

Imperial War Museum, Duxford

Building 104A – Main Works

Appendix 1: Schedule of Works

October 2017



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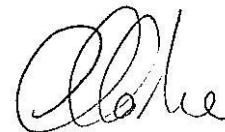
Project: IWM, Duxford

Document Title: Appendix 1: Schedule of Works

Date: October 2017

Authorised By: Eleanor Clarke, Partner

Signature:



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Certificate of Bona Fide Tender

Certificate of Bona Fide Tender

1. I declare that this is a bona fide Tender, intended to be competitive and that I have not fixed or adjusted the amount of the Tender by or under or in accordance with any agreement or arrangement with any other person ('person' includes any persons anybody or association, corporate or incorporate; and) except as disclosed on this Certificate under 7 below.
2. I declare that the Company is not aware of any connection with a member of the Employer's staff which could affect the outcome of the bidding process.
3. I declare that I have not done and I undertake that I will not do at any time any of the following:
 - a) communicate to any person, including the addressee calling for the Tender, the amount or approximate amount of the proposed Tender;
 - b) enter into any agreement or arrangement with any other person or body that he or it shall refrain from tendering or as to the amount of any Tender to be submitted;
 - c) enter into any agreement or arrangement with any other person or body that we will refrain from tendering on a future occasion;
 - d) offer or pay or agree to pay any sum of money or valuable consideration directly or indirectly to any person for doing or causing to be done in relation to any other tender for the said work any act of the kind described above, or do anything which contravenes the provisions of the Bribery Act 2010 or any other applicable laws;
 - e) canvas or solicit the Employer's staff.
4. I understand that any instances of illegal cartels or market sharing arrangements suspected by the Employer will be referred to the Office of Fair Trading for investigation and may be subject to action under The Competition Act 1998 and The Enterprise Act 2002.
5. I understand that any misrepresentations may also be the subject of criminal investigation or used as a basis for civil action.
6. In this Certificate "agreement" or "arrangement" includes any transaction private or open, or collusion, formal or informal, and whether or not legally binding. The word 'person' includes any persons or anybody or associated, corporate or unincorporated.

7. Disclosure:

Signed: _____ Date ____/____/17

Name (Print): _____

in the capacity of: _____

duly authorised to sign this Certificate for and on behalf of:

_____ (state company name)

Preamble

DESCRIPTIONS OF WORK SCHEDULES, MATERIALS AND WORKMANSHIP

ALL SECTIONS

GENERALLY

A1000 Work Schedules

The Tenderer is to price in the tender document for the works shown on the Drawings and described in the Specifications. The Work Schedules are provided as a pricing document but do not purport to be an accurate or full description of the whole of the works required. If they are found to be at variance with the Drawings and/or Specifications then the latter shall prevail. Quantities and dimensions given in descriptions are provided as a general guide and to assist with identification of items of work. Where quantities are not provided the Contractor shall measure and calculate the Quantities. It is the Contractor's responsibility to check and verify any Quantities. These works are not measured in accordance with SMM7/NRM, as such, it is the Tenderers responsibility to satisfy themselves that all quantities are correct and that all works required by the Drawings and Specifications are incorporated and priced in their tender submission.

A1050 Specifications

The Contractor is referred to the Architect's Specifications, Structural Engineer's Specifications and the Mechanical & Electrical Services Engineer's Specifications for full details and descriptions of Materials and Workmanship, which are to be read in conjunction with these Work Schedules.

Descriptions apply reciprocally between sections

A1100 Unless stated otherwise or contradicted, descriptions of materials and workmanship preambles apply reciprocally between Work Schedules sections. It is therefore essential that the Contractor, if detaching any part of the Work Schedules for examination or quotes etc. by other parties, ensures that this portion of the Work Schedules is also made available to such parties.

MATERIALS

A1150 Quality generally

Materials are deemed to be specified in the following order of priority unless otherwise indicated:

Complying with British Standards.

Complying in general with British Standards.

Of British Manufacture.

A1200 Branded materials and proprietary articles and systems

The specification of branded materials and proprietary articles and systems supplied or supplied and fixed complete by particular firms is intended as a guide to the type of article or quality of material. If approval is obtained, the Contractor may order from other sources supplying articles or materials of equal quality. He shall submit full details of alternatives and/or samples when so requested, but the Architect's decision as to acceptability or otherwise of alternatives shall be final. The Contractor will be deemed to have priced the items in the Work Schedules, not his proposed alternatives.

The Contractor shall obtain the manufacturers' printed instructions relating to all branded materials and proprietary systems employed in the Works and he shall take strict precautions to ensure that their recommendations are followed. Copies of such instructions shall be kept on the site at all times and the Contractor shall produce them for the Architect's use on the site when so requested.

The names and addresses of the manufacturers of branded materials and the processes are given only if these do not appear in reference books.

A1300 Samples

Where approval of products or materials is specified the Contractor shall submit, free of charge, samples, certificates or other evidence of suitability. Orders shall not be confirmed and materials shall not be used until approval has been obtained. Approved samples shall be retained on site for comparison with products and materials used in the Works, and they shall be removed when no longer required.

Where samples of finished work are specified the Contractor shall obtain approval of stated characteristic(s) before proceeding with the Works. Samples which are not part of the finished Works shall be removed when no longer required.

WORKMANSHIP

A1400 Standard generally

Except where otherwise stated or contradicted workmanship shall comply with British Standard Codes of Practice where applicable whether or not specifically referred to hereafter.

Workmanship shall be of a high standard throughout, commensurate with the nature of the works, particularly with regard to the accuracy of dimensions, lines, planes, levels and the quality of surface textures. The Contractor shall do everything necessary to ensure that the standard of finish which is hereby demanded by this contract is achieved.

SEQUENCING

A1450 Construction sequence

Sequencing of the works is detailed on drawings 3104 400 and 3104 401. The Tenderer is to allow for all sequencing, temporary works and props, scaffold towers and the like as detailed on the drawings, along with any further requirements deemed necessary by the Contractor to complete the works. The responsibility for these works shall remain with the Contractor.

CONTRACTOR'S DESIGNED PORTION

A1500 Sub-contractor designed works

For works to be designed by a specialist Sub-Contractor the Contractor is to allow for all works necessary for the full and complete design and installation of Contractors Designed Portions (please refer to section A20 of the Preliminaries – Second Recital) to form a complete and structurally sound installation.

The Contractor shall ensure that all calculations, submissions, statutory approvals, co-ordination between trades, provision and distribution of calculations and working drawings (sufficient to meet the Contractors requirement plus 4 Nr copies for the Consultant's use) are provided to meet the requirements of the contract and the contract programme.

The quantities and headings given within the Schedule of Works for Contractors Designed Portion items are given as a guide only and lump sums should be inserted against each item. The sums should be inclusive of all labour, materials, plant and equipment, supervision, sub-contractor's overheads and profit, main contractors discount and main contractor's overheads and profit and shall form the sub-contract sum analysis.

Build-up of the sums are to be made available to the Quantity Surveyor upon request.

The Contractors Proposals to be submitted with the tender are to include detailed calculations and product information sufficient to enable the Architect / Structural Engineer to confirm that the proposals comply in every respect with the Employers Requirements.

General Summary

Item	Item Description	Unit	Amount	
			£	p
	GENERAL SUMMARY			
	SECTION 1 - PRELIMINARIES AND GENERAL CONDITIONS			
	SECTION 2 - SCHEDULE OF WORKS - MAIN WORKS (BUILDING 104A)			
	SECTION 3 - SCHEDULE OF WORKS - MECHANICAL			
	SECTION 4 - SCHEDULE OF WORKS - ELECTRICAL			
	SECTION 5 - SCHEDULE OF WORKS - BUILDERS WORK IN CONNECTION WITH SERVICES			
	SECTION 6 - SCHEDULE OF WORKS - EXTERNALS			
	SECTION 7 - SCHEDULE OF WORKS - DRAINAGE			
	SECTION 8 - DAYWORKS AND CONTINGENCIES			
	SECTION 9 - PROVISIONAL SUMS			
	TOTAL			
	To Form of Tender	£		

Section 1

Preliminaries and General Conditions

IWM Duxford - Main Works

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A10 PROJECT PARTICULARS

- 110 THE PROJECT
 - Name: Imperial War Museum (Duxford) - Building 104A Main Works.
 - Nature: The Works include the construction of the new build storage/archive facility along with associated external works and drainage. The new Building 104A facility is to achieve Passivhaus Certification and will house a number of important documents, collections and artefacts at the Museum and former RAF airfield.
 - Location: IWM Duxford, Duxford, Cambridgeshire, CB22 4QR.
 - Length of contract: 30 weeks (inclusive of weekends and bank holidays) - see section A20 for start and completion dates. The Contractor is invited to propose an alternative programme and contract period with their tender (please see Form of Tender).

- 120A EMPLOYER (CLIENT) (CDM)
 - Name: IWM Duxford.
 - Address: IWM Duxford, Duxford, Cambridgeshire, CB22 4QR.
 - Contact: Gael Dundas / Lindsay Flood.
 - Telephone: 020 7416 5405 / 020 7091 3139.
 - E-mail: gdundas@iwm.org.uk / lflood@iwm.org.uk.

- 130 PRINCIPAL CONTRACTOR (CDM)
 - Name: The Contractor.
 - Address: The Contractor.
 - Contact: The Contractor.
 - Telephone: The Contractor.
 - E-mail: The Contractor.

- 132 PRINCIPAL CONTRACTOR (SWMP)
 - Name: The Contractor.
 - Address: The Contractor.
 - Contact: The Contractor.
 - Telephone: The Contractor.
 - E-mail: The Contractor.

- 135 PROJECT MANAGER
 - Name: Focus Consultants 2010 LLP.
 - Address: 605 Elizabeth House, 39 York Road, London, SE1 7NQ.
 - Contact: Florence Andrews.
 - Telephone: 0203 0969 717.
 - E-mail: florence.andrews@focus-consultants.com

- 140 ARCHITECT/ CONTRACT ADMINISTRATOR
 - Name: Architype Ltd.
 - Address: Unity Wharf, 13 Mill Street, London SE1 2BH.
 - Contact: Gareth Selby / Meital Ben Dayan.
 - Telephone: 0207 403 2889.
 - E-mail: gareth.selby@architype.co.uk / meital.bendayan@architype.co.uk.

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- 150A PRINCIPAL DESIGNER (CDM)
 - Name: Ridge & Partners LLP.
 - Address: Harling House, 47-51 Great Suffolk Street, London, SE1 0BS.
 - Contact: Mark Allen.
 - Telephone: 0207 593 3400.
 - E-mail: mallen@ridge.co.uk.

- 160 QUANTITY SURVEYOR
 - Name: Focus Consultants 2010 LLP.
 - Address: Focus House, Millennium Way West, Phoenix Business Park, Nottingham, NG8 6AS.
 - Contact: Neil Wood.
 - Telephone: 0115 976 5050.
 - E-mail: neil.wood@focus-consultants.com.

- 170A STRUCTURAL ENGINEER
 - Name: Momentum Engineering.
 - Address: 103 The Timber Yard, Drysdale Street, London, N1 6ND.
 - Contact: Abigail Matthews / Howard Richardson.
 - Telephone: 020 7739 6939.
 - E-mail: abigail@momentumengineering.com / howard@momentumengineering.com.

- 175A MECHANICAL ENGINEER
 - Name: E3 Consulting Engineers LLP.
 - Address: 2 Tollbridge Studios, Tollbridge Road, Bath, BA1 7DE.
 - Contact: Andy Jarvis.
 - Telephone: 01225 852 981.
 - E-mail: andy.jarvis@e3ce.com.

- 178A ELECTRICAL ENGINEER
 - Name: E3 Consulting Engineers LLP.
 - Address: 2 Tollbridge Studios, Tollbridge Road, Bath, BA1 7DE.
 - Contact: Andy Worsick.
 - Telephone: 01225 852 981.
 - E-mail: andy.worsick@e3ce.com.

- 181 PASSIVHAUS CERTIFIER
 - Name: Warm.
 - Address: 3 Admirals Hard, Plymouth, PL1 3RJ.
 - Contact: Sally Godber.
 - Telephone: 01752 542 546.
 - E-mail: sally@peterwarm.co.uk.

- 185 M&E/PASSIVHAUS ADVISOR
 - Name: Elemental Solutions.
 - Address: Withy Cottage, Little Hill, Orcop, Hereford, HR2 8SE.
 - Contact: Nick Grant.
 - Telephone: 01981 540 728.
 - E-mail: nick.elemental@gmail.com.

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195 BIM INFORMATION MANAGER

- Name: Architype Ltd.
- Address: Unity Wharf, 13 Mill Street, London SE1 2BH.
- Telephone: 0207 403 2889.
- E-mail: gareth.selby@architype.co.uk /
meital.bendayan@architype.co.uk.

200A FACILITIES MANAGER (IWM DUXFORD)

- Name: Stephen Rogers
- Address: IWM Duxford, Duxford, Cambridgeshire, CB22 4QR.
- Telephone: 01223 497 220.
- E-mail: sjrogers@iwm.org.uk.

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A11 TENDER AND CONTRACT DOCUMENTS

- 110 TENDER DRAWINGS
 - The tender drawings are: as listed in Appendix A.

- 120 CONTRACT DRAWINGS
 - The Contract Drawings: The same as the tender drawings.

- 130 QUANTITIES DRAWINGS
 - The drawings from which the quantities included in the specification/ schedules have been prepared are:
- as listed in Appendix A.

- 160A PRECONSTRUCTION INFORMATION
 - Format: The Preconstruction information is described in these preliminaries in Section A34. It refers to information given elsewhere in the preliminaries and other tender documents.
 - Please see Appendix B - Pre Construction Information.

- 180 OTHER DOCUMENTS
 - Inspection: Drawings and other documents relating to the Contract but not included in the tender documents may be seen by appointment during normal office hours at the office of N/A.
 - The documents include: N/A.

- 225 THE BIM INFORMATION REQUIREMENTS (EIR)
 - Comprise: [Please see Appendix I - BIM Execution Plan and BIM Information Requirements (EIR).
 - The Contractor is required to assess and advise the Employer of any conflict between the Employer's Requirements and the BIM model prior to commencement of the works on site.
 - The Contractor is also requested to provide any comments they may have in relation to the BIM Execution plans or BIM Requirements with their Tender.

- 230 COLLATERAL WARRANTIES
 - The Contractor will be required to provide and complete Collateral Warranties for all Subcontractors in relation to the Contractors Design Portions (CDP). For each CDP the contractor will complete in draft a 'Sub-Contractor Collateral Warranty for the Employer (SCWa/E)' which will be provided to the CA for agreement. Upon agreement the Contractor will purchase, complete and obtain signatures for each CDP package (or contractor, if the contractor is undertaking more than one CDP). Each CDP package will require 3 nr Collateral Warranties (for the Client, Contractor and Sub-contractor) all of which shall be purchased and completed by the Contractor and processed in agreement with the CA. The cost of these works shall be borne by the contractor and are deemed included in their tender price.

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A12 THE SITE/ EXISTING BUILDINGS

- 110 THE SITE
 - Description: The site is located at the Imperial War Museum Duxford, Duxford, Cambridgeshire, CB22 4QR. Please see Site Location Plan drawing 9165-GA001.

- 120 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE
 - Description: Please see Site Location Plan drawing 9165-GA001 for details of existing buildings. A former MT shed (Building 104) is situated immediately to the south of the site proposed for these works.

- 125 WORKING AREA
 - Plant, materials and site huts will be confined to an area on site as indicated on drawing 9165-GA003.

- 140 EXISTING UTILITIES AND SERVICES
 - Drawings: (Information shown is indicative only): (Information shown is indicative only): Please see Appendix G - Existing Drainage and Appendix L - Topographical and Services Surveys.
 - Other information: N/A.

- 160A SOILS AND GROUND WATER
 - Information: Included in the tender documents: Please see Appendix D - Contamination Assessment Report and Appendix E - Site Investigation Report for details on soils and groundwater.

- 170A SITE INVESTIGATION
 - Report: Included in the tender documents.
 - Please see Appendix E - Site Investigation Report.

- 180 HEALTH AND SAFETY FILE
 - Availability for inspection: The Health and Safety File for the site/ building may be seen by appointment during normal office hours at: for H&S information please see Appendix B - Pre Construction Information and Appendix C - IWM Instructions and Guidelines for Contractors.
 - Other documents: N/A.
 - Arrangements for inspection: N/A.

- 200 ACCESS TO THE SITE
 - Description: Please see Contractor Access Route and Parking drawing 9165-GA004 for details of access routes to the site.
 - Limitations: Please see Contractor Access Route and Parking drawing 9165-GA004.

- 210 PARKING
 - Restrictions on parking of the Contractor's and employees' vehicles: Please see Contractor Access Route and Parking drawing 9165-GA004 for details of parking restrictions.

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- 220 USE OF THE SITE
 - General: Do not use the site for any purpose other than carrying out the Works.
 - Limitations: Please see Appendix C - IWM Instructions and Guidelines for Contractors.

- 230 SURROUNDING LAND/ BUILDING USES
 - General: Adjacent or nearby uses or activities are as follows:
 - The site is within the Imperial War Museum Duxford and has buildings associated with its use as an RAF airfield. Please see drawing 9165-GA001 for details.
 - Nearby buildings are in use, as archival stores and office accommodation. Museum staff use the buildings as part of their normal day to day operations. Typically there is light vehicular traffic, occasional deliveries, and staff (and some visitors) on and around the site.

- 240 HEALTH AND SAFETY HAZARDS
 - General: The nature and condition of the site/ building cannot be fully and certainly ascertained before it is opened up. However the following hazards are or may be present:
 - Please see Appendix B - Pre Construction Information, Appendix D - Contamination Assessment Report and Appendix E - Site Investigation Report for details..
 - Information: The accuracy and sufficiency of this information is not guaranteed by the Employer or the Employer's representative. Ascertain if any additional information is required to ensure the safety of all persons and the Works.
 - Site staff: Draw to the attention of all personnel working on the site the nature of any possible contamination and the need to take appropriate precautionary measures.

- 250 SITE VISIT
 - Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
 - Arrangements for visit: Site open days for potential Contractors will be held on the 2nd November 2017 on site at the IWM Duxford. Please see Invitation to Tender (ITT) for further details and for booking places at the open days.

