

10 Minshull Street and 11 Bloom Street

**BUILDING ENVELOPE REPAIR WORKS, MINDEL HOUSE (REVISION D)**

Planning Permission 119374/FO/2018

Planning Condition 11) (b) & (r) in part

Listed Building Consent 119373/LO/2018

Listed Building Consent Condition 4) (b) & (r) in part

- Prepared by Manchester Design & Build -

November 2022



**Building Envelope Repair Works – Schedule of Works**

|            | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Qty/<br>Unit | Rate | £ | p |
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| <b>3.0</b> | <b>Project Particulars</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |   |   |
| A)         | <p>Mindel House is one of two existing buildings (the other being 11 Bloom Street) which together form the development known as Piccadilly Warehouse. Planning permission and listed building consent has been granted (with conditions) for the conversion of both buildings into a total of circa 80 residential apartments. This document schedules specific repair works to the building envelope fabric (both internal and external).</p> <p><u>This package of work includes:</u>, external and internal cleaning generally, external painting, stucco, brick and stone repairs including associated structural defects (structural repair details to be confirmed by GM Structures) and general re-roofing works.</p> <p><u>Planning Note:</u> Unless denoted otherwise, all repair and cleaning works relate to Planning Condition 11) b) / Listed Building Consent Condition 4) b). All works subject to discharge of the relevant planning and listed building consent conditions.</p> |              |      |   |   |
| <b>3.1</b> | <b>General</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |   |   |
| A)         | This Schedule of Works is to be read in-conjunction with the reports, drawings, specifications and or schedules of works provided for all other separate packages of works by other members of the project design and construction team.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |
| B)         | All works subject to compliance with the relevant approved Construction Management Plan.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |
| C)         | The contractor shall make all provisions within his individual pricing for assessing the working areas and all works to be undertaken therein. No extra cost shall be entertained by the Employer for failing to do so.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |

|            | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Qty/<br>Unit | Rate | £ | p |
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| D)         | The Contractor will provide all access for the works, internal and external, to include scaffolding, temporary works and structures, mobile access platforms, or towers, cradles, or a combination thereof, as he considers appropriate to carry out the specified works. The access will also be required for inspections of the works for instruction purposes and throughout the progress of the contract. It will also be required for snagging inspections by the Contract Administer (CA) and re-inspections thereafter if appropriate. |              |      |   |   |
| E)         | The Contractor is to take all necessary precautions to protect all services buried, concealed, exposed or otherwise during the works.                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |
| F)         | Refer to separate M&E specifications and drawings for all associated building services related works. Any associated electrical services works must be undertaken by an NICEIC registered sub-contractor in accordance with the IET Wiring Regulations 18 <sup>th</sup> Edition, BS 7671, 2001 standards and the local Electrical Authority's Conditions and Regulations. Existing electrical installations to be suitably protected before commencement of works and tested upon completion.                                                 |              |      |   |   |
| G)         | The Contractor should note that all items in the schedule of works are to be priced individually. Any items not priced will be deemed to be included. Additionally, all quantities and rates are to be included in the schedule.                                                                                                                                                                                                                                                                                                              |              |      |   |   |
| H)         | The contractor is to use only those products specified and alternative products are only to be used with written approval from the CA. Where the contractor wishes to use alternative products then he will be expected to supply samples to the CA for agreement.                                                                                                                                                                                                                                                                            |              |      |   |   |
| I)         | All works subject to compliance with planning and listed building consent conditions and current Building Regulations, where applicable.                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
| <b>3.2</b> | <b>Programme</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |      |   |   |
| A)         | The contractor will submit a detailed programme, along with a method statement, for the sequencing and phasing of operations for the works.                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |   |   |

|            | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Qty/<br>Unit | Rate | £ | p |
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| <b>3.3</b> | <b>Health and Safety</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |
| A)         | The works are to be undertaken in compliance with the Health and Safety at Work Act 1974 and the Construction Design and Management Regulations 2015. The Client and Principal Designer will determine if the works are notifiable. All works subject to provision of appropriate Pre-Construction Information prior to commencement.                                                                                                                                                                                                                     |              |      |   |   |
| B)         | The Principal Contractor will produce a suitably developed and project/site specific Construction Phase Plan. The Construction Phase Plan is to be updated as necessary during the works. The contractor will comply with the Construction Management Plan and the Construction Phase Plan with regards to health and safety and working arrangements generally.                                                                                                                                                                                          |              |      |   |   |
| C)         | The contractor will comply with The Work at Height Regulations 2005. The contractor is to ensure that no person engages in any activity in relation to works at height or work equipment for use in such work unless they are competent to do so. The contractor is to provide suitable fall protection for all operatives working at height and to ensure the safety of staff and members of the public at all times. Ensure roofing works are undertaken in accordance with current HSE Guidance "Health and safety in roof work" (Fifth Edition 2020). |              |      |   |   |
| D)         | Every precaution needs to be taken to prevent materials or tools from falling from height and to ensure that all operatives can work safely on the roof and to all roof perimeters. Scaffolding must comply with The National Access and Scaffolding Confederation (NASC) Technical Guidance Note TG20:08 to comply with European standard BS EN 12811-1, 2003 and all permits/regulations as stipulated by the local authority.                                                                                                                          |              |      |   |   |
| E)         | Prior to commence of the works, the Client and Principal Contractor must ensure that a suitable 'Refurbishment & Demolition' level asbestos survey report has been undertaken. No allowance or provision has been made in this schedule of works for any asbestos related works. The Client and Principal Contractor will be responsible for the management of any asbestos related works, as required.                                                                                                                                                   |              |      |   |   |

|     | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Qty/<br>Unit | Rate | £ | p |
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| 3.4 | <b>Control of Substances Hazardous to Health Regulations 1998</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |      |   |   |
| A)  | The Contractor shall comply with the Control of Substances Hazardous to Health Regulations 1998 (COSHH) and all other Acts of Parliament instruments, rules, orders, regulations, by-laws and any updates and amendments thereof. The contractor shall take all reasonable precautions for safeguarding their employees and any other person's and property affected by the execution of the contract.                                                                                                                                                                   |              |      |   |   |
| 3.5 | <b>Workmanship</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |   |   |
| A)  | The contractor shall make every site operative under his (direct or indirect) employment working on this project aware of the standard of workmanship expected.                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| B)  | When the site manager has satisfied himself that a completed operation is of the required standard (as described elsewhere and previously agreed with the CA) he should notify the CA so that an inspection can be made of the work and approval given before the next operation is commenced. The contractor shall not leave it to the CA to detect faults and provide snagging lists and shall himself plan his own inspection arrangements in order to reduce the risk of costly remedial works, which he would have had to carry out to comply with his obligations. |              |      |   |   |
| 3.6 | <b>Conservation / Historic Building Good Practice</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |   |   |
| A)  | All works should generally be undertaken in accordance with the guidance and provisions set out in BS 7913: 2013 Guide to the conservation of historic buildings. Where materials, products and workmanship are not fully specified, they shall be in accordance with the manufacturer's instructions and good traditional building practice (including the relevant provisions of current BS documents and BRE digests) suitable for the purpose of the works stated and in accordance with the contract documents.                                                     |              |      |   |   |

