

Methodologies of Works – Joseph Holt. The Shamrock

BENGAL STREET ELEVATION.

Cleaning; -

Our recommended system of removing the paint from faience will be as per our onsite samples. This will incorporate the use of both of the paint softening products, depending on the type of paint coating that has been applied. This will be then left to dwell before being removed using the ThermaTech superheated cleaning system. During our undertaking of the samples, we saw some good results from the application of both of the softening gels, in specific areas. Once all the areas of paint have been taken off the faience, we will then clean the entire façade with the ThermaTech system to remove any further build up of grease and carbon deposits from the brickwork.

Brickwork & Faience Repointing, Repairs & Restoration; -

Upon completion of the removal of all the paint from the façade, the condition of the faience blocks and brickwork can be fully assessed, along with any redundant fixings being removed. We will then take a sample of the original mortar from specific locations on the elevation and have it analysed to try to reproduce an as accurate mortar mix as is possible.

The cutting out of the brickwork and faience will be done either by hand or mechanically, using a small handheld grinder and a vacuum attachment to cut down the amount of dust from becoming airborne – Samples of either method can be provided to the LPA if required.

Previously damaged bricks will be carefully taken out and replaced with bricks that are as close a match in size, colour and texture as possible that we will submit for approval at the commencement of works. Once the areas of eroded, deteriorated mortar to the brickwork has been agreed, it can be carefully raked out once the redundant fixings and damaged bricks have been removed. Once cleaned down, the repointing of the brickwork and faience can then be undertaken following the sequence of works highlighted below in this methodology.

The window cills along this elevation along with the quoins and the head course above the brickwork seems to all be of natural stone. We will provide stone samples to match the existing stone once the elevation has been fully cleaned using the ThermaTech system. Should any of the stonework require indenting, these will be mechanically cut out square and finished off with traditional hand tools. There are a small number of damaged faience units along this elevation to the right-hand side that require either repairing in-situ or taking out and replacing with new units to match the existing. Where possible, we will always endeavour to repair the existing units in-situ. This should be undertaken alongside the repairing of all fixing holes, using the same repair mortar. The method for undertaking these repairs is highlighted below under **Restoration to Stonework**. Again, once the damaged faience units have either been repaired or replaced, the Faience can then be repointed to match the existing.

SPLAY CORNER TO BENGAL STREET & SILK STREET.

Cleaning; -

The faience to this splayed corner is covered by both paint and aerosol graffiti. Once again, we will use the Restorative Polyurethane softener to break down the stubborn areas of paint and graffiti before removing with the ThermaTech superheated water cleaning equipment. Special care should be of the highest priority whilst carrying out work in this area, as laid within the design of the faience is the original brewery logo.

Faience Repointing, Repairs & Restoration; -

As with Bengal Street Elevation, the original mortar that has eroded and deteriorated should be cut out either by hand or mechanical means to remove the original and eroded areas of pointing to the entire area. The hood mould above the raised panel has been previously damaged and removed. We would introduce stainless steel threaded bars and stainless-steel wires to act as a reinforcement to the damaged area for the repair of the hood. Using a specialist repair mortar, we would carefully build out the basic shape in 10mm layers until the full hood mould had been repaired and shaped, using straight edges and timber floats back to its former line and profile. There are also a number of smaller repairs, minor fixing holes and redundant fixings that are still attached to the façade. The redundant fixings should be carefully removed before repairing the now vacant holes with the same repair mortar, along with the other holes and smaller repairs. The repair mortar will be colour matched on site so that the closest possible match can be achieved. Upon completion of the repairs to the splayed corner, the full area should be carefully washed down to remove and loose dust and debris from the face of the faience units to allow the new mortar to adhere too.

SILK STREET ELEVATION.

