Specification

Caretaker's House, Calverton Fish Farm, Moor Lane, Calverton, Nottingham NG14 6QU

Environment Agency

June 2022 – 123094-101

FISHER GERMAN

Contents

1.0 Preliminaries

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ITEM	DESCRIPTION	£
1.1	**DRAWINGS/PLANS/SPECIFICATIONS**	
1.1.1	Responsibility for ascertaining quantities or areas other than those identified and the actual detailed construction will remain with the Contractor, and claims for failure to correctly identify or ascertain the same will not be entertained.	
1.1.2	The Principal Contractor is to retain on site for use by sub-contractors, Contract Administrator, Employer and others all plans, specificaiton and other reference documents.	
1.2	**PLANT, SCAFFOLDING, CRADLES, HOISTS, TOOLS ETC.**	
1.2.1	The Principal Contractor shall provide all necessary plant, scaffolding propping, cradles, hoists and tools for the execution of the works and for all materials carriage, cartage, labour, tarpaulins and whatever else may be required in connection therewith for the proper execution of the works. Scaffolding must conform to the Local Authority guidelines as defined under the terms of the license. All scaffolding to be erected in accordance with all British Standards. Where scaffolding is fixed over entrance points to the building, the approach to the entrance is to be protected by double boarded fans.	
1.2.2	The Principal Contractor shall include to erect and maintain all necessary plant, shoring, cranes, hoists, cradles and similar for the proper execution of the works and shall adapt, adjust or alter as necessary until no longer required or completion of the works, whichever is sooner. Inspect and test equipment equipment regularly and daily before use in accordance with Health and Safety Regulations.	
1.2.3	The Principal Contractor must accept full responsibility for the stability and structural integrity of all works during the contract and maintain and replace as necessary.	
1.2.4	The Principal Contractor will bear sole responsibility for provision, maintenance and insurance for loss and expense of all plant, scaffolding, hoists cranes, cradles, tools and vehicles used on site.	
1.2.5	The Principal Contractor shall be responsible for any damage to fabric or property or any adjoining properties as a result of any plant, scaffolding, cranes, hoists, tools, cradles and vehicles and must make good at his own expense.	
1.3	**SUB-CONTRACTORS**	
1.3.1	Make the CA aware of all sub-contractors for approval prior to appointment.	
1.4	**PROGRAMME**	

ITEM	DESCRIPTION	£
1.4.1	No works to be started without prior arrangement with the Contract Administrator (CA) and agreement of the Programme of Works. No claims for loss of time and other changes will be entertained should the above procedure not be complied with. Allow to programme high level works to minimise scaffolding costs.	
1.5	**INSTRUCTIONS ON PRICING SCHEDULE OF WORKS**	
1.5.1	Each item must be priced individually and totals provided for each section.	
1.5.2	The works are to generally comply with the reference specification for standards and workmanship in Section 3.	
1.5.3	Should it be apparent that there is a conflict between any specified materials or products with the actual construction or that of another specified product the contractor will inform the CA for further instruction.	
1.5.4	Before placing orders for materials and products ensure that a compatibility check is carried out and sub-contractors communicate to avoid compatibility issues on site.	
1.5.5	Allow for carrying out walk-over site survey to ascertain local conditions, ground conditions, levels, gradients and existing surface finishes.	
1.6	**KEY CONTRACT TERMS**	
1.6.1	It is intended that the works would fall under a JCT Minor Works 2016 (MW) contract with standard clauses.	
1.7	**SITE SET UP**	
1.7.1	Site boundaries are those within the confines of the building and the surrounding site.	
1.7.2	The boundary of the site and building is that of the Caretaker's House and does not extend to other buildings that form Calverton Fish Farm	
1.7.3	Vehicular access is required at all times to all properties.	
1.7.4	Allow for providing Heras type fencing to areas of site as required. Maintain fencing through contract period as per BS5837:2550.	
1.7.5	The contractor must allow for a site compound, office, restroom, WC and secure store as deemed necessary, location to be confirmed on site and as per the CDM Approved Code of Practice – Schedule 2. Allow for a portable generator to supply electrical power thoughout the project length and connection to the existing water supply. The contractor is responsible for the security of all fixed and non fixed items within the properties/ site boundary until handover.	

ITEM	DESCRIPTION	£
1.7.6	All debris must be removed from site throughout and at completion of project.	
1.7.7	The site is not to be used for any other purpose other than carrying out the works.	
1.7.8	Electricity and water supply may be used from the property providing this use is exclusively for the works.	
1.8	**HEALTH AND SAFETY**	
1.8.1	The project is not notifiable. Allow for all compliance with the CDM Regulations 2015.	
1.8.2	The Principal Contractor is to submit prior to commencement of the works, for approval by the CDM Principal Designer, a Construction Phase Plan, incorporating the pre-construction information, project specific risk assessments and method statements, procedures, emergencies, communications, training and COSHH data and the like as the project demands. The contractor is to maintain and keep the Health and Safety plan on-site for inspection and throughout the project.	
1.8.3	Allow for all scaffolding or other high level access for all work described and regular safety checks to comply with Work at Height Regulations 2005. Scaffold to technical standards of National Access and Scaffolding Confederation. Scaffolding to be erected and dismantled by accredited person under the Construction Industry Scaffolders Registration Scheme (CISRS) and achieve all platform loads required.	
1.8.4	The contractor must confirm that their site manager is SMSTS qualified for the duration of the works.	
1.9	**GENERALLY**	
1.9.1	Employ all necessary safe methods of working and for providing method statements on removal and strip-out works.	
1.9.2	All works and materials to comply with British Standards and installed to manufacturers recommendations.	
1.10	**OTHER ITEMS**	
1.10.1	Allow a provisional sum of £2,000 to liaise with an ecologist regarding any required surveys relating to bats or birds within the roof void.	2000.00
1.10.2	Use all safety precautions necessary in accordance with HSE – Asbestos: Asbestos essentials documents.	
1.10.3	Any and all asbestos waste is to be disposed of in a safe manner by a registered waste carrier to a waste disposal site licensed to accept asbestos containing materials.	