|            | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Qty/<br>Unit | Rate | £ | p |
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| <b>3.7</b> | <b>Waste</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| A)         | Disposal of all redundant materials arising from the works shall be in accordance with the Code of Practice, current Waste Management Regulations, The Environmental Protection (Duty of Care) Regulations 1991 and any subsequent revisions. Waste to be categorised and carefully sorted where practicable for re-cycling and to minimise any landfill waste. Waste transfer notes to be provided. All waste to be removed from site as it arises.                                                                                                                                                                                  |              |      |   |   |
| <b>3.8</b> | <b>Specification generally</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |      |   |   |
| A)         | The Schedule of Works items should be carried out in accordance with the main contract Preliminaries and works Preambles clauses applicable to the items of work concerned and under the direction of the CA.                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |
| <b>3.9</b> | <b>Internal Cleaning (Planning Condition 11) b) / LBC Condition 4) b))</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      |   |   |
| A)         | Cleaning philosophy to be a 'light touch' approach to remove soiling, dirt and paint etc where necessary and where detrimental to the original building fabric, whilst respecting the age and character of the building. Specific elements are to be cleaned without causing harm to original materials and features. Overcleaning is to be avoided. In no circumstance will original fabric be given a 'new' appearance. There will not be a 'one size fits all' solution for cleaning the different materials and finishes. The cleaning methodology is to be tailored to suit the condition of the various elements to be cleaned. |              |      |   |   |
| B)         | Full account must be taken of the internal plaster repair works and retention of heritage features. All sound original plaster and all original heritage features must be protected at all times. Where no plaster is to be disturbed or removal of plaster has been approved, price for undertaking an internal light clean in order to remove existing coatings, dust, dirt, soiling, old paint, staining, surface contaminants etc. All                                                                                                                                                                                            |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Qty/<br>Unit | Rate | £ | p |
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|    | <p>works to minimise dust and prevent damage to original plaster, brickwork, mortar joints, timber, metalwork etc. Cleaning works are to be undertaken by a specialist heritage approved cleaning and restoration contractor who will recognise when the approach or a different calibration of cleaning tool may be needed. The contractor will continuously use trial panels (exemplars) as part of their work whenever the need arises to ensure a consistent finish without causing unnecessary harm to the historic building fabric. All cleaning work to be undertaken in accordance with the cleaning manufacturer and supplier's technical recommendations. All necessary precautions to be taken to minimise dust and prevent damage to face of brickwork, mortar joints, original timbers and metalwork etc.</p> <p>Restorative Techniques Ltd, Bristol</p> <p>Tel. 01454 417831</p> <p><a href="http://www.restorativetechiniques.co.uk">www.restorativetechiniques.co.uk</a></p> <p>Alternatively:</p> <p>Stonehealth Limited</p> <p>Tel. 01453 540 600</p> <p><a href="http://www.stonehealth.com">www.stonehealth.com</a></p> |              |      |   |   |
| C) | <p>The internal cleaning and associated making good works at Mindel House, Manchester are to be read in-conjunction with the following supplementary reports:</p> <ul style="list-style-type: none"> <li>• WJS cleaning trial sample report / RAMS</li> <li>• Lincoln Conservation paint toxicity and architectural paint research reports</li> <li>• Sandberg mortar sampling report</li> </ul> <p><u>General Scope of Cleaning Work</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |   |   |
| D) | <ul style="list-style-type: none"> <li>• Cleaning for exposed brickwork – <u>4<sup>th</sup> floor only</u> - remove existing damaged plaster and coatings from internal brickwork allowing for localised repointing and repair works to leave exposed brickwork walls as per approved plans.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Qty/<br>Unit | Rate | £ | p |
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| E) | <ul style="list-style-type: none"> <li>Cleaning timber beams (in preparation for primer and intumescent paint coating)</li> <li>Cleaning underside of exposed timber mill boards</li> <li>Cleaning iron columns (in preparation for primer and intumescent paint coating)</li> </ul> <p>Refer to cleaning mark-up plan drawings and elevations for specific details and location of cleaning works on a floor by floor basis.</p> <p>Do not disturb or damage original plaster finishes during cleaning process which are to be repaired / restored - refer to separate plaster condition drawings. Suitable protection measures to be employed in order to prevent any damage to original historic plaster / finishes.</p> <p><u>Cleaning Systems (subject to approved trial samples)</u></p> <p>Light duty, air-abrasive systems; e.g. TORC, Microstrip, VorTech, or other approved systems as per approved trial samples.</p> <ul style="list-style-type: none"> <li>Cleaning brickwork (<u>fourth floor level</u>)</li> </ul> <p>Microstrip – 40-50 PSI – light mist of water – media fine crushed medium</p> <ul style="list-style-type: none"> <li>Cleaning timber beams and underside of timber mill boards</li> </ul> <p>Microstrip – 40-50 PSI – light mist of water – media fine crushed medium</p> <p>Note: cleaning must not damage the grain of the existing timbers.</p> <ul style="list-style-type: none"> <li>Cleaning iron columns</li> </ul> <p>Microstrip – 70 PSI – very light mist of water – media fine crushed medium</p> <p><u>Trial Samples</u></p> <p>The appointed contractor shall produce satisfactory trial panels (exemplars) in locations representative of the soiling and substrate anticipated for treatment as directed by the CA. The location of the test</p> |              |      |   |   |
| F) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Qty/<br>Unit | Rate | £ | p |
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| G) | <p>panels is to be marked on plan drawings or photographs, or if appropriate, directly to the surface with reversible marker (e.g. tape, chalk or crayon). Exemplar panels shall be retained for the duration of the works. Record all parameters including date, time, prevailing weather conditions, operatives, equipment used, equipment settings. Allow sufficient time for test panels to dry before determining acceptable exemplar panels. Trial samples to be approved prior to commencement of cleaning works.</p> <p><u>Lead Paint Removal General</u></p> <p>Refer to separate Paint Toxicity Survey report and drawings from Lincoln Conservation for specific details of lead toxin levels throughout the building. Lead has not generally been detected to the internal plaster coating / paint finishes.</p> <p>Any lead paint coating removal works must be carried out by a specialist lead paint removal cleaning contractor. The contractor must provide detailed RAMS outlining environmental and contamination control measures, mitigation measures, access and egress controls, preparation works, surveillance, air and lead fume testing, lead paint removal works, waste lead residue control and special waste lead residue removal procedures, cleaning, decontamination and testing / certifying removal of lead to within acceptable lead threshold control limits on completion. Lead paint coating removal and associated cleaning to be undertaken strictly in accordance with the following:</p> <ul style="list-style-type: none"> <li>• UK HSE Guidance</li> <li>• The Control of Lead at Work (CLAW) Regulations 2002</li> <li>• British Coatings Federation Guidance</li> <li>• The Environmental Protection (Controls on Injurious Substances) Regulations 1992</li> <li>• The Controls on Dangerous Substances and Preparations Regulations 2006</li> </ul> <p><u>General</u></p> |              |      |   |   |
| H) | <p>Application of any transparent vapour permeable solvent free impregnation treatment dust inhibitor / suppressant (e.g. Keim Ecotec)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Qty/<br>Unit | Rate | £ | p |
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|             | <p>to exposed internal brickwork, e.g. at fourth floor level, is <u>TBC subject to planning approval.</u></p> <p>All works subject to toxicity sampling and testing of existing paints/coatings. Contractor to provide detailed RAMS to include the following information for approval by the CA prior to commencement:</p> <ul style="list-style-type: none"> <li>• Protection measures</li> <li>• Temporary protective materials to be used</li> <li>• Removal processes and clearing up</li> <li>• Monitoring and recording cleaning works</li> <li>• Ongoing trial sampling</li> <li>• Products and equipment used</li> <li>• Details of granulate abrasive cleaning materials</li> </ul>                                                                                                                                        |              |      |   |   |
| <b>3.10</b> | <b>Internal Repairs General</b> (Planning Condition 11) / LBC Condition 4))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| A)          | <p>A criteria-based approach has been used to determine the level of intervention required following surveys carried out by a range of specialists. Repair works will be undertaken only where necessary. Exact scope of work to be confirmed on site with the contractor.</p> <p>All repair works are to be undertaken using traditional techniques by approved heritage / restoration contractors where necessary. Plasters, lime mortars etc to be supplied by approved traditional materials CE certified supplier manufactured to British Standards under heritage guidelines for works to brick and stone masonry on listed buildings. Materials to be sourced from Conserv Lime Mortars (or similar approved supplier) tel. 01642 430 099. <a href="https://www.lime-mortars.co.uk/">https://www.lime-mortars.co.uk/</a>.</p> |              |      |   |   |
| B)          | For all plaster related repair works refer to separate reports and plan drawings. Plaster related works are to be undertaken by the specialist heritage plastering contractor to be compatible with the characteristics of the existing historic plaster and existing substrate on a floor by floor basis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |      |   |   |
| C)          | For structural related repair works (notably to the Alleyway elevation) refer to separate structural repair work specifications and detail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Qty/<br>Unit | Rate | £     | p  |
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|             | drawings supplied by GM Structures. Refer to separate schedules and drawings for lintel / beam repair works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |       |    |
| D)          | Include for undertaking localised crack stitch repairs using Helifix Helibar / Cemtie or similar approved masonry crack stitch repair systems to masonry affected by localised cracking and or distortion / movement generally above window lintel level / below window cill levels.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |       |    |
| E)          | Include the provisional sum of £3,500 for localised masonry crack stitch repair works to be expended and or deducted as directed on site by the CA / Structural Engineer. Refer to drawings for further details. Full extent of works to be confirmed on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      | 3,500 | 00 |
| <b>3.17</b> | <b>Internal Repointing</b> (Planning Condition 11) b) / LBC Condition 4) b))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |       |    |
| A)          | Refer to supplementary Sandberg mortar sampling report provided.<br><br>Being the closest to the original non-hydraulic mortar in terms of softness and permeability, and from a visual perspective in terms of colour, texture and finish, <u>NHL 2 mortar</u> is to be used with suitable well graded sharp sand (in the event of supply difficulties with NHL 2, it may be acceptable to use NHL 3.5, but only if absolutely necessary).<br><br>Repointing to be undertaken only where necessary. On completion of the cleaning works precise areas of repointing are to be identified and marked up on site prior to commencement. Photographic records must be taken prior to commencement and during the works.                                      |              |      |       |    |
| B)          | To all areas of eroded, disturbed or chased out joints repointing is to be undertaken using approved Natural Hydraulic Lime 2 (NHL 2) lime mortar. NHL powdered mortar to be mixed with well graded clean washed sharp sand and 8%-10% water content. Allow for carefully raking out mortar in small sections to a sound surface using appropriate hand tools e.g. sharp masonry scutch hammer minimum depth of 20mm where necessary taking care to avoid damaging existing masonry. If any mortar is too hard and unable to be broken with hand tools without the potential to damage the original masonry, utilise Fein or similar Oscillating Machine with heritage blade. Ensure all masonry is adequately dampened prior to application. Mortar to be |              |      |       |    |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Qty/<br>Unit | Rate | £     | p  |
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|             | <p>placed using a trowel or <u>small tool</u> and <u>hawk</u>. Re-point flush and unfinished. Allow for necessary setting times to enable the mortar to stiffen and set. Finish with a suitable soft bristled brush to a stippled finish showing off the aggregate in the mortar, ensuring the joints are compacted and vapour permeable. Ensure that pointing mortars are adequately protected with breathable hessian sheeting and appropriate humidity levels are maintained to prevent rapid drying cracking.</p> <p>Include the provisional sum of £2,000 for localised repointing works to be expended and or deducted as directed on site by the CA / Structural Engineer. Full extent of works to be confirmed on site.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      | 2,000 | 00 |
| <b>3.18</b> | <b>External Cleaning</b> (Planning Condition 11) b) / LBC Condition 4) b))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |       |    |
| A)          | <p>The cleaning philosophy will be a 'light touch' approach to remove soiling, dirt and paint etc where necessary and where detrimental to the original building fabric, whilst respecting the age and character of the building. Specific elements are to be cleaned without causing harm to original materials and features. Overcleaning is to be avoided. In no circumstance will original fabric be given a 'new' appearance. There will not be a 'one size fits all' solution for cleaning the different materials and finishes. The cleaning methodology is to be tailored to suit the condition of the various elements to be cleaned. Cleaning works to be undertaken in accordance with current principal guidance for masonry cleaning BS8221: Code of practice for cleaning and surface repair of buildings – Part 1: Cleaning of natural stones, brick, terracotta and concrete, revised 2012. Cleaning works to be undertaken by a specialist heritage approved cleaning and restoration contractor. All necessary precautions to be taken to minimise dust and prevent damage to face of brickwork, mortar joints, original timbers and metalwork etc. and to prevent residue or liquid run-off from contaminating or polluting existing pathways, drains, water courses etc. All cleaning work to be undertaken in accordance with the cleaning manufacturer and supplier's technical recommendations;</p> <p>Restorative Techniques Ltd, Bristol<br/>Tel. 01454 417831<br/><a href="mailto:info@restorativetechniques.co.uk">info@restorativetechniques.co.uk</a></p> |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Qty/<br>Unit | Rate | £ | p |
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|    | <a href="http://www.restorativetechniques.co.uk">www.restorativetechniques.co.uk</a><br><br>Alternatively:<br><br>Stonehealth Limited<br><br>Tel. 01453 540 600<br><br><a href="http://www.stonehealth.com">www.stonehealth.com</a><br><br><u>Scope of Work</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |   |   |
| B) | <ul style="list-style-type: none"> <li>Remove paint and graffiti from external masonry / stucco. Paint binders are primarily 'organic'.</li> <li>Localised cleaning to external masonry; remove organic and particulate soiling, bird guano and surface carbonaceous soiling, localised white efflorescence, paint/bitumen splashes. Broad sub-surface discolouration and translucent surface lime efflorescence will likely remain. Localised disfigurements to be reduced by agreement.</li> <li>Extent of cleaning and coating removal shown on drawings.</li> <li>Repointing and redecoration work to be undertaken after cleaning subject to outcome of trial samples.</li> <li>Final rinse-down to all surfaces following adequate setting time for repointing work.</li> </ul> |              |      |   |   |
| C) | <u>Cleaning System (Subject to Approved Trial Samples)</u> <ul style="list-style-type: none"> <li>External paint removal - ThermaTech <i>superheated water</i> system, where necessary supplemented with pH 'neutral' chemical paint softeners.</li> <li>Cleaning of external stone/brickwork -ThermaTech system. Localised lime efflorescence to use Venturi Abrasive Attachment for ThermaTech with Dolomite abrasive.</li> <li>Superfluous runs or spots of paint or bitumen, external - ThermaTech system, pre-softened if necessary with pH neutral paint softener.</li> <li>Alternatively – DOFF Integra superheated cleaning system, or similar approved.</li> </ul>                                                                                                           |              |      |   |   |