Cleaning; -

As with the Bengal Street elevation, this elevation is made up of faience to the ground floor, rising up to the signage in between the ground floor and the first-floor brickwork, and our recommended system of removing the paint from faience will be as per our onsite samples. This will incorporate the use of both of the paint softening products, depending on the type of paint coating that has been applied to this given area. This will be then left to dwell for the recommended time before being removed using the ThermaTech superheated cleaning system. During our undertaking of the samples, we saw some good results from the application of both of the softening gels, in specific areas. Once all the areas of paint have been taken off the faience, we will then clean the entire façade with the ThermaTech system to remove any further build-up of grease and carbon deposits from the brickwork.

Brickwork & Faience Repointing, Repairs & Restoration; -

Upon completion of the removal of all the paint from the façade, the condition of the faience blocks and brickwork can be fully assessed. The wrought iron window guards to this elevation should be removed to allow for full access to the elevation. All redundant fixings should be removed. Previously damaged bricks will be carefully taken out and replaced with bricks previously approved. Once the mortar that has been deemed to have eroded and deteriorated has been identified, it can then be raked out, and the redundant fixings and damaged bricks have been removed, the area can be washed down with clean water and then repointed.

As with the works on the Bengal Street elevation, the repointing can then be undertaken following the sequence of works highlighted below in this methodology. There are a small number of damaged faience units along the bottom left-hand side of this elevation that require either repairing in-situ or taking out and replacing with new units to match the existing. Where possible, we will always endeavour to repair the existing units in-situ. This should be undertaken alongside the repairing of all fixing holes, using the same repair mortar. Again, once the damaged faience units have either been repaired or replaced, the Faience can then be repointed to match the existing. The window cills along this elevation along with the quoins and the head course above the brickwork, as on Bengal Street, seem to all be of natural stone. We will provide stone samples to match the existing stone once the elevation has been fully cleaned using the ThermoTech system. Should any of the stonework require indenting, these will be mechanically cut out square and finished off with traditional hand tools.

THE REAR ELEVATIONS

The rear elevations comprise of mainly brickwork and render panels. We would require closer access to survey the full condition of these elevations before making any specific recommendations.

METHODOLOGIES OF WORK FOR THIS PROJECT

ThermaTech

Superheated water cleaning equipment. Conceived for the requirements of building conservation, restoration and refurbishment, this system is highly effective for removing soot, grease, oil, and organic matter from a wide range of substrates.

The ThermaTech system produces superheated water, a liquid spray at 150°C. This temperature is capable of melting and removing many paints, surface treatments, chewing gum, wax and bitumen.

ThermaTech reduces reliance on chemicals and boosts the performance of milder agents. It also uses less water than conventional hot and cold-water pressure washers. In this way it yields positive results for COSHH and REACH in safety and environmental risk assessment.

Removal Products & Techniques for paint stripping

Restorative Acrylic Softener

A thixotropic gel for softening plasticised masonry and emulsion paints, 'hammer finish' and some car paints. Water-soluble. Brush roller or spray application.

Restorative Polyurethane Softener

A thixotropic cream for softening polyurethane and oil-based household gloss and oil, polyurethane and alkyd-based masonry paints. Water-soluble. Brush, roller or spray application.

Repointing

A mortar sample should be taken from site and a mortar analysis undertaken prior to commencement. This will give an indication of the existing mortar and propose a best match.

Samples of the mortar, including finish will be provided for approval prior to commencement of the main works.

Process

1. Joints should be carefully raked out to a depth at least twice the width of the joint.
2. Rake out mortar with use of both hand & mechanical tools by experienced stonemasons. Hard patches of mortar will be removed by use of mechanical grinders to ensure no damage is done to the brick arises.
3. Thoroughly brush out dust & loose mortar followed by thoroughly cleaning out with water.
4. Spray joints with clean water prior to commencement of repointing works to dampen the area to control suction.
5. Push in the new mortar from a hand board and press it well into the joint with a pointing iron / tool made to the size of the joints to ensure they are fully filled. Work towards existing mortar.

