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Kirkby Grange Hall, Flockton, Wakefield, WF4 4AQ

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SCHEDULE OF WORKS

Quality requirements, pre-construction information and specification

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1.0 INTRODUCTION & BACKGROUND

1.1 Introduction to the document

This document provides information relating to the repairs of Kirkby Grange Hall. It includes details regarding relevant pre-construction information, the expected quality requirements and a technical specification.

This document is to be read in conjunction with the Heritage, Design & Access Statement, External Opening Condition Schedule and along with the existing and proposed drawings for the repair work.

DRAWING PACKAGE

Drawing number	**Title**
547/01(02)001	Site Location Plan
547/01(02)100	Existing Floor Plans
547/01(02)200	Proposed Floor Plans

1.2 Description and proposals to the project

Kirkby Grange Hall is a stone, 17th century, Grade II listed building which is due to undergo a series of repairs and alterations. The clients have owned the property since 2006 and are seeking to gain listed building and planning consent for proposals which include;

- Replacement of the modern (circa 1992) front door
- Replacement rooflights
- Replacement rainwater goods
- Replacement windows (single glazed to double glazed)
- Internal layout changes to house bathroom
- Replacing/repairing stonework within window arrangements
- Stone management and re-pointing

1.3 Planning and Listed Building Consents

Listed building consent and planning consent will be required for the works given the visual material changes to the external face of the property and internal alteration of the house

bathroom. The client has been advised of this and this document forms part of the application for consent and as a schedule of works for a specialist conservation contractor to price from.

Contractor information: The contractor should review the consents prior to completing any work. The programme of works is subject to consents being in place prior to mobilisation.

1.4 Basic Terms

Efflorescence: Efflorescence is a build-up of salts on stone and mortar surfaces often caused by an excessive amount of water ingress as well as a change in temperature. Moisture within a stone block is gradually drawn outwards to evaporate away from its warmer exposed surfaces. Salts which had been dissolved within that water are then deposited on the surface of the stone. They form a powder which is white and soft to touch.

Sulphation: Sulphation refers to the formation of a dark crust on the surface of a building due to the reaction of the natural stone to atmospheric pollutants – often in sheltered areas which are not regularly exposed to rainwater. The crust, which consists of calcium sulphate (gypsum), depletes the structural integrity of the substrate stone. Over time it will itself become unstable and fall away, leaving a cavernous and often friable stone surface behind.

Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, support, linings and bedding materials. Dispose of unwanted materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.

Fix: Unload, handle, store, place and fasten in position including all labours and use of site equipment.

Supply and fix: Includes all labour and site equipment for unloading, handling, storing and execution. All products to be supplied and fixed unless otherwise stated.

Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer or for use in the Works as instructed.

Make good: Execute local remedial work to designated work. Make secure, sound and neat. Excludes redecoration and/or replacement.

Replace: Supply and fix new products matching those removed. Execute work to match original new state of that removed. Samples may be required for certain works to ensure accurate replacement.

Repair: Execute remedial work to designated products. Make secure, sound and neat. Excludes redecoration and/or replacement.

Refix: Fix removed products.

Ease: Adjust moving parts of designated products or work to achieve free movement and good fit in open and closed partitions.

Match existing: Provide products and work of the same appearance and features as the original, excluding ageing and weathering. Make joints between existing and new work as inconspicuous as possible. Samples required will be agreed but not limited to items identified during mobilisation and shall be submitted for approval to the Contract Administrator. The period of review will be five working days.

System: Equipment, accessories, controls, supports and ancillary items, including installation, necessary for that section of the work to function.

Fabric: All components of the building including interiors.

Listed: A heritage asset which is nationally recognised and on the National Heritage List for England. It is a criminal offence to alter the building without listed building consent.

Significant: sufficiently great or important to be worthy of attention; noteworthy. Note that the entire building and all of its fixtures, regardless of their age or present condition, is included within the building's listing and therefore of significance. Some elements have a greater or lesser significance relative to the whole.

1.5 Roles and responsibilities

CLIENT			
Contact	Company	Email	Direct Dial
Sykes	N/A		N/A
ARCHITECT			
Contact	Company	Email	Direct Dial
Matt Massarella-Gill	Shaw & Jagger		
PRINCIPAL CONTRACTOR			
Contact	Company	Email	Direct Dial

2.0 SPECIFICATION

2.1 Replacement Front Door

The existing door is not original and no longer fit for purpose. Inadequacies include poor standard of fabric resulting in very poor thermal performance, very poor airtightness, very poor waterproofing and inadequate security. The replacement is to be a sympathetic hand-crafted period style door befitting of the property built to a high specification to remedy the inadequacies noted above. The replacement is to have aesthetics that complement the listed building.