|  | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Qty/<br>Unit | Rate | £ | p |
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|  | <p><u>Trial Samples</u></p> <ul style="list-style-type: none"> <li>The appointed contractor shall produce satisfactory trial panels (exemplars) in locations representative of the soiling and substrate anticipated for treatment as directed by the CA.</li> <li>The location of the test panels is to be marked on plan drawings or photographs, or if appropriate, directly to the surface with reversible marker (e.g. tape, chalk or crayon). Exemplar panels shall be retained for the duration of the works.</li> <li>Record all parameters including date, time, prevailing weather conditions, operatives, equipment used, equipment settings.</li> <li>Allow sufficient time for test panels to dry before determining acceptable exemplar panels.</li> <li>Trial samples to be approved by the CA and Planning prior to commencement of cleaning works.</li> </ul> <p>Trial sample report to be provided and supplemented by the following:</p> <ul style="list-style-type: none"> <li>Lincoln Conservation paint toxicity and architectural paint research reports</li> <li>Sandberg mortar sampling report</li> </ul> <p><u>General</u></p> <p>All works subject to toxicity sampling and testing of existing paints/coatings. Contractor to provide detailed RAMS to include the following information for approval by the CA prior to commencement:</p> <ul style="list-style-type: none"> <li>Protection measures and temporary protective materials</li> <li>Cleaning methodology and sequence, details of granulate cleaning materials, brushing and scraping, tooling</li> <li>Products and equipment used</li> <li>Wet abrasive cleaning</li> <li>Steam cleaning equipment</li> <li>Control settings</li> <li>Chemical paint softeners</li> <li>Disposal of wash water and detritus</li> <li>Removal processes and clearing up</li> <li>Monitoring</li> <li>Recording cleaning works</li> <li>Ongoing trial sampling</li> </ul> |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Qty/<br>Unit | Rate | £ | p |
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| D)          | <p><u>Anti-Graffiti Coatings / Maintenance General</u></p> <p>All such works subject to approved trial sampling in-conjunction with external cleaning works, as before.</p> <p>Surfaces painted with Keim Mineral Paints must be allowed to thoroughly dry out for a minimum period of 7 days prior to the application of an Anti-Graffiti system. When all surfaces are clean, sound, wind dry, dust free and free from all surface contaminants, further treatment using Keim Mineral Paints may proceed.</p> <p>Allow for the application of an approved 'sacrificial' or 'permanent' Anti-Graffiti Coating system e.g. Keim Anti-Graffiti Wax Coating 694 or Easy On Anti-Graffiti Clear Glaze coating (or similar approved) strictly in accordance with the manufacturer's technical recommendations.</p> <p>To effect the removal of subsequent graffiti damage, for best results remove as soon as possible after graffiti has been applied. Do not attempt to remove any stubborn slogans by abrasion. Subject to the extent of ongoing graffiti, and subsequent graffiti removal, the approved Anti-Graffiti Coating will need to be reapplied periodically in accordance with the manufacturer's recommendations.</p> |              |      |   |   |
| <b>3.19</b> | <b>External Masonry Repairs General</b> (Planning Condition 11) b) / LBC Condition 4) b))                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |   |   |
| A)          | <p>Refer to elevation drawings ref: – 013-MDB-MH-XX-EL-A-2100 for further details and locations.</p> <p>Refer to separate Roofing Works section for external repairs to roof level Roof Structures.</p> <p>A criteria-based approach has been used to determine the level of intervention required following surveys carried out by a range of specialists. Repair works to be undertaken only where necessary.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Qty/<br>Unit | Rate | £ | p |
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|             | <p>Repair works are to be undertaken using traditional techniques by approved heritage / restoration contractors / master stonemasons where necessary. Exact scope of work to be confirmed on site with the contractor. Lime based repair mortars to be supplied by approved traditional materials CE certified supplier manufactured to British Standards under heritage guidelines for works to brick and stone masonry on listed buildings. Materials to be sourced from Conserv Lime Mortars (or similar approved supplier) tel. 01642 430 099. <a href="https://www.lime-mortars.co.uk/">https://www.lime-mortars.co.uk/</a>.</p> <p>Replacement bricks to be reclaimed to match existing or alternatively to be sourced from Imperial Handmade Bricks (tel. 01746 330994), specialists in brick matching imperial sized brickwork for listed buildings and conservation projects. <a href="https://www.imperialhandmadebricks.co.uk/about-us/brick-matching/">https://www.imperialhandmadebricks.co.uk/about-us/brick-matching/</a></p> <p>Refer to separate schedules and drawings for lintel / beam repair works. Final detail design drawings and specifications for all structural related repair works to be provided by GM Structures.</p> <p>Refer to separate drainage and building services engineering specifications and drawings for works associated with isolating/de-commissioning/ removal of any redundant building services related installations.</p> <p>Note: The following defect repairs are quantified on an elevation by elevation basis. All quantities are approximate. Allow for all repairs and price on an itemised elevation by elevation basis. On completion of scaffolding works, the precise locations, detail design and exact scope of work are to be agreed on site with GM Structures, the contractor and the CA.</p> |              |      |   |   |
| <b>3.20</b> | <b>Bloom Street Elevation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |
|             | <u>Stucco Repair General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
| A)          | Following exterior façade cleaning works, localised spalling, cracking and delamination to existing stucco is to be repaired by a specialist heritage plasterer (prior to repainting works). Upon completion of                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Qty/<br>Unit | Rate | £     | p  |
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| B) | <p>scaffolding, include for a full hammer test across all accessible parts of the stucco prior to commencement in order to verify the full scope of works and report findings to the CA. Every effort is to be made to retain and repair / re-coat the existing stucco and to limit hacking off and re-rendering as far as reasonably practicable. All works to the approval of the CA.</p> <p>Include the provisional sum of £2,500 for stucco render repair works to be expended and or deducted as directed on site by the CA.</p> <p>The stucco repair specification is subject to lab test confirmation of the existing original base stucco materials. Allow for all necessary trial patch repairs to ensure compatibility with trial sample repairs to the approval of the CA. Note: the stucco repair specification may be subject to variation depending on test results to ensure historical continuity and structural compatibility with the existing material.</p> <p>Allow for supply, mixing and application of approved Natural Hydraulic Lime based traditional 3 coat stucco render system i.e. allow for render base coat, floating coat and finishing coats as required. All repaired stucco must be fully cured before painting with approved vapour permeable paint (paint specified elsewhere). Sand used should be washed and graded pit sand, hard, sharp, gritty and free from clay and organic impurities.</p> <p>Mix in drum mixers or by mixing whisk in accordance with manufacturer's technical recommendations, carefully add clean water, typically between 4.5-5 litres per 25kg bag and mix for approximately 5minutes. Prompt mortar will rapidly set, typically within 30 - 50 mins, depending on temperature. Do not use in temperatures less than 5 °C or over 30°C. Any animal hair to match the existing mix must be obtained from an approved supplier e.g. Conserv mountain cashmere goat hair and should be long, strong, and free of any contaminants, dirt and grease. The hair should be teased / blended into the base coat / coarse stuff in the ratio of approx. 2 grams of hair for each kilogram of base coat lime plaster after the plaster has been mixed and just before application. It should be well teased into the mix and evenly distributed without tufts.</p> |              |      | 2,500 | 00 |