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A13 DESCRIPTION OF THE WORK

115 PREPARATORY WORK BY OTHERS

- Works: Carried out under a separate contract and completed before the start of work on site for this Contract. Description:
- An Enabling Works package will be undertaken by the Enabling Works Contractor prior to the start of the Main Contract Works. These works involve:
 - Excavation and disposal works to formation level for ground floor slab, and laying of 100mm of Type 1 hardcore blinding to protect the excavations.
 - Removal of rubbish from the materials store adjacent the site.
 - Erection of heras fencing to site perimeter. This will either be removed by the Enabling Works Contractor just prior to the start of the Main Works, or the Main Works Contractor may negotiate with the Enabling Works Contractor to retain the heras fencing already erected. All such negotiations are the responsibility of the two Contractors to agree.

The intention of including an Enabling Works Package is to better understand the ground conditions and de-risk the project and the potential consequences of encountering contaminants within the ground. The Main Works contractor will then be required to undertake the trench foundation works and the works above the 100mm hardcore blinding to completion of the works (See Schedule of Works for clarification on scope)
- The installation of data ducts will be undertaken prior to the Main Works (Client direct). The data ducts will be taken up to the final draw chamber immediately outside Main Works building. The final duct and data fibre connections from the draw pit into the building will form part of the Main Works contract. Please refer to M&E information (including drawing 4405 X 00 J 5010 T3 - Data Site Services Layout, which details the Client direct works for information purposes) for further clarity on client direct works and split with Main Works Contract.

120 THE WORKS

- Description: Main Works Contract at IWM Duxford comprising the construction of the new build storage/archive facility along with associated external works and drainage. The new Building 104A facility is to achieve Passivhaus Certification and will house a number of important documents, collections and artefacts at the Museum and former RAF airfield.
 - Please see Tender Documents and Schedule of Works for full scope of works.

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- 135 WORK BY OTHERS CONCURRENT WITH THE CONTRACT
- Description: IWM Duxford engage the services of Kier workplace to undertake general building maintenance of the buildings, site and services around the building site. In addition IWM have engaged Servest to undertake cleaning post, portering, reception and waste management at the site. These two Contractors will be active in the area during the construction works and should be given unimpeded access to areas they require.
 - The racking rails must be installed prior to the laying of the screed (please see drawing 9165 DD100 showing 'Screed with integrated roller racking rail'). The contractor must therefor allow safe access for the racking contractor (Rackline) to lay their rails prior to the installation of the screed by the Main Works contractor. It is the Main Works contractors responsibility to both coordinate the installation of the racking rails and allow adequate time in their programme for these to be complete.
- 140 COMPLETION WORK BY OTHERS
- Description: The installation of racking and storage equipment (by others) will be undertaken following the Works (please see clause A13/135 above for details of screed intergrated roller racking). Following completion of the Main Works the racking contractor will complete the installation. The Main Works Contractor shall allow all reasonable requests for access to safe areas for installation of these items prior to completion of the works and shall cooperate fully with the Client and Rackline to facilitate this and any other requests where so required.

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A20 JCT INTERMEDIATE BUILDING CONTRACT WITH CONTRACTOR'S DESIGN (ICD)

INTERMEDIATE BUILDING CONTRACT WITH CONTRACTOR'S DESIGN (ICD)

- The Contract: JCT Intermediate Building Contract with Contractor's Design 2016 Edition.
- Requirement: Allow for the obligations, liabilities and services described.

THE RECITALS

First - THE WORKS

- Comprise: Imperial War Museum (Duxford) - Building 104A Main Works. Comprising the construction of the new build storage/archive facility along with associated external works and drainage. The new Building 104A facility is to achieve Passivhaus Certification and will house a number of important documents, collections and artefacts at the Museum and former RAF airfield.
- Location: IWM Duxford, Duxford, Cambridgeshire, CB22. Please see Site Location Plan drawing 9165-GA001.

Second - CONTRACTOR'S DESIGNED PORTION

- The Works include the design and construction of:
 - (1) Cor-ten cladding system (including all openings).
 - (2) Vehicle access and pedestrian (parking bay) gate.
 - (3) Timber frame cassette system.
 - (4) Roof drainage system.
 - (5) Lightning protection systems.
 - (6) Gas suppression system, including associated fire alarm, detection and gas control, and ventilation systems.
 - (7) Access control system.
 - (8) Smoke damper control system.
 - (9) Building control systems.
 - (10) Fire alarm system.
 - (11) CCTV system.
 - (12) Mechanical system controls.
 - (13) All temporary works and supports.

Third - CONTRACT DRAWINGS

- The Contract Drawings: As listed in clause A11/120.

Fourth - OTHER DOCUMENTS SUPPLIED BY THE EMPLOYER

- Comprise: The Work Schedules and Specifications.
- Named person: The whole of the text referring to a named person as a subcontractor will not be deleted.

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Fifth A - PRICING BY THE CONTRACTOR

- Option A will apply: Option B will be deleted.
- Priced document: Within Option A the following words will be deleted:
 - Bills of Quantities.
- Priced Activity Schedule: The words 'and has provided the Employer with a priced schedule of activities annexed to this Contract (the Activity Schedule)' will be deleted.

Ninth - INFORMATION RELEASE SCHEDULE

- The Ninth Recital will be deleted.

Eleventh - DIVISION OF THE WORKS INTO SECTIONS

- The Eleventh Recital will be deleted.

ARTICLES

3 - ARCHITECT/ CONTRACT ADMINISTRATOR

- Architect/ Contract Administrator: See clause A10/140.

4 - QUANTITY SURVEYOR

- Quantity Surveyor: See clause A10/160.

5 - PRINCIPAL DESIGNER

- Principal Designer: See clause A10/150A.

6 - PRINCIPAL CONTRACTOR

- Principal Contractor: See clause A10/130.

9 - LEGAL PROCEEDINGS

- Amendments: N/A.

CONTRACT PARTICULARS

Fourth Recital - EMPLOYER'S REQUIREMENTS

- Comprise: As detailed in the Schedule of Works, Tender Drawings, Specifications and Appendices, including all Contractors Design Portions as set out in the Second Recital.

Sixth Recital - CONTRACTOR'S PROPOSALS/ CDP ANALYSIS

- Comprise: To be completed by the Contractor.
- Specific Requirements: All design drawings are to be submitted for early approval and fabrication drawings for approval 7 working days before commencement of manufacture.

Eighth Recital and Clause 4.6 - CONSTRUCTION INDUSTRY SCHEME

- Employer at Base Date is a 'contractor' for the purposes of the CIS.

Tenth Recital - CDM REGULATIONS

- The project is notifiable.

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- Eleventh Recital - DESCRIPTION OF SECTIONS
 - Description of Sections:
 - N/A.

- Twelfth Recital - FRAMEWORK AGREEMENT
 - Framework agreement: Does not apply.
 - Details:
 - Date: N/A.
 - Title: N/A.
 - Parties: N/A.

- Thirteenth Recital and Schedule 5 - SUPPLEMENTAL PROVISIONS
 - Collaborative working: Supplemental Provision 1 applies.
 - Health and safety: Supplemental Provision 2 applies.
 - Cost savings and value improvements: Supplemental Provision 3 applies.
 - Sustainable development and environmental considerations: Supplemental Provision 4 applies.
 - Performance indicators and monitoring: Supplemental Provision 5 does not apply.
 - Notification and negotiation of disputes: Supplemental Provision 6 applies.
 - Where Supplemental Provision 6 applies, the respective nominees of the parties are:
 - Employer's nominee: TBC.
 - Contractor's nominee: TO BE COMPLETED BY CONTRACTOR.
Or such replacement as each party may notify to the other from time to time.

- Article 8 - ARBITRATION
 - Article 8 and clauses 9.3 to 9.8 (arbitration) apply.

- Clause 1.1 - BASE DATE
 - Base Date: 10 days prior to return of tenders.

- Clause 1.1 - BIM PROTOCOL
 - BIM Protocol (where applicable): Appendix I - BIM Execution Plan and BIM Information Requirements (EIR).

- Clause 1.1 - DATE FOR COMPLETION OF THE WORKS
 - Date for completion of the Works (where completion by sections does not apply): 31st August 2018.

- Clause 1.7 - ADDRESSES FOR SERVICE OF NOTICES
 - Employer:
 - Address: Simon Bourne, Head of Procurement and Compliance, IWM London, Lambeth Road, London, SE1 6HZ.
 - Fax number: N/A.
 - Contractor:
 - Address: TO BE COMPLETED BY CONTRACTOR.
 - Fax Number: TO BE COMPLETED BY CONTRACTOR

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- Clause 2.4 - DATE OF POSSESSION OF THE SITE

 - Date of Possession of the site: 5th February 2018.

- Clause 2.5 - DEFERMENT OF POSSESSION OF THE SITE

 - Clause 2.5 applies.
 - Where clause 2.5 applies, maximum period of deferment (if less than six weeks) is 6 weeks.

- Clause 2.23.2 - LIQUIDATED DAMAGES

 - Damages: At the rate of £1,032.00 per calendar week or part thereof.

- Clause 2.30 - RECTIFICATION PERIOD

 - Period: Twelve months from the date of practical completion of the Works.

- Clause 2.34.3 - CONTRACTOR'S DESIGNED PORTION

 - Limit of Contractor's liability for loss of use: unlimited.

- Clause 4.3 and 4.9 - FLUCTUATIONS PROVISION

 - Fluctuations Provision: no Fluctuations Provision applies.
 - Where Schedule 4 applies, percentage addition (paragraph 12): N/A.

- Clause 4.7 - ADVANCE PAYMENT AND ADVANCE PAYMENT BOND

 - Advance payment: Clause 4.7 does not apply.

- Clause 4.8.1 - INTERIM PAYMENTS - INTERIM VALUATION DATES

 - The first Interim Valuation Date is: within one month of date of possession, and thereafter the same date in each month or the nearest Business Day in that month.

- Clause 4.9.1 - INTERIM PAYMENTS - PERCENTAGE OF VALUE

 - Not achieved practical completion: Where the Works, or those works in a section, have not achieved practical completion, the percentage of total value in respect of the works that have not achieved practical completion is 95%.
 - Completed works: Where the Works, or those works in a section, have achieved practical completion, the percentage in respect of the completed works is 97.5%.

- Clause 4.10.4 - LISTED ITEMS - UNIQUELY IDENTIFIED

 - The Contract Particulars item for clause 4.10.4 will be deleted.

- 4.10.5 - LISTED ITEMS - NOT UNIQUELY IDENTIFIED

 - Listed items: The Contract Particulars entry for Clause 4.10.5 will be deleted.

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Clause 6.4.1 - CONTRACTOR'S PUBLIC LIABILITY INSURANCE: INJURY TO PERSONS OR PROPERTY

- Insurance cover for any one occurrence or series of occurrences arising out of one event: 10,000,000.00.

Clause 6.5.1 - INSURANCE - LIABILITY OF EMPLOYER

- Insurance may be required.
- Minimum amount of indemnity for any one occurrence or series of occurrences arising out of one event: 10,000,000.00.

Clause 6.7 and Schedule 1 - WORKS INSURANCE - INSURANCE OPTIONS

- Schedule 1: Insurance option A applies.
- Percentage to cover professional fees: 15 per cent.
- If option A applies, annual renewal date (as supplied by the Contractor): TBC.
- Where Insurance Option C applies, Paragraph C1: N/A.

Clause 6.10 and Schedule 1 - TERRORISM COVER

- Details of the required cover:
- N/A.

Clause 6.15 - JOINT FIRE CODE

- Joint Fire Code: Applies.
- Application: State whether the insurer under Insurance Option A, B or C (paragraph C.2) has specified that the Works are a 'Large Project': No.

Clause 6.18 - JOINT FIRE CODE - AMENDMENTS/ REVISIONS

- Joint Fire Code - Amendments/ revisions: The cost, if any, of compliance with amendments or revisions to the Joint Fire Code shall be borne by the Contractor.

Clause 6.19 - CONTRACTOR'S DESIGN PORTION - PROFESSIONAL INDEMNITY INSURANCE

- Level of cover: Amount of indemnity required:
- relates to claims or series of claims arising out of one event;
- and is £ 5,000,000.00.
- Cover for pollution and contamination claims: Is not required.
- Expiry of required period of CDP Professional Indemnity Insurance: 12 years.

Clause 7.2.1 - PERFORMANCE BOND OR GUARANTEE

- Bond or guarantee from bank or other approved surety: is required.
 - Required form: Please see Appendix N - Performance Bond Proforma.
 - Initial value (percentage of the Contract Sum): 10%.
 - Period of validity: The date of practical completion of the Works.
 - Reduction in value: N/A.

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Clause 7.2.2 - GUARANTEE FROM THE CONTRACTOR'S PARENT COMPANY

- Guarantee: is required.
 - Parent company's name and registration number: _____.
 - The required form of guarantee is set out in: TBC.

CLAUSE 7.3 - COLLATERAL WARRANTIES

- Details: As set out below: Collateral warranties will be required from the following subcontractors or categories of subcontractor.
 - Name or category: Required from all subcontractors as detailed in 'Second - CONTRACTOR'S DESIGNED PORTION'
 - (1) Cor-ten cladding system (including all openings).
 - (2) Vehicle access and pedestrian (parking bay) gate.
 - (3) Timber frame cassette system.
 - (4) Roof drainage system.
 - (5) Lightning protection systems.
 - (6) Gas suppression system, including associated fire alarm, detection and gas control, and ventilation systems.
 - (7) Access control system.
 - (8) Smoke damper control system.
 - (9) Building control systems.
 - (10) Fire alarm system.
 - (11) CCTV system.
 - (12) Mechanical system controls.
 - (13) All temporary works and supports.
 - Types of warranty: SCWa/E.
 - Professional Indemnity Insurance: Level: relates to claims or series of claims arising out of one even, Amount: £1,000,000.00
 - Period: 12 years.
 - Please see clause A11/230 for further details.

Clause 8.9.2 - PERIOD OF SUSPENSION (TERMINATION BY CONTRACTOR)

- Period of suspension: Two months.

Clauses 8.11.1.1 to 8.11.1.5 - PERIOD OF SUSPENSION (TERMINATION BY EITHER PARTY)

- Period of suspension: Two months.

Clause 9.2.1 - ADJUDICATION

- The Adjudicator is: To be appointed by the nominating body.
- Nominating body - where no Adjudicator is named or where the named Adjudicator is unwilling or unable to act (whenever that is established): The Royal Institution of Chartered Surveyors.

Clause 9.4.1 - ARBITRATION

- Appointor of Arbitrator (and of any replacement): President or a Vice President of the Royal Institution of Chartered Surveyors.

THE CONDITIONS

SECTION 1: DEFINITIONS AND INTERPRETATION

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- 1.5 - RECKONING PERIODS OF DAYS
 - Amendments: N/A.

- 1.12 - APPLICABLE LAW
 - Amendments: N/A.

- SECTION 2: CARRYING OUT THE WORKS

- SECTION 3: CONTROL OF THE WORKS

- 3.7 - NAMED SUBCONTRACTORS (1)
 - General: The work listed below and described in the Contract Documents is to be executed by the following persons who are hereby named as subcontractors as provided in Intermediate Building Contract clause 3.7. (For each such person a completed Form of Tender and Agreement ICSUB/NAM, together with the Numbered Documents referred to therein, is included with the Main Contract tender documents).
 - Work to be executed:
 - (1) Security systems (including CCTV).
 - (2) Access controls.
 - (3) Intruder detection installations.
 - Named person: ZE Global (contact Mr Jim Gemmell, jgemmell@zeglobal.co.uk, www.zeglobal.co.uk) - 20-22 Wenlock Rd, London N1 7GU (T: 07590 890595).
 - Agreement: The JCT Form of Agreement ICSUB/NAM/E will be used. Please note - these are to be purchased and completed by the Contractor. The Contractor will submit draft copies for approval prior to completion.
 - Subcontractor's drawings, etc. to be prepared during the course of the Contract:
 - Installation drawings, schematic and as installed drawings. Information to include technical submissions during the design process, design drawings, operating and maintenance information and final certification documentation. Please see M&E documentation for further requirements.
 - Allow for attendance: As described in ICSUB/NAM.

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- 3.7 - NAMED SUBCONTRACTORS (2)
- General: The work listed below and described in the Contract Documents is to be executed by the following persons who are hereby named as subcontractors as provided in Intermediate Building Contract clause 3.7. (For each such person a completed Form of Tender and Agreement ICSUB/NAM, together with the Numbered Documents referred to therein, is included with the Main Contract tender documents).
 - Work to be executed:
 - (1) Voice and Data Communications.
 - Named person: G-Lan Ltd (contact Mr Murray Torkildsen, askglan@btinternet.com) - Spellbrook Farm, London Road. Bishops Stortford. Herts CM23 4AX (T: 07968 473730).
 - Agreement: The JCT Form of Agreement ICSUB/NAM/E will be used. Please note - these are to be purchased and completed by the Contractor. The Contractor will submit draft copies for approval prior to completion.
 - Subcontractor's drawings, etc. to be prepared during the course of the Contract:
 - Installation drawings, schematic and as installed drawings. Information to include technical submissions during the design process, design drawings, operating and maintenance information and final certification documentation. Please see M&E documentation for further requirements.
 - Allow for attendance: As described in ICSUB/NAM.

SECTION 4: PAYMENT

- Amendment: clause 4.12.1 'Subject to clause 4.12.4, the final date for payment of each interim payment and the final payment shall be 14 days from its due date' - final date for interim payment and final payment shall be amended to 28 days.

SECTION 5: VARIATIONS

SECTION 6: INJURY, DAMAGE AND INSURANCE

SECTION 7: ASSIGNMENT AND COLLATERAL WARRANTIES

SECTION 8: TERMINATION

SECTION 9: SETTLEMENT OF DISPUTES

EXECUTION

- The Contract: Will be executed as a deed.

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A30 TENDERING/ SUBLETTING/ SUPPLY

MAIN CONTRACT TENDERING

- 110 SCOPE
 - General: These conditions are supplementary to those stated in the Invitation to Tender and on the form of tender.
- 115 REGISTER OF INTEREST
 - Please register your interest in this tender by email to Neil Wood at neil.wood@focus-consultants.com. This will enable us to keep you updated with any addendum information and responses to queries.
- 120 CERTIFICATE OF BONA FIDE TENDER
 - The Tenderer is required to provide a signed copy of the Certificate of Bona Fide Tender with their submission.
- 145 TENDERING PROCEDURE
 - General: In accordance with NBS Guide to Tendering for Construction Projects.
 - Errors: Alternative 2 is to apply.
- 160 EXCLUSIONS
 - Inability to tender: Immediately inform if any parts of the work as defined in the tender documents cannot be tendered.
 - Relevant parts of the work: Define those parts, stating reasons for the inability to tender.
- 170 ACCEPTANCE OF TENDER
 - Acceptance: No guarantee is offered that any tender will be recommended for acceptance or be accepted, or that reasons for non acceptance will be given.
 - Costs: No liability is accepted for any cost incurred in the preparation of any tender.
- 190 PERIOD OF VALIDITY
 - Period: After submission or lodgement, keep tender open for consideration (unless previously withdrawn) for not less than 90 days.
 - Date for possession/ commencement: See section A20.

