no pigments or dyes to be used within the mix. Colour is to be consistent and is to match the existing farmhouse/barn.

Pointing Specification

All pointing and re-pointing works to existing stone masonry are to be in accordance with 'SPAB Technical Pamphlet 5 – Repointing Stone and Brick Walling; with particular reference to 'Section 7.2 – Rubble Stone walls'.

UNDER NO CIRCUMSTANCE IS 'STRAP' OR 'RIBBON' POINTING, OR RECESSED JOINTS, TO BE USED.

The proposed pointing work to existing stone masonry is to be finished by scraping with an edge of a trowel, leaving the joint flush with the edge of the stone without recessing the profile. After the initial set (possibly the following day), the mortar is stippled/tamped with a 'churn' brush with stiff natural bristles to compact the mortar, removing any laitance from the surface of the joints, revealing the coarse aggregate. If the brush bristles are picking up mortar, it is a sign that the stippling is being undertaken too soon. The surface of the joint should be firm to the touch but can be marked with a fingernail.

The joints are to be rubbed with hessian which provides a less-immaculate and more suitable finish than brushing alone. Do not use a water spray to roughen the surface as this washes out free lime, weakening the mortar mix and leaving white streaks on the masonry.