KIDDERPORE AVENUE · FORMER KINGS COLLEGE CAMPUS

FAÇADE RENOVATION

Introduction

The project consists of a combination of six new buildings and renovation and conversion of six existing buildings, to provide 152 new residential apartments and houses.

This section of work deals with the renovation and restoration of existing facades to the following buildings.

Dudin Brown
Skeel Library *
Bay House*
Kidderpore Hall *
Maynard Wing *
The Chapel *
Lady Chapman Hall [South and part West face only]

[* Listed Building Grade II]

Dudin, Skeel, Bay, Maynard and Lady Chapman have brick facades. Kidderpore Hall and The Chapel are rendered.

SCOPE OF WORKS

General Requirement

- The intention is to restore, and where required amend, the external elevations to return the facades to their former glory, presenting a uniform whole.

Existing Surface Fittings

- Contractor to identify any fittings or adornment, which could be traced, back to the era of the original construction and identify these to Mount Anvil for further instruction.
- Remove all other existing lights, security features, CCTV, signs, light switches, display cases etc.

Existing Surface Fixings

- Remove all existing cables, conduits, junction boxes, pipes, tapes and all associated fixings including 'Rawl plugs' and make good brickwork. Method of making good to be agreed prior to undertaking any work.

Existing Rainwater Pipes

- Any plastic or light gauge metal down pipes will be replaced with cast or cast effect versions.
- All existing cast pipes will be rubbed back to bare metal, treated and painted gloss black.

Existing Rainwater Gutters and Hoppers

- All rainwater gutters, hoppers and ear bands to be removed for full 'back to metal' refurbishment when temporary roof erected.
- All original 'ear bands' to be reinstated with new stainless steel large headed lug nails, 'rawl bolts' or coach screws.
- All refurbished elements to be treated, primed and painted gloss black.
- All gutters will be replaced in their original locations with spigot to socket sections fixed together, sealed with a low modulus silicon seal and lined with a propriety EDPM system.
- All hoppers to be sealed using a low modulus silicon sealant.

Proposed Rainwater Pipes

- All new RWP's to Prime and Conversion units will be cast pattern to match original, treated, primed and painted gloss black.
- No horizontal or diagonal pipes to be installed. 'Swan necks' from gutters and hoppers at the head and a 45° shoe at the base are permitted.

Lightning Conductors

- All existing tapes must be replaced and relocated away from front and main elevations.
- Air termination spikes should be located towards the centre of the roof and placed so that they are generally hidden from main vantage points.
- Tapes should descend down the rear face of chimney stacks.
- Tapes should be located beneath tiles on pitched roofs (ideally along the ridge line).
- Tapes fixed to walls should run behind existing or planned RWP's or into the corners of abutting walls.
- New tapes, where visible, should be exposed copper and left to oxidise naturally.

Brick Cleaning

- Surface damaged and severely damaged bricks to be repaired before brick cleaning is carried out.
- The weathered maturity of the existing brick surface should be preserved. Staining from rain, oxidisation and wear should be retained.
- Organic (moss and algae) staining, caused by defective rainwater goods and overflow pipes should be cleaned. The source of surface wetting should be fixed.
- A medium level surface clean will be used, wherever possible, to preserve patina and wearing. Only hand scrubbing or medium pressure washing, using hot water only will be permitted.
- Sand, plastic bead or crushed shell blasting will not be permitted.
- General Brick cleaning to be undertaken with a 'Doff' brick cleaning system. The Doff system cleans stonework and masonry using high temperature steam (upto 150°C) at the rate of 3-10L per min under low pressure. Medium level clean, with nozzle held 300mm from surface for single pass, a second pass may be required for heavily stained areas by instruction.

Brick Damage

- Existing graffiti, unless it is in close proximity to front entrances to be retained.
- Graffiti showing initials or dates will be acceptable as part of the site history. Offensive graffiti to be removed.
- Severely weathered bricks to be replaced.
- Worn and rubbed bricks to be retained.
- Historic light brick damage through weathering and use will be retained.
- Where moulded brick features have been painted, these will be restored to return all of the original detailing and profiles.
- Gauged bricks below window cills should be replaced with good copies of the original using the same mortar and joint weathering as the original. Other damaged gauged bricks should only be replaced if significant damage has occurred. Light weathering and worn bricks will be retained.