PRICING/ SUBMISSION OF DOCUMENTS

- 210 PRELIMINARIES IN THE SPECIFICATION
 - Measurement rules: Preliminaries/ General Conditions must not be relied on as having been prepared in accordance with SMM7/NRM 2.
- 220 PRICING OF PRELIMINARIES
 - Abbreviations: The following have been used:
 - F = Fixed charge item.
 - TR = Time related charge item.

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- 250 PRICED DOCUMENTS
 - Alterations: Do not alter or qualify the priced documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.
 - Measurements: Where not stated, ascertain from the drawings.
 - Deemed included: Costs relating to items, which are not priced, will be deemed to have been included elsewhere in the tender.
 - Submit: With tender.

- 300 QUANTITIES IN THE PRICED DOCUMENT
 - Quantities: Where included in the priced document, these have been prepared in accordance with SMM7/ NRM2 only where and to the extent stated.
 - Other items, descriptions and measurements not prepared in accordance with SMM7/ NRM2: Must be priced taking account of the information given elsewhere in the tender documents, including for all associated and ancillary work shown or clearly apparent as being necessary for the complete and proper execution of the work.

- 310 TENDER
 - General: Tenders must include for all work shown or described in the tender documents as a whole or clearly apparent as being necessary for the complete and proper execution of the Works.

- 480 PROGRAMME
 - Programme of work: Prepare a summary showing the sequence and timing of the principal parts of the Works and periods for planning and design. Itemize any work which is excluded.
 - Submit: With tender.

- 485 PRELIMINARIES
 - Preliminaries pricing: The tenderer will produce a full breakdown of their Preliminaries costs which will be split into fixed and time related.
 - Submit: With tender.

- 490 INFORMATION RELEASE SCHEDULE
 - Compatibility with programme: At the same time as submitting the proposed programme or summary, confirm that it is compatible with the Information Release Schedule.
 - Alternative proposals: If any part of the programme is not compatible with the Schedule submit alternative proposals and reasons for varying the times for release of information.

- 500 TENDER STAGE METHOD STATEMENTS
 - Method statements: Prepare, describing how and when the following is to be carried out:
 - As requested in the Tender Documents.
 - Statements: Submit within one week of request.

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- 505 PRICING/SUBMISSION OF DOCUMENTS, INFORMATION TO BE SUBMITTED BY THE CONTRACTOR WITH THE TENDER
1. Details of pricing of the Preliminaries and items of attendance on sub-contractors and specialist including detailed breakdown of all resources and costs which have been allowed for.
 2. Priced copy of tender document. All pricing documents to be completed fully and without exception to be a compliant tender.
 3. Proposed programme for the Works in 'bar chart' form clearly indicating the start date and duration for each part of Section thereof (if any), including, where applicable, design activities and off-site fabrication and other 'lead in' activities. Ensure that the programme provided shows that the contractor fully understand the requirements for environmental commissioning and the requirements for air tightness and intermediate testing. The programme should also show when the main submissions are to be made, eg O+M manuals, training and demonstrations etc
 4. Plan of proposed locations for temporary accommodation and stores, plant, hoists and storage of materials etc.
 5. Organisation chart showing on and off site staff working on the project. CVs of technical support and M&E management staff. Programme identifying time and attendance during design and site activities.
 6. Details of the proposed management of construction traffic to minimise disruption and risk of accident.

510 ALTERNATIVE METHOD TENDERS

- General: In addition to and at the same time as tendering for the Works as defined in the tender documents, alternative methods of construction/ installation may be submitted for consideration. Alternatives, which would involve significant changes to other work, may not be considered.
- Alternative tenders: Such alternatives will be deemed to be alternative tenders and each must include a complete and precise statement of the effects on cost and programme.
- Safety method statement: Carry out a health and safety risk assessment for each alternative and where appropriate provide a safety method statement suitable for incorporation in the Health and Safety Plan.
- Full technical data: Submit for each alternative together with details of any consequential amendments to the design and/ or construction of other parts of the Works.
- Submit: With tender.

515A ALTERNATIVE TIME TENDERS

- General: In addition to and at the same time as tendering based upon the date or period specified in section A20, an alternative tender based upon a different date for completion or period may be submitted.
- Date for completion: If any such tender is accepted the date for completion inserted in the Contract will be the date stated in the alternative tender or determined from the period stated in the alternative tender.
- See Form of Tender for alternative time tender option.

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- 520 DESIGN DOCUMENTS
 - Scope: Include the following in the Contractor's Proposals:
 - Design drawings: For 'the Contractors Designed Portions' as listed in Section A20 - Second Recital.
 - Technical information: For 'the Contractors Designed Portions' as listed in Section - A20 Second Recital.
 - Submit: With tender.

- 530 SUBSTITUTE PRODUCTS
 - Details: If products of different manufacture to those specified are proposed, submit details with the tender giving reasons for each proposed substitution. Substitutions, which have not been notified at tender stage, may not be considered.
 - Compliance: Substitutions accepted will be subject to the verification requirements of clause A31/200.

- 540 QUALITY CONTROL RESOURCES
 - Statement: Describe the organisation and resources to control the quality of the Works, including the work of subcontractors.
 - QA staff: Identify in the statement the number and type of staff responsible for quality control, with details of their qualifications and duties.
 - Submit: With the Tender.

- 545 BIM EXECUTION PLAN (BEP)
 - The Precontract Plan
 - Contents: Appendix I - BIM Execution Plan and BIM Information Requirements (EIR).
 - Submit: with the Tender.
 - The Post Contract Plan: Update and resubmit as described in the Employers Information Requirements (EIR).

- 550 HEALTH AND SAFETY INFORMATION
 - Content: Describe the organisation and resources to safeguard the health and safety of operatives, including those of subcontractors, and of any person whom the Works may affect.
 - Include:
 - A copy of the contractor's health and safety policy document, including risk assessment procedures.
 - Accident and sickness records for the past five years.
 - Records of previous Health and Safety Executive enforcement action.
 - Records of training and training policy.
 - The number and type of staff responsible for health and safety on this project with details of their qualifications and duties.
 - Submit: Within one week of request.

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- 570 OUTLINE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN
 - Content: Submit the following information within one week of request:
 - Method statements on how risks from hazards identified in the pre-construction information and other hazards identified by the contractor will be addressed.
 - Details of the management structure and responsibilities.
 - Arrangements for issuing health and safety directions.
 - Procedures for informing other contractors and employees of health and safety hazards.
 - Selection procedures for ensuring competency of other contractors, the self-employed and designers.
 - Procedures for communications between the project team, other contractors and site operatives.
 - Arrangements for cooperation and coordination between contractors.
 - Procedures for carrying out risk assessment and for managing and controlling the risk.
 - Emergency procedures including those for fire prevention and escape.
 - Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded.
 - Arrangements for welfare facilities.
 - Procedures for ensuring that all persons on site have received relevant health and safety information and training.
 - Arrangements for consulting with and taking the views of people on site.
 - Arrangements for preparing site rules and drawing them to the attention of those affected and ensuring their compliance.
 - Monitoring procedures to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements.
 - Review procedures to obtain feedback.

- 590 SITE WASTE MANAGEMENT PLAN
 - Person responsible for developing the Plan: The Contractor.
 - Content: Include details of:
 - Principal Contractor for the purposes of the plan
 - Location of the site.
 - Description of the project.
 - Estimated project cost.
 - Types and quantities of waste that will be generated.
 - Resource management options for these wastes including proposals for minimization/ reuse/ recycling.
 - The use of appropriate and licensed waste management contractors.
 - Record keeping procedures.
 - Waste auditing protocols.
 - Additional requirements: N/A.
 - Submit with tender.

- 596A ENVIRONMENTAL TARGETS
 - Passivhaus certification required. Please refer to Specifications for further details.

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- 599 FREEDOM OF INFORMATION
- Records: Retain, make available for inspection and supply on request information reasonably required to allow response to requests made under the provisions of the Freedom of Information Act.
 - Determination: Submit requests received. Do not supply information to anyone other than the project participants without express written permission.
 - Confidentiality: Maintain at all times.

SUBLETTING/ SUPPLY

- 630A DOMESTIC SUBCONTRACTS
- General: Comply with the Construction Industry Board 'Code of Practice for the selection of subcontractors'.
 - List: Provide details of all subcontractors, sub-subcontractors and specialist contractors and the work for which they will be responsible.
Submit: Within one week of request.

- 635 SUBCONTRACTING
- The Contractor is to provide a comprehensive list of all subcontractors they intend on using during the works. Details of which must be supplied with their tender submission.
 - In addition to the above the Contractor is to provide a list of all works to be undertaken 'in-house' by direct main contractor employees. Details of which must be supplied with their tender submission.

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A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

- 110 DEFINITIONS
 - Meaning: Terms, derived terms and synonyms used in the preliminaries/ general conditions and specification are as stated therein or in the appropriate British Standard or British Standard glossary.

- 120 COMMUNICATION
 - Definition: Includes advise, inform, submit, give notice, instruct, agree, confirm, seek or obtain information, consent or instructions, or make arrangements.
 - Format: In writing to the person named in clause A10/140 unless specified otherwise.
 - Response: Do not proceed until response has been received.

- 130 PRODUCTS
 - Definition: Materials, both manufactured and naturally occurring, and goods, including components, equipment and accessories, intended for the permanent incorporation in the Works.
 - Includes: Goods, plant, materials, site materials and things for incorporation into the Works.

- 135 SITE EQUIPMENT
 - Definition: All appliances or things of whatsoever nature required in or about the construction for completion of the Works but not materials or other things intended to form or forming part of the Permanent Works.
 - Includes: Construction appliances, vehicles, consumables, tools, temporary works, scaffolding, cabins and other site facilities.

- 140 DRAWINGS
 - Definitions: To BSRIA BG 6 A design framework for building services. Design activities and drawing definitions.
 - CAD data: In accordance with BS 1192.

- 145 CONTRACTOR'S CHOICE
 - Meaning: Selection delegated to the Contractor, but liability to remain with the specifier.

- 150 CONTRACTOR'S DESIGN
 - Meaning: Design to be carried out or completed by the Contractor and supported by appropriate contractual arrangements, to correspond with specified requirements.

- 155 SUBMIT PROPOSALS
 - Meaning: Submit information in response to specified requirements.

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160 TERMS USED IN SPECIFICATION

- Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, supports, linings and bedding materials. Dispose of unwanted materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.
- Fix: Receive, unload, handle, store, protect, place and fasten in position and disposal of waste and surplus packaging including all labour, materials and site equipment for that purpose.
- Supply and fix: As above, but including supply of products to be fixed. All products to be supplied and fixed unless stated otherwise.
- 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/ Purchaser 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.
- 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 positions.
- 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.
- System: Equipment, accessories, controls, supports and ancillary items, including installation, necessary for that section of the work to function.

170 MANUFACTURER AND PRODUCT REFERENCE

- Definition: When used in this combination:
 - Manufacturer: the person or legal entity under whose name or trademark the particular product, component or system is marketed
 - Product reference: the proprietary brand name and/ or identifier by which the particular product, component or system is described.
- Currency: References are to the particular product as specified in the manufacturer's technical literature current on the date of the invitation to tender.

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- 200 SUBSTITUTION OF PRODUCTS
 - Products: If an alternative product to that specified is proposed, obtain approval before ordering the product.
 - Reasons: Submit reasons for the proposed substitution.
 - Documentation: Submit relevant information, including:
 - manufacturer and product reference;
 - cost;
 - availability;
 - relevant standards;
 - performance;
 - function;
 - compatibility of accessories;
 - proposed revisions to drawings and specification;
 - compatibility with adjacent work;
 - appearance;
 - copy of warranty/ guarantee.
 - Alterations to adjacent work: If needed, advise scope, nature and cost.
 - Manufacturers' guarantees: If substitution is accepted, submit before ordering products.

- 210 CROSS REFERENCES
 - Accuracy: Check remainder of the annotation or item description against the terminology used in the section or clause referred to.
 - Related terminology: Where a numerical cross-reference is not given the relevant sections and clauses of the specification will apply.
 - Relevant clauses: Clauses in the referred to specification section dealing with general matters, ancillary products and execution also apply.
 - Discrepancy or ambiguity: Before proceeding, obtain clarification or instructions.

- 220 REFERENCED DOCUMENTS
 - Conflicts: Specification prevails over referenced documents.

- 230 EQUIVALENT PRODUCTS
 - Inadvertent omission: Wherever products are specified by proprietary name the phrase 'or equivalent' is to be deemed included.

- 240 SUBSTITUTION OF STANDARDS
 - Specification to British Standard or European Standard: Substitution may be proposed complying with a grade or category within a national standard of another Member State of the European Community or an international standard recognised in the UK.
 - Before ordering: Submit notification of all such substitutions.
 - Documentary evidence: Submit for verification when requested as detailed in clause A31/200. Any submitted foreign language documents must be accompanied by certified translations into English.

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- 250 CURRENCY OF DOCUMENTS AND INFORMATION
 - Currency: References to published documents are to the editions, including amendments and revisions, current on the date of the Invitation to Tender.

- 260 SIZES
 - General dimensions: Products are specified by their co-ordinating sizes.
 - Timber: Cross section dimensions shown on drawings are:
 - Target sizes as defined in BS EN 336 for structural softwood and hardwood sections.
 - Finished sizes for non-structural softwood or hardwood sawn and further processed sections.

- DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER**

- 410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS
 - Additional copies: Issued on request and charged to the Contractor.

- 440 DIMENSIONS
 - Scaled dimensions: Do not rely on.

- 450 MEASURED QUANTITIES
 - Ordering products and constructing the Works: The accuracy and sufficiency of the measured quantities is not guaranteed.
 - Precedence: The specification and drawings shall override the measured quantities.

- 460 THE SPECIFICATION
 - Coordination: All sections must be read in conjunction with Main Contract Preliminaries/ General conditions.

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**DOCUMENTS PROVIDED BY CONTRACTOR/
SUBCONTRACTORS/ SUPPLIERS**

- 510A DESIGN AND PRODUCTION INFORMATION
 - Master programme: Make reasonable allowance for completing design/ production information, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
 - Design/ production information: Submit two copies, one could be returned with comments and this will be deemed to be a direction, notice or instruction under the Contract. Ensure that any necessary amendments are made without delay and resubmit unless it is confirmed that it is not required.
 - Contractor's changes to Employer's Requirements: Support request for substitution or variation with all relevant information.
 - Employer's amendments to Employer's Requirements: If considered to involve a variation, which has not already been acknowledged as a variation, notify without delay (maximum period 7 days), and do not proceed until instructed. Claims for extra cost, if made after it has been carried out, may not be allowed.
 - Final version of design/ production information: Submit three copies. Information to include installation drawings and BIM model, and all information as requested in the Tender Documents (see Appendix A).

- 550 NAMED SUBCONTRACTORS: DESIGN AND PRODUCTION INFORMATION
 - General: Certain Subcontractors are/ will be required to provide design/ production information during the contract as described in the Conditions of Contract, clause 3.7.
 - Master programme: Make reasonable allowance, based on information in section A30, for completing design/ production information, checking, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
 - Information from Subcontractors:
 - Obtain in time to meet the programme and in accordance with NAM/T where applicable.
 - Check dimensions are correct, account is taken of all related work, and construction is practicable. Note any comments on one copy of the design/ production information, then submit with the required number of additional unmarked copies. Such checking will not relieve the CA or the Subcontractors of their respective responsibilities for design, co-ordination and documentation.
 - Inspection and comments: One copy will be marked and returned to Contractor. This will not relieve the Subcontractors of their responsibility for design and documentation. Ensure that any necessary amendments are made without delay and resubmit unless it is confirmed that it is not required.
 - Final version of information: Distribute copies to all affected Subcontractors and others and keep one copy on site.
 - Submit two copies.

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- 600 CONTRACTOR'S DESIGN INFORMATION
 - General: Complete the design and detailing of parts of the Works as specified.
 - Provide:
 - Production information based on the drawings, specification and other information.
 - Liaison to ensure coordination of the work with related building elements and services.
 - Master programme: Make reasonable allowance for completing design/ production information, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and reinspection.
 - Information required: Full set of design information including drawings and specifications for all Contractors Design Portions..
 - Format: electronically as PDF.
 - Number of copies: TBC.
 - Submit: Within one week of request.

- 610A PRODUCTION INFORMATION
 - Contractor/ Domestic subcontractor provide: measured drawings and detailed specification for approval..
 - Submit:
 - Proposals for approval by CA/Architect, allow 7 working days before commencement of manufacture.
 - For comment and make any necessary amendments.
 - Sufficient copies of final version for distribution to all affected parties.

- 620A AS BUILT DRAWINGS AND INFORMATION
 - Contractor designed work: Provide drawings/ information:
 - Draft drawings at least four weeks before date for completion.
 - Final drawings at least two weeks before date for completion.
 - Submit: At least two weeks before date for completion.

- 630 TECHNICAL LITERATURE
 - Information: Keep on site for reference by all supervisory personnel:
 - Manufacturers' current literature relating to all products to be used in the Works.
 - Relevant British, EN or ISO Standards.

- 640 MAINTENANCE INSTRUCTIONS AND GUARANTEES
 - Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before completion of the Works.
 - Information location: In Building Manual.
 - Emergency call out services: Provide telephone numbers for use after completion. Extent of cover: twenty four hours seven days a week.

- 650 ENERGY RATING CALCULATION
 - Calculation documentation:
 - Number of copies: 2.
 - Deliver to: Energy Performance Certificate Assessor and also lodge in the Building Manual.

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660A ENVIRONMENTAL ASSESSMENT INFORMATION

- Scheme type: Passivhaus Certification.
- Assessment information:
 - Provide the following: As detailed in the Passivhaus Evidence checklist provided in the tender documents.
 - Format: As detailed in the Passivhaus Evidence checklist provided in the tender documents.
 - Submit: Within one month of project completion.

DOCUMENT/ DATA INTERCHANGE

855 ELECTRONIC DATA INTERCHANGE (BIM)

- Requirements: to comply with BIM Level 2 including a requirement for CDE (Common Data Environment) that will be managed by BIM Manager.