Supplier of products: Meakins Heritage Carpenters & Joiners of Halifax, West Yorkshire – Refer to supporting information.

2.2 Replacement Rooflights

The existing rooflights are a mixture of modern Velux style rooflights and conservation style rooflights, installed prior to the current owner purchasing the property. Some of these are now failing with evidence of water ingress.

We proposed that all existing rooflights are all to be replaced with conservation accredited units. This will provide a positive impact and enhance the historic building.

Supplier of products: The Rooflight Co's 'Conservation Rooflight' & flashing kit - or similar approved. Contractor to check the fall/ pitch is adequate.

2.3 Replacement Rainwater Goods

Replace the existing gutters with Evolve Deepflow 128 x 75mm half-round aluminium rainwater gutter system (or similar approved) on rafter arms in 'Textured Heritage Black' is proposed as new rainwater goods across the property.

Supplier of products: Evolve Deepflow 'Textured Heritage Black' 128 x 75mm half-round aluminium rainwater gutter system on rafter arms.

2.4 Internal Layout Changes

These are confined to the house bathroom only – *see existing and proposed floor plans*. The existing house bathroom on the first floor is partitioned by modern internal walls therefore the disturbance of historic fabric will be kept to a minimum.

2.5 Replacement Windows

Existing windows consist of single glazed painted timber windows that are, generally, in a good state of repair due to good upkeep practices. However, their integrity and performance has been degraded over time by the deterioration of the cut stone surrounds. New glazing and painted timber Accoya slimline double-glazed units (Histoglass HD10 thin double-glazing system, or similar approved) to match existing style carefully installed to replace existing timber units. This will provide a positive impact and enhance the historic building via thermal efficiency.

2.6 Replacing/Repairing Stone Window surrounds

Method statement for replacing/repairing like-for-like stone window surrounds;

- Structural engineer to be consulted prior to any intervention.
- All works to be completed by hand.
- Defrass stonework
- Carefully remove existing glazing units.
- Apply biocide where necessary.
- Carefully remove stonework.
- Reuse suitable removed stonework where possible.
- Suitably qualified stonemason to install replacement cut-faced stone, where necessary – style and colour to match existing.
- Repoint stonework where necessary with a lime mortar mix
- new glazing and timber Accoya slimline double-glazed units (painted) carefully installed as per the necessary consents/conditions.

2.7 Stone management and re-pointing

The proposals include, where necessary, raking out and removing cementitious mortar from joints at least to a depth twice the depth of the joint opening. The stone will then need to be-

defrassed prior to the re-pointing. All works to be completed by hand. Supplier of lime products: Ty Mawr Lime

3.0 CONTRACTOR REQUIREMENTS

3.1 General requirements

The Contractor shall:

- Provide all information necessary to complete the Health & Safety File required by the CDM Regulations & The Building Safety Act 2022
- Use only recognised good practices and comply with all relevant British Standards and codes of practice – unless requirements conflict with this document, in which case this document takes precedence
- Comply with all appropriate National and Local Government Regulations and provide documentation as appropriate to others for submission to the Statutory Authorities
- Comply with CDM and Health and Safety regulations
- Liaise weekly for progress updates
- Provide samples as required by this document and any consents
- Organise the delivery of components to the site so that the Works can be installed in proper sequence without omissions which would require modification of the design
- Be responsible for co-ordination between the site installation team, the works suppliers, the Contractor's designers and site staff
- Provide an assumed sequence of work
- Ensure that all people engaged in the Works are adequately trained, proficient and experienced
- Provide the name, address and telephone number of each firm and/or sub-contractor involved in the Works
- Protect the Works and carry out a final clean-down so that the Works are handed over in a clean condition
- Provide details of all products used, along with any warranties and maintenance requirements

3.2 Access

The Contractor shall arrange access to the site with the Client. A primary point of contact in the Client organisation will be provided to the Contractor. Welfare facilities to be agreed with the client.

3.4 Health and Safety Regulations and responsibilities

The Contractor shall confirm to the Architect/Client whether the works are notifiable under the CDM (2015) Regulations.

If notifiable, the appropriate person will need to submit an F10 form notifying the Health & Safety Executive (HSE) of the upcoming works.

The Principal Designer Role is limited due to the limited design and nature of the project. Shaw & Jagger is acting as the Principal Designer. The appointed contractor will take on the Principal Contractor roles and responsibilities.

