

**Admin Entrance Wall & Gates | Alton Towers Resort | Farley Lane | ALTON
Masonry Re-pointing Specification**

C41 RE-POINTING NATURAL SANDSTONE WALLS

GENERAL/ PREPARATION

- 110 SCOPE OF WORK
- Re-pointing/bedding mortar to copings to lowered sandstone boundary wall to highway to Grade II Listed C19 boundary wall
- 130A **REMOVAL OF PLANT GROWTHS FROM MASONRY** (if required) :
- Carefully remove plants, root systems and associated soil/debris from joints, voids and facework.
 - Use dampened temporary timber wedges or other approved method to assist removal of roots. Where growths cannot be removed completely without disturbing masonry treat with herbicide to manufacturer's instructions: **ROUNDUP PRO-VANTAGE** Glyphosate-based herbicide (Monsanto UK Limited., Cambridge, CB2 9LQ tel. 01223 849200). **Spray treat all organic growth and vegetation to external brickwork** including saplings etc. and all exposed brickwork faces using **RPRO-ADVANTAGE** herbicide product in accordance with manufacturers instructions **BUT DO NOT** remove any of the growth for a minimum of 10 days. Only after 10 days have passed carefully remove all vegetation including roots. Following the raking out of mortar joints and **BEFORE** the commencement of re-pointing/rendering, apply a further spray/flood treatment of all **OUNDUP** brickwork and joints using **ROUNDUP PRO-VANTAGE** to manufacturers instructions.

WORKMANSHIP GENERALLY

- 150 POWER TOOLS FOR REMOVAL OF MORTAR **are NOT PERMITTED**
- 155 PUTLOG OR ANY MECHANICALLY-FIXED SCAFFOLDING **will NOT be permitted**
- 160A PROTECTION OF MASONRY
- Masonry: Prevent damage, particularly to arises, projecting features and delicate, friable surfaces. Prevent mortar/grout splashes and other staining and marking on facework. Protect using suitable non-staining slats, boards, tarpaulins, etc. Remove protection on completion of the work.
- 165 STRUCTURAL STABILITY
- General: Maintain stability of masonry. Report defects, including signs of movement, that are exposed or become apparent during the removal of masonry units.
- 170 DISTURBANCE TO RETAINED MASONRY
- Retained masonry in the vicinity of repair works: Disturb as little as possible.
 - Existing retained masonry: Do not cut or adjust to accommodate new or reused units.
 - Retained loose masonry units and those vulnerable to movement during repair works: Prop or wedge so as to be firmly and correctly positioned.
- 180A WORKMANSHIP
- Skill and experience of site operatives: Appropriate for types of work on which they are employed.

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185A ADVERSE WEATHER & PROTECTION OF MORTARS:

- Do not use frozen materials and do not lay masonry units on frozen surfaces.
- Do not bed masonry units or re-point in natural hydraulic lime:sand mortars when the air temperature is at or below 5°C and falling or below 3°C and rising. Where it is anticipated that the temperature in the first few days might fall to 5°C, or lower, the structure should be protected with dry (not damp/wet) dark-coloured **felt carpet underlay** or **old wool blankets** (furniture removal company-type) to preserve the moisture and with sufficient cover, **to protect the structure itself and the mortar against frost**, whilst allowing air movement over the mortar. FROST RESISTANT ADDITIVES WILL NOT BE TOLERATED AS THEY CONTAIN SALTS WHICH WILL AFFECT THE MORTAR.
- Maintain temperature of the work above freezing until mortar has fully set.
- **Protect masonry against rain and snow** by covering when precipitation occurs and at all times when work is not proceeding.
- **Prevent masonry from drying out too rapidly** in hot conditions and in drying winds by covering with damp (not wet) dark-coloured **felt carpet underlay** or **old wool blankets** (furniture removal company-type) as soon as possible to maintain moisture and then with additional cover to prevent it from drying out. For best results the moist conditions should be maintained using a at least the first seven days so that the mortar does not dry out, whilst allowing air movement over the mortar, and then for up to three weeks.
- Rake out and replace mortar damaged by frost and where instructed, redo the work.