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A32 MANAGEMENT OF THE WORKS

GENERALLY

110 SUPERVISION

- General: Accept responsibility for coordination, supervision and administration of the Works, including subcontracts.
- Coordination: Arrange and monitor a programme with each subcontractor, supplier, local authority and statutory undertaker, and obtain and supply information as necessary for coordination of the work.

115 CONSIDERATE CONSTRUCTORS SCHEME

- Registration: Before starting work, register the site and pay the appropriate fee:
- Contact:
 - Address: Considerate Constructors Scheme Office, PO Box 75, Great Amwell, Ware, Hertfordshire, SG12 0YX.
 - Tel. 01920 485959.
 - Fax. 01920 485958.
 - Free phone 0800 7831423
 - Web. www.ccscheme.org.uk
 - E mail. enquiries@ccscheme.org.uk
- Standard: Comply with the Scheme's Code of Considerate Practice.
 - Minimum compliance level: Compliance.

118A VEHICLE SAFETY REQUIREMENTS

- Vehicle equipment: Ensure that all vehicles have the following:
 - Audible alert to other road users to the planned movement of the vehicle when the vehicle's indicators are in operation.
 - Prominent signage at the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside.
 - Properly adjusted class VI mirror/s or Fresnel lens to eliminate the near side blind spot.
 - Side under run guards.
- Driver training:
 - Drivers must be trained on vulnerable road user safety through an approved course and hold a current valid Certificate of Competence.
 - Drivers must have a valid driving licence and be legally able to drive the vehicle. - . - .

120 INSURANCE

- Documentary evidence: Before starting work on site submit details, and/ or policies and receipts for the insurances required by the Conditions of Contract.

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- 130 INSURANCE CLAIMS
 - Notice: If any event occurs which may give rise to any claim or proceeding in respect of loss or damage to the Works or injury or damage to persons or property arising out of the Works, immediately give notice to the Employer, the person named in clause A10/140 and the Insurers.
 - Failure to notify: Indemnify the Employer against any loss, which may be caused by failure to give such notice.

- 140A CLIMATIC CONDITIONS
 - Information: Record accurately and retain:
 - Daily maximum and minimum air temperatures (including overnight). To include maximum and minimum dry and wet bulb temperatures for relative humidity checking.
 - Delays due to adverse weather, including description of the weather, types of work affected and number of hours lost.

- 150 OWNERSHIP
 - Alteration/ clearance work: Materials arising become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.

PROGRAMME/ PROGRESS

- 210A PROGRAMME
 - Master programme: When requested and before starting work on site, submit in an approved form a master programme for the Works, which must include details of:
 - Design, production information and proposals provided by the Contractor/ Subcontractors/ Suppliers, including inspection and checking (see section A31).
 - Planning and mobilisation by the Contractor.
 - Earliest and latest start and finish dates for each activity and identification of all critical activities.
 - Running in, adjustment, commissioning and testing of all engineering services and installations
 - Work resulting from instructions issued in regard to the expenditure of provisional sums (see section A54)
 - Work by or on behalf of the Employer and concurrent with the Contract (see section A50). The nature and scope of which, the relationship with preceding and following work and any relevant limitations are suitably defined in the Contract Documents.
 - To include for how the commissioning and finishing trades are to be integrated at the end of the project. There should be no overlap and the commissioning period should be clear of all other activities. An interim End of Physical Trades date should be inserted in the programme.
 - To include key commissioning dates, including air tightness testing and fabric drying out proposals.
 - To include demonstrations and training.
 - Exclusions: Where and to the extent that the programme implications for work which is not so defined are impossible to assess, the Contractor should exclude it and confirm this when submitting the programme.
 - Submit: three copies.

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- 230 SUBMISSION OF PROGRAMME
 - Further information: Submission of the programme will not relieve the Contractor of the responsibility to advise of the need for further drawings or details or instructions in accordance with the Contract.

- 240 COMMENCEMENT OF WORK
 - Notice: Before the proposed date for commencement of work on site give minimum notice of two weeks.

- 250 MONITORING
 - Progress: Record on a copy of the programme kept on site.
 - Avoiding delays: If any circumstances arise which may affect the progress of the Works submit proposals or take other action as appropriate to minimize any delay and to recover any lost time.
 - Key Performance Indicators:
 - Details: N/A.
 - Record progress against each of the KPIs. If performance against KPI falls short of target, submit proposals for remediation.

- 260 SITE MEETINGS
 - General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
 - Frequency: Every month.
 - Location: On site.
 - Accommodation: Ensure availability at the time of such meetings.
 - Attendees: Attend meetings and inform subcontractors and suppliers when their presence is required.
 - Chairperson (who will also take and distribute minutes): Contract Administrator.

- 265 CONTRACTOR'S PROGRESS REPORT
 - General: Submit a progress report at least 3 days before the site meeting.
 - Content: Notwithstanding the Contractor's obligations under the Contract the report must include:
 - A progress statement by reference to the master programme for the Works.
 - Details of any matters materially affecting the regular progress of the Works.
 - Subcontractors' and suppliers' progress reports.
 - Any requirements for further drawings or details or instructions to fulfil any obligations under the Conditions of Contract.

- 270 CONTRACTOR'S SITE MEETINGS
 - General: Hold meetings with appropriate subcontractors and suppliers shortly before main site meetings to facilitate accurate reporting of progress.

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- 275 PROGRESS RECORDS, PHOTOGRAPHS
 - Progress photographs of construction will be required and the Contractor should allow for taking 50 No colour photographs per week throughout the contract period. The photographs are to be taken at the discretion of the CA and shall record the progress of the work.
 - The contractor shall provide digital prints to the Employer within one week of their being taken. Location and direction of the shots shall be clearly indicated on a plan on the rear of each print.

- 280 PHOTOGRAPHS
 - Number of locations: TBC.
 - Frequency of intervals: TBC by Contract Administrator. The Contractor is expected to comply with all requests for photographs throughout the build.
 - Image format: Digital.
 - Number of images from each location: TBC.
 - Other requirements: Photographs for evidence of thermal continuity and air tightness line before cover up

- 285 PARTIAL POSSESSION BY EMPLOYER
 - Clause 2.25 of Conditions of Contract: Ensure all necessary access, services and other associated facilities are also complete.

- 290 NOTICE OF COMPLETION
 - Requirement: Give notice of the anticipated dates of completion of the whole or parts of the Works.
 - Associated works: Ensure necessary access, services and facilities are complete.
 - Period of notice (minimum): One month.

- 310 EXTENSIONS OF TIME
 - Notice: When a notice of the cause of any delay or likely delay in the progress of the works is given under the contract, written notice must also be given of all other causes which apply concurrently.
 - Details: As soon as possible submit:
 - Relevant particulars of the expected effects, if appropriate, related to the concurrent causes.
 - An estimate of the extent, if any, of the expected delay in the completion of the Works beyond the date for completion.
 - All other relevant information required.

- CONTROL OF COST**

- 410 CASH FLOW FORECAST
 - Submission: Before starting work on site, submit a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period. Base on the programme for the Works.

- 420 REMOVAL/ REPLACEMENT OF EXISTING WORK
 - Extent and location: Agree before commencement.
 - Execution: Carry out in ways that minimize the extent of work.

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- 430 PROPOSED INSTRUCTIONS
 - Estimates: If a proposed instruction requests an estimate of cost, submit without delay and in any case within seven days.
 - Include:
 - A detailed breakdown of the cost, including any allowance for direct loss and expense.
 - Details of any additional resources required.
 - Details of any adjustments to be made to the programme for the Works.
 - Any other information as is reasonably necessary to fully assess the implications of issuing such an instruction.
 - Inability to comply: Inform immediately if it is not possible to comply with any of the above requirements.

- 440 MEASUREMENT
 - Covered work: Give notice before covering work required to be measured.

- 450 DAYWORK VOUCHERS
 - Before commencing work: Give reasonable notice to person countersigning daywork vouchers.
 - Content: Before delivery each voucher must be:
 - Referenced to the instruction under which the work is authorised.
 - Signed by the Contractor's person in charge as evidence that the operatives' names, the time daily spent by each and the equipment and products employed are correct.
 - Submit: By the end of the week in which the work has been executed.

- 470 PRODUCTS NOT INCORPORATED INTO THE WORKS
 - Ownership: At the time of each valuation, supply details of those products not incorporated into the Works which are subject to any reservation of title inconsistent with passing of property as required by the Conditions of Contract, together with their respective values.
 - Evidence: When requested, provide evidence of freedom of reservation of title.

- 475 LISTED PRODUCTS STORED OFF SITE
 - Evidence of Title: Submit reasonable proof that the property in 'listed items' is vested in the Contractor.
 - Include for products purchased from a supplier:
 - A copy of the contract of sale and a written statement from the supplier that any conditions of the sale relating to the passing of property have been fulfilled and the products are not subject to any encumbrance or charge.
 - Include for products purchased from a supplier by a subcontractor or manufactured or assembled by any subcontractor:
 - Copies of the subcontract with the subcontractor and a written statement from the subcontractor that any conditions relating to the passing of property have been fulfilled.

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480 LABOUR AND EQUIPMENT RETURNS

- Records: Provide for verification at the beginning of each week in respect of each of the previous seven days.
- Records must show:
 - The number and description of craftsmen, labourers and other persons directly or indirectly employed on or in connection with the Works or Services, including those employed by subcontractors.
 - The number, type and capacity of all mechanical, electrical and power-operated equipment employed in connection with the Works or Services

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A33 QUALITY STANDARDS/ CONTROL

STANDARDS OF PRODUCTS AND EXECUTIONS

- 110 INCOMPLETE DOCUMENTATION
 - General: Where and to the extent that products or work are not fully documented, they are to be:
 - Of a kind and standard appropriate to the nature and character of that part of the Works where they will be used.
 - Suitable for the purposes stated or reasonably to be inferred from the project documents.
 Contract documents: Omissions or errors in description and/ or quantity shall not vitiate the Contract nor release the Contractor from any obligations or liabilities under the Contract.

- 120 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/ qualifications when requested.

- 130 QUALITY OF PRODUCTS
 - Generally: New. (Proposals for recycled products may be considered).
 - Supply of each product: From the same source or manufacturer.
 - Whole quantity of each product required to complete the Works: 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.

- 135 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 dimensions.
 - Finished work: Not defective, e.g. not damaged, disfigured, dirty, faulty, or out of tolerance.
 - Location and fixing of products: Adjust joints open to view so they are even and regular.

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- 140 COMPLIANCE
 - Compliance with proprietary specifications: Retain on site evidence that the proprietary product specified has been supplied.
 - Compliance with performance specifications: Submit evidence of compliance, including test reports indicating:
 - Properties tested.
 - Pass/ fail criteria.
 - Test methods and procedures.
 - Test results.
 - Identity of testing agency.
 - Test dates and times.
 - Identities of witnesses.
 - Analysis of results.

- 150 INSPECTIONS
 - Products and executions: Inspection or any other action must not be taken as approval unless confirmed in writing referring to:
 - Date of inspection.
 - Part of the work inspected.
 - Respects or characteristics which are approved.
 - Extent and purpose of the approval.
 - Any associated conditions.

- 160 RELATED WORK
 - Details: Provide all trades with necessary details of related types of work. Before starting each new type or section of work ensure previous related work is:
 - Appropriately complete.
 - In accordance with the project documents.
 - To a suitable standard.
 - In a suitable condition to receive the new work.
 - Preparatory work: Ensure all necessary preparatory work has been carried out.

- 170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS
 - General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
 - Changes to recommendations or instructions: Submit details.
 - Ancillary products and accessories: Use those supplied or recommended by main product manufacturer.
 - Agrément certified products: Comply with limitations, recommendations and requirements of relevant valid certificates.

- 180A WATER FOR THE WORKS
 - Clean and uncontaminated.
 - Other: Do not use until:
 - Evidence of suitability is provided.
 - Tested to BS EN 1008 if instructed.
 - Please see clause A36/430A.

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SAMPLES/ APPROVALS

- 210 SAMPLES
- Products or executions: Comply with all other specification requirements and in respect of the stated or implied characteristics either:
 - To an express approval.
 - To match a sample expressly approved as a standard for the purpose.

- 215 PROVIDING SAMPLES
- The contractor is to provide all samples as requested in the Specifications and Tender Documents. The cost of providing these samples is deemed to be included within the Contractors tender price.

- 217 CONSTRUCTION INFORMATION
- The contractor is to provide all the information as requested (including fabrication drawings, setting out drawings etc) in the Specifications and Tender Documents or as deemed necessary by the design team before works commence on those elements. Approval of these works must be gained before commencement or fabrication. The cost of providing this information is deemed to be included within the Contractors tender price.

- 220 APPROVAL OF PRODUCTS
- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
 - Approval: Relates to a sample of the product and not to the product as used in the Works. Do not confirm orders or use the product until approval of the sample has been obtained.
 - Complying sample: Retain in good, clean condition on site. Remove when no longer required.

- 230 APPROVAL OF EXECUTION
- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
 - Approval: Relates to the stated characteristics of the sample. (If approval of the finished work as a whole is required this is specified separately). Do not conceal, or proceed with affected work until compliance with requirements is confirmed.
 - Complying sample: Retain in good, clean condition on site. Remove when no longer required.

ACCURACY/ SETTING OUT GENERALLY

- 320 SETTING OUT
- General: Submit details of methods and equipment to be used in setting out the Works.
 - Levels and dimensions: Check and record the results on a copy of drawings. Notify discrepancies and obtain instructions before proceeding.
 - Inform: When complete and before commencing construction.

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- 330 APPEARANCE AND FIT
 - Tolerances and dimensions: If likely to be critical to execution or difficult to achieve, as early as possible either:
 - Submit proposals; or
 - Arrange for inspection of appearance of relevant aspects of partially finished work.
 - General tolerances (maximum): To BS 5606, tables 1 and 2.

- 340 CRITICAL DIMENSIONS
 - Critical dimensions: Set out and construct the Works to ensure compliance with the tolerances stated.
 - Location: Detailed on drawings Detailed on drawings contained in Tender Documents.

- 355A LEVELS OF STRUCTURAL FLOORS
 - Maximum tolerances for designed levels to be:
 - Floors to be self-finished, and floors to receive sheet or tile finishes directly bedded in adhesive: +/- 10 mm.
 - Floors to receive dry board/ panel construction with little or no tolerance on thickness: +/- 10 mm.
 - Floors to receive mastic asphalt flooring/ underlays directly: +/- 10 mm.
 - Floors to receive mastic asphalt flooring/ underlays laid on mastic asphalt levelling coat(s): +/- 15 mm.
 - Floors to receive fully bonded screeds/ toppings/ beds: +/- 5 mm.
 - Floors to receive unbonded or floating screeds/ beds: +/- 5 mm.
 - Floors to receive racking: +/- 5 mm (this is critical to fit the racking in the space available).

- 360 RECORD DRAWINGS
 - Site setting out drawing: Record details of all grid lines, setting-out stations, benchmarks and profiles. Retain on site throughout the contract and hand over on completion.

SERVICES GENERALLY

- 410 SERVICES REGULATIONS
 - New or existing services: Comply with the Byelaws or Regulations of the relevant Statutory Authority.

- 420 WATER REGULATIONS/ BYELAWS NOTIFICATION
 - Requirements: Notify Water Undertaker of any work carried out to or which affects new or existing services and submit any required plans, diagrams and details.
 - Consent: Allow adequate time to receive Undertaker's consent before starting work. Inform immediately if consent is withheld or is granted subject to significant conditions.

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- 430 WATER REGULATIONS/ BYELAWS CONTRACTOR'S CERTIFICATE
 - On completion of the work: Submit (copy where also required to the Water Undertaker) a certificate including:
 - The address of the premises.
 - A brief description of the new installation and/ or work carried out to an existing installation.
 - The Contractor's name and address.
 - A statement that the installation complies with the relevant Water Regulations or Byelaws.
 - The name and signature of the individual responsible for checking compliance.
 - The date on which the installation was checked.

- 435 ELECTRICAL INSTALLATION CERTIFICATE
 - Submit: When relevant electrical work is completed.
 - Original certificate: To be lodged in the Building Manual.

- 445 SERVICE RUNS
 - General: Provide adequate space and support for services, including unobstructed routes and fixings.
 - Ducts, chases and holes: Form during construction rather than cut.
 - Coordination with other works: Submit details of locations, types/ methods of fixing of services to fabric and identification of runs and fittings.

- 450A MECHANICAL AND ELECTRICAL SERVICES
 - Final tests and commissioning: Carry out so that services are in full working order at completion of the Works. Please see M&E specifications (Appendix A) for full M&E testing and commissioning requirements, including seasonal commissioning.
 - Building Regulations notice: Copy to be lodged in the Building Manual.

- SUPERVISION/ INSPECTION/ DEFECTIVE WORK**

- 510 SUPERVISION
 - General: In addition to the constant management and supervision of the Works provided by the Contractor's person in charge, all significant types of work must be under the close control of competent trade supervisors to ensure maintenance of satisfactory quality and progress.
 - Replacement: Give maximum possible notice before changing person in charge or site agent.

- 520 COORDINATION OF ENGINEERING SERVICES
 - Suitability: Site organisation staff must include one or more persons with appropriate knowledge and experience of mechanical and electrical engineering services to ensure compatibility between engineering and the Works generally.
 - Evidence: Submit when requested CVs or other documentary evidence relating to the staff concerned.

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- 530 OVERTIME WORKING
 - Notice: Prior to overtime being worked, submit details of times, types and locations of work to be done.
 - Minimum period of notice: One week.
 - Concealed work: If executed during overtime for which notice has not been given, it may be required to be opened up for inspection and reinstated at the Contractor's expense.

- 540 DEFECTS IN EXISTING WORK
 - Undocumented defects: When discovered, immediately give notice. Do not proceed with affected related work until response has been received.
 - Documented remedial work: Do not execute work which may:
 - Hinder access to defective products or work; or
 - Be rendered abortive by remedial work.

- 550 ACCESS FOR INSPECTION
 - Removal: Before removing scaffolding or other facilities for access, give notice of not less than one week.

- 560 TESTS AND INSPECTIONS
 - Timing: Agree and record dates and times of tests and inspections to enable all affected parties to be represented.
 - Confirmation: One working day prior to each such test or inspection. If sample or test is not ready, agree a new date and time.
 - Records: Submit a copy of test certificates and retain copies on site.