This document is intended to communicate several important aspects of the project, including various safety-critical items and forms part of the pre-construction information.
The Contractor shall submit RAMS for all key activities.

3.5 Condition surveys

3.5.1 Prior to commencing works

The Contractor shall provide a brief digital report including elevations, annotations and clear and readable photos at A5 size. The document shall contain the following.

- Photographs of relevant external faces, roof, windows, abutting floor and internal walls where affected (please refer to the drawing package provided)
- Notes on key vulnerable areas in particular need of protection prior to the installation/removal of scaffolding.

3.5.2 After commencing works

The Contractor shall update and reissue their report to show the same areas after the work has been carried out.

3.6 Protection

Kirkby Grange Hall is a Grade II listed building and of architectural and historical importance. This importance derives from a number of characteristics that may be irreplaceable even with the most skilful repair. It is essential that the greatest possible care be taken at all times to prevent any damage to the buildings' fabric, contents and setting. Unless otherwise specified it is always the intention to carry out the minimum repair works to avoid over repair. Existing fittings and elements of the structure and fabric are to be retained where possible and treated with great care.

When working around glazing, the Contractor shall use boards within the window rebates to avoid contact and cracking. The boards shall be carefully wedged in place to avoid damage.

3.7 Damage

No damage is permitted to any building fabric, external or internal, including building services. The Contractor shall be held liable for any damage they have caused to the building accidental or otherwise during the works, and any costs relating to managing associated non-compliance with the terms of the consent.

3.8 Site preparation

The Contractor shall assist the Client in their notification of the HSE, if appropriate, regarding the nature of the Works.

The Contractor shall ensure all appropriate signage, fencing, and other security measures are in place prior to the commencement of work.

The site shall be kept clear from debris throughout all phases of works. The Contractor shall responsibly dispose of any masonry and mortar removed from the building.

The Contractor shall provide the required welfare facilities and storage. Any other arrangements must be agreed with the Client prior to the commencement of works.

The Contractor shall confirm the location of building services and utilities, and highlight any associated risks, prior to starting work.

3.9 Hazardous materials

The Contractor shall give notice immediately of any suspected asbestos-containing materials during deconstruction/demolition work and avoid disturbing such materials.

Lead paint may be present in the gutters and downpipes. The Contractor shall submit a method statement for the identification, control, containment and removal of any lead paint.

3.10 Temporary works

The Contractor is responsible for the design, provision and execution of any temporary works required for the safe carrying out of the works. All temporary works should be independent of permanent fixings to the fabric.

3.11 Scaffolding generally

The Contractor shall provide details of any scaffolding required, with design proposals provided by a scaffold designer, in advance of the main contract. Surrounding sheeting, screening and protection shall be provided.

A scaffold designer appointed by the Contractor shall be responsible for the overall stability of the scaffolding structure. The Contractor is to submit proposals, including details of qualifications and experience. The Contractor must comply with the following:

- Design supervision/ checking levels: To BS EN 1990, table B4, level DSL1
- Design requirements: None additional
- Design quality control: To BS EN ISO 9001
- Scaffold to be free-standing with no fixings into listed building. The Contractor shall make provision for, and submit details of, requirements to maintain the safety and serviceability of the structure for the duration of the Works, including:

- Critical parts that should be regularly inspected, with recommendations for the frequency of inspection.

- Elements susceptible to corrosion, mechanical wear or fatigue that may need to be reconstructed or replaced during the design working life of the structure.

3.12 Scaffold delivery

Weekend working may be acceptable to enable minimising length of time on site. This is to be agreed in advance.

Sound restrictions may not be in place but the Contractor and scaffolders are to be mindful of neighbouring properties and any residents.

3.13 Urgent works

If any area of masonry is found showing signs of displacement or structural instability, the Contractor shall inform the Architect immediately and take all necessary steps to temporarily support the area and make it safe.

3.14 Completion

The Contractor shall leave the site clean and tidy with all waste material disposed of responsibly. Any permanent marks or damage shall be reported to the Architect prior to removing scaffolding.

4.0 MATERIALS & WORKMANSHIP

4.1 Compliance and sourcing of materials

Materials and methods used for the restoration works shall comply with current British and European Standards. Where compliance with current standards may be inappropriate, for example if compliant materials will not achieve the required physical or aesthetic properties, this shall be brought to the attention of the Architect at Tender. The Contractor shall obtain materials from established and reputable manufacturers, and shall obtain the total quantity of each material from the same manufacturer.