2.0 Schedule of Works

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ITEM	DESCRIPTION	UNIT	£
2.1	**ROOF VOID**		
2.1.1	At the location of the previously spliced timber purlin, supply and install a 10mm steel plate across and over the join fix a minimum of 650mm away from the join using M12 bolts. Refer to the structural engineer's sketch for detail.	Item	
2.1.2	Carefully remove existing water tank from its location and cart from site.	Item	
2.1.3	Carefully cut out all existing 47x47mm timbers (both horizontal and vertical) which support the tank and cart from site.	Item	
2.1.4	Supply and install new 100x100mm section C24 timber to the locations of timbers removed to support the new water tank.	Item	
2.1.5	Supply and install new integrally insulated water tank sited on top of the replaced timbers with size to match previously removed. New tank to be WRAS Approved and to be installed in accordance with BSEN 806-5 and BS 8558. Include for all pipework connections and adaptations to pipes to form watertight connection with the new tank. Connections should not be made to cold water taps.	Item	
2.1.6	Allow to level out existing insulation and 'top-up' to a depth of 270mm. Supply and install counter-battens with sufficient depth to accommodate the insulation and a 10mm ventilation gap at 600mm centres. Supply and mechanically fix new 18mm plywood to the new counter-battens to provide a boarded floor to the loft space.	Item	
2.2	**ROOF**		
2.2.1	Contractor to take care at all times to ensure the photovoltaic panels to the roof covering are not damaged.	Note	
2.2.2	Carefully rake out loose and friable mortar to the joints beneath the re-built section of the chimney stacks.	Item	
2.2.3	Repoint lower areas of chimney stacks in mortar to closely match existing in consistency and colour.	Item	
2.2.4	Carefully rake out mortar to the verges of all gable ends.	Item	
2.2.5	Repoint verges in mortar to closely match existing in consistency and colour.	Item	

ITEM	DESCRIPTION	UNIT	£
2.2.6	Carefully remove existing chimney pots to both chimney stacks. Supply and install new terracotta chimney pots with bonnet hood to the existing locations.	Item	
2.2.7	Allow a cost to hack off any loose or friable flaunching from the chimneys and repair using a 3:1 strong sand to cement mortar.	Item	
2.2.8	Carefully remove ridge tiles from the roof including to scrape off all mortar bedding to the junction.	Item	
2.2.9	Structural engineer to advise on effect of wind uplift prior to installation of eaves and ridge installation.		
2.2.10	Supply and install new Manthorpe or similar approved dry ridge ventilation kit (brown) in accordance with manufacturer's instructions, and ensuring sufficient ventilation gap to top of ridge.	Item	
2.2.11	Supply and install new Manthorpe or similar approved retro-fit 'Continuous Soffit Vent' (10,000mm^2) to allow air flow into the roof void in accordance with manufacturer's instructions. Include for felt support tray as necessary.	Item	
2.2.12	Allow a provisional sum of £1,000 to identify alterations to fascia / soffit / underlay as required following opening up of the same to ensure free flow of ventilation. Provisional Sum to be expended in part or whole only upon instruction by the CA.	PSum	1000.00
2.2.13	Chop out section of fascia and soffit boards around redundant cast iron soil pipe. Carefully remove soil pipe through this section taking care not to damage surrounding materials and cart from site, including for removal of wall fixing brackets.	Item	
2.2.14	Supply and install new section of PVC-U fascia and soffit boards to match profile and colour of existing.	Item	
2.2.15	Supply and install concrete roof tiles to fit in and over redundant soil pipe penetration and ensure the same is watertight.	Item	
2.2.16	Following removal of soil pipe, decommission section of pipe by backfilling to the junction with aggregate, and sealing at the next junction with underground drainage to ensure backfill does not infiltrate below ground drainage system.	Item	

ITEM	DESCRIPTION	UNIT	£
2.3	**FENESTRATION**		
2.3.1	Carefully remove existing UPVC windows and doors and cart from site.	Item	
2.3.2	Design, supply and install of new windows to follow requirements as per the workmanship clauses in Section 3 of this specification.	Note	
2.3.3	Supply and install new white PVC-U hermetically sealed double glazed units to match existing profile and casement style (with the exception that the rear lounge window is to be replaced with a door). Windows to be fixed into prepared masonry openings with a 6-10mm tolerance between windows and structure. Shims and wedges are to be removed after fixing with lugs and screws prior to sealing. All fixings shall be direct to the structure using stainless steel lugs.	Item	
2.3.4	Provide a cost for triple glazed windows as an alternative glazing.	Item	
2.3.5	Windows to comply with building regulations including adjustable trickle vents and to be installed by FENSA registered installer.	Item	
2.3.6	Include for the supply and installation of ironmongery with finishes to match windows. Include for all hinges, window stays, fasteners, handles and the like. Handles to be push release.	Item	
2.3.7	New bathroom and WC glazing to be obscure.	Note	
2.3.8	Supply and install new white external composite doors to match existing sizes and profiles (with the exception that the rear lounge window is to be replaced with a door). Include this new door within this item. Doors to be hermetically sealed double glazing and toughened to critical locations. Threshold of new door to include for threshold drain and suitable detail to prevent water ingress.	Item	
2.3.9	During window installation allow for inspection by CA of lintels or lack thereof above window openings.	Item	
2.3.10	Allow a Provisional Sum of £3,000 for the installation of lintels where existing are found to be insufficient. Provisional sum to be expended in part or whole only upon written confirmation by the Contract Administrator.	Item	3000.00
2.4	**WINDOW TO DOOR**		
2.4.1	Carefully remove radiator beneath rear window to the lounge and cart from site.	Item	