- 570A AIR PERMEABILITY
 - Testing organisation: UKAS accredited and registered with the Air Tightness Testing and Measurement Association (ATTMA).
 - Method:
 - Pressure test in accordance with see Architects Specification Section P14 (included in Appendix A).
 - Standard:
 - Design Air tightness value (maximum): Architects Specification Section P14 (included in Appendix A)
 - Results:
 - Content: Include test results and all supporting data.
 - Copies: Required for building control inspection and inclusion in Building Manual.
 - Electronic deposit: Through the ATTMA lodgement database
 - Additional copies: Provide on request.

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- 580 CONTINUITY OF THERMAL INSULATION
 - Record and report: Confirm that work to new, renovated or upgraded thermal elements has been carried out to conform to specification. Include:
 - The address of the premises.
 - The Contractor's name and address.
 - The name, qualification and signature of the competent person responsible for checking compliance.
 - The date on which the installation was checked.
 - Submit: Before completion of the Works.
 - Copy: To be lodged in the Building Manual.

- 590 RESISTANCE TO PASSAGE OF SOUND
 - Method: Specified constructions.
 - Compliance: Submit results of testing,
 - Copies: Incorporate in the Building Manual.

- 595A ENERGY PERFORMANCE CERTIFICATE
 - Assessment: Undertaken by a specialist member of an approved accreditation scheme. Submit details of scheme name and evidence of qualifications when requested.
 - Building Type: Non-dwelling.
 - Method: As Department for Communities and Local Government document Improving the energy efficiency of our Buildings. A guide to energy performance certificates for the construction sale and let of non-dwellings dated December 2012. Specialist to confirm whether SBEM or Dynamic prior to work being carried out..
 - Format:
 - In accordance with the above document.
 - Certificate: To be incorporated in the Building Manual and submitted to Approved Inspector.
 - Report: In accordance with the above document.
 - Submit: Final document submitted for approval 5 days prior to practical completion.

- 610 PROPOSALS FOR RECTIFICATION OF DEFECTIVE PRODUCTS/ EXECUTIONS
 - Proposals: Immediately any work or product is known, or appears, to be not in accordance with the Contract, submit proposals for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.
 - Acceptability: Such proposals may be unacceptable and contrary instructions may be issued.

- 620 MEASURES TO ESTABLISH ACCEPTABILITY
 - General: Wherever inspection or testing shows that the work, materials or goods are not in accordance with the contract and measures (e.g. testing, opening up, experimental making good) are taken to help in establishing whether or not the work is acceptable, such measures:
 - Will be at the expense of the Contractor.
 - Will not be considered as grounds for revision of the completion date.

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630 QUALITY CONTROL

- Procedures: Establish and maintain to ensure that the Works, including the work of subcontractors, comply with specified requirements.
- Records: Maintain full records, keep copies on site for inspection, and submit copies on request.
- Content of records:
 - Identification of the element, item, batch or lot including location in the Works.
 - Nature and dates of inspections, tests and approvals.
 - Nature and extent of nonconforming work found.
 - Details of corrective action.

WORK AT OR AFTER COMPLETION

710 WORK BEFORE COMPLETION

- General: Make good all damage consequent upon the Works. Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
- Cleaning: Clean the Works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
- Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.
- COSHH dated data sheets: Obtain for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.
- Minor faults: Touch up in newly painted work, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
- Moving parts of new work: Adjust, ease and lubricate as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.

715 TESTING AND COMMISSIONING OF MECHANICAL AND ELECTRICAL ENGINEERING SERVICES

- The Certificate of Practical Completion will not be issued before the testing and commissioning of the engineering services is complete. Normally this involves control of room conditions over the whole of the accommodation by the Sub-Contractor(s) for a period of time during which no further work will be permitted.
- All commissioning records and certification are to be provided in their final form at completion. No exclusions, list to be agreed with the contractor 4 weeks prior to completion.
- All necessary information to provide building/service manuals and as built drawings must be handed to the Contract Administrator prior to Practical Completion.

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- 717A MAINTENANCE INSTRUCTIONS
 - Obtain and handover to Contract Administrator at practical completion any maintenance instruction and guarantees provided by manufacturers, suppliers and sub-contractors. Where more than one installation is to be provided within the Works, copies of maintenance instruction and guarantees shall be provided for each installation and included in the Health and Safety File as necessary.
 - The Contractor will also be required to provide a list of all M&E assets for each room/area of the building and provide this to the Client.

- 720 SECURITY AT COMPLETION
 - General: Leave the Works secure with, where appropriate, all accesses closed and locked.
 - Keys: Account for and adequately label all keys and hand over to Employer with itemized schedule, retaining duplicate schedule signed by Employer as a receipt.

- 730 MAKING GOOD DEFECTS
 - Remedial work: Arrange access with Employer.
 - Rectification: Give reasonable notice for access to the various parts of the Works.
 - Completion: Notify when remedial works have been completed.

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A34 SECURITY/ SAFETY/ PROTECTION

SECURITY, HEALTH AND SAFETY

- 110 PRECONSTRUCTION INFORMATION
 - Location: Integral with the project Preliminaries, including but not restricted to the following sections:
 - Description of project: Sections A10 and A11.
 - Client's consideration and management requirements: Sections A12, A13 and A36.
 - Environmental restrictions and on-site risks: Section A12, A35 and A34.
 - Significant design and construction hazards: Section A34.
 - The Health and Safety File: Section A37.

- 120 EXECUTION HAZARDS
 - Common hazards: Not listed. Control by good management and site practice.
 - Significant hazards: The design of the project includes the following:
 - Hazard: See Pre Construction Information - Appendix B.
 - Precautions assumed: See Pre Construction Information - Appendix B.
 - Specification reference: See Pre Construction Information - Appendix B.
 - Drawing reference: See Pre Construction Information - Appendix B.

- 130 PRODUCT HAZARDS
 - Hazardous substances: Site personnel levels must not exceed occupational exposure standards and maximum exposure limits stated in the current version of HSE document EH40: Workplace Exposure Limits.
 - Common hazards: Not listed. Control by good management and site practice.
 - Significant hazards: Specified construction materials include the following:
 - Hazard: See Pre Construction Information - Appendix B.
 - Material: See Pre Construction Information - Appendix B.
 - Specification reference: See Pre Construction Information - Appendix B.

- 140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN
 - Submission: Present to the Employer/ Client no later than at least 3 weeks before commencement on site.
 - Confirmation: Do not start construction work until the Employer has confirmed in writing that the Construction Phase Health and Safety Plan includes the procedures and arrangements required by the CDM Regulations.
 - Content: Develop the plan from and draw on the Outline Construction Phase Health and Safety Plan, clause A30/570, and the Pre-tender Health and Safety Plan/ Preconstruction information.

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- 150 SECURITY
 - Protection: Safeguard the site, the Works, products, materials, and any existing buildings affected by the Works from damage and theft.
 - Access: Take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property.
 - Special requirements: The Contractor will be fully responsible for the security of the site and building during the works.

- 160 STABILITY
 - Responsibility: Maintain the stability and structural integrity of the Works and adjacent structures during the Contract.
 - Design loads: Obtain details, support as necessary and prevent overloading.

- 170 OCCUPIED PREMISES
 - Extent: Existing buildings will be occupied and/ or used during the Contract as follows: no buildings within the site works boundary will be occupied during the works. Adjacent buildings within the Imperial war Museum will remain occupied and in use during the course of the works.
 - Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.
 - Overtime: If compliance with this clause requires certain operations to be carried out during overtime, and such overtime is not required for any other reason, the extra cost will be allowed, provided that such overtime is authorized in advance.

- 180 ACCESS CONTROL
 - Controlled areas: Contractors are not permitted access to other buildings on the site. Access into the site will be via the staff entrance and guardroom, and then via the Bailey Bridge to the north site and the area covered by this specification. Delivery of plant and machinery will need notice (48 hours) to the guardroom. Access will then be granted directly to the north site via the north site gates. Please see drawing 9165-GA004.
 - Control type: Gate key.
 - Authorised persons: Submit a list of the names of all persons requiring access together with any other related information reasonably required.
 - Return of credentials: When requested or on completion of the work to which the controlled area relates.

- 190 OCCUPIER'S RULES AND REGULATIONS
 - Compliance: Conform to the occupier's rules and regulations affecting the site.
 - Copies:
 - Location: Please see Appendix C - IWM Instructions and Guidelines for Contractors.
 - Arrangements for inspection: Included in Tender Documents.

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- 200 MOBILE TELEPHONES AND PORTABLE ELECTRONIC EQUIPMENT
 - Restrictions on use:
 - TBC - the contractor is expected to conform to the requirements of the client regarding this clause..

- 210 EMPLOYER'S REPRESENTATIVES SITE VISITS
 - Safety: Submit details in advance, to the Employer or the person identified in clause A10/140, of safety provisions and procedures (including those relating to materials, which may be deleterious), which will require their compliance when visiting the site.
 - Protective clothing and/ or equipment: Provide and maintain on site for the Employer and the person stated in clause A10/140 and other visitors to the site.

- 220 WORKING PRECAUTIONS/ RESTRICTIONS
 - Hazardous areas: Operatives must take precautions as follows:
 - Work area: See Pre Construction Information - Appendix B.
 - Precautions: See Pre Construction Information - Appendix B.
 - Permit to work: Operatives must comply with procedures in the following areas:
 - Work area: See Pre Construction Information - Appendix B.
 - Procedures: See Pre Construction Information - Appendix B.

PROTECT AGAINST THE FOLLOWING

- 310 EXPLOSIVES
 - Use: Not permitted

- 320 NOISE CONSENT BY LOCAL AUTHORITY
 - Consent: Granted by the Local Authority under Part III of the Control of Pollution Act relating to the Works providing the following conditions are met:
 - TBC.

- 330 NOISE AND VIBRATION
 - Standard: Comply with the recommendations of BS 5228-1, in particular clause 7.3, to minimize noise levels during the execution of the Works.
 - Noise levels from the Works: Maximum level: TBC dB(A) when measured from TBC.
 - Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
 - Restrictions: Do not use:
 - Percussion tools and other noisy appliances without consent during the hours of TBC.
 - Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.

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- 340 POLLUTION
 - Prevention: Protect the site, the Works and the general environment including the atmosphere, land, streams and waterways against pollution.
 - Contamination: If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.

- 350 PESTICIDES
 - Use: Not permitted.

- 360 NUISANCE
 - Duty: Prevent nuisance from smoke, dust, rubbish, vermin and other causes.
 - Surface water: Prevent hazardous build-up on site, in excavations and to surrounding areas and roads.

- 370 ASBESTOS CONTAINING MATERIALS
 - Duty: Report immediately any suspected materials discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe removal or encapsulation.

- 371 DANGEROUS OR HAZARDOUS SUBSTANCES
 - Duty: Report immediately suspected materials discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe removal or remediation.

- 373 SITE CLEANLINESS
 - The Contractor is required to keep all areas adjacent to the site clean and free from mud, dirt and dust from the works. This is especially prevalent following delivery of items to site by vehicles. The Contractor will ensure all areas surrounding the site are fully clean following any deliveries.

- 375 ANTIQUITIES
 - Duty: Report immediately any fossils, antiquities and other objects of interest or value discovered during execution of the Works.
 - Preservation: Keep objects in the exact position and condition in which they were found.
 - Special requirements: N/A.

- 380 FIRE PREVENTION
 - Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
 - Standard: Comply with Joint Code of Practice 'Fire Prevention on Construction Sites', published by Construction Industry Publications and The Fire Protection Association (The 'Joint Fire Code').

- 390 SMOKING ON SITE
 - Smoking on site: Not permitted.

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- 400 BURNING ON SITE
 - Burning on site: Not permitted.

- 410A MOISTURE
 - Wetness or dampness: Prevent, where this may cause damage to the Works.
 - Drying out: Control humidity and the application of heat to prevent:
 - Blistering and failure of adhesion.
 - Damage due to trapped moisture.
 - Excessive movement.
 - Building materials to be actively dried, whilst controlling shrinkage and cracking so that the building is dry to specification prior to completion.

- 415 WATER PROTECTION
 - Prevent damage from storm and surface water. Any remedial works required are to be born by the Contractor.
 - Its is imperative that the Contractor mitigates water damage to as minimal as possible as any compromise will have serious effects on the building drying out process.

- 420 INFECTED TIMBER/ CONTAMINATED MATERIALS
 - Removal: Where instructed to remove material affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.
 - Testing: carry out and keep records of appropriate tests to demonstrate that hazards presented by concentrations of airborne particles, toxins and other micro organisms are within acceptable levels.

- 430 WASTE
 - Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
 - General: Minimize production. Prevent accumulations. Keep the site and Works clean and tidy.
 - Handling: Collect and store in suitable containers. Remove frequently and dispose off site in a safe and competent manner:
 - Non-hazardous material: In a manner approved by the Waste Regulation Authority.
 - Hazardous material: As directed by the Waste Regulation Authority and in accordance with relevant regulations.
 - Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Regulation Authority.
 - Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
 - Waste transfer documentation: Retain on site.

- 440 ELECTROMAGNETIC INTERFERENCE
 - Duty: Prevent excessive electromagnetic disturbance to apparatus outside the site.

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- 450 LASER EQUIPMENT
- Construction laser equipment: Install, use and store in accordance with BS EN 60825-1 and the manufacturer's instructions.
 - Class 1 or Class 2 laser equipment: Ensure laser beam is not set at eye level and is terminated at the end of its useful path.
 - Class 3A and Class 3B laser equipment: Do not use without approval and subject to submission of a method statement on its safe use.

- 460 POWDER ACTUATED FIXING SYSTEMS
- Use: Not permitted.

- 470 INVASIVE SPECIES
- General: Prevent the spread of species (e.g. plants or animals) that may adversely affect the site or Works economically, environmentally or ecologically.
 - Special precautions: N/A.
 - Duty: Report immediately any suspected invasive species discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe eradication or removal.

PROTECT THE FOLLOWING

- 490 WORK IN ALL SECTIONS
- Adequately protect all types of work and all parts of the Works, including work carried out by others, throughout the Contract. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur.

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510 EXISTING SERVICES

- Confirmation: Notify all service authorities, statutory undertakers and/ or adjacent owners of proposed works not less than one week before commencing site operations.
- Identification: Before starting work, check and mark positions of utilities/ services. Where positions are not shown on drawings obtain relevant details from service authorities, statutory undertakers or other owners.
- Work adjacent to services:
 - Comply with service authority's/ statutory undertaker's recommendations.
 - Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service authorities/ statutory undertakers or other owners.
- Identifying services:
 - Below ground: Use signboards, giving type and depth;
 - Overhead: Use headroom markers.
- Damage to services: If any results from execution of the Works:
 - Immediately give notice and notify appropriate service authority/ statutory undertaker.
 - Make arrangements for the work to be made good without delay to the satisfaction of service authority/ statutory undertaker or other owner as appropriate.
 - Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
- Marker tapes or protective covers: Replace, if disturbed during site operations, to service authority's/ statutory undertakers recommendations.

520A ROADS AND FOOTPATHS

- Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris.
- Damage caused by site traffic or otherwise consequent upon the Works: Make good to the satisfaction of the Employer, Local Authority or other owner.
- The Contractor is to be made aware that all existing surfaces within the IWM museum are part of a Conservation Area and should be protected during the works. No damage must be made to existing surfaces and all costs associated with protection of existing surfaces will be borne by the Contractor and are deemed included in their tender price (see drawing 9165 GA002 for location of historic surfaces surrounding the site).

530 EXISTING TOPSOIL/ SUBSOIL

- Duty: Prevent over compaction of existing topsoil and subsoil in those areas which may be damaged by construction traffic, parking of vehicles, temporary site accommodation or storage of materials and which will require reinstatement prior to completion of the Works.
- Protection: Before starting work submit proposals for protective measures.

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- 540 RETAINED TREES/ SHRUBS/ GRASSED AREAS
 - Protection: Preserve and prevent damage, except those not required.
 - Replacement: Mature trees and shrubs if uprooted, destroyed, or damaged beyond reasonable chance of survival in their original shape, as a consequence of the Contractor's negligence, must be replaced with those of a similar type and age at the Contractor's expense.

- 550A RETAINED TREES
 - Protected area: Unless agreed otherwise do not:
 - Dump spoil or rubbish, excavate or disturb topsoil, park vehicles or plant, store materials or place temporary accommodation within an area which is the larger of the branch spread of the tree or an area with a radius of half the tree's height, measured from the trunk.
 - Sever roots exceeding 25 mm in diameter. If unintentionally severed give notice and seek advice.
 - Change level of ground within an area 3 m beyond branch spread.
 - There are a number of trees adjacent the works that require protection and have root protection areas. The Contractor is required to provide adequate protection to trees and roots during the works to prevent any damage. Please see Appendix F - Tree protection Areas for further details.

- 555 WILDLIFE SPECIES AND HABITATS
 - General: Safeguard the following: TBC.
 - Protected habitats and species: Upon discovery immediately advise. Do not proceed until instruction is received.
 - Education: Ensure employees and visitors to the site receive suitable instruction and awareness training.

- 560 EXISTING FEATURES
 - Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.
 - Special requirements: All existing surfaces surrounding the site are part of a Conservation Area and should be protected during site works (please see drawing 9165-GA003). All protection works required are to be borne by the Contractor and are deemed included within their tender price.

- 570 EXISTING WORK
 - Protection: Prevent damage to existing work, structures or other property during the course of the work.
 - Removal: Minimum amount necessary.
 - Replacement work: To match existing.

- 580 BUILDING INTERIORS
 - Protection: Prevent damage from exposure to the environment, including weather, flora, fauna, and other causes of material degradation during the course of the work.

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- 625 ADJOINING PROPERTY RESTRICTIONS
 - Precautions:
 - Prevent trespass of workpeople and take precautions to prevent damage to adjoining property.
 - Pay all charges.
 - Remove and make good on completion or when directed.
 - Damage: Bear cost of repairing damage arising from execution of the Works.

- 630 EXISTING STRUCTURES
 - Duty: Check proposed methods of work for effects on adjacent structures inside and outside the site boundary.
 - Supports: During execution of the Works:
 - Provide and maintain all incidental shoring, strutting, needling and other supports as may be necessary to preserve stability of existing structures on the site or adjoining, that may be endangered or affected by the Works.
 - Do not remove until new work is strong enough to support existing structure.
 - Prevent overstressing of completed work when removing supports.
 - Adjacent structures: Monitor and immediately report excessive movement.
 - Standard: Comply with BS 5975 and BS EN 12812.

