

Specification for Flintwork

in connection with

Clymping Mill

on behalf of

Mr G. Love

prepared by

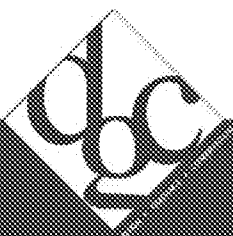
DEBORAH GARDNER IHBC PG Dip (Bldg Cons)



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Flintwork

Prior to commencement of works carry out inspection of all the surrounding flintwork, Record photographically areas to be repointed / repaired showing:

- surrounding work
- joint sizes
- texture of pointing
- style of dressing (brick)
- any special or unusual features

Cross refer areas of repair on drawing, schedules or other to the Contract Administrator's approval.

Prepare mortar samples as required by the contract administrator to ensure that the materials and finish of the new flintwork matches as closely as possible the existing garden flint walls.

Agree with the contracts administrator the bond and finish of the flintwork from the existing garden walls and prepare a sample panel of flintwork to replicate the existing appearance in all respects, (including finishes, colours, courses, patterns, etc.) The sample panel to be constructed as a free standing 1m x 1m structure, retained on site for the duration of the works.

A sample of the existing mortar, location to be agreed with the contracts administrator to ensure authenticity of the mix to be submitted to Chalk Down Limes, or similar and approved for the purpose of analysis. Confirmation of exact ratios of materials to be determined so as to replicate the results of the analysis and the original lime mortar.

Generally the mortar mix shall replicate the existing which shall be determined by analysis, otherwise:

Sheltered Exposure

1 part	lime putty
1.5 parts	Well graded sharp sand
1.5 parts	Porous limestone
1 part	Brick pozzolan

Moderate Exposure

1 part	Natural hydraulic lime (NHL2)
1.5 parts	Well graded sharp sand
1 part	Porous limestone / Grit to 6mm

Severe Exposure

1 part	Natural hydraulic lime (NHL3.5)
2 parts	Well graded sharp sand with grit to 6mm

ADMIXTURES AND MASONRY CEMENT WILL NOT BE PERMITTED

NOTE: Gauging boxes must be used in the preparation of mortar and the correct preparation of mature lime putty, by chopping and ramming. The water content of the mortar mix is to be strictly controlled and in accordance with best practice. The workability of the mortar is to be achieved using a paddle mixer or similar and approved.

Structural Stability

The Contractor shall be entirely responsible for the structural stability during repairs and shall arrange that sufficient temporary supports are used as works proceed to keep the structure stable until repair is completed.

Temporary bracing where deemed necessary, shall be designed by the Contractor so that it does not impede work on site or in any way weaken or impair the serviceability of the structure.

Removal / Taking down Flintwork

Identify areas of flintwork to be removed as specified and provide all the necessary temporary support to adjacent areas to prevent damage or collapse during the works.

Where aggressive cementitious mortars exist and of some depth 'stitch drill' with a masonry drill to loosen.

Flintwork

Using sharp tungsten tipped chisels remove all inappropriate cement mortar and carefully take down flint garden wall in accordance with the contract documentation. Ensure that the flints are not damaged during the demolition process. All existing flint to be set aside, cleaned to remove all trace of existing mortar and stored avoiding damage to the flints ready for re-use. Particular care should be taken where the flint is knapped and regular.

At junction between work to remain and area of repair, adopt methods necessary to prevent displacement of existing structure during taking down operations.

Use manual tools only.

Inform Contract Administrator if signs of structural movement are found during taking down operations.

Remove remaining jointing pointing attached to surrounding work adopting methods which will ensure that no disturbance is caused. Remove loose material and dust taking corework back to a sound backing.

Remove existing metal fixings such as nails, metal cramps, dowels and brackets within area as directed by the Contract Administrator.

Remove remnant corework, pointing and jointing materials and other unwanted debris from site to Local Authority tip or similar.

Ensure that the bond, joint size and any other special or unusual features are replicated in accordance with preparations records. In walls which are faced on both sides build in bonding stones of sufficient length to tie facework into the core. Flush out voids with clean water as specified to remove all loose material and reduce suction. Wet backing and rebuild flintwork in short lifts taking care to match the existing flintwork. Ensure that long tailed flints are well anchored in to provide sufficient bonding. Where there is a deficiency in the bonding flints use austenitic stainless steel wire, bronze or similar and approved ties or anchors. Mortar for rebuilding should be as dry as possible while achieving a workable mix.

Pack mortar around the flints using a suitable pointing iron until a slightly recessed joint is achieved. Allow to set overnight before tooling back to expose aggregate where necessary as specified for re-pointing.

Repointing Flintwork

Rake out joints to a firm backing and to a minimum depth of 38mm, using quirks, chisels and tooth masonry chisels or methods necessary to prevent damage to the surrounding work. Cold chisels may wedge joints and should not be used. Generally use manual tools, only where aggressive cementitious mortars exist and of some depth should a masonry drill be used to 'stitch drill' and loosen. Otherwise no power tools will not be permitted. .

Where mortar has disintegrated, and the joints are empty they should be deep tamped with grout ensuring that the grout is not closer than 38mm from the finished face of the flintwork. If mortar, when tamped, finishes less than the required depth of cutting out for repointing, it should be cut back as necessary for repointing.

Impact, when cutting out should be at an oblique angle to the joint face, not direct into it. Cutting out should leave a clean square face at the back of the joint for optimum contact with the new mortar. Well attached mortar to remain in situ.

The joint should be carefully cleaned out with a bristle brush, adequately stiff to remove loose material, and flushed out with clean water. All loose material must be removed from the joints before filling can commence. This operation is to be carried out from top to bottom avoiding cross contamination.

Where the joints are colonised with algae or lichens, a biocide must be used on the dry surfaces during the cleaning out. Residue from the chemical treatment will be washed away with clean water, again working from top to bottom.

Repoint in a continuous operation working from the upper level of repair downwards

Liberally wet existing mortar, press home new mortar firmly preventing voids forming behind, but avoiding encroaching over arises of surrounding flints. Do not try and achieve compaction from the surface alone.

Finish slightly recessed with a rag or stick or brush (NOT a steel trowel).

Brush after an initial set to remove laitance from the mortar surface and to expose the aggregate.

Drying

During periods of rapid drying, either by general temperature, sunlight or wind, ensure that the joints are prevented from rapid drying by spraying with fine water sprays, and covering with sheets of wet Hessian. Ensure that drying takes place steadily over a period of not less than 5 days.

The Hessian should not be in direct contact with the mortar.

Where there is the risk of freezing or rain, dry Hessian and polythene sheets should be provided for protection. Completed face work shall be protected and kept clean and free from mortar droppings and scaffold splash

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