ITEM	DESCRIPTION	UNIT	£
2.4.2	Carefully take down brickwork beneath the rear window to form opening for new double doorset. including the skirting boards, and cart from site. Include to prepare reveals ready for plasterboard finish.	Item	
2.4.3	Allow to alter pipework to the radiator so that it can be installed adjacent to the newly installed patio doors.	Item	
2.4.4	Supply and install new vertical radiator including brackets and fixings, to the space directly to the left of the newly installed patio doors. Contractor to design sizing of new radiator including BTU calculations so that heat levels are appropriate for the size of the room and to be able to heat to approximately 21C. Following installation test the whole central heating system and install Fernox Inhibitor to the pipework.	Item	
2.4.5	Fully prepare exposed brickwork and supply and install new plasterboard to sit flush with the existing finish, including for angle beads at corners. Allow to apply skim plaster finish ready for decoration.	Item	
2.4.6	Fully prepare and redecorate all walls of the lounge in accordance with the specification.	Item	
2.5	**EXTERNAL WALLS**		
2.5.1	Carefully hack off concrete flaunching to the brick step at low level. Supply and install new cement-based flaunching to a chamfer to the same location.	Item	
2.5.2	Option 1 Carefully remove corroded soot doors from site. Allow cost to fabricate new steel doors to match size and fittings and install to the same locations. 	Item	
2.5.3	Option 2 Carefully remove corroded soot doors from site. Brick up cavities with bricks to closely match external facing including installation of Rockwool or similar approved insulation within any cavity.	Item	

ITEM	DESCRIPTION	UNIT	£
2.5.4	Rake out existing loose mortar to isolated locations around the perimeter of the property. For tendering purposes allow for 12m^2. Locations to be agreed with Contract Administrator.	Item	
2.5.5	Repoint areas of removed point in mortar to closely match existing in consistency and colour.	Item	
2.5.6	Allow to liaise with the electrical supplier to in relating to the making safe / temporary fixing of cabling to affixed to the south corner of the property at eaves level.	Item	
2.5.7	Chop out loose brickwork to south corner to the eaves and re-bed and repoint as required utilising existing bricks. 	Item	
2.5.8	Carefully drill 10no holes to the cavity wall to the mortar joints to allow inspection via borescope of the cavity to identify the presence of cavity wall insulation. Following inspection, allow to fill holes with new mortar pointing.	Item	

ITEM	DESCRIPTION	UNIT	£
2.6	**DRAINAGE**		
2.6.1	Undertake a CCTV survey of all below ground drainage systems including to flush out the same in case of blockage.	Item	
2.6.2	Allow a Provisional Sum of £2,000 for the repairs of below ground drainage systems following the CCTV survey. Provisional sum to be expended in part or whole only upon written confirmation by the Contract Administrator.	Item	2000.00
2.7	**HANDOVER**		
2.7.1	At completion of the works, clean the premises and surrounding site of rubbish and sundry surplus materials and the like. Clean all fittings, glazing, door and window frames, light diffusers etc. Clean off any paint splashes etc. and leave in clean and tidy condition.	Item	
2.7.2	Supply all guarantees/warranties/certificates etc. obtained during the works including building regulations final certificate, and all literature regarding fittings, maintenance, paint colours, etc. to the CA.	Item	
2.7.3	Provide a 10 year fully independent insurance backed warranty covering all design, materials and workmanship, and protecting against insolvency of any subcontractors used. The guarantee shall cover all costs involved should remedial work prove to be necessary and shall cover against consequential loss and be protected against inflation.	Item	
2.7.4	Allow a Provisional Sum of £500.00 to make good damage caused by intrusive investigations throughout the property made as part of the refurbishment asbestos survey.	PSum	500.00
	TOTAL OF SCHEDULE OF WORKS		

3.0 Materials and Workmanship

Contents

L10
Windows/ rooflights/ screens/ louvres

To be read with preliminaries/ general conditions.

30 PVC-U windows

1. Standard: Non-fire and/ or smoke-rated windows to BS EN 14351-1 and BS 7412
2. Manufacturer: To be submitted as part of tender
   - 2.1. Product reference: To be submitted as part of tender
   - 2.2. Colour/ Texture: White
3. Thermal performance (U-value maximum): To meet building regulations
4. Acoustic performance rating: Manufacturer's standard
5. Fire performance
   - 5.1. Fire resistance: Manufacturer's standard
   - 5.2. Fire egress: Manufacturer's standard
6. Glazing details: Insulating glass units incorporating low-emissivity glass, air-filled
   - 6.1. Beading: Manufacturer's standard
7. Ironmongery/ accessories: Manufacturer's standard
8. Fixing: Manufacturer's standard
   - 8.1. Fastener spacing: When not pre-drilled or specified otherwise, position fasteners 150-250 mm from ends of each jamb, adjacent to each hanging point of opening lights, but no closer than 150 mm to a transom or mullion centre line, and at maximum 600 mm centres.

80 Ironmongery

1. Fixing: In accordance with any third party certification conditions applicable. Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
2. Checking/ adjusting/ lubricating: Carry out at completion and ensure correct functioning.
3. Tender: Provide information regarding compatibility of accessories at tender stage.

90 Replacement window installation

1. Standard: To BS 8213-4.

Ω End of Section

M60
Painting/ clear finishing

To be read with preliminaries/ general conditions.

10 Emulsion paint

1. Description: WALLS TO LOUNGE
2. Manufacturer: Contractor to submit proposals
3. Surfaces: WALLS
   3.1. Preparation: Ensure surfaces are clean and dry
4. Initial coats: As recommended by manufacturer
   4.1. Number of coats: 1
5. Undercoats: As recommended by manufacturer
   5.1. Number of coats: 1
6. Finishing coats: TBC
   6.1. Number of coats: 1

30 Preparation generally

1. Standard: In accordance with BS 6150.
2. Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
3. Risk assessments and method statements for suspected hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
5. Substrates: Sufficiently dry in depth to suit coating.
6. Efflorescence salts, dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
7. Surface irregularities: Provide smooth finish.
8. Organic growths and infected coatings
   8.1. Remove with assistance of biocidal solution.
   8.2. Apply residual effect biocidal solution to inhibit regrowth.
9. Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
10. Dust, particles and residues from preparation: Remove and dispose of safely.
11. Water-based stoppers and fillers
    11.1. Apply before priming unless recommended otherwise by manufacturer.
    11.2. If applied after priming: Patch prime.
12. Doors, opening windows and other moving parts
    12.1. Ease, if necessary, before coating.
    12.2. Prime resulting bare areas.