- 640 MATERIALS FOR RECYCLING/ REUSE
 - Duty: Sort and prevent damage to stated products or materials, clean off bedding and jointing materials and other contaminants.
 - Storage: Stack neatly and protect until required by the Employer or for use in the Works as instructed.

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**A35 SPECIFIC LIMITATIONS ON METHOD/
SEQUENCE/ TIMING**

110 SCOPE

- General: The limitations described in this section are supplementary to limitations described or implicit in information given in other sections or on the drawings.

125 DESIGN CONSTRAINTS

- Please refer to the following Information:
 - Preambles
 - Preliminaries
 - Schedule of Works
 - Appendix A - Drawing and Specifications
 - Appendix B - Pre-Construction Information
 - Appendix C - IWM Instructions and Guidelines for Contractors
 - Appendix D - Contamination Assessment Report
 - Appendix E - Site Investigation Report
 - Appendix F - Tree Protection Areas
 - Appendix G - Below Ground Drainage
 - Appendix H - Fire Strategy Report
 - Appendix I - BIM Execution Plan and BIM Information Requirements (EIR)
 - Appendix J - Planning Permission
 - Appendix K - Archaeological Desk Based Assessment
 - Appendix L - Topographical and Services Surveys
 - Appendix M - Ecology Report
- The Contractor is required to comply with all Planning Permissions (see Appendix J - Planning Permission) relevant to the works and as detailed in the documents. The Contractor is required to coordinate the discharging of all Planning Permissions in conjunction with the Contract Administrator. The Contractor will provide the relevant information required for discharge of the conditions prior to commencement of the works. If required, the contractor will liaise with the Planning authority to make sure that the information provided is in accordance with the conditions' requirements. Any costs incurred or associated with enabling the discharging these conditions is to be borne by the contractor and deemed to be included in their tender price.

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132 METHOD/ SEQUENCE OF WORK

- Specific Limitations: The Contractor should be aware of and include the following in the programme:
 - Airshows will be taking place on the following days in 2018:- Saturday 26th to Sunday 27th May, Saturday 14th to Sunday 15th July and Saturday 22nd to Sunday 23rd of September. No works on site will be permitted during these days - please see clause A35/170 regarding weekend working. The contractor should be aware that the museum and site will be busier the week before and after these dates and there will be an affect on access and traffic to the site. The contractor is expected to factor this disruption into their programme and comply with any Client requests during this period to minimise disruption to the Museum.
 - A Remembrance event will take place on Sunday 11th November 2018. No works on site will be permitted on this day - please see clause A35/170 regarding weekend working. The contractor is expected to factor this disruption into their programme and comply with any Client requests during this period to minimise disruption to the Museum.
 - The proximity of adjacent IWM buildings when approaching the site as per drawings 9165-GA001 and 9165-GA004. Unimpeded access to IWM buildings and areas surrounding the site must be maintained during the works.
 - Sequencing requirements as detailed on drawings 3104 400 and 3104 401.
 - Access to the site, working areas, conservation areas, site restrictions and positioning of compound area and welfare facilities as per drawings 9165-GA001, 9165-GA003 and 9165-GA004.
 - Design team information - please see Appendix A - Drawings and Specs.
 - Health and safety hazards - please see Appendix B - Pre Construction Information.
 - The requirement to follow the IWM rules and regulations - please see Appendix C - IWM Instructions and Guidelines for Contractors.
 - The potential for contaminants in the ground - please see Appendix D - Contamination Assessment Report.
 - The findings of the site investigations - please see Appendix E - Site Investigation Report
 - The presence of trees and roots which require protecting during the works - please see Appendix F - Tree Protection Areas.
 - The presence of existing drainage, sewers etc - please see Appendix G - Below Ground Drainage.
 - The Fire Strategy Report - please see - Appendix H - Fire Strategy Report.
 - Planning requirements - please see - Appendix J - Planning Permission.
 - Archeological issues - please see Appendix K - Archaeological Desk Based Assessment.
 - Topographical Surveys - please see - Appendix L - Topographical and Services Surveys.
 - Ecology findings and requirement - please see - Appendix M - Ecology Report.
 - the general nature of the Works.

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- 135 CONSTRUCTION SEQUENCING
 - The Tenderer is to be made aware of the sequencing of works as detailed on drawings 3104 400 and 3104 401. The Tenderer is to allow for all sequencing, temporary works and props, scaffold towers and the like as detailed on the drawings, along with any further requirements deemed necessary by the Contractor to complete the works. The responsibility for these works shall remain with the Contractor and the cost of which shall be borne by the Contractor and deemed included in their Tender figure.

- 137 WEATHER SEALING AND DRYING
 - The Tenderers should note the requirement for the early weather sealing of the archive spaces and requirement for the building fabric to be dry prior to completion. This will require the contractor to carry out controlled drying out during the construction process to ensure that the fabric has dried sufficiently. To include moisture and temperature control.

- 140A SCAFFOLDING
 - Scaffolding: Make available to subcontractors and others at all times.
 - See clause A35/135.

- 160 USE OR DISPOSAL OF MATERIALS
 - Specific limitations: TBC.

- 165 WORKING AREA AND ROUTES
 - The Contractor will be restricted to the working area and routes as defined on drawing 9165-GA003 and 9165-GA004. Routes may be subject to variation as directed by the CA, but at all times the Contractor shall ensure that the requirements of restrictions on the working area are strictly complied with.

- 170 WORKING HOURS
 - Specific limitations: work is permitted between 07.30 to 17.30 Monday to Friday. Weekend working only with consent of CA.

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A36 FACILITIES/ TEMPORARY WORK/ SERVICES

GENERALLY

- 110 SPOIL HEAPS, TEMPORARY WORKS AND SERVICES
 - Location: Give notice and details of intended siting.
 - Maintenance: Alter, adapt and move as necessary. Remove when no longer required and make good.

ACCOMMODATION

- 210 ROOM FOR MEETINGS
 - Facilities: Provide suitable temporary accommodation for site meetings, adequately heated and lit. The room may be part of the Contractor's own site offices.
 - Furniture and Equipment: Provide table and chairs for 10 people.

- 230A TEMPORARY ACCOMMODATION
 - Proposals for temporary accommodation and storage for the Works: Submit two weeks prior to starting on site.
 - Details to be included: Type of accommodation and storage, its siting and the programme for site installation and removal.
 - Contractor is expected to provide all temporary accommodation, storage, sanitary accommodation etc as required by themselves to complete the works. The IWM's own facilities will not be available to the contractor during the works.

- 260 SANITARY ACCOMMODATION
 - Requirement: Provide sanitary accommodation for the Employer/ Purchaser, and other members of the consultant team, either separate or shared with the Contractor's supervisory staff. Maintain in clean condition and provide all consumables.

- 285 PARKING
 - Please see drawing 9165-GA004 for areas allocated for contractor parking.

TEMPORARY WORKS

- 310 ROADS
 - Permanent roads, hard standings and footpaths on the site: The following may be used, subject to clause A34/520:
 - Details: Please see drawing 9165-GA004 for details of access routes through the IWM to the site. These areas are used for access only, the Contractors works and storage must be kept and maintained within the site area as detailed on drawing 9165-GA003.
 - Restrictions on use: existing surfaces as part of Conservation Area.
 - Protective or remedial measures: As deemed necessary by the Contractor to protect the existing surfaces.

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- 320 TEMPORARY WORKS
 - Employer's specific requirements: Provide: as necessary all temporary hoardings, screens, fans, planked footways, guard rails, access gates, gantries and the like as may be necessary for protecting the public and others, for the proper execution of the Works and for meeting the requirements of the Employer, any Local or other Authority and for allowing proper access for persons into adjacent operating buildings. Allow for providing as necessary fire resisting and / or acoustic screens. Allow for adapting/modifying/altering all such temporary fencing, hoardings etc, throughout the duration of the Works for removing upon completion of the Works and making good all disturbed areas, structure, finishes etc.

- 330 TEMPORARY PROTECTION TO EXISTING TREES/ VEGETATION
 - Temporary protection: Provide before starting work in locations shown on drawing Please see Appendix F - Tree Protection Areas.
 - Protective barriers and any other relevant physical protection measures: To BS 5837.
 - Design details of the proposed physical means of protection: must be in accordance with BS 5837.
 - Areas of structural landscaping to be protected from construction operations: TBC
 - Integrity of protection: Maintain for the duration of the Works. Remove on completion of the works and make good disturbed area.

- 340A NAME BOARDS/ ADVERTISEMENTS
 - Name boards/ advertisements: As permitted by the CA only. The Contractor is to allow for 5 nr signage boards and fixings for boards provided by the CA.

SERVICES AND FACILITIES

- 410 LIGHTING
 - Finishing work and inspection: Provide temporary lighting, the intensity and direction of which closely resembles that delivered by the permanent installation.

- 420A LIGHTING AND POWER
 - Supply: Electricity from the Employer's mains may be used for the Works as follows: The supply from building 104 could be made available for the works. However, it will be the contractors responsibility for arranging to get supply to his point of use. Otherwise the contractor shall provide their own lighting and power. All lighting and power costs (including costs associated with possible connections to Building 104) will be borne by the contractor and deemed included in their tender price.
 - Metering: Metered by the Contractor and charged to the Contractor.
 - Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.

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- 430A WATER
 - Supply: The Employer's mains may be used for the Works as follows: The supply can be made available via nearby fire hydrant. However, it will be the contractors responsibility for arranging to get supply to their point of use. Otherwise the contractor shall provide their own water. All water costs (including costs associated with possible connections to the fire hydrant) will be borne by the contractor and deemed included in their tender price.
 - Metering: Metered by the Contractor and charged to the Contractor
 - Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.
- 440 TELEPHONES
 - Temporary on site telephone: Provide as soon as practicable after the start on site for joint use by the Contractor and Subcontractors and pay all charges.
 - Responses: Make arrangements (e.g. an external bell) to ensure that incoming calls are answered promptly.
- 470 E-MAIL AND INTERNET FACILITY
 - General: As soon as practicable after the start on site provide a suitable e-mail facility on site, with a separate dedicated telephone line, for the use of the Contractor, Subcontractors and those acting on behalf of the Employer.
 - Use on behalf of Employer: Allow for the cost of a reasonable number of transmissions made by those acting on behalf of the Employer.
 - Peripherals: N/A.
- 510 TEMPERATURE AND HUMIDITY
 - Levels required by the Employer: Maintain the following:
 - See specifications (Appendix A).
- 520 USE OF PERMANENT HEATING SYSTEM
 - Permanent heating installation: May be used for drying out the Works/ services and controlling temperature and humidity levels.
 - Installation: If used:
 - Take responsibility for operation, maintenance and remedial work.
 - Arrange supervision by and indemnification of the appropriate Subcontractors.
 - Pay costs arising.
- 530 BENEFICIAL USE OF INSTALLED SYSTEMS
 - Permanent systems: Unless specific permission is given by the Employer and installer, do not use for any purpose other than running in, testing and commissioning.
 - Other uses: If permission is given for any other use of a system before the Works are accepted as complete, enter into a separate written agreement recording details of the terms and conditions of use.

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540 METER READINGS

- Charges for service supplies: Where to be apportioned ensure that:
 - Meter readings are taken by relevant authority at possession and/ or completion as appropriate.
 - Copies of readings are supplied to interested parties.

550A THERMOMETERS

- General: Provide on site and maintain in accurate condition a maximum and minimum thermometer for measuring atmospheric shade temperature, in an approved location.
- Provide fabric moisture meter and suitable RH measurement device. To be kept in a locked cupboard in the plantroom.

570 PERSONAL PROTECTIVE EQUIPMENT

- General: Provide for the sole use of those acting on behalf of the Employer, in sizes to be specified:
 - Safety helmets to BS EN 397, neither damaged nor time expired. Number required: 5.
 - High visibility waistcoats to BS EN ISO 20471 Class 2. Number required: 5.
 - Safety boots with steel insole and toecap to BS EN ISO 20345. Pairs required: 5.
 - Disposable respirators to BS EN 149.FFP1S.
 - Eye protection to BS EN 166.
 - Ear protection - muffs to BS EN 352-1, plugs to BS EN 352-2
 - Hand protection - to BS EN 388, 407, 420 or 511 as appropriate.

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A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

GENERALLY

110 THE BUILDING MANUAL

- Purpose: The Manual is to be a comprehensive information source and guide for owners and users of the completed Works. It should provide an overview of the main design principles and describe key components and systems to enable proper understanding, efficient and safe operation and maintenance.
- Scope:
 - Part 1: General: Content as clause 120.
 - Part 2: Fabric: Content as clause 130.
 - Part 3: Services: Content as clause 140.
 - Part 4: The Health and Safety File: Content as clause 150.
 - Part 5: Building User Guide: Content as clause 151.
- Responsibility: The Building Manual is to be produced by The Contractor and must be complete no later than 2 weeks before practical completion.
- Information provided by others: Details: N/A.
- Compilation:
 - Prepare all information for Contractor designed or performance specified work including as-built drawings.
 - Obtain or prepare all other information to be included in the Manual.
- Reviewing the Manual: Submit a complete draft. Amend in the light of any comments and resubmit. Do not proceed with production of the final copies until authorized.
- Final copies of the Manual:
 - Number of copies: Number of copies: 2 nr hard copies and electronic copy.
 - Format: TBC.
 - Latest date for submission: 2 weeks before the date for completion stated in the contract.
- As-built drawings and schedules:
 - Number of copies: 2.
 - Format: TBC.

115 THE HEALTH AND SAFETY FILE

- Responsibility: the contractor.
- Content: Obtain and provide the following information: as required in the Pre Construction Information and tender documents.
- Format: 2 nr hard copies and electronic copy
- Delivery to: Principle Designer By (date): no later than 2 weeks before Practical Completion.

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- 120 CONTENT OF THE BUILDING MANUAL PART 1: GENERAL
- Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
 - Index: list the constituent parts of the manual, together with their location in the document.
 - The Works:
 - Description of the buildings and facilities.
 - Ownership and tenancy, where relevant
 - Health and Safety information – other than that specifically required by the Construction (Design and Management) Regulations.
 - The Contract:
 - Names and addresses and contact details of all significant consultants, contractors, subcontractors, suppliers and manufacturers.
 - Overall design criteria.
 - Environmental performance requirements
 - Relevant authorities, consents and approvals.
 - Third party certification, such as those made by competent persons in accordance with the Building Regulations
 - Operational requirements and constraints of a general nature:
 - Maintenance contracts and contractors.
 - Fire safety strategy for the buildings and the site. Include drawings showing emergency escape and fire appliance routes, fire resisting doors location of emergency alarm and fire fighting systems, services, shut off valves switches, etc.
 - Emergency procedures and contact details in case of emergency.
 - Other specific requirements: TBC.
 - Description and location of other key documents.
 - Timescale for completion: 2 weeks before Practical Completion.

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- 120A CONTENT OF THE BUILDING MANUAL PART 1: GENERAL
- Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
 - Index: list the constituent parts of the manual, together with their location in the document.
 - The Works:
 - Description of the buildings and facilities.
 - Ownership and tenancy, where relevant
 - Health and Safety information – other than that specifically required by the Construction (Design and Management) Regulations.
 - The Contract:
 - Names and addresses and contact details of all significant consultants, contractors, subcontractors, suppliers and manufacturers.
 - Overall design criteria.
 - Environmental performance requirements
 - Relevant authorities, consents and approvals.
 - Third party certification, such as those made by competent persons in accordance with the Building Regulations
 - Operational requirements and constraints of a general nature:
 - Maintenance contracts and contractors.
 - Fire safety strategy for the buildings and the site. Include drawings showing emergency escape and fire appliance routes, fire resisting doors location of emergency alarm and fire fighting systems, services, shut off valves switches, etc.
 - Emergency procedures and contact details in case of emergency.
 - Other specific requirements: TBC.
 - BIM:
 - All BIM requirements and models (see Tender Documents)
 - Description and location of other key documents.
 - Final digital documentation should be HTML linked and fully integrated.
 - Timescale for completion: 2 weeks before Practical Completion.

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- 130 CONTENT OF THE BUILDING MANUAL PART 2: BUILDING FABRIC
- Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
 - Detailed design criteria, including:
 - Floor and roof loadings.
 - Durability of individual components and elements.
 - Loading restrictions.
 - Insulation values.
 - Fire ratings.
 - Other relevant performance requirements.
 - Construction of the building:
 - A detailed description of methods and materials used.
 - As-built drawings recording the construction, together with an index.
 - Information and guidance concerning repair, renovation or demolition/ deconstruction.
 - Periodic building maintenance guide chart.
 - Inspection reports.
 - Manufacturer's instructions index, including relevant COSHH data sheets and recommendations for cleaning, repair and maintenance of components.
 - Fixtures, fittings and components schedule and index.
 - Guarantees, warranties and maintenance agreements – obtain from manufacturers, suppliers and subcontractors.
 - Test certificates and reports required in the specification or in accordance with legislation, including:
 - Air permeability.
 - Resistance to passage of sound.
 - Continuity of insulation.
 - Electricity and Gas safety.
 - -.
 - Other specific requirements:
 - Photographic record of installations to be provided in the report.
 - Record of thermal and moisture content of all fabric facing into the archive spaces are to be provided and recorded at completion.
 - Record of space environmental logging data from construction and as recorded at completion.
 - Timescale for completion: 2 weeks before Practical Completion.

£	p

140A CONTENT OF THE BUILDING MANUAL PART 3: BUILDING SERVICES

- Content: Obtain and Provide the following, including all relevant details not included in other parts of the manual:
- Detailed design criteria and description of the systems, including:
 - Services capacity, loadings and restrictions
 - Services instructions.
 - Services log sheets.
 - Manufacturers' instruction manuals and leaflets index.
 - Fixtures, fittings and component schedule index.
- Detailed description of methods and materials used.
- As-built drawings for each system recording the construction, together with an index, including:
 - Diagrammatic drawings indicating principal items of plant, equipment and fittings
 - Record drawings showing overall installation
 - Schedules of plant, equipment, valves, etc. describing location, design performance and unique identification cross referenced to the record drawings.
 - Identification of services – a legend for colour coded services.
- Product details, including for each item of plant and equipment:
 - Name, address and contact details of the manufacturer.
 - Catalogue number or reference
 - Manufacturer's technical literature, including detailed operating and maintenance instructions.
 - Information and guidance concerning dismantling, repair, renovation or decommissioning.
- Operation: A description of the operation of each system, including:
 - Starting up, operation and shutting down
 - Control sequences
 - Procedures for seasonal changeover
 - Procedures for diagnostics, troubleshooting and faultfinding.
- Guarantees, warranties and maintenance agreements – obtain from manufacturers, suppliers and subcontractors.
- Commissioning records and test certificates list for each item of plant, equipment, valves, etc. used in the installations – including:
 - Electrical circuit tests.
 - Corrosion tests.
 - Type tests.
 - Work tests.
 - Start and commissioning tests.
- Equipment settings: Schedules of fixed and variable equipment settings established during commissioning.
- Preventative maintenance: Recommendations for frequency and procedures to be adopted to ensure efficient operation of the systems
- Lubrication: Schedules of all lubricated items
- Consumables: A list of all consumable items and their source.
- Spares: A list of recommended spares to be kept in stock, being those items subject to wear and tear or deterioration and which may involve an extended delivery time when replacements are required.
- Emergency procedures for all systems, significant items of plant and equipment.