6. Fill the joints with mortar until it is flush with the face of the brick/stonework. Ensure that no mortar encroaches/smears upon the face of the brick or stone. Finish joints neatly as specified when the mortar is curing, but before it is fully set, with a light brush finish. This will expose any aggregate for appearance and better weathering. Differences in timing and techniques may give rise to inconsistencies in the visual appearance and performance. The optimal timing of finishing the joints will depend on the brick type, mortar mix and the weather. Correct timing will become apparent to an experienced and practised stonemason at an early stage.
7. Deep point joints where required, wedge with natural slate and point with the same mix.
8. No pointing should be carried out in frost or when frost is likely to occur. Pointing should be protected against weather where possible by use of hessian sheeting.

Removal of fixings; -

1. Carefully remove redundant fixing via drilling around to loosen fixing and remove.
2. Clean out resulting hole to remove dust & debris cleaning out with water.
3. Spray with clean water prior to commencement.
4. Infill with lime mortar ensuring it has been well compacted, and the mortar is colour toned to match the existing as best as possible.

Replacement Stone; -

Samples to be provided of Birchover Gritstone (Buff) - It is a versatile stone, with the advantages of being ideal for intricate carving and fine masonry combined with durability and resilience. The colour is a warm and attractive naturally varied blend of buff to pink.

Stone Indents

Before any repairs are undertaken, the existing stonework details should be carefully categorised for the type of stone, colour of stone, finish to stone face.

1. Carefully mark out area to be cut out to receive indent.
2. Remove loose and friable stone from face, with hand tools.
3. Using a grinder cut into the stone to form a neat straight line between the new indent and the existing stone.
4. Once the initial cuts are made around the perimeter of the indent location then the defective section of stone can be removed using a mixture of mechanical and hand tools.
5. The stone should be cut back to the required depth ensuring sound stone remains.
6. Dampen area prior to installation of indent with clean water.
7. New indent will be made to match any existing profile with templates made and followed by masons in the workshop prior to delivering to site.
8. Indent repairs should be fixed in place using stainless steel dowels set in resin.
9. The interface between a stone indent and repaired stone should be kept as tight as possible and grout filled.

Replacement Bricks

Bricks are to be sourced from a reclamation yard and are to be approved. They will be used only if they are free from fungus, have no deep or extensive cracks, or damaged corners or arises, and are free from old mortar. A sample will be provided prior to commencement of works.

Descaling & Redressing

Redressing is the removal of the surface layer from the decayed stone.

1. Initially use a phosphor bronze or churn brush to brush off any loose and friable material from the face of the stone.
2. Using a fine chisel remove more stubborn carbon build up from areas around the joints
3. Finally rub any proud edges down with a carborundum block to ensure no water traps remain.

Bed reinforcement to brickwork Vertical cracks

The objective is to strengthen the brickwork without the need to replace sections of the fractured bricks.

1. Rake out the joints to 40mm in depth and 300-500mm either side of the crack
2. Wash out the joint with clean water
3. Once dried insert a bead of approved epoxy resin and set in a 1m length of 3-6mm stainless steel helical bar, insert a further bead of epoxy resin.
4. Once set, repoint by pressing mortar well into joints using pointing tools/irons that fit into the joints, so they are fully filled.
5. Finish joints neatly as specified when the mortar is curing, but before it is fully set, with a light brush finish.

Restoration to stonework

1. Identify the area where the repair is required.
2. Carefully cut back face of damaged stone to a sound base within use of hand & mechanical tools.
3. Clean area to leave free from dust and debris by thoroughly washing out with water.
4. Dampen to control suction by spraying with clean water.
5. Apply mortar firmly, ensuring good adhesion with no voids. Form a mechanical key to undercoats by combing or scratching to produce evenly spaced lines.
6. If required for deep repairs insert non-ferrous pins, armatures, reinforcing wire as necessary & progressively build up in layers not exceeding 12mm to original profile using lime-based restoration mortar.
7. Prevent each layer from drying out rapidly by covering immediately with plastics sheeting and/ or dampening intermittently with clean water.
8. Final coat to be finished with a float and colour toned, textured to match existing stonework.