32 Previously coated surfaces generally

1. Preparation: In accordance with BS 6150.

2. Contaminated or hazardous surfaces: Give notice of:
   2.1. Coatings suspected of containing lead.
   2.2. Substrates suspected of containing asbestos or other hazardous materials.
   2.3. Significant rot, corrosion or other degradation of substrates.
3. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
4. Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
5. Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
6. Alkali affected coatings: Completely remove.
7. Retained coatings
   7.1. Thoroughly clean.
   7.2. Gloss-coated surfaces: Provide key.
8. Partly removed coatings
   8.1. Apply additional preparatory coats.
   8.2. Junctions: Provide flush surface.
9. Completely stripped surfaces: Prepare as for uncoated surfaces.

35 Fixtures and fittings

1. Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
2. Removal: Before commencing work: Ironmongery, cover plates, grilles, wall clocks, and other surface mounted fixtures.
3. Replacement: Refurbish as necessary, refit when coating is dry.

43 Plaster preparation

1. Nibs, trowel marks and plaster splashes: Scrape off.
2. Overtrowelled 'polished' areas: Provide suitable key.
3. Depressions around fixings: Fill with stopper/ filler.

61 Coating generally

1. Application: In accordance with BS 6150,
2. Conditions: Maintain suitable temperature, humidity and air quality.
3. Surfaces: Clean and dry at time of application.
4. Thinning and intermixing: Not permitted unless recommended by manufacturer.
5. Overpainting: Do not paint over intumescent strips or silicone mastics.
6. Priming coats: Apply as soon as possible on same day as preparation is completed.
7. Finish
   7.1. Even, smooth and of uniform colour.
   7.2. Free from brush marks, sags, runs and other defects.
   7.3. Cut in neatly.
8. Doors, opening windows and other moving parts: Ease before coating and between coats.

Ω End of Section

Z10
Purpose-made joinery

To be read with preliminaries/ general conditions.

110 Fabrication

1. Standard: To BS 1186-2.
2. Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
   2.1. Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
3. Joints: Tight and close fitting.
4. Assembled components: Rigid. Free from distortion.
5. Screws: Provide pilot holes.
   5.1. Screws of 8 gauge (4 mm diameter) or more and screws into hardwood: Provide clearance holes.
   5.2. Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.
   5.3. Adhesives: Compatible with wood preservatives applied and end uses of timber.

120 Cross section dimensions of timber

1. General: Dimensions on drawings are finished sizes.
2. Maximum permitted deviations from finished sizes
   2.1. Softwood sections: To BS EN 1313-1:-
      2.1.1. Clause 6 for sawn sections.
   2.2. Hardwood sections: To BS EN 1313-2:-
      2.2.1. Clause 6 for sawn sections.
      2.2.2. Clause NA.3 for further processed sections.

130 Preservative treated wood

1. Cutting and machining: Completed as far as possible before treatment.
2. Extensively processed timber: Retreat timber sawn lengthways, thicknessed, planed, ploughed, etc.
3. Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.

140 Moisture content

1. Wood and wood-based products: Maintained within range specified for the component during manufacture and storage.

250 Finishing

1. Surfaces: Smooth, even and suitable to receive finishes.
   1.1. Arrises: Eased unless shown otherwise on drawings.
2. End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

Ω End of Section

Z21
Mortars

Cement gauged mortars

110 Cement gauged mortar mixes

1. Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

120 Sand for site made cement gauged masonry mortars

1. Standard: To BS EN 13139.
2. Grading: 0/2 (FP or MP).
    2.1. Fines content where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5-6):
        2.1.1. Lower proportion of sand: Use category 3 fines.
        2.1.2. Higher proportion of sand: Use category 2 fines.
3. Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.

131 Ready-Mixed lime:sand for cement gauged masonry mortars

1. Standard: To BS EN 998-2.
2. Lime: Nonhydraulic to BS EN 459-1.
    2.1. Type: CL 90S.
3. Pigments for coloured mortars: To BS EN 12878.

135 Site made lime:sand for cement gauged masonry mortars

1. Permitted use: Where a special colour is not required and in lieu of factory made ready-mixed material.
2. Lime: Nonhydraulic to BS EN 459-1.
    2.1. Type: CL 90S.
3. Mixing: Thoroughly mix lime with sand, in the dry state. Add water and mix again. Allow to stand, without drying out, for at least 16 hours before using.

160 Cements for mortars

1. Cement: To BS EN 197-1 and CE marked.
    1.1. Types: Portland cement, CEM I.
2. Portland limestone cement, CEM II/A-L or CEM II/A-LL.
3. Portland slag cement, CEM II/B-S.
4. Portland fly ash cement, CEM II/B-V.
    4.1. Strength class: 32.5, 42.5 or 52.5.
5. White cement: To BS EN 197-1 and CE marked.
    5.1. Type: Portland cement, CEM I.
    5.2. Strength class: 52.5.
6. Sulfate resisting Portland cement
    6.1. Types: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
7. To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.

7.1. Strength class: 32.5, 42.5 or 52.5.

8. Masonry cement: To BS EN 413-1 and CE marked.

8.1. Class: MC 12.5.

180 Admixtures for site made cement gauged mortars

1. Air entraining (plasticizing) admixtures: To BS EN 934-3 and compatible with other mortar constituents.
2. Other admixtures: Submit proposals.
3. Prohibited admixtures: Calcium chloride, ethylene glygol and any admixture containing calcium chloride.

190 Retarded ready to use cement gauged masonry mortars

1. Standard: BS EN 998-2.
2. Lime for cement:lime:sand mortars: Nonhydraulic to BS EN 459-1.

2.1. Type: CL 90S.

3. Pigments for coloured mortars: To BS EN 12878.
4. Time and temperature limitations: Use within limits prescribed by mortar manufacturer.

4.1. Retempering: Restore workability with water only within prescribed time limits.

210 Making cement gauged mortars

1. Batching: By volume. Use clean and accurate gauge boxes or buckets.

1.1. Mix proportions: Based on dry sand. Allow for bulking of damp sand.

2. Mixing: Mix materials thoroughly to uniform consistency, free from lumps.

2.1. Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.