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IWM Duxford - Building 104A Main Works

Preliminaries

- Annual maintenance summary chart.
 - Other specific requirements: All information is to be provided in accordance with BSRIA BG26/2011 and BG1/2007. To include log book and user guide as separate linked elements.
 - Timescale for completion: 2 weeks before Practical Completion
- 150 CONTENT OF THE BUILDING MANUAL PART 4: THE HEALTH AND SAFETY FILE
- Content: obtain and provide the following, including all relevant details not included in other parts of the manual, including:
 - residual hazards and how they have been dealt with
 - hazardous materials used
 - information regarding the removal or dismantling of installed plant and equipment
 - health and safety information about equipment provided for cleaning or maintaining the structure;
 - the nature, location and markings of significant services,
 - information and as-built drawings of the structure, its plant and equipment
 - -.
 - Information prepared by others: Details: N/A.
 - Timescale for completion: 2 weeks before Practical Completion.
 - Submit to: Principle Designer.
- 151 CONTENT OF THE BUILDING MANUAL PART 5: THE BUILDING USER GUIDE
- Content: Obtain and provide the following:
 - Building services information.
 - Emergency information.
 - Energy & environmental strategy.
 - Water use.
 - Transport facilities.
 - Materials & waste policy.
 - Re-fit/ re-arrangement considerations.
 - Reporting provision.
 - Training.
 - Links & references.
 - Other specific requirements: TBC.
 - " Timescale for completion: 2 weeks before Practical Completion .
- 160 PRESENTATION OF BUILDING MANUAL
- Format: A4 size, plastics covered, loose leaf, four ring binders with hard covers, each indexed, divided and appropriately cover titled.
 - Selected drawings needed to illustrate or locate items mentioned in the Manual: Where larger than A4, to be folded and accommodated in the binders so that they may be unfolded without being detached from the rings.
 - As-built drawings: The main sets may form annexes to the Manual.

£	p

- 190 MAINTENANCE SERVICE
 - Scope; provide a comprehensive maintenance service for the following items of plant and equipment: Include all planned preventative maintenance, as set out within the maintenance schedule and replacement of all consumable items
 - As detailed in the tender documents.
 - Terms: As detailed in the tender documents.
 - Commencement: As detailed in the tender documents.
 - Duration: As detailed in the tender documents.

- 220 TRAINING
 - Objective: Before Completion, explain and demonstrate to designated maintenance staff the purpose, function and operation of the installations including items and procedures listed in the Building Manual.
 - Level of training
 - Prior to handover, the Principal contractor is to arrange a pre handover inspection to be undertaken with the IWM FM department and hard FM service provider, together with suitable information and training to allow IWM and service provider to understand the operation of the building and installed facilities and undertake relevant maintenance works
 - Please see Specifications (Appendix A) for additional information and requirement for Training and demonstrations. Contractor to complete all training and demonstrations prior to handover and with completed O+M manuals.
 - Time allowance: Include a minimum of five days.

- 230A SPARE PARTS
 - General:
 - Spares as required by the preventative maintenance programme are to be available and stored on site. To include lamps and fittings where specified.
 - In addition and before Completion submit a priced schedule of spare parts that the Contractor recommends should be obtained and kept in stock for maintenance of the services installations.
 - Content: Include in the priced schedule for:
 - Manufacturers' current prices, including packaging and delivery to site.
 - Checking receipts, marking and numbering in accordance with the schedule of spare parts.
 - Referencing to the plant and equipment list in Part 3 of the Building Manual.
 - Painting, greasing, etc. and packing to prevent deterioration during storage.
 - Latest date for submission: Two weeks before completion.

£	p

250A TOOLS

- General: Provide tools and portable indicating instruments for the operation and maintenance of all services plant and equipment (except any installed under Named Subcontracts) together with suitable means of identifying, storing and securing.
- Refer also to Specifications (see Appendix A). To include all keys and access tools and test equipment where required.
- Quantity: Two complete sets.
- Time of submission: At completion.

£	p

**A40 CONTRACTOR'S GENERAL COST ITEMS:
MANAGEMENT AND STAFF**

- 110 MANAGEMENT AND STAFF
 - Cost significant items: The Contractor shall provide a full and detailed breakdown of his Preliminaries with his tender.

£	p

A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION

- 110 SITE ACCOMMODATION
 - Details: Site accommodation required or made/ not made available by the Employer: See section A36.
 - Cost significant items: The Contractor shall provide a full and detailed breakdown of his Preliminaries with his tender.

£	p

**A42 CONTRACTOR'S GENERAL COST ITEMS:
SERVICES AND FACILITIES**

- 110 SERVICES AND FACILITIES
- Details: Services or facilities required or made/ not made available by the Employer: See section A36.
 - Cost significant items:

POWER

LIGHTING

FUELS (excluding fuels for testing and commissioning)

WATER

TELEPHONE AND ADMINISTRATION

SAFETY, HEALTH AND WELFARE (see A34/)

STORAGE OF MATERIALS (see A33/)

RUBBISH DISPOSAL (see A34/)

CLEANING (see A33/)

DRYING OUT (see A34/)

PROTECTION OF WORK IN ALL SECTIONS (see A34/et seq)

PROTECTION OF BUILDING FABRIC IN ALL SECTIONS

SECURITY (see A34/)

MAINTAIN PUBLIC AND PRIVATE ROADS (see A34/)

SMALL PLANT AND TOOLS

OTHERS

ADDITIONAL SERVICES AND FACILITIES ITEMS: Insert below further cost items as may be required, with fixed charges and time related charges as appropriate.

£	p

**A43 CONTRACTOR'S GENERAL COST ITEMS:
MECHANICAL PLANT**

110 MECHANICAL PLANT

- Cost significant items:

CRANES

HOISTS

PERSONNEL TRANSPORT

TRANSPORT

EARTHMOVING PLANT

CONCRETE PLANT

PILING PLANT

PAVING AND SURFACING PLANT

ADDITIONAL MECHANICAL PLANT ITEMS

Insert below further cost items as may be required, with fixed charges and time related charges as required.

£	p

**A44 CONTRACTOR'S GENERAL COST ITEMS:
TEMPORARY WORKS**

- 110 TEMPORARY WORKS
- Details: Temporary works required or made/ not made available by the Employer: See section A36.
 - Cost significant items:

TEMPORARY ROADS

TEMPORARY WALKWAYS

ACCESS SCAFFOLDING

SUPPORT SCAFFOLDING AND PROPPING

HOARDINGS, FANS, FENCING, ETC.

HARDSTANDING

TRAFFIC REGULATIONS

ADDITIONAL TEMPORARY WORKS ITEMS: Insert below further cost items as may be required, with fixed charges and time related charge as required.

£	p

A50 WORK/ PRODUCTS BY/ ON BEHALF OF THE EMPLOYER

- 120 PRODUCTS PROVIDED BY/ ON BEHALF OF EMPLOYER
- General: Details of such products are given in the work sections, for fixing as part of the contract. Use for no other purpose than the Works.
 - Handling: Accept delivery, check against receipts and take into appropriate storage.
 - Surplus products: Keep safe and obtain instructions.

£	p

**A53 WORK BY STATUTORY AUTHORITIES/
UNDERTAKERS**

150 ADDITIONAL INFORMATION

- The Contractor shall give all notices in accordance with the Conditions of Contract and pay all fees and charges required under the Conditions of Contract. The amount of all such fees and charges shall be deemed to be included in the tender offer.

£	p

A54 PROVISIONAL WORK/ ITEMS

- 110A PROVISIONAL SUMS FOR DEFINED WORK
 - Please see Section 9 - Provisional Sums.

- 210A PROVISIONAL SUMS FOR UNDEFINED WORK
 - Please see Section 9 - Provisional Sums.

- 590A CONTINGENCIES
 - Please see Section 8 - Dayworks & Contingencies.

£	p

A55 DAYWORKS

- 105 ADDITIONAL INFORMATION
 - See Schedule of Works Section 8 - Dayworks & Contingencies.

£	p

A56 ADVANCE PROCUREMENT

- 105 ADDITIONAL INFORMATION
 - N/A

£	p

Section 2

Schedule of Works - Main Works (Building 104A)

Item	Item Description	Unit	Amount	
			£	p
	SECTION 2 - MAIN WORKS (BUILDING 104A)			
	<p>Preamble</p> <p>The Tenderer is to price in the tender document for the works shown on the Drawings and described in the Specifications. The Work Schedules are provided as a pricing document but do not purport to be an accurate or full description of the whole of the works required. If they are found to be at variance with the Drawings and/or Specifications then the latter shall prevail. Quantities and dimensions given in descriptions are provided as a general guide and to assist with identification of items of work. Where quantities are not provided the Contractor shall measure and calculate the Quantities. It is the Contractor's responsibility to check and verify any Quantities. These works are not measured in accordance with SMM7/NRM, as such, it is the Tenderers responsibility to satisfy themselves that all quantities are correct and that all works required by the Drawings and Specifications are incorporated and priced in their tender submission.</p> <p>Construction Sequencing: the Tenderer is to be made aware of the sequencing of works as detailed on drawings 3104 400 and 3104 401. The Tenderer is to allow for all sequencing, temporary works and props, scaffold towers and the like as detailed on the drawings, along with any further requirements deemed necessary by the Contractor to complete the works. The responsibility for these works shall remain with the Contractor and the cost of which shall be borne by the Contractor and deemed included in their Tender figure.</p> <p>When considering the structural elements the Tenderer is to be made aware of the 'General Notes and Loading Plans' on drawing 3104 100 as well as the requirements as detailed throughout the Structural Engineers Specification (please refer to the Section 1 'Preamble' and Section 2 'General Requirements' along with the specific sections which follow). All requirements are deemed to be met and priced within the structural items listed throughout this Schedule of Works.</p> <p>The Tenderer is to be made aware of the requirement for Passivhaus Certification and the need for pressure, thermal and fire proofing requirements as detailed throughout the tender documents. The Tenderer is particularly drawn to the Architects design details ('DD' series of drawings as provided in Appendix A) and the requirements for 'Weathertight Connections', 'Airtight Connections' and the positioning of the 'Airtightness Line'. The Tenderer is deemed to have included within their costs below for all connections and detailing as so described on these drawings and within the specifications.</p> <p>Substructure</p> <p><i>Preamble: (1) the Contractor is to be made aware of the Contamination Assessment Report (Appendix D) and Site Investigation Report (Appendix E) contained within these tender documents. The Contractor is required to review the Contamination Assessment Report and Site Investigation Report and price accordingly for the below Schedule of Works items based on the findings and conclusions of the report. The Contractor is also required to review and adhere to the Structural Engineers Specification (Appendix A).</i></p> <p><i>(2) The Contractor should be aware that as the excavation works are in made-ground there is the potential for contaminants and hazardous materials. The Contractor is therefore required to follow the recommendations, guidance and instructions contained within the Pre Construction Information (Appendix B) and Structural Engineers Specification (Appendix A) when undertaking excavation and disposal of materials, as well as all other guidance or instructions contained within these Tender Documents.</i></p> <p><i>(3) The Contamination Assessment Report (Appendix D) details the finding of asbestos fragments during sampling. It will be the responsibility of the Contractor to arrange the disposal of asbestos materials found during the excavations, along with any other potential contaminants and hazardous materials found during the works.</i></p> <p><i>(4) The Contractor is deemed to have made allowances for all formwork, earth work support and working space allowance within the rates they have provided below.</i></p> <p><i>(5) The Contractor is to be aware of the Enabling Works package undertaken prior to the Main Works (please see Preliminaries clause A13/115 for further details). These works involve the excavation to formation level of the ground floor slab (reduce level dig) and the installation of 100mm of hardcore. As such the description below for the 'Ground slab' only details the requirement to install a further 50mm of hardcore to obtain the design requirement of 150mm depth of hardcore below the ground slab. No excavation and disposal works are required for the slab, as such, this only applies to the mass concrete foundation beams which contains the requirement within the description of these works below.</i></p>			
	SECTION 2 - MAIN WORKS (BUILDING 104A) To Section Collection	£		

Item	Item Description	Unit	Amount	
			£	p
	<p><u>Ground slab: 350mm thick RC concrete slab; H20 bars at 200crs top and bottom longitudinal, H12 bars at 200crs top and bottom distribution; on 50mm sand blinding; 50mm well compacted hardcore; including all slab edge thickenings between underside of slab and top of all perimeter foundation beams (as 3104 300 - detail 2/4); all membrane and airtightness works above and below slab, including turning up faces and upstands; including DPM all as J40/120A; protection to DPM all as J30/110A; DPC all as J40/120C; jointing tape all as J40/120A; double sided butyl jointing tape all as spec J40/120A; airtightness tape all as P10/315C; primer/adhesive continuous 5mm bead all as P10/315C; all as SE spec Section 4; as drawings 3104 200, 3104 250, 3104 251, 3104 300, 9165 DD100, 9165 DD101</u></p>			
A	To main building (1,198m2)	Item		
B	extra over; well compacted hardcore to soft-spots (30m3) (provisional)	Item		
C	extra over; protection to slab perimeter; 2 nr layers 100mm SD Grade EPS insulation with staggered joints all as spec P10/256A (600x200); including cold applied tanking protection (Axium Guard and Guard Primer) to DPM all as spec J30/110A; DPM all as J40/120A; painted DPC all as J30/110A; painted DPM lapped over concrete; including weathertight tape at junction between insulation and duvet zone (or openings) all as Spec P10/320A; DPC all as J40/120C; all perimeter works to form thermal and airtight junction as drawing 9165 DD100 (131m)	Item		
D	To vehicle access (67m2)	Item		
E	extra over; protection to slab perimeter; 2 nr layers 100mm SD Grade EPS insulation with staggered joints all as spec P10/256A (825x200); including cold applied tanking protection (Axium Guard and Guard Primer) to DPM all as spec J30/110A; DPM all as J40/120A; painted DPC all as J30/110A; DPC lapped onto concrete footing; including weathertight tape at junction between insulation and duvet zone (or openings) all as Spec P10/320A; DPC all as J40/120C; all perimeter works to form thermal and airtight junction as drawing 9165 DD101 and 9165 DD131 (17m)	Item		
	<p><u>Mass concrete foundation beams: excavate trenches (note: through ground and 100mm hardcore as installed by Enabling Works Contractor); dispose of materials; compact base of trench; install concrete to Structural Engineers specification; all as SE spec Section 4; as drawings 3104 200, 3104 250, 3104 251, 3104 300</u></p>			
F	1000 wide x 550 deep; GB1 (113m)	Item		
G	1250 wide x 550 deep; GB2 (164m)	Item		
H	1500 wide x 775 deep; GB3 (54m)	Item		
J	2000 wide x 775 deep; GB4 (54m)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<p>Frame</p> <p><u>Structural steelwork; portal frame: grade S275 J0 (unless otherwise stated); plans as drawing 3104 200, 3104 201 and 3104 202; details as drawing 3104 300, 3104 301, 3104 310, 3104 320, 3104 321, 3104 322; adjustments to flanges as drawing 3104 321 - detail 22; including all preparations / treatments / coatings / protections as SE spec; all fabrication, framing and erection; specification as drawing 3104 100 and all as SE spec Section 5</u></p>			
A	Columns; 203x203x86 UC (2.99 t)	Item		
B	Beams; 203x203x86 UC (2.49 t)	Item		
C	Beams; 152x89x16 UB (0.16 t)	Item		
D	Beams (grade S355 J2H); 200x200x10 SHS; with bracketing welded on to support door (0.39 t)	Item		
E	Cross bracing; 70x70x7 EA (0.48 t)	Item		
F	Fittings, connections, base plates, end plates, side plates, top/bottom plates, resin anchors, nuts, bolts, washers, stiffeners, cleats, lugs and the like (0.65 t)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Roof			
	<u>Structural steelwork; grade S275 J0 (unless otherwise stated); plans as drawing 3104 202; pre-cambered by 22mm at each span to allow for dead load deflection; sections as drawing 3104 250 and 3104 251; details as drawing 3104 320; including all preparations / treatments / coatings / protections as SE spec; all fabrication, framing and erection; specification as drawing 3104 100 and all as SE spec Section 5</u>			
A	Roof beams; 305x305x97 UC (22.47 t)	Item		
B	extra over; Naylor ULTRAFIRE 215-9 lintel (lintels under beams); mortar bed; 215mm high x 215mm wide x 700mm long; as drawing 3104 320 - detail 18 (32nr)	Item		
C	Fittings, connections, base plates, end plates bolts, cleats, lugs, washers (2.25 t)	Item		
	<u>Concrete roof deck; 175mm thick reinforced concrete slab roof; cast in-situ; slopping; H16 bars at 200mm crs T1 layer min 25mm cvr; H10 bars at 200mm crs T2 layer min 25mm cvr; H16 bars at 200mm crs B1 layer min 65mm cvr; H10 bars at 200mm crs B2 layer min 65mm cvr; including all formwork and shuttering (sides, edges, soffits etc); five star grout to structural engineers specification; as drawings 3104 202, 3104 250, 3104 251; details as drawing 3104 320; all as SE spec Section 4</u>			
D	175mm thick; roof slab (1,190m2)	Item		
E	extra over; lifting hook; ceiling fixed lifting eye; range 1000kg; as drawing 9165 DD300 (1nr)	Item		
	<u>Concrete beam encasements; cast in-situ; including D49 wrapping mesh; including all formwork and shuttering (sides, edges, soffits, casings etc); all as SE spec Section 4; as drawing 3104 320 - detail 18</u>			
F	500x500mm; to roof beams (232m)	Item		
	<u>Hollowcore roof deck; hollowcore units; pre-cambered to allow for dead load deflection; hollowcore unit seating and 20mm thick mortar bed as drawing 3104 310 - detail 10; including 4hr intumescent mastic as drawing 9165 DD105 and Spec Z22/310B; as SE spec; as drawing 3104 202, 3104 320, 3104 321, 9165 GA103, 9165 DD111</u>			
G	150 thick; to vehicle access (67m2)	Item		
H	extra over; 35mm structural topping; as SE spec (67m2)	Item		
J	extra over; forming detail (thermal envelope and movement joint) between vehicle access roof and roof generally; mineral wool batt insulation as spec P10/165A; weathertight tape as spec P10/320A; fire retardant membrane as spec P10/320A; as drawing 9165 GA103 and 9165 DD111 (17m)	Item		
	<u>Roof coverings; built up reinforced bitumen membrane warm deck roof covering; including all preparation; primers; Bauder VB4-Expal vapour barriers; 250mm thick Bauderrock mineral wool insulation; Bauder PIR angle fillets; metal hard edge insulation protection angles; Bauder Total Roof System; Bauder G4E underlayer; Bauder K5K top layer/cap sheet; all insulation and adjustments for upstands and openings; all skirtings and upstands; all flashings, detail work and accessories as required; all works to form complete roof build-up as spec J41; as drawings 9165 GA103, 9165 DD110, 9165 DD111, 9165 DD112, 9165 DD113, 9165 DD115</u>			
K	Roof; generally (1,190m2)	Item		
L	extra over; roof detail at parapet interface; allow for all works to form intersection between roof and parapets (including works over head of parapet wall and under Cor-ten coping); including treated timber fillets; roof cap sheet over parapet head (overlapped with roof cap sheet); roof vapour control layer extending over parapet head; roof trims; weathertight tape all as P10/320A; all turning up faces and upstands; including forming sump drainage channel to west wall as drawing 9165 DD112 (145m)	Item		
M	Roof; to vehicle access (67m2)	Item		
N	extra over; forming detail (thermal envelope and movement joint) between vehicle access roof and roof generally; 3 nr layers 250mm high x 50mm thick insulation as J41/110A; 4 nr 250x50mm thick treated SW as spec G20/210; 2 nr 150x20mm plywood tops as spec K11/515C; torch grade waterproof expansion joint as spec J41/375A; Bauder Sprint Duo; roof cap sheet as J41/110A; roof underlayer as J41/110A; as drawing 9165 DD111 (17m)	Item		
P	extra over; service penetration cap and conduit to Bauder standard detail K17 (to allow for future PV connection); including all necessary adjustments for conduit through roof finishes and hollowcore deck; jubilees clips; as spec J41/110A; as drawing 9165 GA103 and 9165 DD111 (1nr)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
Sub-Contractor Designed Items (see Preambles - A1500)				
<u>Rainwater pipes (gravity system); aluminium pipework; Guardian Security Aluminium downpipe system; Alumasc Exterior Building Products Ltd (or equal and approved); including all brackets, fixings and accessories; installed in accordance with manufacturers recommendations; all as spec R10/370C; as drawing 9165 GA103, 9165 DD112, 9165 DD150</u>				
A	125x75 downpipes (30m)	Item		
<u>Rainwater hopper; Concealed hoppers; bespoke size aluminium rainwater head/hopper; Exterior Building Products Ltd (or equal and approved); including all brackets, fixings and accessories; installed in accordance with manufacturers recommendations; all as spec R10/366B; as drawing 9165 GA103, 9165 DD112, 9165 DD150</u>				
B	300mm wide x 100mm front to back x 250mm deep; with additional 50mm upstand to 3 sides to prevent overspill from chute (5nr)	Item		
C	extra over through parapet rainwater pipe weir outlet with leafguard; 300mm wide, 200mm high, depth of parapet (to suit hopper); including all adjustments and weatherproofing to parapet for installation; all as spec R10366A (5nr)	Item		
<u>Rainwater pipes (siphonic system); aluminium pipework; Alumasc Exterior Building Products Ltd (or equal and approved); including all brackets, fixings and accessories; installed in accordance with manufacturers recommendations; all as spec R10/370D; as drawing 9165 GA103, 9165 DD113, 9165 DD150</u>				
D	200 dia.; horizontal and vertical pipework to vehicle access (13m)	Item		
E	75 dia.; from roof outlets (3m)	Item		
F	extra over; syphonic roof outlet; including all adjustments to roof cap sheet and roof underlay; all as spec R10/366C; as drawing 9165 DD115 (2nr)	Item		
G	90 dia.; from roof outlets (4m)	Item		
H	extra over; syphonic roof outlet; including all adjustments to roof cap sheet and roof underlay; all as spec R10/366C; as drawing 9165 DD115 (3nr)	Item		
End of Sub-Contractor Designed Items				
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection			£	

