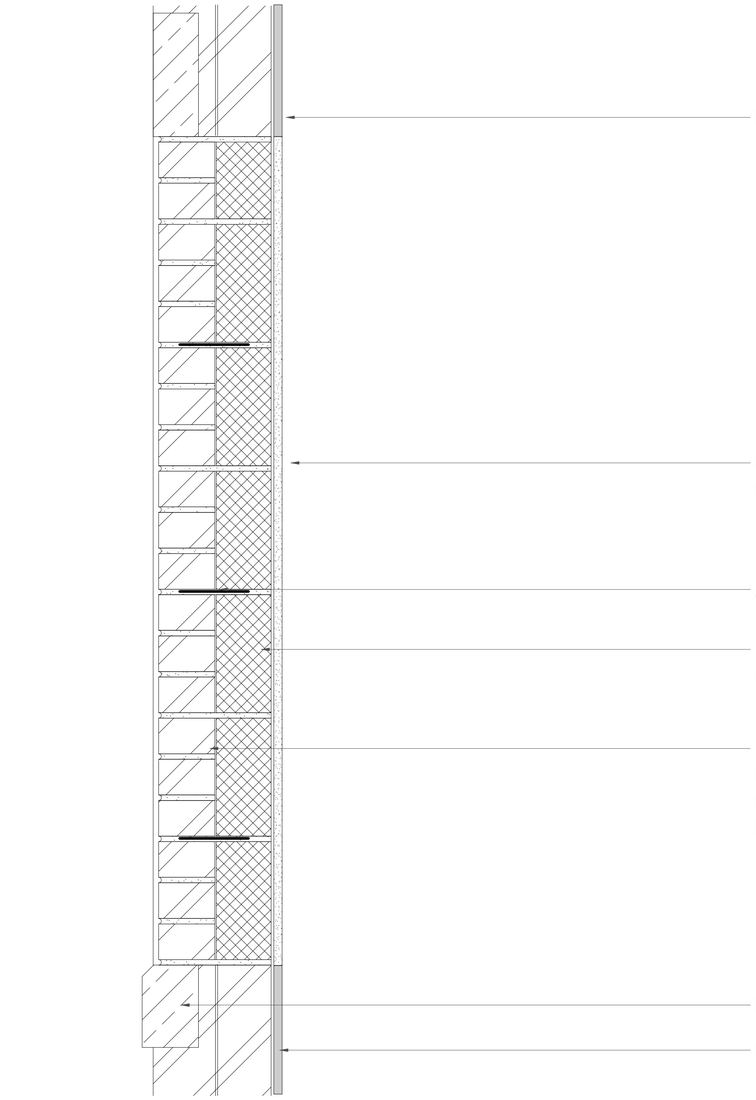
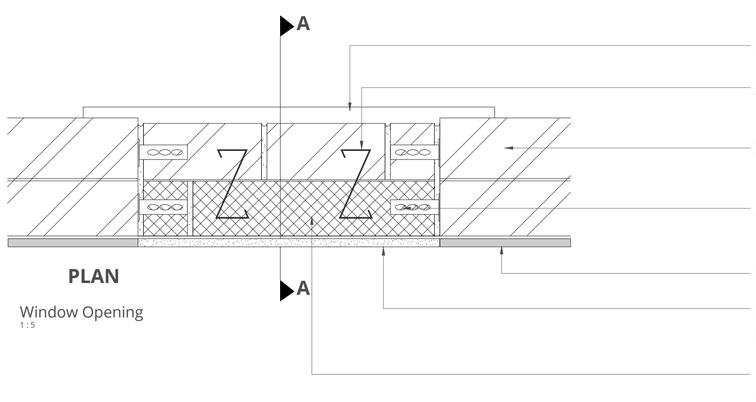