3. Working time (maximum): Two hours at normal temperatures.
4. Contamination: Prevent intermixing with other materials.

Lime:sand mortars - Not Used

Ω End of Section

Specification created using NBS Chorus

Replacement of external doors and windows

The works covered in this tender include but are not limited to:

a) Survey of the existing site and openings.
b) Provision of temporary safe access.
c) Measuring and design of new windows, screens and doors and all necessary supports.
d) Provision of temporary covers to protect furniture, furnishings and fixtures during the course of the works.
e) Removal of existing windows, screens and doors and the provision of temporary weather sealing and security as required.
f) Supply and installation of new supports.
g) Supply and installation of new windows, screens and doors, with all fittings required to complete the installation and ensure full, effective and safe operation.
h) Builders work including making good around the frames.
i) Internal and external finishing and weather sealing.
j) Cleaning on completion.

Information required within tender submission

The following information is to be submitted as part of tender:

a. Manufacturer and product reference.
b. Costs - for both double and triple glazed units as comparable dual tender costs
c. Availability.
d. Relevant standards.
e. Performance – Uvalue and Window Energy Rating of proposed windows
f. Function.
g. Compatibility of accessories.
h. Proposed drawings and revisions to specification.
i. Compatibility with adjacent work.
j. Appearance.
k. Copy of warranty or guarantee.

Quality Requirements:

Workmanship skills

- Operatives: Appropriately skilled and experienced for the type and quality of work.
- Registration: With Construction Skills Certification Scheme.
- Evidence: Operatives must produce evidence of skills and qualifications when requested.

Quality of products

- Generally: New.
- Supply: Each product from the same source or manufacturer.
- Quantity: Whole quantity of each product required to complete the Works of a consistent kind, size, quality and overall appearance.
- Tolerances: Where critical, measure a sufficient quantity to determine compliance.
- Deterioration: Prevent, order in suitable quantities to a programme and use in appropriate sequence.
- Recycling: Proposals for recycled products may be considered.
- Recycing or reuse of old replaced windows will be considered a positive addition to the tender – provide names and contact details of proposed schemes for upcycling where suitable

Quality of execution

- Generally: Fix, apply, install or lay products securely, accurately, plumb, neatly and in alignment.
- Colour batching: Do not use different colour batches where they can be seen together.
- Dimensions: Check on-site.
- Finished work: Not defective damaged, disfigured, dirty, faulty, or out of tolerance.
- Appearance: Adjust joints open to view so they are even and regular.

Manufacturer’s recommendations and instructions

- General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to Tender.
- Exceptions: Submit details of changes to recommendations or instructions.
- Execution: Use ancillary products and accessories supplied or recommended by main product manufacturer.
- Products: Comply with limitations, recommendations and requirements of relevant valid certificates.

1. General Requirement and Scope of Work

a. The Environment Agency will be undertaking a programme of window and door replacement works.

b. The completion date includes for any access equipment to be completely removed from site.

c. The Performance Specification covers the design, supply and installation of new PVCu framed, double glazed windows, screens and doors.

d. The Contractor shall provide all necessary design, survey, manufacturing, fabrication, installation, associated works, and operating & maintenance manuals to ensure proper and complete installation to the satisfaction of the Contract Administrator.

e. All design in connection with the works shall be undertaken by and shall remain the responsibility of the Contractor, who shall prepare Contractor's Proposals in response to the Specification contained herein and shall submit the same with the tender return. The Contractor should note that tenders returned without adequate written Contractor's Proposals may be rejected.

f. The Contractor's Proposals shall include detailed technical specifications for windows and doors, manufacturers' product literature, accreditation certificates, information on guarantees/warranties and 'as proposed' drawings.

g. The Contractor shall make all arrangements for safe access as necessary to carry out the installation.

h. It is the intention, by setting the standards quoted within this specification, to set a quality standard so as to obtain sustainability and performance of the components in achieving the full 25 year life cycle of all windows at minimal cost to the Employer.

i. The Contractor is to allow for a full scaffold where required to allow access to all areas of works, which is to remain in place until the works are complete. The scaffold must conform to Local Authority guidelines as defined under the terms of the licence. All scaffolding is to be erected in accordance with all British Standards.

j. Where scaffolding is fixed over entrance points to the building, the approach to the entrance is to be protected by double boarded fans.

k. The Contractor is to make all due allowance to ensure that no damage is caused to the property internally and externally. The Contractor's attention is drawn specifically to the need to protect soft landscaping, external and internal fabrics and finishes. Any damaged caused as a result of the replacement windows, screens and doors will be the Contractor's liability.

l. The Contractor is to allow for all necessary measures to protect the occupants, fittings and finishes within the rooms for the duration of the works.

m. The Contractor is to allow to remove and re-fit existing net curtains and other soft furnishings as applicable and to inform the Contract Administrator of any soft furnishings not suitable for reinstatement

n. The Contractor is to allow for the unclipping of all existing telephone cables, aerial cables and the like from existing frames and re-clip to surround in a suitable location using new cable clips of an appropriate size and colour. Any cables passing through a frame/ structure joint shall be routed through a plastic sleeve, the inner end of which is to be higher than the outer to prevent water penetration along or through the sleeve.

o. On completion of the installation of each window, screen or door, all glazing, window frames, handles and all other surfaces are to be cleaned to a perfect finish with mild detergent. All components are to be checked for security of fixings, adequacy of clearances, adjustment of hinges, locks etc. as may be necessary to leave the units in perfect working order.

p. All works must be undertaken by competent operatives. Works to achieve self-certification for all installations in accordance with the Fenestration Assessment Scheme by FENSA Limited to ensure Building Regulations are fully complied with.

q. This section of the Specification should be read in conjunction with the current British Standards and Building Regulation requirements for new window installations in terms of construction, safety, thermal performance and robustness, suitable for use in a residential environment.

r. The Contractor is required to survey the existing installation as part of the tender process, no subsequent claim for lack of knowledge of the existing installation shall be considered.

s. It shall be the Contractor's objective to develop the detailed design in partnership with the Employer in order to add maximum value to the project and to ensure the satisfaction of all parties.