190 CONTROL/REFERENCE SAMPLES

Obtain approval of the following before proceeding with the remainder:

- General: Complete an area of each of the following types of work, and **arrange for inspection by the architect/local authority conservation officer before proceeding** with the remainder:
 - Mortar raking-out and re-pointing (C41/810, 820 & 840) to sandstone walling - **provide up to 2no. 0.5sq.m sample/reference panels**
- Protect from adverse weather and damage.

MATERIALS/ PRODUCTION/ ACCESSORIES

215 SAND SAMPLES

- Approval: Before placing order, submit for approval representative samples of: sand to be **good quality, washed, well graded coarse or fine sharp sand to suit application/joint width** as Z21/320A. ie. '**Croxden M2 Concreting Sand**' from Tarmac's Croxden Quarry, Cheadle tel. 01538 722393
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POINTING/ REPOINTING

810A PREPARATION FOR REPOINTING:

- Work from the top of the wall downwards.
- Remove all loose and cracked mortar, and all Portland cement mortar carefully and without damaging adjacent masonry, arrises or widening joints **using HAND TOOLS ONLY** - strictly no disc grinders, or the like. Specialist mechanical tools only permitted in exceptional circumstances and strictly by prior agreement with the architect. Form a neat recess of depth **not less than 30mm** or **twice the thickness of the joint**. When mortar beyond this depth is loose and friable and/or cavities are found **seek instructions**. **However, allow for raking-out joint depths up to 75mm deep when pricing**
- Remove dust and loose debris by brush then **vacuum-out joints**.
- Dampen joints to control suction as necessary.

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- 820A RE-POINTING SANDSTONE WALLING
- Preparation of joints: as clause 810A
 - Mortar: pre-bagged natural hydraulic lime (NHL 3.5) : sand
 - **Mix: 1:2.5** (by volume), **NHL 2.0** : '**Croxden M2 Concreting Sand**' from Tarmac's Croxden Quarry, Cheadle tel. 01538 722393. Mortar pointing sample (materials & technique), to be agreed/advised with the architect before commencing work
 - Joints: Finish mortar joints flush, approx. 1mm behind face of stonework/brickwork
 - Other requirements: Build-up mortar in 10-15mm thick layers within joint depth. Mortar to be carefully pressed/'tamped' into the joint **with a pointing tool/'iron' that fits into the joints** so that they are fully filled, but not 'trowelled' which leaves the faces smeared. Ensure that no mortar encroaches/smears upon the face of the masonry. Use suitable temporary adhesive tape on each side of joints where necessary. Finish joints neatly as specified (with a 'recessed key' type joint NOT 'weatherstruck') generally to full face of brickwork. **After initial setting and before fully dry, revisit area of pointing and compact with a stiff bristle 'churn brush', or 'dress with a shaped wooden spatula', or use a soft brush to consolidate the finish and ensure consistently** (exact technique to be discussed and agreed on site) **until the mortar is recessed by approx. 1mm BEHIND FACE OF ADJACENT STONES. DO NOT 'BRUSH' JOINT. DO NOT SMEAR ADJACENT MASONRY**
 - **Allow for raking out & pointing joint depths up to 75mm deep when pricing**
- 870A ADVERSE WEATHER & PROTECTION OF POINTING MORTARS:
- UNDER NO CIRCUMSTANCES re-point in natural hydraulic lime:sand mortars when the air temperature is at or below 5°C and falling or below 3°C and rising. Where it is anticipated that the temperature in the first few days might fall to 5°C, or lower, the structure should be protected with dry (not damp/wet) dark-coloured **felt carpet underlay** or **old wool blankets** (furniture removal company-type) to preserve the moisture and with sufficient cover, **to protect the structure itself and the mortar against frost**, whilst allowing air movement over the mortar. FROST RESISTANT ADDITIVES WILL NOT BE TOLERATED AS THEY CONTAIN SALTS WHICH WILL AFFECT THE MORTAR.
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