Masonry Repairs - General

- All brickwork used in the repairs should be from clay bricks colour matched to the satisfaction of the architect and if possible should be site won from the demolition.
- Pointing and grouting should be colour matched to the satisfaction of the architect.
- When colour matching consideration should be given to how the repairs will weather with time and also how well the repairs match when both dry and wet.
- Where vegetation is growing out of brickwork, the vegetation should be removed carefully and the roots sprayed with a proprietary weed killer such as sodium chloride or similar in accordance with the manufacturer's recommendations. After a period of six weeks further loose roots and pointing etc should be removed and the gaps re-pointed, grouted or resin filled.

Repairs to cracks and tied in bricks

- Allowance should be made for additional general pointing and repairs to the other cracks and defects discovered and that also may occur due to the nature of the other refurbishment works such as replacement of the roof, increasing wall loads, window repair and embedded element removal.

Pointing & Re-pointing

- Bed joint cracks or missing mortar in joints to be re-pointed. Repairs to be a suitable colour match using the strength of mortar and mix hardness to match the assumed surrounding mortar strength and should have a strength grade equivalent to class iii/iv to BS5628. These repairs should be a blend of Portland cement, Lime, clean sand and water. Admixtures should be submitted for approval prior to use. In all cases both Portland cement and Lime should be used in the mix proportions.
- In the case of cracked bed joints, re-pointing should be carried out by removal of bed joints to a depth of 50mm over a maximum length of 450mm using a non-mechanical method minimising damage to the adjacent brickwork. Pilot drill holes should be employed as necessary to avoid damage to the brickwork. The re-pointing should be finished in a continuous smooth finish to match the adjacent brickwork.

Resin Injection

- Vertical or diagonal cracking to be generally repaired by either resin injection or cutting out and replacing with new bricks. The requirement for each is subject to the crack width, its visibility, proximity of any feature or arises. In certain locations severe cracking will require partial or full reconstruction of the wall. All resin injection should be as directed by the Structural Engineer.
- Not withstanding the above, resin injection will generally be used for cracking below 5mm in width.
- Prime Rez 1000 – High Mod resin injected in accordance with the manufacturer's instructions or similar approved should be used. The method of injection should avoid unsightly straining and resin runs overfilling around the crack and should provide a fully filled and slightly recessed finish. Trial areas n the less visual areas should be carried out to achieve a benchmark standard for the project to the satisfaction of the employer's representative.

Brick Replacement & Ties

- Generally for vertical and diagonal cracks in excess of 5mm, cracked bricks and mortar should be removed from every other course and new colour matched replacement bricks grouted into place and pointed, finished as per the adjacent areas. It will only generally be necessary to place new bricks every other course and cracks running across the remaining bricks may be grouted or flush pointed.

Bed Joint Reinforcement Repairs.

- In certain critical locations or locations of significant cracking or anticipated foundation movement related cracking, bed joint reinforcement repairs may be specified by the Structural Engineer. These will generally consist of stainless steel HeliBar 6mm diameter Grade 304 by Helifix or similar approved anchored a minimum of 600mm either side of the crack. These should be fixed in a pre-drill and chased bed joint using the proprietary grout mortar recommended (Helibond grout) in accordance with the manufacturer's instructions. A 10mm deep finishing, colour matched pointing should be used.

Damp Brickwork

- Locations of excessively damp brickwork associated with gutter and down pipe defects have been identified on the repair drawings. The repair to these locations should be carried out as follows:

  - The brickwork should be kept dry and allowed to dry out for 6 to 8 weeks, ensuring the surfaces are adequately ventilated and the source of dampness has been removed.
  - Moss, algae and other vegetation should be removed and the surrounding areas of brickwork should be treated as described in the General section.
  - After the drying out period, a hardness test will be conducted on the mortar and brickwork using a hammer and chisel to determine if the brickwork and mortar has got sufficient residual strength to the agreement of the employer's representative. If the brickwork is deemed to be unsatisfactory then the brickwork will require removal and replacement.

Brick & Mortar Patches

- All brick and mortar patches and infills should be cut out using the existing brick coursing as a guide and replaced with comparable bricks using the same mortar material, joint finish and colour as the original, matching the original wall brick bond.
- Repair patches should not be obvious although they should demonstrate a repair has been made.
- Ageing and staining of new repair patches should be demonstrated via small sample panels before the treatment is applied to the insitu repair.