2 Contractor site survey requirements

a. The Contractor shall design, supply and install new double-glazed or triple-glazed windows, screens and doors. This shall include all structural supports to ensure that the windows do not flex in the event of extreme windows, forces from occupants and the building itself.

b. The Contractor shall ascertain on site the exact dimensions of openings before manufacture of the windows, screens and doors. The Contractor shall allow in his price for a survey visit to take the dimensions and adjacent structural details of every window and door that is to be replaced. The units supplied and manufactured are to suit each individual opening and the relative sizes to take into consideration the site and site conditions. Surveys are to be carried out at appointed times in liaison with residents. Where access proves difficult the Contract Administrator shall be informed.

c. It is recommended that surveys of external windows and doors are undertaken by surveyors employed by the fabricating organisation.

d. Replacement windows are to match the existing arrangement and relative sizes of fixed and opening lights except where indicated otherwise or required in order to comply with Building Regulations.

e. The replacement windows and doors are to match the existing colour and style unless we state otherwise.

f. Each and every structural opening shall be measured including checks for squareness by measuring diagonals. The responsibility to survey each and every structural opening is that of the Contractor and no claims or acceptance for ill-fitting doors or deviations in the structure will be entertained by the Contract Administrator. Allow for any anomalies and variations in the size of openings and for out of square openings. This is to include for the manufacture of 'specials' as necessary.

g. Window and door sizes shall include for all necessary tolerances for thermal movement together with manufacturer’s tolerances in fitting to existing/new openings.

h. The appearance of the external cill must remain the same and must not be adversely affected by the installation of a new window or door. The sill must be left in a condition to ensure that it is fully protected from rainwater damage.

i. If PVCu windows are replacing steel windows, the new windows must allow for the plaster line and any DPCs. New window profiles are to allow for the internal plaster or the internal plaster is to be cut back. Larger external gaps are not permitted. Where internal sills are tiled, the sill section must accommodate the sills without the need for cutting the tiles. Where they are concrete, brick, stone or tiled external sills the Contractor must advise whether a PVCu sill is still required.

j. On completion of the tender and before appointment, Contractors shall be required to demonstrate that they have included for all supports and fixings required to ensure that the existing structure is not weakened, the rigidity of the new windows exceeds that of the existing installation along with meeting all current British Standards and Building Regulations for windows and doors being installed in the particular situation.

k. Contractor surveys shall consider the location of BT, power, coaxial, lighting, bell wire and other electrical cabling that is present either internally or externally.

l. Both internal and external dimensional checks are to be undertaken to ensure the correct fitment and alignment of the proposed doors and windows.

3 Compliance standards

a. The Contractor shall ensure that the design, surveying, fabrication/manufacture and installation complies with all relevant British and European Standards, Codes of Practice, Building Regulations and manufacturers' current printed instructions and recommendations, including, but not limited to, the following standards and all amendments thereto:

b. Building Regulations Approved Documents B, F, K, L and M.

c. BS EN 795 Protection against falls from a height - anchor devices - requirements and testing. BS EN 1027 Windows and doors. Water tightness. Test method.

d. BS EN 1125 Panic and emergency exit devices.

e. BS EN 1279 Glass in building. Insulating glass units. BS EN 1670 Building hardware – corrosion resistance.

f. BS EN 1935 Building hardware. Single-axis hinges. Requirements and test methods. BS EN 1991 Eurocode 1. Actions on structures. General Actions. Wind actions.

g. BS EN 12519 Windows and pedestrian doors.

h. BS EN 12600 Glass in building - pendulum test - impact test method and classification.

i. BS EN 12758 Glass in building. Glazing and airborne sound insulation. BS EN 13115 Windows. Classification of mechanical properties.

j. BS EN 13126 Building hardware. Hardware for windows and door height windows. BS EN 14351 Windows and doors. Product standard, performance characteristics.

k. BS EN 17271. Plastics. Poly(vinyl chloride) (PVC) based profiles. Determination of peel strength of profiles laminated with foils.

l. BS 3621 Thief resistant lock assemblies.

m. BS 4255 Rubber used in preformed gaskets for weather exclusion from buildings.

n. BS 6206 Specification for impact performance requirements for flat safety glass and safety plastics for use in buildings (AMD 4580) (AMD 5189) (AMD 7589) (AMD 8156) (AMD 8693).
o. BS 6213 Guide to selection of constructional sealants. BS 6262 Glazing for buildings.
p. BS 6375 Performance of windows and doors. Part 1: Classification for weathertightness. Part 2: Specification for operation and strength. Part 3: Classification for additional performance.
q. BS 7412 Specification for windows and door sets made from unplasticized polyvinyl chloride (PVC-U) extruded hollow profiles.
r. BS 8213 Windows and doors.
s. Part 1: Code of practice for safety in use and during cleaning of windows and doors. Part 4: Code of practice for the installation of replacement door sets in dwellings.
t. BS 8220 Guide for security of buildings against crimes.
u. BRE Digest 379 Double glazing for heat and sound insulation. BRE IP 25/81 The selection and performance of sealants.
v. BS EN ISO 9001 & 9002 Quality assurance systems for design, development, production, installation and servicing.
w. The Workplace (Health, Safety and Welfare) Regulations 1992, Specific Regulation 14.
x. PAS 24 - Enhanced security performance requirements for door sets and windows in the UK. External door sets and windows intended to offer a level of security suitable for dwellings and other buildings exposed to comparable risk.

4 Design

The Contractor shall design, supply and install new hermetically sealed double glazed or triple glazed windows, screens and doors. This shall include all structural supports and framing to ensure the windows do not flex in the event of extreme winds, forces from occupants within the building and the building itself. The Contractor is to produce accurate design and manufacture drawings including sections and elevations for approval by the Contract Administrator prior to manufacture.

a. The design shall take into account:

- Cleaning of the windows.
- Health and Safety in the workplace i.e. meeting the requirements of The Workplace (Health, Safety and Welfare) Regulations 1992.
- Energy efficiency of the windows.
- Fire safety and escape in the case of fire from upper storeys.
- Security of the building.
- Robustness for heavy handling and misuse.
- Ease of maintenance.