|  | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Qty/<br>Unit | Rate | £ | p |
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|  | <p>Stucco repairs to be undertaken on a clean and dry background. Allow for carefully cutting out any defective or cracked sections of stucco taking care to form a slight undercut to act as a key as required (a finer aggregate will be required where the crack is fine or hairline and it is unnecessary to undercut where the space is easily filled). Flush out with water to remove dust and debris and allow to dry.</p> <p>Repoint and or repair underlying masonry as required with the correct lime mortar (specified elsewhere). Adequately dampen dry or high suction surfaces beforehand, apply Lime Green Stucco Primer or Beech Quartz priming filler 1-2 coats, thinned if required with Beech fixative, or similar approved lime/silicate based primer, to improve adhesion. Apply new Stucco whilst substrate still damp. Price on the basis of three layers of hydraulic lime based stucco render of uniform thickness. Apply each coat while the previous is still damp, to prevent any rapid drying. Interval time between coats and overall curing time to be in accordance with manufacturer's technical recommendations. Protect all stucco work during and after application to prevent any accelerated or prolonged drying. In hot weather or situations where rapid drying is likely, work should be protected with damp hessian.</p> <p>The contractor should also allow for undertaking localised lime based grout repairs. Any notable hollow areas and or voids in lime-based stucco may be flushed out likewise. Allow for forming a small hole at the base of any void to allow water to escape. Acetone may be used or added to the water to assist drying. A ten per cent solution of Primal WS24 or similar resin for consolidating lime plasters may be injected into the void prior to grouting in order to increase the bond between grout and the internal face, before injecting fine lime based grout. Observe surface of the stucco while grouting to check for escape holes, surface bulging or consequent loss. Vulnerable areas should be supported until grout has set. Surface of the stucco to be reinstated to its original profile, where possible without causing loss.</p> <p>Note: newly repaired areas must be allowed to dry out for a minimum period of 15 days (28 days for lime repairs) prior to the application of Keim Mineral Paints (see below).</p> |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Qty/<br>Unit | Rate | £ | p |
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|    | <u>Repainting Stucco / Stone (Ground Floor Level Only)</u><br><br>Note: Repainting works to be subject to the outcome of trial sample cleaning works (as previously specified).<br><br><i>Preparation</i><br><br>Generally prepare existing previously painted surfaces in-conjunction with specialist cleaning works and removal of existing paint coatings and only once all stucco repairs have thoroughly cured. Prepare and repaint all existing previously painted stone/stucco as indicated on elevation repair drawings using new Keim paints (or similar approved mineral based vapour permeable paint system) with all work to be undertaken strictly in accordance with manufacturer's technical recommendations.                                                                                                                                  |              |      |   |   |
| C) | Loose, flaking and unstable material must be thoroughly removed using stiff brushes and broad bladed scrapers to get back to a sound edge. Edges to be feathered in. Underlying substrate must be sound and adhering well and surfaces should be thoroughly prepared to create a good key.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |   |   |
| D) | Paint removal as previously specified and or with Keim STS 7M or similar approved liberally applied by brush. The coat of paint stripper should be thicker than the coat of paint that is to be removed. For any multiple layers of paint score the surfaces to aid penetration through the layers. For best performance cover surfaces in thin protective plastic film to prevent from premature drying out. Keim STS 7M should be allowed to remain undisturbed for between 30 minutes and 30 hours depending on the number and thickness of paint layers (it can be applied and left protected overnight). Paint should be dissolved and easily removed either using a scraper, brush used with warm water or a high pressure hot water washer (refer to external cleaning specification for further details). Operatives should wear all appropriate PPE. |              |      |   |   |
| E) | Mould and or fungal growth must be thoroughly removed as previously specified. Once prepared surfaces have dried uniformly soak with undiluted KEIM Algicide-Plus (or similar approved) by brush or flood coating (do not spray). Subsequent washing down is not necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |   |   |
| F) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Qty/<br>Unit | Rate | £ | p |
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|    | Once the product has been allowed to act for at least 24 hours, KEIM coating systems can be applied onto the cleaned surface.                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
| G) | Stucco repairs specified previously - any other subsequent cracks to be filled using Keim Spachtel (or similar approved) ready to use silicate mineral filler, brush or trowel applied to a pre-wetted surface and dressed back to the required level.                                                                                                                                                                                                                                                                                                                             |              |      |   |   |
| H) | Important Note: newly repaired areas must be allowed to dry out for a minimum period of 15 days (28 days for lime repairs) prior to the application of Keim Mineral Paints. Newly lime rendered/repaired areas must be allowed to dry out for a minimum period of 28 days and to have carbonated to a minimum depth of 2.5mm prior to application of Keim Mineral Paints. This is a minimum requirement.                                                                                                                                                                           |              |      |   |   |
| J) | All surfaces must be thoroughly washed down with clean cold water to remove all surface dirt and dust. When all surfaces are clean, sound, wind dry, dust free and free from all surface contaminants, decoration using Keim Mineral Paints may proceed.<br><br><i>Decoration</i>                                                                                                                                                                                                                                                                                                  |              |      |   |   |
| K) | For porous or any bare lime render surfaces apply first coat Keim Soldalit Fixativ (or similar approved primer), brush applied and worked well into all surfaces, to reduce any high surface porosity. Leave for a minimum period of 12 hours before further decoration.                                                                                                                                                                                                                                                                                                           |              |      |   |   |
| L) | Apply two coat Keim Soldalit exterior silicate vapour permeable paint system (or similar approved), applied undiluted by brush, roller or airless spray with a minimum period of 12 hours between coats.                                                                                                                                                                                                                                                                                                                                                                           |              |      |   |   |
| M) | After a minimum period of 12 hours apply final coat of Keim Restaurolasur (blending colourwash), diluted to the required level with Keim Restaurolasur Fixativ. Typical specification would be to dilute the second coat using a 3:1 ratio (3 parts Keim Restaurolasur Fixativ & 1 part Keim Restaurolasur). Keim Restaurolasur should be applied by brush; it is important that a wet edge is kept at all times and that contractors work to a natural break-line working from the bottom upwards so that runs going back into wet material can be dealt with. Keim Restaurolasur |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Qty/<br>Unit | Rate | £ | p |
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|    | should not be cut in at any time and the contents of the containers should be stirred frequently during application.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |      |   |   |
| N) | Allow for conducting site trials to determine the number of coats and the amount of Fixativ required to obtain the desired opacity. Consumption rates and all application works to be undertaken strictly in accordance with manufacturer's technical recommendations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      |   |   |
|    | <u>Crack / Building Movement Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| O) | Allow for remedying cracked arches / lintels over the upper ground floor windows (masonry/stucco to be confirmed on site), using supplementary angled / vertical wall tie repairs to localised sections of masonry where cracked or potentially unstable using 'Cemtie' or similar approved austenitic stainless steel ties (length to suit) drilled into predetermined hole to a depth 25mm longer than the length of the tie. Install / inject tie with Helibond or similar approved grout using manufacturer's approved injecting tool strictly in accordance with manufacturer's recommendations. Fill pilot holes / make good any damage with approved lime based stone / stucco repair mortar (as specified elsewhere) prior to repainting. |              |      |   |   |
|    | Include for overhead stitch repairs as above to 5no. upper ground floor window stone / stucco arches where cracked.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |   |   |
|    | <u>Stone Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |      |   |   |
| P) | Localised spalling and delamination to existing stonework to be repaired following appropriate cleaning works by a specialist stonemason. Upon completion of scaffolding, survey work is to be carried out by specialist stonemasonry contractor experienced in the conservation and repair of decorative masonry in the company of the CA in order to verify the full scope of works.                                                                                                                                                                                                                                                                                                                                                            |              |      |   |   |
|    | Replacement substitute stone is to be <i>Crosland Hill Hard Yorkstone</i> to match existing stone in terms of colour, grain, texture, bedding arrangement and dressing style. Quality to be free from vents, cracks, fissures, discoloration, or other defects deleterious to strength/colour. Design, supply and installation of stone to be in accordance with BS8298 parts 1-4 and BS EN 1469:2004. Density 2410kg/m <sup>3</sup> . Ethical                                                                                                                                                                                                                                                                                                    |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Qty/<br>Unit | Rate | £ | p |
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| Q) | <p>sourcing: Verification Status within Ethical Stone Register. Cast stone will not be used.</p> <p>All Crosland Hill Hard Yorkstone must be sourced from: Johnsons Wellfield Quarry Limited</p> <p>Blackmoorfoot Road</p> <p>Huddersfield</p> <p>HD4 7AB</p> <p>Tel. 01484 652311.</p> <p>Email: <a href="mailto:sales@johnsons-wellfield.co.uk">sales@johnsons-wellfield.co.uk</a> / <a href="mailto:Michael.gorman@myersgroup.co.uk">Michael.gorman@myersgroup.co.uk</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
|    | <p>To locations to be directed on site subject to scaffold access, allow for undertaking precise stone indent repairs to existing parapet coping / cill stones where necessary (stone indent repairs require high level of masonry skill). Thoroughly prepare damaged surfaces. Affected stone surfaces to be cut back to sufficient depth to ensure repairs remain safely in place. Mechanical (disc) cutters may be used to remove larger sections of damaged stone. Final dressing of the repair cavity, backs and sides, to be undertaken by hand with sharp masonry chisels to form well-cut, neat edges to the repair. Interface between stone indent and repaired stone to be very fine (not a masonry joint) for maximum durability. Indents to exposed edges should be dovetailed in place. Allow for carefully anchoring indent repairs where necessary with approved stainless steel dowels inserted and resin bonded into the indent and the back of the repair cavity. Resin to be used in the drilling only and not smeared across the stone surfaces at the interface. Bond stone interfaces with lime grout to be completely filled approved for the exposure, stone type and colour. Replacement Crosland Hill Hard Yorkstone to match in terms of colour, grain, texture, bedding arrangement and dressing style. Stone indents and any replacement stones to follow the original stone profile mouldings, stone type and colour. All stone repair faces to be finished by hand and dressed to</p> |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qty/<br>Unit | Rate | £     | p  |
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| R) | replicate original masonry. All bedding, perp and bed finished joints to be visually and physically compatible with the existing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |      |       |    |
|    | Include the provisional sum of £2,000 for optional stone indent repairs (as above) to be expended and or deducted as directed on site by the CA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      | 2,000 | 00 |
| S) | <p><u>Minor sections of weathered stone (to be confirmed on site) to be left as existing on the basis such sections of stone express age and character and are not harmful to the building.</u> For limited surface repairs only (to be confirmed on site) refer to the following link for taking samples of the existing stonework in order to match stone repair mortar <a href="https://www.lime-mortars.co.uk/stone-repair/guides/stone-matching">https://www.lime-mortars.co.uk/stone-repair/guides/stone-matching</a>. Allow for undertaking optional stone surface repairs to be undertaken using approved ethical lime mortar based stone repair mortar. Note: minor sections of weathered stone are to be left as existing (on the basis such sections of stone express age and character and are not harmful to the building). Mix according to the manufacturer's recommendations in a suitable mixing vessel add the aggregate first, then the lime. Dry mix for 2 to 5 minutes, depending upon the quantity. Add a small amount of water and mix for 5 minutes until a stiff consistency has been reached. Leave to stand for 10 minutes before slowly adding more water to achieve desired application consistency. Mix for no less than 15 minutes. The mixture will set overnight (although it will take 91 days to fully cure and harden). Cut back defective masonry to a sound base taking care not to damage the stones natural substrata (otherwise undertake stone indent repair work as specified previously). Remove all debris and flush with clean water. Apply base primer, a small quantity of the repair material mixed with clean water, slurry and leave to dry overnight. Once the main primer has set mix up the repair mortar. Remove a small amount of the repair mortar and place into a separate vessel to be made into paintable slurry by adding more water. Use slurry as a secondary primer. Apply the secondary primer to the repair areas previously primed but place the first coat of repair material on top before the primer dries (i.e. apply wet on wet). Undertake this procedure repair by repair. Build out the repairs in thin layers to a max depth of 10mm allowing each layer to stiffen before applying the next. Leave to dry before applying further layers (allowing 1 day per</p> |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Qty/<br>Unit | Rate | £     | p  |
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|    | millimetre thickness of mortar applied e.g. 10mm = 10 days). Re-prime areas dried out before placing more mortar. Employ moisture control measures if necessary. Cover repairs with mortar fleece or hessian to help cure and protect from weather (this is very important and do not use plastic sheeting). Once the repair has dried sufficiently (approx. 1 day per millimetre thickness of repair material applied depending upon weather / full curing may take longer) the repair can be worked as per new stone should tooling be necessary. Mortar joints to be cut back to accept repointing of the surrounding joints. All work (mixing, preparation, application, protection and shaping etc) to be undertaken strictly in accordance with manufacturer's technical recommendations. All works to be undertaken by specialist skilled masonry restoration contractor / stonemason.                                                                                                                                                                                                                                                                                                                                                                             |              |      |       |    |
| T) | Include the provisional sum of £1,000 for optional stone surface mortar repairs (as above) to be expended and or deducted as directed on site by the CA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      | 1,000 | 00 |
|    | <u>Joint Failure Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |      |       |    |