All principal materials delivered to site shall bear the manufacturer's name, brand name or any other data that may be required to verify the exact nature of the material and relate it to the requirements of this Specification. Where applicable, the material shall bear British Standards Certification, Trade Mark, CE Mark and/or British Board of Agrément Certificate mark.

4.2 Compatibility of materials and unspecified materials

The Contractor shall select and install each material so that it is, and will remain, compatible with the other materials around it.

As part of their submissions after appointment, the Contractor shall submit a list of any materials they propose to use that are not specifically described in this Specification. These materials shall conform to the general requirements of the Specification, and shall be subject to review by the Architect.

4.3 Stonework

4.3.1 Power tools

The Contractor shall prepare all stone elements using hand tools only. The use of power tools shall only be permitted once written approval has been given following the Architect's review of method statements and off-site benchmark samples carried out by the labourers who will perform the specific tasks on the project.

4.3.2 Identification of stone type

The Contractor shall propose a suitable stone type for replacement work, based on their understanding of the existing stone appearance, porosity, etc. Samples shall be provided for approval.

All European stones must be named and identified in BS EN 12440. The name, a petrographic description (e.g. limestone) and location of non-European stones must be submitted
If the Contractor is aware of any potential interference between different stones on the building they shall declare this.

4.3.3 Defrassing and cleaning

The Contractor shall:

- Remove all dust, flakes and other loose particles back to a sound layer
- Ensure all other contaminates have been removed
- Examine the surface for voids, fissures and any delamination – any of which shall be reported
- Carefully remove plants, root systems and associated soil or debris from joints and voids in the stonework, using dampened temporary timber wedges or another method approved

4.3.4 Conservation work

Following approval of the detailed design the Contractor shall commence conservation/restoration work, in accordance with BS 8221-2 and this Specification, to meet the requirements shown on drawings.

Load-bearing masonry shall generally be carried out in accordance with BS 5628-1 and 5628-3. Repair and replacement of masonry shall generally be carried out in accordance with BS 8221-2.

4.3.5 New stone

New stone used for the specified repair works shall:

- match the existing, surrounding material on the building
- be free from cracks, vents, fissures or other defects which may adversely affect appearance, strength or durability
- be thoroughly seasoned, dressed and washed before delivery to site

Mouldings and carved detail (where relevant) shall match the existing elements.

Marks shall be made clearly and indelibly on concealed faces to indicate the natural bed and position in the finished work.

Load-bearing masonry shall generally be carried out in accordance with BS 5628-1 and 5628-3. Repair and replacement of masonry shall generally be carried out in accordance with BS 8221-2.

4.3.6 Storage

Stockpiled stone shall be wrapped with polyethylene to prevent timber bearers, protective boards, etc. from staining facings in wet conditions.

Dressed stone shall be stored clear of the ground, separated with resilient spacers, protected from inclement weather and kept dry. It shall be protected to prevent soiling, chipping and contamination by salts and other deleterious substances.

Lime products to be kept protected as required.

4.3.8 Piecing in

The Contractor shall piece-in localised stone indent repairs if identified when removing the cement mortar, where the existing stonework has become unsound, severely eroded or cracked so as to compromise the fabric of the structure.
The Contractor shall follow the following sequence:

- Cut or rake out joints using fine-toothed masons' saws
- Release stone from the surrounding work using hooked blades and chisels

- Cut back area of decay or cracked stone using small chisels or sharp saw blades to form a sound square backing
- On removal, use timber blocks as necessary to support surrounding work until replacement stone is installed
- Remove all loose material and dust using stiff bristle brushes
- Treat cavity where necessary with approved biocide
- Dress new stones, of minimum depth 65mm, when all cutting-out and cleaning operations are complete, taking moulds and dimensions from voids and working as closely as possible to original unweathered sections of adjoining work
- Cut tapering 'V' shaped sinkings on joint faces to improve adhesion on backing and bed.
- Wash out cavity with clean water immediately prior to placing repair
- Dampen stone to reduce suction and spread lime mortar on backing and bed joint then tamp into place using mortar as the lubricant.
- Bed new stone piece in exact position occupied by original stone, ensuring bond joint size and any other special or unusual features are replicated.
- Use fixings, where appropriate, of austenitic stainless steel or phosphor bronze.
- Work the new stone to a tight fit into cavity and ensure the stone is flush to the surrounding facing stone.
- Work the exposed face of stone to a true plain work finished free from hollows and rough areas.
- Pack mortar around set stone and firmly iron in to set joint >1mm back from stone face. Leave mortar to stiffen for 24 hours, then compact the mortar, brushing it into the joint with a churn brush or equivalent broad stiff bristle brush.
- Ensure any pointing and stone dust is brushed away and does not remain on the stone face after completion of installation of the stone piece.