- Have a 10 year minimum insurance backed guarantee for materials and workmanship.

b. For any windows that are load bearing or structural, taking loads from the roof etc (i.e. bay windows), the new windows must be designed to take the same loads by means of structural members, corner posts etc., that must fully and adequately transfer the loads to the structure below the window. The Contractor must serve a Building Notice in respect of any structural windows and provide temporary support. Calculations proving the adequacy of the structural members must be provided.

c. Windows are not to open outwards on to balconies or in other locations where they could present a danger to persons using access routes.

d. Opening lights shall be no closer to finished floor level than 1100mm.

e. The Contractor shall provide 'as proposed' drawings with the tender. The drawings shall either be fully annotated to explain any designs not in accordance with the Performance Specification and Compliance Standards, or a separate written explanation shall be provided in support of the drawings. The Contractor shall agree all design proposals with the Employer prior to commencing fabrication and installation.

f. The Contractor's detailed design shall include full working drawings and specifications; copies of which are to be submitted to the Contract Administrator for approval prior to manufacture.

Manufacture

a. The Contractor shall call upon the system manufacturers to provide any necessary technical assistance throughout the design, fabrication, installation, maintenance and guarantee/warranty periods.
b. The finished windows, screens, doors and all components shall be clearly identified by a permanent manufacturer's mark or label. This should be unobtrusive.
c. The units supplied are to be manufactured to suit existing/ prepared openings.
d. All joints associated with the PVCu frames are to be hot fusion welded and shall meet or current requirements. The joints must be completely moisture resistant and not permit any penetrations into the profiles either internally or externally. The residue of material resulting from hot fusion welding is to be carefully removed and neatly routed to just below the surface leaving a uniformed recessed feature.
e. All profile sections are to be multi-chambered extruded PVCu. The system must enable adequate drainage to be incorporated away from the central reinforcement chamber regardless of the positioning of the profile. The profiles should resist normal weathering and colour fastness.

5 Windows and doors

a. The window assemblies must incorporate concealed drainage dispersal methods that discharge clear of the structure.

b. All fixings and fastenings shall be of corrosion resistant material and be compatible with other metallic fixings used in the manufacture of the window. Where surface fixed and generally seen, fixings and fastenings are to be coloured to match the frame.

c. Generally hardware and ironmongery fittings and fixtures are to penetrate at least two thicknesses of the PVCu profile and/ or penetrate the reinforcement by at least 2mm.

d. Any multi light window is any room is to have sight lines kept to a minimum. Therefore, coupling of multi light windows will not be permitted except for window and door combinations.

6 Glazing

a. i Double Glazed units are to be 28mm hermetically sealed units with an inner pane of 'soft coat' low emissivity glass, an argon filled cavity and thermally broken 'warm edge' spacer bar. The thickness of the double glazed units shall be selected to ensure that each window achieves or betters the Employer's thermal and sound insulation requirements. Double glazed units will provide a Window Energy Rating of a minimum A rating and a maximum U value of 1.2W/m^2K.

ii Triple glazed units are to be 32mm hermetically sealed units with inner pane of 'soft coat' low emissivity glass and 'toughened low emissivity' central pane to prevent thermal stress cracking, argon filled cavities and a thermally broken 'warm edge' spacer bar. The thickness of the triple glazed units shall be selected to ensure that each window achieves or betters the Employers thermal and sound insulation requirements of a minimum A++ rating and a maximum U value of 0.8W/m^2K. All ironmongery must be designed for the associated increase in weight associated with the triple glazed units

b. The glazing shall be of neutral colour in transmission and reflection without applied tints or coatings, though 'K' glass or other suitable low emissivity (low 'E') coatings shall be provided for the purpose of attaining the required thermal performance.

c. All glazing in bathrooms/ WCs is to be obscured glass to the inner pane, grade/ rating 5.

d. Glazing shall be of British manufacture of the best quality of its respective kind, picked clear of all specks, bubbles, smoke wanes, all holes and other defects to comply with BS 952. The glazing units are to be retained by suitable PVCu integral glazing beads matching the existing frame.

e. Each panel of laminated and toughened glass shall be permanently etched with the Kitemark identifying the appropriate BS number in the bottom right hand corner when viewed from the inside.

f. Glazing gaskets shall be EPDM and shall remain free from long-term shrinkage.

7 Window and door ironmongery

a. The Contractor shall ensure that all ironmongery has a positive and smooth action and shall be capable of operation by occupiers of all ages.
b. Openable windows shall be fitted with stainless steel friction hinges incorporating integral restrictors limiting the opening of the window to 100mm. The restrictors are to be capable of simple release to allow the window to open fully and function as a fire escape window in accordance with Building Regulations.
c. Openable windows shall be fitted with multipoint locking mechanisms operated via a key deadlocking, push button locking handle. One key is to be supplied with each handle. Egress windows are to be fitted with non key locking push to release handle.
d. Window furniture to opening lights is to be positioned so that the handle can be easily operated by the resident whilst standing with their feet on the floor. Window furniture in kitchens and bathrooms are to be positioned on the opening light such that it can be easily reached by an average sized person leaning over sanitary and kitchen fittings, i.e. below the centre line within the limit of the design of the window.
e. The hinges should be capable of holding the windows steady when opening under all foreseeable wind loads and shall prevent slamming on closing.
f. All ground floor and any vulnerable windows are to be fitted with additional security to the hinged side of the window or door.

8 Appearance

a. The Contractor shall ensure that frame sizes and sight lines match as closely as practicable with those of the existing windows and doors.
b. The finish must be resistant to colour fading, staining and all other foreseeable modes of deterioration for the effective life of the system.
c. Durability
d. The new windows shall have a minimum serviceable life of 25 years and they shall be designed and installed to eliminate, or reduce to a practicable minimum, the need for repairs and maintenance during this period.
e. All components and materials shall, in so far as is practicable, remain corrosion resistant and free from abrasion, cracking, crazing, discolouration, interstitial condensation, peeling, staining and all other foreseeable modes of deterioration for the serviceable life of the frames.