| U) | Allow for repairing defective masonry joints where perished (i.e. larger joints or gaps where traditional repointing work with lime mortar is not practicable). Carefully cut/rake out all defective joints where necessary using non-mechanical handtools, e.g. mason's saw, tooth edged chisel or alternative approved method so as to avoid damaging masonry. Joint surfaces must be clean, dry and free from all contamination. <u>Use non-staining sealant only</u> – sealant products to be obtained from Adshead Ratcliffe (or similar approved) <a href="https://www.arbo.co.uk/products/silicone-sealants/arbosil-xl-1099/">https://www.arbo.co.uk/products/silicone-sealants/arbosil-xl-1099/</a> tel. 01773 826661. Degrease prepared defective joints using appropriate Arbo Cleaner. Prime with Arbo Primer 2650. Install appropriate joint backing filler i.e. closed cell polyethylene foam to act as a linear stopper to appropriate depths for joint sealant. Carefully seal all prepared defective joints using Arbosil XL 1099 silicone sealant applied by an Arbo Caulking Gun. Colour of sealant to match stone/brick to the approval of the CA. All joint preparation, priming, and sealant application should be carried out in accordance with BS |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Qty/<br>Unit | Rate | £ | p |
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| V) | <p>8000 Part 16, the British Standard for the sealing of joints in buildings using sealants.</p> <p><u>Brick Repairs General</u></p> <p>Minor spalling, weathering, holes or chips to the surface of bricks or mortar joints or any other such surface imperfections are considered insignificant and are to be left without intervention so as to maintain the buildings original character. A small number of bricks have spalled more substantially. Carefully remove all redundant projecting ferrous / metal fixings only where necessary taking care to prevent damaging existing masonry. Undertake localised isolated repair to make good and restore the original stucco (as specified elsewhere). Brick repair mortars are to be avoided wherever possible. A further review will be undertaken on site with the contractor to determine whether brick repair/replacement is considered necessary. To brickwork notably deteriorated, loose or badly delaminated affecting 50% or more of the face of the brick, and or where the function of the brick has failed, carefully cut out the affected existing defective brickwork using hand tools and allow for localised replacing, re-bedding or re-building using imperial reclaimed bricks to match existing brick type exactly and bed and point using approved NHL 2 lime mortar – refer to Re-Pointing section for details. Replacement bricks to be reclaimed to match existing or alternatively to be sourced from Imperial Handmade Bricks (tel. 01746 330994), specialists in brick matching imperial sized brickwork for listed buildings and conservation projects. <a href="https://www.imperialhandmadebricks.co.uk/about-us/brick-matching/">https://www.imperialhandmadebricks.co.uk/about-us/brick-matching/</a></p> <p>Allow for 50no bricks (to be confirmed on site).</p> <p><u>External Repointing</u></p> <p><u>Trial Samples</u></p> <ul style="list-style-type: none"> <li>The contractor shall produce satisfactory trial panels (exemplars) in locations as directed by the CA.</li> <li>The location of the test panels is to be marked on plan drawings or photographs. Exemplar panels shall be retained for the duration of the works.</li> </ul> |              |      |   |   |
| W) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Qty/<br>Unit | Rate | £ | p |
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| X) | <ul style="list-style-type: none"> <li>Record all parameters including date, time, prevailing weather conditions, operatives, equipment used, equipment settings.</li> <li>Allow sufficient time for test panels to dry before determining acceptable exemplar panels.</li> <li>Trial samples to be approved by the CA and Planning prior to commencement of repointing works.</li> </ul> <p>Trial sample report to be provided and supplemented by the Sandberg mortar sampling reports.</p> <p>Being the closest to the original non-hydraulic mortar in terms of softness and permeability, and from a visual perspective in terms of colour, texture and finish, <u>NHL 2 mortar</u> is to be used with suitable well graded sharp sand (in the event of supply difficulties with NHL 2, it may be acceptable to use NHL 3.5, but only if absolutely necessary).</p> <p>Repointing work to be undertaken only where necessary i.e. where mortar has eroded or where the condition of the existing pointing is detrimental to the original masonry. On completion of the cleaning works precise areas of repointing are to be identified and marked up on site prior to commencement. Photographic records must be taken prior to commencement and during the works.</p> <p>To all areas of eroded, disturbed or chased out joints repointing is to be undertaken using approved Natural Hydraulic Lime 2 (NHL 2) lime mortar. NHL powdered mortar to be mixed with well graded clean washed sharp sand and 8%-10% water content. Allow for carefully raking out mortar in small sections to a sound surface using appropriate hand tools e.g. sharp masonry scutch hammer minimum depth of 20mm where necessary taking care to avoid damaging existing masonry. If any mortar is too hard and unable to be broken with hand tools without the potential to damage the original masonry, utilise Fein or similar Oscillating Machine with heritage blade. Ensure all masonry is adequately dampened prior to application. Mortar to be placed using a trowel or <u>small tool</u> and <u>hawk</u>. Re-point flush and unfinished. Allow for necessary setting times to enable the mortar to stiffen and set. Finish with a suitable soft bristled brush to a stippled finish showing off the aggregate in the mortar, ensuring the joints are compacted and vapour permeable. Ensure that pointing mortars are adequately protected with breathable hessian sheeting and</p> |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Qty/<br>Unit | Rate | £     | p  |
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|             | appropriate humidity levels are maintained to prevent rapid drying cracking.<br><br>Allow for repointing approx. 40m <sup>2</sup> (to be confirmed on site)<br><br><u>Additional Structural Repairs (Provisional Sum)</u><br><br>Y) Include the provisional sum of £2,500 for potential additional localised structural repair works to the Bloom Street elevation to be expended and or deducted as directed on site by the CA.<br><br>Note: extent of any additional structural related repair works and scope for deductions to be confirmed on site by GM Structures and the CA. |              |      | 2,500 | 00 |
| <b>3.15</b> | <b>Main Entrance Corner Elevation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |      |       |    |
| A)          | Refer to separate architectural drawing and specification packages for details relating to the main entrance doors and entrance lobbies and all associated finishes.<br><br><u>Stucco Repair General</u>                                                                                                                                                                                                                                                                                                                                                                             |              |      |       |    |
| B)          | Following specialist exterior façade cleaning works, allow for repairing any localised spalling, cracking and or delamination to existing stucco. Works to be undertaken by a specialist heritage plasterer (prior to repainting works) all as previously specified.<br><br><u>Repainting Stucco / Stone (Ground Floor Levels Only)</u>                                                                                                                                                                                                                                              |              |      |       |    |
| C)          | Generally prepare existing previously painted surfaces in-conjunction with specialist cleaning works and removal of existing paint coatings and only once all stucco repairs have thoroughly cured. Prepare and repaint all existing previously painted stone/stucco as indicated on elevation repair drawings using new Keim paints (or similar approved mineral based vapour permeable paint) all as previously specified, with all work to be undertaken strictly in accordance with manufacturer's technical recommendations.                                                    |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Qty/<br>Unit | Rate | £     | p  |
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|    | <u>Stone Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |       |    |
| D) | Localised spalling and delamination to existing stonework to be repaired following appropriate cleaning works by a specialist stonemason. Upon completion of scaffolding, survey work is to be carried out by specialist stonemason contractor experienced in the conservation and repair of decorative masonry in the company of the CA in order to verify the full scope of works. Allow for localised stone indent repairs using substitute matching stone and or stone surface mortar repairs (where necessary) to repair existing parapet coping stones / corning. Precise details to be confirmed and agreed on site. Works to be undertaken as previously described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |      |       |    |
| E) | Include the provisional sum of £1,500 for optional stone repairs (as above) to be expended and or deducted as directed on site by the CA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      | 1,500 | 00 |
| F) | Allow for supply and installation of new Code 6 rolled lead sheet flashing to the existing stone cornices at first and fourth floor levels. Detailing beneath timber window cills to be confirmed on site. Works must not proceed if the leadwork compromises the existing timber windows. All lead work to comply with BS EN 12588 and BS 6915:2001 and Lead Sheet Association technical recommendations. Clean and prepare stone as previously described. <u>Ensure that a layer of building paper to BS1521 Class A is placed under the lead sheet to allow for thermal movement and to protect against corrosion.</u> Remove mortar from any existing joints to a depth of at least 25mm. Allow for carefully cutting any necessary chases into the masonry above as required to fit a cover flashing. Flashings at abutments to be turned into the wall at least 25mm depth and be secured with wedges at not more than 450mm centres. Lead flashings to be fitted in lengths not exceeding 1500mm with 100mm end to end laps. Stainless steel screws and washers can be used at 450mm centres. Each length should be jointed with welted joints with clips engaged into the welts. Edges should turn down the face by at least 75mm and finish with a welted edge with clips tucked in to secure against wind uplift. Joints should be at least 6mm wide to allow hall clips to be inserted to hold the lead flashing in place. Wide joints over 18mm will require a more substantial fixing. Pre-point joints with NHL lime mortar and neatly point finished joints |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Qty/<br>Unit | Rate | £ | p |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|---|---|
|    | between lead flashings and masonry with approved Lead Pointing Sealant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |
|    | <u>Joint Failure Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |   |   |
| G) | Allow for repairing defective masonry joints where perished (i.e. larger joints or gaps where traditional repointing work with lime mortar is not practicable). Carefully cut/rake out defective joints where necessary, prime, fill and seal affected joints with Arbosil XL 1099 silicone sealant, all as previously specified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |   |   |
|    | <u>Brick Repairs General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |   |   |
| H) | Minor spalling, weathering, holes or chips to the surface of bricks or mortar joints or any other such surface imperfections are considered insignificant and are to be left without intervention so as to maintain the buildings original character. Carefully remove all redundant projecting ferrous / metal fixings only where necessary taking care to prevent damaging existing masonry. To external brickwork requiring isolated brick replacement or minor re-building works (where traditional repair mortar is not deemed suitable), carefully cut out existing defective brickwork using hand tools and allow for localised replacing, re-bedding or re-building using imperial reclaimed bricks (as described previously) to match existing brick type exactly and bed and point using approved Natural Hydraulic Lime (NHL) lime mortar – refer to Re-Pointing section. Undertake localised isolated repair to make good and restore the original stucco (as specified elsewhere). |              |      |   |   |
|    | Allow for 10no bricks (to be confirmed on site).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |      |   |   |
|    | <u>External Repointing</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
| J) | Repointing work to be undertaken only where necessary i.e. where mortar has eroded or where the condition of the existing pointing is detrimental to the original masonry. The building will not be fully raked out and repointed. Exact quantity of repointing to be established on site following completion of all façade cleaning restoration works and following re-inspection from scaffolding. Subject to trial samples,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Qty/<br>Unit | Rate | £     | p  |
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|             | repoint using NHL 2 lime with well graded sharp sand mortar - as before detailed descriptions - to match existing.<br><br>Allow for repointing approx. 15m <sup>2</sup> (to be confirmed on site)<br><br><u>Additional Structural Repairs (Provisional Sum)</u><br><br>K) Include the provisional sum of £2,500 for potential additional localised structural repair works around the corner junction of the Bloom Street elevation and the Minshull Street elevation to be expended and or deducted as directed on site by the CA.<br><br>Note: extent of any additional structural related repair works and scope for deductions to be confirmed on site by GM Structures and the CA. |              |      | 2,500 | 00 |
| <b>3.16</b> | <b>Minshull Street Elevation</b><br><br><u>Stucco Repair General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |
| A)          | Following specialist exterior façade cleaning works, allow for repairing any localised spalling, cracking and or delamination to existing stucco. Works to be undertaken by a specialist heritage plasterer (prior to repainting works) all as previously specified.                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |
| B)          | Include the provisional sum of £2,500 for stucco render repair works to be expended and or deducted as directed on site by the CA.<br><br><u>Repainting Stucco / Stone (Ground Floor Levels Only)</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      | 2,500 | 00 |
| C)          | Generally prepare existing previously painted surfaces in-conjunction with specialist cleaning works and removal of existing paint coatings and only once all stucco repairs have thoroughly cured. Prepare and repaint all existing previously painted stone/stucco as indicated on elevation repair drawings using new Keim paints (or similar approved mineral based vapour permeable paint) all as previously specified, with all work to be undertaken strictly in accordance with manufacturer's technical recommendations.                                                                                                                                                       |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Qty/<br>Unit | Rate | £     | p  |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|-------|----|
|    | <u>Crack / Building Movement Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |       |    |
| D) | <p>Allow for remedying cracked arches / lintels over the upper ground floor windows (masonry/stucco to be confirmed on site), using supplementary angled / vertical wall tie repairs to localised sections of masonry where cracked or potentially unstable using 'Cemtie' or similar approved austenitic stainless steel ties (length to suit) as previously specified.</p> <p>Include for overhead stitch repairs as above to 5no. upper ground floor window stone / stucco arches where cracked.</p>                                                                                                                                                                          |              |      |       |    |
|    | <u>Stone Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |       |    |
| E) | <p>Localised spalling and delamination to existing stonework to be repaired following appropriate cleaning works by a specialist stonemason. Upon completion of scaffolding, survey work is to be carried out by specialist stonemason contractor experienced in the conservation and repair of decorative masonry in the company of the CA in order to verify the full scope of works. Allow for localised stone indent repairs using substitute matching stone and or stone surface mortar repairs (where necessary) to repair existing parapet coping stones / cills. Precise details to be confirmed and agreed on site. Works to be undertaken as previously described.</p> |              |      |       |    |
| F) | <p>Include the provisional sum of £3,000 for optional stone repairs (as above) to be expended and or deducted as directed on site by the CA.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |      | 3,000 | 00 |
|    | <u>Joint Failure Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |       |    |
| G) | <p>Allow for repairing defective masonry joints where perished (i.e. larger joints or gaps where traditional repointing work with lime mortar is not practicable). Carefully cut/rake out defective joints where necessary, prime, fill and seal affected joints with Arbosil XL 1099 silicone sealant, all as previously specified.</p>                                                                                                                                                                                                                                                                                                                                         |              |      |       |    |
|    | <u>Brick Repairs General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |       |    |
| H) | <p>Minor spalling, weathering, holes or chips to the surface of bricks or mortar joints or any other such surface imperfections are considered</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |       |    |