4.3.9 Re-pointing

Where required to achieve the approved repair works, the Contractor shall rake out and repoint joints as appropriate using the following methods.

Joints shall be pointed flush, to match the surrounding fabric, and firmly pushed home finished with stiff brush on completion.

Joints wider than 5mm

- Rake out joints, using methods necessary to prevent damage to surrounding work, to a minimum depth of 25mm or twice the width of the joint
- Ensure that the back of the joints is square
- Retain well-attached mortar in situ
- Dampen joints to prevent suction
- Allow stones to settle
- Repoint in continuous operation working from upper levels downwards
- Press the mortar well into the joints using a pointing key or suitably sized iron, preventing voids forming behind, but avoiding encroaching over arrises of surroundings
- Place mortar in two layers, each 10mm thick
- Do not allow rapid drying of the mortar
- Cure all jointing mortar
- Ensure bagging technique completed

4.3.10 Dust control

The Contractor shall reduce airborne dust by periodically spraying masonry works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.

4.4 Mortar

The Contractor shall use NHL 2 hydraulic lime and graded crushed stone sand, colour matched to approval by the Architect.

Proposed final mixes for jointing, pointing and grouting, specific to each type of repair, shall be presented to the Architect for approval.

Different sands and aggregates shall be stored in different stockpiles on hard clean bases which allow free drainage.

Factory-produced pre-mixed mortars shall be stored in covered containers to prevent excessive drying-out or wetting. Bagged limes and cements shall be stored in dry conditions, raised above the ground and not in contact with damp surfaces. Lime or cements which are frozen or affected by damp shall not be used.

4.5 Weather

Do not use frozen materials or lay masonry units on frozen surfaces.

Do not bed masonry units or repoint in hydraulic lime: sand mortars when ambient air temperature is at or below 5°C and falling, or unless it is at least 3°C and rising.

Do not bed masonry units or repoint in non-hydraulic limes and mortars in cold weather, unless approval is given.

All masonry works shall be:

- Protected from frost and maintained above freezing until mortars have fully set
- Protected by covering during precipitation, and at all times when work is not proceeding
- Prevented from drying out rapidly in warm temperatures

The Contractor shall rake out and replace any new mortar work damaged by the weather.

Should the weather have a detrimental effect on the programme of works the Architect is to be notified of the reason and anticipated length of delay within 24 hours.

4.6 Metal fixings

The Contractor shall submit proposals for metal fixings, if required as part of the works.

In general fixings shall be austenitic stainless steel. Their use shall be kept to a minimum, but as necessary to resist loads likely to occur during the life of the building and to prevent lateral displacement or pulling apart of the construction.

If corroded ferrous fixings are encountered during the works, the Contractor shall:

- Prepare metal using scraping and brushing techniques
- Remove deleterious material with clean dry bronze wire brushes
- Remove all loose defective metalwork back to a firm edge
- Remove ridges, burrs, rust, loose paint, dirt and grime, until a metallic sheen is visible over the area to be repaired, quality to BS 7079 Part A1 grade ST2
- Ensure that bare surfaces remain unaffected by moisture, frost or airborne dust
- Protect adjacent masonry

- Prime all bare and treated metal exposed during preparation with approved rust-inhibiting primer as soon as possible after preparation, in accordance with recommendations of the manufacturer
- Take all necessary precautions including restrictions on working hours, providing protection and allowing extra drying time, to ensure that coatings are not adversely affected by climatic conditions during and after application
- Prevent or control exposure of operatives to solvent vapour levels exceeding occupational exposure standards set by the HSE

4.7 Leadwork

All new and replacement lead soakers, flashings, etc., to be installed fully in accordance with the Lead Sheet Association.

Leadwork to flashings to be code 5. Leadwork to soakers and copings to be code 4.

4.8 Other materials

Silica acid ethoxy ester consolidants are not to be used in this contract, nor is any other resin or chemical which purports to rebind the aggregate in binder-depleted limestone.

Proprietary plastic repair materials shall not be used unless written approval has been given by the Architect.

4.9 Samples

Samples to be provided and approved prior to works.

Item No.	Sample
1	Provide 2no. samples of lime re-pointing mix
2	Provide 2no. samples of replacement stone