

### METHOD STATEMENT

# Rebedding, Repointing and Replacement of York Stone Paviours

#### 1.1 Paviours to be sourced for external replacement

#### NATURAL STONE SLABS

- Standard: To BS EN 1341.
- Supplier: subject to agreement of samples to be supplied by the contractor.
- Product reference: A minimum 5 samples to be provided to the Contract Administrator all to match colour and texture of the existing stone.
- Quarry: Subject to agreement of samples to be supplied by Contractor.
- Petrographical description/ stone type: to match existing flagstones.
- Finish: Honed / Sawn to match existing.
- Sizes: Plan dimensions to match existing layout and depth.
- Plan dimension deviation class: P2.
- Diagonal deviation class: D1.
- Thickness deviation class: T2.
- Arrises: Square to matching.
- Breaking strength: Class 1.
- Slip resistance: to match existing flagstones.
- Skid resistance: to match existing flagstones.
- Surface treatment: None.
- Record areas to be worked on before commencement, and during the works.

As a minimum:

- Photograph paviours and mortar jointing to be worked on.
- Photograph building fabric potentially affected by the works, including access to the works.
- Photograph any structure or defects revealed during the works.
- Photograph completed work.
- Provide protection to prevent water ingress during the works.
- Protect windows, doors, and decorative features against ingress of dust.
- Assess any known information on possible hidden ducts or services.



#### 1.2 Lifting and Rebedding Existing Paviours

- Avoid damage to paving arrises or to any abutting building fabric.
- Sharp hand tools to be used to remove mortar jointing. Angle grinders and mini-disks are expressly prohibited.
- Cut/rake out the mortar joints using fine-toothed masons saws and hooked blades to release the stone.
- Lift paviour with care, it may have worn thin over time and can easily break.
- Lever paviour from the cavity ensuring that surrounding paviours are not disturbed or arrises damaged.
- The original paviour should be re-laid, unless it is impossible to do so in which case it should be replaced in the identical material, and finished to an appearance to match the existing paviour exactly.
- Excavate the paviour bedding to no deeper level than the existing mortar or sand bed.
- Inspect the substrate below the paving and bring any unusual circumstances to the attention of F+G Conservation Surveyor in view of a possible increase in the scope of work.
- Prepare the substrate ready for re-installation of bedding and the paviour. Wet the void before installing mortar bedding to avoid the bedding drying out before it sets.
- During clement weather lay paving true and level on a 1:3 hydraulic lime, NHL 5/sharp sand mortar. Joint and point paving joints using mix to be agreed. (4 no mortar samples to be provided by Contractor, to agree most suitable mortar replacement).
- Wet the joint and the bedding mortar before placing jointing mortar, to avoid suction from the surrounding stones and bed from drying-out the new mortar before it has set.
- Place the mortar, compacting it firmly into the full depth of the joint using a pointing-iron. Dress the mortar well, to ensure that it is recessed from arrises and contours between paviours, and that arrises of paviours are never obscured by mortar.
- After the mortar has taken its first set and gone 'leather hard', bristle brush the surface lightly to expose the aggregate or sharp sand in the mortar mix, to give the joint visual character.
- After placing mortar 'tend it' well keeping the area damp for a minimum period of 48 hours:-
  - spray at regular intervals
  - shield from sun with damp hessian to prevent mortar drying before it has set
  - shield from wind with hessian to prevent mortar drying before it has set
  - avoid any mortar works in cold weather, but if unavoidable then protect mortar from frost damage with several layers of hessian
- Brush/clean the paviours to remove any vestiges of mortar from their surfaces. Re-pointed joints are often too visible because mortar has not been fully cleaned off the paviours.

#### 1.3 Replacement of Individual Paviours

- Where agreed with F+G Conservation Surveyor cut out a single severely eroded or damaged stone using sharp tools.
- Cut/rake out the mortar joints using fine-toothed masons saws and hooked blades to release the stone.
- Lever paviour from the cavity ensuring that surrounding paviours are not disturbed or arrises damaged.



- Excavate the paviour bedding to no deeper level than the existing mortar or sand bed without prior liaison with F+G Conservation Surveyor.
- Inspect the substrate below the paving and bring any unusual circumstances to the attention of the F+G Conservation Surveyor in view of a possible increase in the scope of work.
- Dimension and cut to size a new paviour taking account of the exact size and thickness, and any irregularities in the shape and possible varying thicknesses of the stone that has been removed.
- Prepare the substrate ready for re-installation of bedding and the paviour. Wet the void before installing mortar bedding to avoid the bedding drying out before it sets.

## 1.4 Bedding, jointing and pointing clauses all as for raking out and repointing clauses to 'Lifting and Rebedding Existing Paviours' above.

- Install the new paviour level and true but ensuring that there are no checks, jumps, ledges or edges between the newly laid paviour and surrounding paviours.
- Install the paviour on its correct bed unless there is reason to edge-bed.
- Once dressed then 'tool' the surface of the stone (typically French or English-drag or other tooling sufficient to visually soften the crisp appearance of the new stone in the context of the surrounding weathered stonework. All joints to be packed with mortar full-depth and pointed, all as described above.

#### 1.5 Assessment of Works

- All paviours to be carefully lifted in accordance with the methodology detailed above, and assessed on site by F+G Conservation Surveyor, and as a minimum rebedded to provide a safe level access (removal of trip hazards). Please refer to drawing – UCL/JAH/001 – highlighting current condition.

- The following proposed criteria will be used to assess condition and works required:



(1) Relay Paving (Including repointing) - No additional works

Method Statement –Rebedding and Repointing Paving UCL – John Adams Hall 20/03/17



(2) Mortar Repair



(3) Replacement Stone



(4) Careful removal of concrete from surface of paviour, assessment of surface condition (Revert to options 1,2 or 3 dependant on condition).





(5) Modern paving slabs (Refer to Main Spec)