|  | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Qty/<br>Unit | Rate | £     | p  |
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|  | <p>insignificant and are to be left without intervention so as to maintain the buildings original character. Carefully remove all redundant projecting ferrous / metal fixings only where necessary taking care to prevent damaging existing masonry. To external brickwork requiring isolated brick replacement or minor re-building works (where traditional repair mortar is not deemed suitable), carefully cut out existing defective brickwork using hand tools and allow for localised replacing, re-bedding or re-building using imperial reclaimed bricks (as described previously) to match existing brick type exactly and bed and point using approved Natural Hydraulic Lime (NHL) lime mortar – refer to Re-Pointing section. Undertake localised isolated repair to make good and restore the original stucco (as specified elsewhere).</p> <p>Allow for 10no bricks (to be confirmed on site).</p> <p><u>External Repointing</u></p> <p>J) Repointing work to be undertaken only where necessary i.e. where mortar has eroded or where the condition of the existing pointing is detrimental to the original masonry. The building will not be fully raked out and repointed. Exact quantity of repointing to be established on site following completion of all façade cleaning restoration works and following re-inspection from scaffolding. Subject to trial samples, repoint using NHL 2 lime with well graded sharp sand mortar - as before detailed descriptions - to match existing.</p> <p>Allow for repointing approx.40 m<sup>2</sup> (to be confirmed on site)</p> <p><u>Additional Structural Repairs (Provisional Sum)</u></p> <p>K) Include the provisional sum of £2,500 for potential additional localised structural repair works to the Minshull Street elevation to be expended and or deducted as directed on site by the CA.</p> <p>Note: extent of any additional structural related repair works and scope for deductions to be confirmed on site by GM Structures and the CA.</p> |              |      |       |    |
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      | 2,500 | 00 |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Qty/<br>Unit | Rate | £     | p  |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|-------|----|
| <b>3.17</b> | <b>Richmond Street Elevation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |      |       |    |
|             | <u>Stucco Repair General (at corner with Minshull Street)</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |      |       |    |
| A)          | Following specialist exterior façade cleaning works, allow for repairing any localised spalling, cracking and or delamination to existing stucco. Works to be undertaken by a specialist heritage plasterer (prior to repainting works) all as previously specified.                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |
|             | <u>Repainting Stucco / Stone (at corner with Minshull Street)</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |       |    |
| B)          | Generally prepare existing previously painted surfaces in-conjunction with specialist cleaning works and removal of existing paint coatings and only once all stucco repairs have thoroughly cured. Prepare and repaint all existing previously painted stone/stucco as indicated on elevation repair drawings using new Keim paints (or similar approved mineral based vapour permeable paint) all as previously specified, with all work to be undertaken strictly in accordance with manufacturer's technical recommendations.                                                                                                                                                       |              |      |       |    |
|             | <u>Stone Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |
| C)          | Localised spalling and delamination to existing stonework to be repaired following appropriate cleaning works by a specialist stonemason. Upon completion of scaffolding, survey work is to be carried out by specialist stonemason contractor experienced in the conservation and repair of decorative masonry in the company of the CA in order to verify the full scope of works. Allow for localised stone indent repairs using substitute matching stone and or stone surface mortar repairs (where necessary) to repair existing parapet coping stones / cills / lintels etc. Precise details to be confirmed and agreed on site. Works to be undertaken as previously described. |              |      |       |    |
| D)          | Include the provisional sum of £2,000 for optional stone repairs (as above) to be expended and or deducted as directed on site by the CA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      | 2,000 | 00 |
|             | <u>Joint Failure Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      |       |    |
| E)          | Allow for repairing defective masonry joints where perished (i.e. larger joints or gaps where traditional repointing work with lime mortar is not                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qty/<br>Unit | Rate | £ | p |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|---|---|
|    | <p>practicable). Carefully cut/rake out defective joints where necessary, prime, fill and seal affected joints with Arbosil XL 1099 silicone sealant, all as previously specified.</p> <p><u>Brick Repairs General</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |
| F) | <p>Minor spalling, weathering, holes or chips to the surface of bricks or mortar joints or any other such surface imperfections are considered insignificant and are to be left without intervention so as to maintain the buildings original character. Carefully remove all redundant projecting ferrous / metal fixings only where necessary taking care to prevent damaging existing masonry. To external brickwork requiring isolated brick replacement or minor re-building works (where traditional repair mortar is not deemed suitable), carefully cut out existing defective brickwork using hand tools and allow for localised replacing, re-bedding or re-building using imperial reclaimed bricks (as described previously) to match existing brick type exactly and bed and point using approved Natural Hydraulic Lime (NHL) lime mortar – refer to Re-Pointing section. Undertake localised isolated repair to make good and restore the original stucco (as specified elsewhere).</p> <p>Allow for 15no bricks (to be confirmed on site).</p> |              |      |   |   |
| G) | <p>In conjunction with external cleaning works (specified elsewhere) and masonry repairs, make allowance for carefully removing and grubbing out all excess vegetation and associated root systems from the external masonry and treat affected areas with an approved herbicide / fungicidal wash. Make good and restore damaged masonry to match existing as previously described.</p> <p><u>External Repointing</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |
| H) | <p>Repointing work to be undertaken only where necessary i.e. where mortar has eroded or where the condition of the existing pointing is detrimental to the original masonry. The building will not be fully raked out and repointed. Exact quantity of repointing to be established on site following completion of all façade cleaning restoration works and following re-inspection from scaffolding. Subject to trial samples,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Qty/<br>Unit | Rate | £      | p  |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|--------|----|
|             | repoint using NHL 2 lime with well graded sharp sand mortar - as before detailed descriptions - to match existing.<br><br>Allow for repointing approx. 40m <sup>2</sup> (to be confirmed on site)<br><br><u>Additional Structural Repairs (Provisional Sum)</u>                                                                                                                                                                                                                    |              |      |        |    |
| J)          | Include the provisional sum of £2,500 for potential additional localised structural repair works to the Richmond Street elevation to be expended and or deducted as directed on site by the CA.<br><br>Note: extent of any additional structural related repair works and scope for deductions to be confirmed on site by GM Structures and the CA.                                                                                                                                |              |      | 2,500  | 00 |
| <b>3.18</b> | <b>Alleyway Elevation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |        |    |
| A)          | Refer to separate architectural drawing and specification packages for all details relating to the proposed alterations, windows and door openings etc to the Alleyway elevation.<br><br><u>Building Movement / Structural Repairs</u>                                                                                                                                                                                                                                             |              |      |        |    |
| B)          | Include the provisional sum of £50,000 for undertaking structural repair works to the Alleyway elevation to be expended and or deducted as directed on site by the CA.<br><br>Note: Temporary works priced elsewhere as a separate package of works. Extent of structural works and or scope for variations to be confirmed on site by the Structural Engineer and the CA.<br><br><u>Stone Repairs</u>                                                                             |              |      | 50,000 | 00 |
| C)          | Localised spalling and delamination to existing stonework to be repaired following appropriate cleaning works by a specialist stonemason. Upon completion of scaffolding, survey work is to be carried out by specialist stonemason contractor experienced in the conservation and repair of decorative masonry in the company of the CA in order to verify the full scope of works. Allow for localised stone indent repairs using substitute matching stone and or stone surface |              |      |        |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Qty/<br>Unit | Rate | £     | p  |
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|    | mortar repairs (where necessary) to repair existing parapet coping stones / cills etc. Precise details to be confirmed and agreed on site. Works to be undertaken as previously described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |      |       |    |
| D) | Include the provisional sum of £2,000 for optional stone repairs (as above) to be expended and or deducted as directed on site by the CA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      | 2,000 | 00 |
|    | <u>Joint Failure Repairs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |       |    |
| E) | Allow for repairing defective masonry joints where perished (i.e. larger joints or gaps where traditional repointing work with lime mortar is not practicable). Carefully cut/rake out defective joints where necessary, prime, fill and seal affected joints with Arbosil XL 1099 silicone sealant, all as previously specified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |
|    | <u>Brick Repairs General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |       |    |
| F) | Minor spalling, weathering, holes or chips to the surface of bricks or mortar joints or any other such surface imperfections are considered insignificant and are to be left without intervention so as to maintain the buildings original character. Carefully remove all redundant projecting ferrous / metal fixings only where necessary taking care to prevent damaging existing masonry. To external brickwork requiring isolated brick replacement or minor re-building works (where traditional repair mortar is not deemed suitable), carefully cut out existing defective brickwork using hand tools and allow for localised replacing, re-bedding or re-building using imperial reclaimed bricks (as described previously) to match existing brick type exactly and bed and point using approved Natural Hydraulic Lime (NHL) lime mortar – refer to Re-Pointing section. |              |      |       |    |
|    | Allow for 100no bricks (to be confirmed on site).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |
| G) | In conjunction with external cleaning works (specified elsewhere) and masonry repairs, make allowance for carefully removing and grubbing out all excess vegetation and associated root systems from the external masonry and treat affected areas with an approved herbicide / fungicidal wash. Make good and restore damaged masonry to match existing as previously described.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |       |    |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Qty/<br>Unit | Rate | £ | p |
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|             | <u>External Repointing</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |
| H)          | Repointing work to be undertaken only where necessary i.e. where mortar has eroded or where the condition of the existing pointing is detrimental to the original masonry. The building will not be fully raked out and repointed. Exact quantity of repointing to be established on site following completion of all façade cleaning restoration works and following re-inspection from scaffolding. Subject to trial samples, repoint using NHL 2 lime with well graded sharp sand mortar - as before detailed descriptions - to match existing.<br><br>Allow for repointing approx. 100m <sup>2</sup> (to be confirmed on site) |              |      |   |   |
| <b>3.19</b> | <b>Re-Roofing Works General</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |      |   |   |
|             | <u>General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |
| A)          | The contractor will comply with The Work at Height Regulations 2005. The contractor is to ensure that no person engages in any activity in relation to works at height or work equipment for use in such work unless they are competent to do so. The contractor is to provide suitable fall protection for all operatives working at height and to ensure the safety of staff and members of the public at all times. Ensure roofing works are undertaken in accordance with current HSE Guidance "Health and safety in roof work" (Fifth Edition 2020).                                                                          |              |      |   |   |
| B)          | Every precaution needs to be taken to prevent materials or tools from falling from height and to ensure that all operatives can work safely on the roof and to all roof perimeters. Scaffolding must comply with The National Access and Scaffolding Confederation (NASC) Technical Guidance Note TG20:08 to comply with European standard BS EN 12811-1, 2003 and all permits/regulations as stipulated by the local authority (refer to separate detailed Scaffold and Temporary Works design and specifications for further details).                                                                                           |              |      |   |   |
| C)          | All roofing works are to be undertaken in strict compliance with the following:<br><br>Construction Design and Management Regulations 2015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Qty/<br>Unit | Rate | £ | p |
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|    | <p>Work at Height Regulations 2005</p> <p>HSE Guidance "Health and safety in roof work" (Fifth Edition 2020)</p> <p>Fire Prevention on Construction Sites 9<sup>th</sup> Edition – The Joint Code of Practice on the Protection from Fire of Construction Sites and Buildings Undergoing Renovation.</p> <p>National Federation of Roofing Contractors Safe2Torch Guidance - for the safe installation of torch-on reinforced bitumen membranes and use of gas torches in the workplace.</p> <p>It will be necessary to assess the hazards associated with any potential hot works taking into account the nature of the existing historic timber roof construction and to eliminate or mitigate the risk of fire. Where flammable substrates or a risk of fire occurs e.g. where a membrane directly adjoins the timber pitched roof with details to be completed under abutments to roof slates etc, <u>compatible alternative torch-free solutions should be adopted</u>, even if just local to specific risk areas.</p> |              |      |   |   |
| D) | All roofing works and associated demolition and enabling works subject to asbestos 'refurbishment and demolition level' survey report results. Isolate, disconnect, decommission as necessary and carefully strip out all existing redundant building services and associated fixtures, fittings, cables, pipework, controls etc and terminate all supplies from all roof areas, roof mounted structures, roof voids etc including for removal of the existing redundant sprinkler installations in order to facilitate the re-roofing works (refer to separate Building Services detailed design and specifications for further details).                                                                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |
| E) | Refer to separate architectural drawing and specification packages for localised roof level adaptation / alteration works, roof access, roof voids, insulation provision, ceiling / wall finishes and all associated detailing generally. Refer to roof plan drawing ref: 061_159 F for scope of proposed roof level works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |      |   |   |
| F) | Refer to separate specialist reports in relation to the condition of the existing roof structures. The full extent of roof structure repair work is to be confirmed by the structural engineer, subject to safe access into the roof voids and further investigation of the roof structure timbers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Qty/<br>Unit | Rate | £ | p |
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|             | etc. Access into the roof voids to enable further investigation of the roof structures subject to planning officer's approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |
| G)          | Refer to separate reports, drawings and specification information provided by Hutton + Rostron for all timber decay details relating to the timber roof structure, timber ceiling structures and all ceiling plaster and roof void / wall plaster related repair works etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |
| <b>3.20</b> | <b>Pitched Roofs</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      |   |   |
|             | <u>Pitched Roofing General</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |
| A)          | <p>Pitched re-roofing works are to be undertaken in accordance with the following:</p> <p>BS 5534:2014 + A2:2018 – Slating and Tiling for Pitched Roofs and Vertical Cladding – Code of Practice</p> <p>BS EN 12326-1:2014 - Slate and stone for discontinuous roofing and external cladding</p> <p>BS 8000-6:2013 – Workmanship on Building Sites – Code of Practice for Slating and Tiling of Roofs and Walls</p> <p>BS 7913: 2013 - Guide to the conservation of historic buildings</p> <p>BS EN 13707 – Flexible Sheets for Waterproofing and Water Vapour Control</p> <p>Historic England Guidance – Energy Efficiency and Historic Buildings Insulating Pitched Roofs at Ceiling Level</p> <p>BS EN 12588: 2006 and BS6915 Code of Practice – Lead Sheet Roofing</p> <p><u>Roof Structure General</u></p> |              |      |   |   |
| B)          | The existing timber roof structure is to be repaired in-situ. The full scope of structural repair is to be confirmed by the structural engineer. Final re-roofing details maybe subject to review following further investigations by the structural engineer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qty/<br>Unit | Rate | £ | p |
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|    | <u>Roofing Slates / Stripping Roofs</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |      |   |   |
| C) | Existing sound roofing slates are to be salvaged and re-used where possible. Existing slates are to be carefully stripped from all existing pitched roofs. Sound slates are to be carefully stacked. Discard defective, delaminated or non-original slates. New replacement slates are to match existing: Welsh slate to be sourced from Welsh Slate Quarry – via the appropriate Penrhyn, Dinorwig or Blaenau Ffestiniog quarries - to the approval of the CA. <a href="http://www.welshslate.com/">http://www.welshslate.com/</a> .                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| D) | Provide all necessary protection to the existing original lath and plaster ceilings and associated timber roof structures. Existing slates and ridge and hip tiles are to be carefully removed and stacked and sorted - defective tiles and slates are to be discarded. Nails are to be carefully removed to protect existing slates taking care to minimise splitting or enlarging nail holes. All reused slates should be re holed. Carefully remove all lead flashings, valley gutters, battens and existing underlay sarking felts etc from all pitched roof areas. Carry out work carefully to minimise damage and loss of existing materials to be reused and ensure adjoining / abutting roof structures are not disturbed. Carefully sort and set aside all existing materials for inspection and re-use where possible.<br><br>Report any decay to the existing roof timbers where exposed during roof refurbishment works to the CA. |              |      |   |   |
|    | <u>Re-Roofing Slates</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |   |   |
| E) | To all pitched roofs supply and lay new flexible vapour permeable membrane (suitable for use with an open rafter / cold roof arrangement) directly over the rafters to the minimum horizontal lap and laid with accessories as required strictly in accordance with the manufacturer's recommendations (e.g. Dupont Tyvek Supro / Permavent Apex). To all pitched roofs allow to re-slate using existing sound previously removed salvaged slates (to the outer roof pitches where possible) and or with new Welsh Slate or approved reclaimed slates to match existing exactly fixed onto new 50 x 25mm tanalised factory graded softwood battens double nailed with approved copper nails. Slates to be laid to gauges, laps etc in accordance with BS 5534                                                                                                                                                                                  |              |      |   |   |