Mortar Joints

- Rake out by hand and make good all cracked and loose joints.
- Rake out by hand and make good all joints which are not in keeping with the original material.
- Rake out by hand and make good all joints that are not the same colour as the original construction. This does not cover staining or discolouration but does cover obvious mismatching of colours and those where colour dyes have been used.
- Like for like mortar replacements will be followed ie Lime mortar repairs where the original was in lime and joint weathering to match the original.
- No mechanical raking will be permitted.

Cement Fillets

- Existing cement fillets over brick projections and features to be tested for adhesion, soundness and consistency and renewed to match where necessary.
- Where the extent of cement fillet detail is considered an unsatisfactory weathering detail, Lead flashing may be considered. Proposals to be submitted to employers representative.

Stone & Roman Cement Features

- Before remedial repairs are carried out, a sample of the stone / Roman cement should be analysed to determine type and, in the case of the cement, the proportion of ingredients should be determined. Samples of materials should be provided before work is permitted.
- Cracked stone features and those with missing sections should be replaced with the same stone as the original and cut to the same profile as the original.
- Where original but damaged stone cills are being replaced, rainwater drip channels should be created if the original did not possess one.
- Roman cement features should be repaired insitu. Light weathering should be retained and cracking should be raked open and filled with the same material as the original.
- Damaged, cracked or missing features should be replaced with new pieces created using moulds/templates taken from the original location.
- The Roman cement eaves cornice of Bay House appears to be heavily damaged from a defective gutter. Specialist assessment required before a decision on extent of repair or replacement is made.
- All existing slate cills to be cleaned and retained. Damaged and cracked examples to be replaced with slates of the same type and dimensions.

Survey

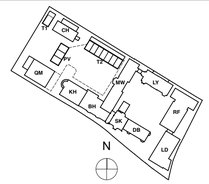
- Arrange for a Specialist Stonework Repair Contractor to carry out a survey to evaluate the condition of the existing stone (and any cast stone); to report and recommend the extent of repairs necessary.
- The Planning and Listed Building consent conditions require the details of the proposed stonework repairs to be submitted for approval prior to any works.
- Repairs to include cutting out and replacement or refacing of defective and friable stonework, with new matching stone.
- Defective coping stones to parapets should be taken off and replaced. Elsewhere leadwork to defective weatherings (eg cornices) may be considered.
- Smaller repairs may, subject to Listed Building Approval, be undertaken using a matching plastic repair mortar. This may include replacement of former repairs that have failed, or are a poor match.
- Works to include raking out and replacing all defective stone pointing.

Render Repairs

- Non-original render repairs should be assessed for type of material. If the material matches the original then the repair should be rubbed back to remove irregularities and imperfections and cracks filled with the correct render.
- Specialist trades to be employed to repair and recreate the Stucco incisions of Kidderpore Hall. This should include a full renovation of the incisions on the front and rear entrance columns.
- Existing render to The Chapel is to be entirely removed (subject to Listed Building approval) to allow repairs and to dry out brickwork. External render to be renewed with insulated render system, recreating all original features and colour. Detailed proposals to be submitted by specialist.

0 10 50 100mm

DIMENSION AT ORIGINAL SHEET SIZE:
Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported to the Architect before proceeding.© This drawing is Copyright



KEY PLAN

NOTE:
ALL INFORMATION SHOWN ON THIS DRAWINGS IS SUBJECT TO DESIGN DEVELOPMENT

FOR TENDER

	REVISION	DR'N	CH'KD	DATE
-	First Issue	TW		02.08.16

A&Q PARTNERSHIP

CLIENT
MOUNT ANVIL LTD

PROJECT
KIDDERPORE AVENUE

DRAWING
General Notes
Facade Renovation

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DATE Aug 16

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DRAWN BY TW
REV T1

A&Q PARTNERSHIP (LONDON) LTD
THE LUX BUILDING, 2-4 HOXTON SQUARE, LONDON N1 6NU
Tel: 020 7613 2244 Fax: 020 7613 2642 Email:london@aqp.co.uk
ARCHITECTURE DESIGN MASTERPLANNING INTERIORS