9 Air and water tightness

a. The windows, screens and doors shall be air and watertight under all foreseeable weather conditions for the area and shall remain so for their serviceable life span. The Contractor will therefore be required to determine the local wind pressures and exposure categories in accordance with BS6375. The Contractor shall provide a copy of his exposure, thermal and structural calculations to the Contract Administrator on request.
b. Thermal and condensation performance

c. The inside surfaces of the frames and components fixed thereto shall minimise the formation of condensation under all foreseeable psychrometric conditions and shall therefore incorporate suitable thermal breaks. The design shall ensure that condensation always forms on the glazing before the frames.
d. Sound insulation
e. The windows and doors shall be designed, manufactured and installed with due regard to the requirements of the Approved Document E of the Building Regulations and BS 8233.
f. The Contractor shall therefore pay close attention to the design and installation of the glazing units, gaskets, perimeter seals and the like.

10 **Background ventilation**

a. Background ventilation to all windows shall be provided in accordance with Approved Document F of the Building Regulations. These shall be fully closable and draught-free when closed. The trickle vents shall be fitted with insect screening and the vents shall be fully controllable by the occupiers. Colour of vents to match the window frames.

11 Window door frames and cills

a. All new frames shall be fixed in accordance with the quality assurance systems for design, development, production, installation and servicing (BS EN ISO 9001 & 9002). In particular, the Contractor shall be responsible for ensuring that the number, spacing, size and type of fixings are appropriate for the substrates, frame sizes and anticipated loading conditions.
b. All joints at angles and abutments shall be heat welded to BS 2782 and finished with a V groove or be ground down flush and polished.
c. All sections shall be reinforced with internal hot dip galvanised steel cores, which shall be sealed into the central sections of the frame profiles.

12 Installation requirements

a. The new windows, screens and doors shall be supplied by only one manufacturer and shall be fabricated and installed by only one contractor, who shall be approved in writing by the system manufacturer.
b. The complete systems shall be designed, fabricated and installed in accordance with the current printed instructions and recommendations of the relevant manufacturer.
c. Window and door framing is to be securely fixed direct to the building structure.
d. The removal of existing windows and doors must be programmed to ensure that units are removed only if they are to be replaced within the same working day. Immediately on removal the existing windows and doors together with any debris associated with the removal of the existing units is to be cleared away to an appropriate location. Existing windows must be removed with care and the removal should prevent any unnecessary damage to the surrounding structure and finishes. All work must take into account the fact that the houses are occupied and the needs of the residents must be taken into account, and unnecessary disturbance avoided.
e. At the end of each working day, the Contractor shall be responsible for the removal of any debris and shall thoroughly clean the working area. No windows are to be left out overnight.

New windows are to be offered up to position to ensure that they fit before the existing windows are removed.

f. On removal of the existing windows and doors, the reveal surfaces of the opening are to be cleaned to remove all existing frame sealant, mastic, beading mortar etc., ready for the installation of the new units. The masonry surrounds of the windows and doors must be left in a condition that will prevent the ingress of moisture and its appearance not affected.
g. Damp proof materials are to be repaired and /or renewed as necessary and tucked into the new framing.
h. The Contractor shall allow for the supply and installation of matching trims, internal and external perimeter sealant pointing. All gaps around frames shall be fully filled with expanding foam. The depth of sealant is to be 10mm minimum to the full width of the gap, with a backing strip used where necessary. All trims are to match the colour of the window profile. Joints are to be mitred and not butt jointed.
i. Allow for all making good to window and door openings, both internally and externally. This is to include masonry, plaster, cladding and decorative finishes. No additional allowance will be made for costs associated with making good which should have been visible on a site inspection. The contractor is recommended to undertake a photographic survey prior to starting the works for comparison.
j. Frames are to be positioned to cover the cavity, within the reveals and level with the existing external window line wherever possible, ensuring that they are plumb, level and without bow.
k. New windows and doors are to be provided with cills of sizes appropriate to maintain the projection of the existing cills beyond the face of the external walls.
l. The Contractor is to ensure that all PVCu or other framing materials and all glass taken out is recycled, using the system's recycling facilities.
m. Once the entire installation is complete the windows and glazing are to be cleaned and the ironmongery checked to ensure that it operates correctly.

13 Operation and maintenance

a. The Contractor shall provide each resident with operating instructions and basic maintenance and cleaning instructions. The Contractor shall demonstrate the operation of all windows, doors, safety devices etc. to residents.

14 Guarantee

a. The Contractor shall provide a 10 year fully independent insurance backed warranty covering all design, materials and workmanship and protecting against insolvency of any Subcontractors used.
b. The Guarantee shall cover all costs involved should remedial work prove to be necessary and shall cover against consequential loss and be protected against inflation.

Summary of Tender

Preliminaries

Schedule of Works

Total

4.0 Form of Tender

We being _____

having visited the site and having read the Drawings, Specification and Schedule of Works, HEREBY offer to complete the whole of the works described therein for the FIXED PRICE sum of:

Total tender figure (in words)

_____

_____(£_____._____) (Excluding VAT)

I / We agree to complete all the works within _____ weeks. Commencement and completion dates to be agreed.

I / We agree that should obvious pricing errors in arithmetic be discovered in the Schedule of Works before acceptance of this offer, the contractor will be given the opportunity to confirm/correct for genuine errors or withdraw their offer in accordance with Alternative (2) contained in JCT Practice Note 2017.

I / We agree that this tender remains open for acceptance for a period of 24 weeks from the date of receipt by the Contract Administrator of the priced Schedule of Works.

I / We agree in the event of your acceptance to execute with you a formal contract embodying all the terms and conditions contained in this offer.

I / We agree that any conditions appended by me / us which are at variance with contract documents shall be unreservedly withdrawn.

Signature: _____ in the capacity of

_____ being duly authorised to sign tenders on behalf of

_____

Registered Address:

_____

Dated this _____ day of _____ 2022

Witnessed by _____

of _____

Note: The Client does not bind themselves to accept the lowest or any tender, nor to reimburse any expenses incurred in tendering.

A Facsimile transmission of the Form of Tender will NOT be accepted.

Fisher German's Building Consultancy Team has in depth knowledge and experience across all market sectors. Our expertise ranges from full design and build management to specific advice on construction and property related matters.

By understanding technical advances, new legislation and importantly, our Clients' requirements, we seek to provide innovative and bespoke solutions to add value.

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