|  | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Qty/<br>Unit | Rate | £ | p |
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|  | <p>approved code of practice. Replacement new roof slate samples to be provided for approval by the CA prior to installation.</p> <p><u>Ridges and Hips</u></p> <p>F) Ridge and hip details are covered with clay tiles. Allow to carefully remove and salvage existing tiles where feasible. Replacement angled / capped ridge and hip tiles are to be Staffordshire Blue from Dreadnought Tiles or similar approved supplier to match existing original angled clay ridge and hip tiles to the approval of the CA. Include for approved integral angled ridge vent tiles as required (see Ventilation section). Ensure that replacement ridge and hip tiles are sized to suit the angle / pitch of the existing roof pitches in order to minimise gaps. Allow for ordering customised tiles as required to suit ridge and hip configurations and connections (subject to availability from Dreadnought, or similar supplier) and or carefully align and bed with mitred joints at hip/ridge junctions as required. Re-bed clay ridge and hip tiles to match existing using traditional NHL lime mortar e.g. <i>Cornerstone Roofline Mix - Conservation Mortar for Bedding Ridge and Hip Tiles by Cornish Lime</i> ensuring that the mortar strength does not exceed the strength and porosity of the clay ridge or hip tiles. Refer to manufacturer's technical recommendations and data sheet for mix ratios. Incorporate hip irons and mechanical fixings as required to ensure that installations generally comply with BS EN 5534.</p> <p><u>Ventilation</u></p> <p>G) Note: the provision of adequate roof / eaves ventilation is essential to prevent condensation occurring and to satisfy BS5250:2011+A1:2016 <i>Control of Condensation in Buildings and Building Regulations Approved Document C2 Resistance to Moisture</i>. A minimum 25mm air gap must be provided / maintained including around the eaves / gutter substrate. Allow to supply and install a new discreet proprietary eaves Layboard Ventilator system (e.g. AIRTRAK LB30 System by Nicholson or similar approved eaves ventilation system) fully compatible with existing roof pitch (contractor to confirm) replacement natural slates and in-conjunction with re-roofing works in order to provide continuous ventilation. Install strictly in accordance with the manufacturer's recommendations. Note the LB30 is fitted to a 25mm</p> |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Qty/<br>Unit | Rate | £     | p  |
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|    | <p>batten running parallel with the layboard and the slate coursing battens. The ventilator should be installed in a straight line parallel to the slating battens. Deviation will cause the slates or tiles to sit unevenly. The ventilator can be mitred at corners and trimmed to length. The LB30 should be covered with a code 5 lead flashing which is nailed to the batten and welted around the bottom edge of the ventilator. The roofing membrane should be routed over the ventilator before the slating is commenced. Some support for the roofing membrane may be required to prevent backfall and ponding occurring. Ensure a minimum of 25mm airflow is achieved throughout the detail. The use of a sprocket on the rafters for the lowest three battens will avoid the slates being unsupported and will render them less susceptible to damage. Roofing contractor to dictate actual measurements for the sprocket. In addition and or as an alternative, allow to supply and install discreet approved 'conservation' ridge tile vents and eaves level top flush vented natural slate vents to provide ventilation of 10 000mm<sup>2</sup> /m per fitting at eaves or low level and 5000mm<sup>2</sup> /m per fitting at ridge or high level. Ridge tile/slate vents to be sourced from an approved manufacturer / supplier to the approval of the CA.</p> <p>Include the provisional sum of £3,500.00 for the supply and installation of approved eaves / ridge vent tiles/slate vents as above to be expended and or deducted as directed on site by the CA. Exact quantity and locations to be confirmed on site.</p> <p><u>Ceiling Insulation</u></p> <p>Allowance to be made for careful removal and disposal of existing ceiling debris / insulation and redundant building services etc, as specified elsewhere. In conjunction with the re-roofing works include for the supply and installation of new Thermafleece, or similar approved breathable natural wool insulation, to be installed at fourth floor ceiling level in two layers between and over ceiling joists to an overall thickness of 240mm (TBC) as required to comply with current Building Regulations 0.16 W/m<sup>2</sup> K. Refer to separate ceiling detail drawings. Installation of Thermafleece or similar approved to be undertaken in accordance with the manufacturer's and English Heritage / Historic England technical recommendations, allowing for all</p> |              |      | 3,500 | 00 |
| H) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |      |       |    |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Qty/<br>Unit | Rate | £ | p |
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|    | necessary eaves ventilation, building services, access for maintenance, avoiding thermal bridges etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |
|    | <u>Rainwater Drainage / Lead Flashings</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |   |   |
| J) | The main pitched roofs to Mindel House drain to outlets at the midpoint of the elevations on Bloom Street and Richmond Street (as well as to outlets on the alleyway elevation). The original internal lead lined open top timber chutes in the roof space are obsolete and rainwater drainage from these outlet locations is currently via two UPVC pipes which drop down the respective elevations of the building before offsetting at cornice level and continuing to the alleyway elevation. There is evidence of leaks to the external rainwater drainage pipework with surrounding brickwork heavily stained. The existing UPVC pipe drops are to be removed.                                                                                                                                                                                                                                                                                                                                                   |              |      |   |   |
| K) | Complete renewal of the existing rainwater drainage systems is to be undertaken in-conjunction with the re-roofing works and all existing rainwater drainage installations are to be removed and disposed from site. New internal pipework is to connect at basement level into the combined drainage system. All pipework will be fully sealed and installed in accordance with BS EN 877. Existing outlet connection openings through the walls to the Bloom Street and Richmond Street elevations are to be retained, lined in Code 6 lead, and repurposed as high level overflow spitters. Existing rainwater outlets and rainwater downpipe general arrangement to the alleyway elevation to be retained and refurbished - existing UPVC downpipes are to be replaced with new cast iron heritage pipework. All new and existing cast iron pipework to be finished with a traditional semi-gloss black paint. <u>Refer to proposed internal rainwater drainage system drawings and specification for details.</u> |              |      |   |   |
| L) | The existing lead lined perimeter stepped box gutter has variable existing parapet upstand heights. Existing stone copings are capped with mineral felt. There is evidence of water penetration at various locations around the original perimeter box gutter. In-conjunction with stripping and re-roofing of the main pitched slate roofs and in-conjunction with the proposed rainwater drainage system, allow to completely remove and renew the lead lined gutters. Allow to carefully                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Qty/<br>Unit | Rate | £ | p |
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|    | strip and remove the existing lead sheeting to the box gutter - only remove in sections that can be replaced within a 30 minute working window. Inspect existing exposed roof timbers for rot/damage and report any defects located to the CA. Allow to supply and fix new external grade 18mm marine plywood gutter and lay boarding as required throughout (gutter boards to be installed at lower levels than existing if feasible). Continue 12mm plywood to parapet upstands and onto existing stone coping in readiness for encapsulating the parapet copings with new lead. Note: where feasible, the contractor should allow for all necessary building / carpentry works to introduce ventilation/cross air flow around the box gutter (to prevent condensation forming on the underside of the lead sheets) in-conjunction with re-lining works. Supply and install new code 6 lead sheeting to full width and length of the box gutter. New Code 6 lead flashing to be provided to the external grade plywood to the parapet upstand and dressed over the top of the existing parapet copings in order to encapsulate and provide full weathertightness (in lieu of the existing felt cappings). Edges should turn down the face of the coping by at least 75mm finished with a weltd edge with continuous stainless steel clips tucked in and double fixed as required to secure against wind uplift. New lead sheets to be maximum lengths of 1500mm and laid to minimum 1:80 falls, allowing for welds, lead lined outlets, upstand detailing, cover flashing and soaker flashings etc where necessary. New lead <u>must</u> be laid on appropriate Building paper, conforming to BS 1521 Class A, suitable for ventilated plywood decking. |              |      |   |   |
| M) | Allow to replace and reinstate all abutment / upstand / back gutters / aprons / flashings / cover flashings, valley boards and valley gutters etc throughout in-conjunction with the re-roofing works with new Code 5 lead.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |      |   |   |
| N) | New lead to be sourced from British Lead <a href="http://www.britishlead.co.uk">www.britishlead.co.uk</a> . All lead working, preparation, allowance for thermal movement, installation, fixing , jointing, welding, drips, clipping etc to be undertaken on a like for like basis where feasible with all works to be carried out by an experienced specialist roofing / conservation lead worker. All leadwork installation and detailing to be undertaken strictly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |

|             | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Qty/<br>Unit | Rate | £ | p |
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| P)          | <p>in accordance with Lead Sheet Association technical recommendations and with current codes of practice.</p> <p>Include for treating all leadwork with approved patination oil strictly in accordance with the manufacturer's instructions including to all hidden underside surfaces, clips, etc <u>before</u> installation. Patination oil should be applied to new leadwork before the end of the day of installation (preferably out of direct sunlight), before any unsightly carbonate has had chance to form. Apply one coat only to the lead surfaces with a soft, clean cloth. Work across the lead surface, applying the Patination Oil from top to bottom in straight, vertical lines. Do not apply in a circular motion as this will leave an uneven appearance.</p>                                                                                                                                                                                                                                                                                                                                    |              |      |   |   |
| <b>3.21</b> | <p><b>Flat Roofs</b></p> <p><u>Condition Summary</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |      |   |   |
| A)          | <p>Mindel House features a central flat roof covered with a combination of bituminous and or mastic asphalt waterproofing membranes. The central flat roof is intersected by a redundant dilapidated brick and concrete lift shaft structure. Rainwater drainage is currently via an outlet provided at the south-east end of the central flat roof (in turn draining via pipework through the ceiling voids). The shaft structure is open to the elements and the effectiveness of the existing drainage and waterproofing arrangement is compromised by the existing redundant shaft structure penetrating the central valley flat roof. The existing flat roof waterproofing and associated flashings are dilapidated and permitting water ingress. Investigations undertaken to date reveal decay to underlying roof timbers. The structural deck is assumed to be decayed given the condition of the surrounding roof timbers and the nature of the existing roof arrangement. Structural engineers are unable to confirm that the roof timbers are structurally sound. Temporary support is being provided.</p> |              |      |   |   |
| B)          | <p>The existing central valley flat roof has to be completely re-roofed with a new insulated built-up flat roof laid to falls on new structural timber decking. A level / monolithic waterproofing system for the installation of the new roof mounted building services plant is required. Whilst mastic asphalt is a traditional heritage waterproofing material, it is not deemed safe or feasible to use it on this particular roof due to the hot</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Qty/<br>Unit | Rate | £ | p |
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| C) | <p>works involved, close proximity of historic roof timbers and higher risk of fire. Rolled lead sheet may be considered as a heritage material however, it would not provide the lowest level and or even roof surface for the proposed roof mounted building services plant due to the thicker overall roof build up, the need to incorporate lead rolls and install the lead in bays.</p> <p>The most suitable option, especially given the installation of roof mounted plant, will be to install a new blue grey coloured high performance built up elastomeric mineral surfaced felt membrane system.</p> <p>Remaining assorted flat roof housing structures are dilapidated and the roofing contractor should allow for re-waterproofing all such structures as per the drawings in-conjunction with the main re-roofing works.</p> <p><u>Re-Roofing Specification</u></p> <p>GENERAL</p> |              |      |   |   |
| A) | <p>New built up felt roofing system to be either Bauder Total Roof System or Alumasc Eurorof system, or similar approved subject to agreement with the CA. All works to be undertaken by a specialist flat roofing contractor approved by the roofing system manufacturer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |   |   |
| B) | <p>All materials and workmanship to comply with BS EN 13707 - Reinforced Bitumen Membrane Sheets, BS8747:2007 UK guide for reinforced bitumen membranes and BS 6229:2018 Flat roofs with continuously supported flexible waterproof coverings. An approved high performance self adhesive flame free (where necessary) built up insulated mineral surfaced elastomeric felt system is to be installed. The new roof system is to be BBA certified and BS EN 13501-5 fire classification B roof (t4) compliant. A minimum 15 year insurance backed guarantee is to be provided on completion of all new flat roofing works to cover detailed design, materials and workmanship. All flat roofing works to be undertaken strictly in accordance with the selected manufacturer's technical recommendations.</p>                                                                                    |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Qty/<br>Unit | Rate | £ | p |
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|    | SCOPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| C) | New felt waterproofing is to be provided to all existing flat roof structures including central flat roof, roof housings and canopy roofs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |              |      |   |   |
|    | ENABLING WORKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |      |   |   |
| D) | Refer to separate drawings and specifications for full scope of demolition works. In-conjunction with stripping and re-roofing the main pitched slate roofs, allow to carefully strip and remove all existing flat roof coverings, all associated flashings, trims etc and carefully take up existing flat roof decking. Report any defects or decay to existing roof timbers etc where exposed during roof refurbishment works to the CA. Any structural repairs required are to be undertaken in accordance with the structural engineer's recommendations and details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
|    | TIMBER DECKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |      |   |   |
| E) | Roof structure repairs are specified and detailed elsewhere as per the structural engineer's details. Allow for supplying and installing new structural exterior grade 18mm thick square-edged plywood decking to the central flat roof. Decking to incorporate firrings as required to create a design fall of 1:40 to ensure minimum 1:80 falls for roof drainage. Include for running plywood lay boarding minimum 300mm at junctions with perimeter pitched roofs mechanically fixed to exposed rafters / joists as required. Plywood to be fixed using corrosion resistant screws/flat headed nails 50mm to suit with longitudinal joints occurring on the centre line of the supporting joists. Cross joints to be staggered, provide additional support noggins as required. A joint gap of 1 mm per metre of panel to be allowed at all edges. Plywood to comply with BS EN1995 for structural use (materials suitable for flat roofing should be marked BS EN 636-2 or BS EN 636-3 and must be suitable for exterior use). To localised sections of existing roof e.g. roof window housings where disturbed or defective include for fixing new exterior grade plywood where necessary as above to suit existing section sizes, moisture content etc. |              |      |   |   |
| F) | Provide and lay suitable high grade approved bituminous primer to all areas of roof receiving new waterproofing. Primer must be applied                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Qty/<br>Unit | Rate | £ | p |
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|    | strictly in accordance with the manufacturer's instructions and recommendations and allowed to dry thoroughly before receiving the first layer of the built up roof system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |      |   |   |
|    | EXISTING CONCRETE SLABS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |
| G) | Subject to further investigation on site and structural engineer's details, include for localised repairs to spalled concrete / exposed reinforcement to redundant lift shaft plant housing exposed concrete slabs (where retained). Cut back extremities of repair to a depth of at least 20mm to avoid feather edging and to provide a square edge. Clean surfaces and remove dust, unsound or contaminated material, grease, corrosion, deposits or algae. Expose any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel to be cleaned to a bright condition, paying particular attention to the back of exposed steel bars. Supply and apply 1 no. full coat of Nitoprime Zincrich or similar approved and allow to dry before continuing. The substrate should be saturated surface dry immediately before the application of the primer, i.e. thoroughly saturated with clean water and any residual surface water removed. Supply and apply 1 no. coat of Nitobond HAR primer or similar approved to substrate. The primer is to be scrubbed well into the surface. When the primer becomes tacky, supply and apply Renderoc HB or similar approved concrete repair mortar in order to achieve a flush and smooth surface and joint with existing concrete faces. |              |      |   |   |
|    | VAPOUR CONTROL LAYER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |   |   |
| H) | Install approved metal lined self-adhesive elastomeric bitumen vapour control layer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |      |   |   |
|    | INSULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |      |   |   |
| J) | Supply and lay fire safety rated 120mm (TBC) thick foil faced PIR insulation fully bonded to the vapour control layer using an elastomeric bonding agent. Contractor is to ensure that the insulation is installed in accordance with the manufacturers fixing instructions ensuring falls to drainage.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Qty/<br>Unit | Rate | £ | p |
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| K) | <p>UNDERLAYER</p> <p>Fully bond one layer of approved elastomeric bitumen underlay onto the previously installed insulation board. Ensure that all laps have a minimum 5mm bitumen bleed out, and side laps are 50mm and end laps are 75mm. Install strictly in accordance with the manufacturers fixing instructions.</p>                                                                                                                                                                                                               |              |      |   |   |
| L) | <p>CAP SHEET</p> <p>Fully bond one-layer of approved torch bonded, heavy duty elastomeric mineral surface bitumen capping sheet with spunbond polyester reinforcement, colour anthracite/slate grey, onto the previously installed underlay – including to upstands and details. Ensure that the cap sheet is offset by half a roll with the underlay and is installed in accordance with current codes of practice. Ensure all laps have a minimum 5mm bitumen bleed out.</p>                                                           |              |      |   |   |
| M) | <p>DETAILING GENERAL</p> <p>All waterproof detailing to upstands to be carried out using approved underlay and elastomeric mineral surface cap sheet. Minimum height for upstand waterproofing to be 150 mm from the top of the waterproofing. Special attention to be paid to dressing and flashing any penetrations with suitable sleeves or cowls, abutment and upstand structures, flashings, window, and doorsills, etc. in accordance with the roofing manufacturer's technical recommendations.</p>                               |              |      |   |   |
| N) | <p>Provide new Harmer AV400 aluminium dome grate flat roof rainwater outlet to the central flat roof with vertical 110mm spigot suitably sized to connect to new drainage points installed to the approval of the roofing manufacturer and drainage engineer. New outlets to be installed as per manufacturer's instructions and recommendations. The contractor is to allow for dressing the waterproof layer down the throat of the rainwater outlet, using appropriate outlet flashing as per the manufacturer's recommendations.</p> |              |      |   |   |
| P) | <p>Include for cutting new chases into existing brickwork upstands where necessary. Chases to be minimum 25mm deep and minimum 150mm above the finished surface level of the new waterproofing. New</p>                                                                                                                                                                                                                                                                                                                                  |              |      |   |   |

|    | Item (Works)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Qty/<br>Unit | Rate | £ | p |
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| Q) | <p>waterproofing to be dressed so as to finish flush with the bottom of the chase. Allow for installing new Code 5 lead cover flashings clipped and plugged at 300mm centres. Lengths should not exceed 1.5 linear metres and laps should be not less than 150mm. All chases should be brushed clean and primed with an approved primer and flashings sealed with a flexible silicone based sealant approved by the roofing manufacturer and the Lead Sheet Association.</p> <p>Include for supply and installation of new approved preformed GRP edge / drip trims to the perimeter of housing / canopy roofs, inc. all corner sections. Include for a fixed pre-treated timber packer behind the face of the trim to facilitate ease of fixing as required. GRP trims to be mechanically fixed and capped with coloured matched plastic weathering caps - all to the approval of the roofing manufacturer.</p> |              |      |   |   |