SECTION A-A



PLAN

Window Opening
1 : 5

BRICKWORK REPAIR & REPOINTING SPECIFICATION
Pointing in the sections below covers. a. re-pointing of existing walls where required under the Contract b. pointing to mortar in newly constructed masonry
The Contractor should provide sample panels of pointing to allow inspection of re-pointing of existing brickwork. Trial panels to remain on site for the duration of the Contract until the completion and approval of the works.
The typical specification below may be altered if agreement is gained in advance to meet the site requirements.
In preparation cut out all loose and defective mortar in existing masonry to a depth equal to one and half times the width of the joint and never less than 35mm. in areas of particularly defective brickwork identified on site. This may involve cutting out less existing mortar and insertion of extra mortar to meet the specification below. Care may be needed to only cut out very small areas to prevent collapse of the masonry.
For removal of existing mortar equipment should be used that will minimise damage to the masonry and which will be more precise than use of hand held hammers and suitable (less than width of mortar) pointing chisels. Sound mortar should remain undisturbed. a. Angle grinders with circular saw blades and similar chasing tools will not be permitted. b. Mortar picks and scotch hammers will not be permitted c. Where necessary use specially made tools for extra fine joints i.e. hacksaw blades, spikes and fine plugs to avoid friction contact with edges of the brick. d. While the general specification for funded projects does not allow use of any power tools it is acknowledged that precision drills and files and purpose made tools provide the ability to remove mortar in a much more diligent and precise manner than manual techniques. The Contractor will need to discuss any proposals for tools in advance and obtain agreement from the conservation team.
All dust must be removed prior to repointing. Raked out joints should be thoroughly cleaned from top to bottom using brushes, low pressure compressed air or washed out with a hose.
Joints to be thoroughly wetted before mortar inserted.
Pointing shall generally be using an NHL 3.5 mortar. The pointing should be flush finished then brushed back with a stiff bristle brush until slightly recessed behind the face of the masonry. Wire brushes must not be used. The face of the masonry should be kept clean at all times. Where the existing masonry is generally eroded, the face of the mortar should be kept back to the point at which the joint remains the original width (unless agreed otherwise) so that re-pointing should not increase the width of the original joints.
Where cavities of loose material of depth greater than 50mm are found replacement mortar must be built up by tamping in layers not exceeding 75mm in thickness with setting time allowed between layers using the structural mortar mix. New reclaimed matching brickwork may be inserted where appropriate.
Curing; the mortar once placed in the joints must be protected from drying out quickly from wind, rain and frost. The setting time is very slow. The area is to be covered with damp hessian or canvas sheeting for an average period of two weeks. The length of this period will depend upon the prevailing conditions and may be longer (although is unlikely to be shorter). In warm or windy weather the sheeting must be sealed to prevent evaporation. In frosty weather additional insulation in the form of straw filled sacking (or other equivalent) will be necessary to prevent freezing of mortar. The amount of insulation depends upon the level of temperature. Ideally no pointing should be carried out where a risk of frost is present. Rain must never be allowed to strike the mortar and brickwork until the setting process is complete. Exposed wall tops and flat or sloping surfaces are very susceptible to frost damage and may have to be protected for extended periods by tarpaulin weighted down with straw bales.
MORTARS
Where no investigation or testing has been carried out on the existing walls:
Two natural hydraulic lime mortars may be required on site. Natural hydraulic lime mortar category NHL 3.5 or 5 is to be used as specified, delivered as a hydrated hydraulic lime powder in sealed bags unless lime putty mortar is agreed. Hydrated lime (bag lime) and both ordinary and white Portland cement should only be brought on site with prior approval (e.g. for foundations)
It is essential that the material be kept dry.
The brickwork is generally to be consolidated and repointed using NHL 3.5. However the Contractor may choose to use NHL 5 as a structural mix where there are problems over the short term stability of the works and a harder and quicker set is required.
Requirements for NHL 3.5 re-pointing and consolidation mix: a. The outer 40 to 25mm of mortar should be re-pointing mix. b. The mortar should be weaker than the original mortar using NHL 3.5 c. The requirement for pointing mortar is that it starts to set within two to four days unless otherwise agreed. d. A mortar mix (3 to 1) may be prepared with discussion and prior approval i) 1 soft sand ii) 2 grit sand iii) 1 hydraulic lime putty e. Where joints are very wide add ½ grit aggregate (5mm down) may be added.
For mixing;
a. A conventional cement mixer may be used, although the lime tends to roll around rather than mix with the aggregate. A roll pan or paddle mixer is therefore preferable.
b. If mixed in a drum precautions should be taken to prevent balling. It is recommended that a small quantity of water is put into the mixer while not rotating and then the appropriate quantity of lime added. When the mixer is switched on the lime should be turned into a wet slurry. The sand is added to the slurry with more water and mixed for approximately 15-20 minutes. Do not overfill mixer as this will prevent proper mixing. The mix to begin with should appear rather dry but as mixing time increases the render will become much 'fattier' At the end of 20 minutes the final water can be added to obtain the correct workability – if required. If too much water is added the risk of shrinkage will increase and the final strength reduced.
c. Mix ingredients thoroughly to a consistence suitable for the work and free from lumps. Mortars containing air entraining admixtures must be mixed by machine do not over mix
d. Do not use any Plasticisers unless otherwise agreed.
e. Measure materials accurately by volume using clean gauge boxes. Proportions of mixes are for dry sand allow for bulking if sand is damp. A shovel is not acceptable since quantities are too inconsistent.
f. Use mortar within about two hours of mixing at normal temperature. Use retarded mortar within the time and site temperatures recommended by the manufacturer. Mortar may be re-tempered to restore workability but only within these time limited.
Requirements for structural mix:
a. If considered necessary a NHL 5 mix may be used for reconstruction of areas of masonry where there are concerns over stability and a rapid set is required for safety reasons. However NHL 3.5 is preferred to allow for subsequent movement of the walls.
b. The mortar shall have properties as above except that the setting period may be reduced to 24 hours. 2.8 Sand for mortar. a. To BS EN 13139:2002 unless otherwise specified b. Sand for face work mortar to be from one source different loads to mixed if necessary to ensure consistency of colour and texture.
c. When a range is specified (e.g. 1:1:5:6) use lower proportion of sand for grade G sands and higher proportion for grade S.
d. Ground stone or course dark grit and to be generally used to reduce shrinkage and allow for insertion of lime putty in place of some of the fine sand.
e. Where very fine joints preclude the use of aggregate sand/crushed stone, a fine building sand will be permitted or a lime putty may be applicable – to be subject to discussion.

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1. Do not scale off this drawing. Use figured dimensions only
2. All dimensions are in millimeters unless otherwise noted
3. All dimensions to be checked on site.
4. All omissions & discrepancies to be reported to the architect immediately
5. Check site conditions prior to commencement of works
6. This drawings is to be read in conjunction with other consultants & specialists drawings

Rev	Description	Date
C0	1 Initial Issue	09.09.22

EDWARDS ARCHITECTURE
5, Brewhouse Bank, North Shields, NE30 1LL
T: 0191 649 8404
E: info@edwardsarchitecture.co.uk
W: www.edwardsarchitecture.co.uk

Project
20063 - Beach Road, South Shields
Mandeville Properties

Drawing Title
Typical Window
Blocking Up Detail

Scale at A1
1 : 5

Information Issued

Project	Originator	Stage/ Volume	Level/ Locat.	Type	Role	Number	Rev
20063 -	EArch -	CN -	XX -	DR -	A -	600 -	C01