Item	Item Description	Unit	Amount	
			£	p
	<p><u>Upper Floors</u></p> <p><u>Hollowcore floor; hollowcore units; pre-cambered to allow for dead load deflection; hollowcore unit seating and 20mm thick mortar bed as drawing 3104 310; including 4hr intumescent mastic to perimeters as drawing 9165 DD105 and Spec Z22/310B; as SE spec; as drawing 3104 201, 3104 250, 9165 GA101, 9165 DD105</u></p>			
A	350 thick; to mezzanine (261m2)	Item		
B	150 thick; to stair landing (15m2)	Item		
C	150 thick; to plant (32m2)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<p>Stairs</p> <p><u>Proprietary concrete stair: 2nr flights and landing: contractors choice of manufacturer: 1400mm wide: treads: Concrete with slip resistant coating as M60; risers: Concrete, dimension as drawings; strings: nosing to be Gradus EAR1140 stair edging (nosing) comprising an aluminium channel with interior insert, and is 60mm on the tread and 35mm on the riser to meet the guidance in BS8300:2009+A1:2010. Mill finish aluminium; all movement joints and fittings to complete the installation: including painted floor to stairs and landing all as spec M60/180A: including decorative finish/ sealer to stair concrete soffits all as spec M60/160G: all as spec L30/270: as drawing 9165 DD300</u></p>			
A	Concrete stairs	Item		
B	extra over; balustrade; proprietary balustrades to stair; galvanised cast iron; 950/976mm high; kee Klamp; face mounted balustrade with standard Vertical Railing Base; Kee Klamp handrails; top rail vinyl coated, standard colour; bottom rail galvanised cast iron; corrosion protected fittings and grub screws and no welding; all as spec L30/560; as drawing 9165 DD300 (approx 7m)	Item		
C	extra over; balustrade; proprietary balustrades to balconies; 2nr sections (to landing area and continuation of stair balustrade); galvanised cast iron; 1100 mm high; kee Klamp; face mounted balustrade with standard Vertical Railing Base; Kee Klamp handrails; top rail vinyl coated, standard colour; bottom rail galvanised cast iron; corrosion protected fittings and grub screws and no welding; including 3mm Stainless steel kick plate mounted on balcony edge face (metal plate bolted to concrete, from flush to U/S of slab to 100mm above screed); balcony to be demountable for lifting requirements; all as spec L30/560; as drawing 9165 DD300 (approx 5m)	Item		
D	extra over; handrail; galvanised cast iron; Kee Klamp; wall mounted Kee Klamp handrail against walls; vinyl coated, standard colour; corrosion protected fittings and grub screws and no welding; all as spec L30/560 (approx 12m)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<p>External Walls</p> <p><i>Preambles; (1) The Tenderer is to allow for adjustments to the materials below for working into all reveals and openings. This work is deemed included in the rates provided below.</i></p> <p><i>(2) The Tenderer is to be made aware that all walls to the vehicle bay have been measured in the 'External Wall' section as the two internal walls (North and East) form part of the continuous airtight envelope.</i></p> <p><u>Blockwork walls; 10N blockwork walls in class ii mortar; 2 nr layers of 190mm thick blocks; low shrinkage by Forticrete, or similar approved; wall ties as SE spec; including forming all openings as required; to locations as detailed on 3104 200 and 3104 201; as drawings 3104 250, 3104 251 and 3104 300; all as SE spec Section 6 and 7</u></p>			
A	400mm thick (165m2)	Item		
B	extra over; sealing around blockwork; primer/adhesive continuous 5mm bead all as spec P10/315C; as drawing 9165 DD100 and 9165 DD101 (28m)	Item		
C	extra over; movement joints; Ancon PPS 225mm wall tie with debonding sleeves at 200mm vertical crs; 2 nr 25mm wide rockwool intumescent expansion joint seal, duel seal refer to manufacturers literature for installation; all sealing and airtightness around blockwork to both sides as architects specification; airtightness tape and primer/adhesive continuous 5mm bead all as spec P10/315C and drawing 9165 DD120; approx 5500mm long (2nr)	Item		
	<p><u>Blockwork walls; 10N blockwork walls in class ii mortar; 100mm blocks laid flat; low shrinkage by Forticrete, or similar approved; including forming all openings as required; to locations as detailed on 3104 200 and 3104 201; as drawings 3104 250, 3104 251 and 3104 300; all as SE spec Section 6 and 7</u></p>			
D	215mm thick (678m2)	Item		
E	extra over; sealing around blockwork; primer/adhesive continuous 5mm bead all as spec P10/315C; as drawing 9165 DD100 and 9165 DD101 (117m)	Item		
F	extra over; movement joints; Ancon PPS 225mm wall tie with debonding sleeves at 200mm vertical crs; 2 nr 25mm wide rockwool intumescent expansion joint seal, duel seal refer to manufacturers literature for installation; all sealing and airtightness around blockwork to both sides as architects specification; airtightness tape and primer/adhesive continuous 5mm bead all as spec P10/315C and drawing 9165 DD120; approx 5500mm long (13nr)	Item		
G	extra over; Naylor ULTRAFIRE 215-9 lintel; mortar bed; with 150mm seating to each end; 215mm high x 215mm wide to suit opening width (to ED001); as drawing 3104 310 - detail 11 (1nr)	Item		
H	extra over; Naylor ULTRAFIRE 215-9 lintel; mortar bed; with 150mm seating to each end; 215mm high x 215mm wide to suit opening width (to ED002); as drawing 3104 310 - detail 11 (1nr)	Item		
	<p>Sub-Contractor Designed Items (see Preambles - A1500)</p> <p><u>Timber frame; i-joists; Cygum Timber Frame, or similar approved; at min 600mm centres; all as spec B15/110A; as drawings 9165 DD100, 9165 DD101, 9165 DD105, 9165 DD110, 9165 DD111, 9165 DD112, 9165 DD120, 9165 DD121</u></p>			
J	195mm deep; vertical joists (1,648m)	Item		
K	195mm deep; horizontal to top and bottom of duvet zone (296m)	Item		
	<p><u>Forming parapet structure to vehicle access roof; 125x75 C24 studs at 300mm crs; 125x75 C24 top plate; 125x75mm C24 sole plate with pairs of 5mm dia Tek screws into UC at 200mm crs; 2 layers of 9mm thk plywood sheathing fix with 5mm dia screws at 150mm crs to perimeter, 300mm crs throughout. Layered and staggered on elevation. Plywood joints to align with studs; treated SW counterbattens as spec G20/210; chamfered timber pieces; Simpson angle bracket with Hilti M6 HKD push anchor into slab at 300crs; as drawing 9165 DD113 and 3104 322</u></p>			
L	Parapet structure to vehicle access roof; approx 950mm high (17m)	Item		
	<p><u>Full fill cellulose insulation; Warmcell Cellulose Fibre Insulation (Warmcell 500); Excell Fibre Technology; insulation blown between studs, fully filled; all installation requirements as detailed; all as spec P10/205A; as drawings 9165 DD100, 9165 DD101, 9165 DD105, 9165 DD110, 9165 DD111, 9165 DD112, 9165 DD120, 9165 DD121</u></p>			
M	195mm width fill (954m2)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	<p>Oriented strand board wall sheathing; OSB3; 15mm thick; all setting out and fixing requirements; all as spec K11/435B; as drawings 9165 DD100, 9165 DD101, 9165 DD105, 9165 DD110, 9165 DD111, 9165 DD112, 9165 DD120, 9165 DD121</p> <p>195mm wide; including chamfered edges to receive capping sheets; to top and bottom of insulation duvet zone (317m)</p>	Item		
B	To internal face of parapets (132m2)	Item		
C	<p>Panelvent wall sheathing; breather board; Panelvent DHF, or similar approved; Panelvent 13mm thick; all setting out and fixing requirements; all as spec K11/485A; as drawings 9165 DD100, 9165 DD101, 9165 DD105, 9165 DD110, 9165 DD111, 9165 DD112, 9165 DD120, 9165 DD121</p> <p>13mm thick (954m2)</p>	Item		
D	<p>Rain screen cladding; Cor-ten cladding and support rails; drained and back ventilated cladding system; cassette rainscreen panel system 3mm thick Cor-ten with plain natural finish for natural weathering patination- blasted SA2.5; not less than 25mm air gaps; aluminium secondary supports/ framing system; Cor-ten soffit panels at all opening; all incorporated components and other requirements as necessary; including all fixings, brackets, fasteners, supports, interfaces; all works to provide complete system; including insect mesh to all openings (to bottom of cladding, to coping detail and to all door, vent openings and the like) as spec N16/320A; all as spec H92/110; as drawing 9165 GA600, 9165 DD100, 9165 DD105, 9165 DD110, 9165 DD112, 9165 DD120, 9165 DD121, 9165 DD133</p> <p>Generally (875m2)</p>	Item		
E	extra over; 450mm wide Cor-ten coping detail to top of cladding; as drawing 9165 DD110 and 9165 DD112 (131m)	Item		
F	extra over; outward opening Cor-ten gate with escape push bar; all fixings; all steel framing and post supports; all ironmongery; including push pad release integrated into frame; all as spec H92/110C; to door ED002; as drawing 9165 DD132 (1nr)	Item		
G	extra over; Cor-ten panel openings, to open with vents (note: vents to be priced in M&E section); 500x500 vent openings; all steel framing and supports; all ironmongery; including magnetic latch to release on fire alarm to MEP drawings and specifications; as spec H92/110; as drawing 9165 DD133 (5nr)	Item		
H	extra over; Cor-ten panel openings, to open with vents (note: vents to be priced in M&E section); 1000x1000 vent openings; all steel framing and supports; all ironmongery; including magnetic latch to release on fire alarm to MEP drawings and specifications; as spec H92/110; as drawing 9165 DD133 (5nr)	Item		
J	extra over; Cor-ten panel openings, to open for maintenance; 2500x1500 openings; all steel framing and supports; all ironmongery; including locks; as spec H92/110; as drawing 9165 GA600 (5nr)	Item		
K	<p>Rain screen cladding with perforations; pattern merges from low level pattern to high level pattern (i.e. proportion of open area increases) as height of panel increases; Cor-ten cladding and support rails; drained and back ventilated cladding system; cassette rainscreen panel system 3mm thick Cor-ten with plain natural finish for natural weathering patination- blasted SA2.5; not less than 25mm air gaps; aluminium secondary supports/ framing system; all incorporated components and other requirements as necessary; including all fixings, brackets, fasteners, supports, interfaces; all works to provide complete system; including insect mesh to all openings (to bottom of cladding, to coping detail and to all door, vent openings and the like) as spec N16/320A; including SFS Zone (secondary steel frame system) for cladding support (designed by cladding sub-contractor) as drawing 9165 DD113 and 9165 DD14; all as spec H92/110B; perforation pattern as drawing 9165 DD010; as drawing 9165 GA600, 9165 DD113, 9165 DD114, 9165 DD115, 9165 DD116</p> <p>To vehicle parking bay (95m2)</p>	Item		
L	extra over; 450mm wide Cor-ten coping detail to top of cladding; as drawing 9165 DD110 and 9165 DD112 (17m)	Item		
End of Sub-Contractor Designed Items				
M	<p>Calcium silicate boards to achieve 240FD: SUPLUX; Promat UK Limited; all fixings to manufacturers recommendations; as spec K11/885; as drawing 9165 DD133</p> <p>12mm thick; to vent openings (27m2)</p>	Item		
N	12mm thick; to maintenance openings (36m2)	Item		
P	<p>Breather membrane; Powerlon UV 145 FR; Industrial Textiles & Plastics Ltd; all installation requirements; penetration seals; opening seals; installed to manufacturers recommendations; all as spec P10/320A; as drawings 9165 DD100, 9165 DD101, 9165 DD105, 9165 DD110, 9165 DD100, 9165 DD112</p> <p>Breather membrane (1,058m2)</p>	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	<p><u>Metal stud frame suitable for external application to support cladding board; light gauge steel frame; contractors choice of manufacturer and product; all as spec B15/130A; as drawing 9165 DD101 and 9165 DD113</u></p> <p>To vehicle parking bay (164m2) (provisional)</p> <p><u>Fire cavity barriers; flexible intumescent strip cavity barrier, type CV/75/10) - ventilated; Intumescent systems limited, or equal approved; to external walls, head and cills of all opening and top and base of walls; cavity width 150mm north, south and east walls and 220mm on west wall; installed to manufacturers recommendations; all as spec P12/170A; to areas as detailed on drawing 9165 GA410; as drawings 9165 DD100, 9165 DD101, 9165 DD105, 9165 DD110, 9165 DD100, 9165 DD112</u></p>	Item		
B	Cavity width 150mm (north, south and east walls); horizontal (243m)	Item		
C	Cavity width 150mm (north, south and east walls); vertical (74m)	Item		
D	Cavity width 220mm (west wall); horizontal (120m)	Item		
E	Cavity width 220mm (west wall); vertical (52m)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A) To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Windows and External Doors			
	<u>ED001: 4 hour fire resistant door; Defender; Britannia Metador; galvanised steel; steel removable panel for reveal fixing; self closed; FD60 (S); all seals; including frame and architraves to manufacturers recommendation; finishes to doors, frames and architraves including standard etch primer or polyester powder coat to BA or RAL colour or anti-graffiti powder coat or stainless steel; threshold strips; all ironmongery as manufacturers recommendation; including Abloy EL560 Electromechanical Lock integrated with access control; all fixings; all as spec L20/515B; as drawing 9165 DD550 and 9165 DD131</u>			
A	Single door; 2410x1400 overall size; ED001 (1nr)	Item		
B	extra over; all sealing and airtightness around door to both sides; airtightness tape as spec P10/315C; including silicone seal to board reveal above door as Z22/310A; as drawing 9165 DD131	Item		
	<u>ED002: 4 hour fire resistant door; Defender; Britannia Metador; galvanised steel; steel removable panel for reveal fixing; self closed; FD240 (S); all seals; silicone greased; including frame and architraves to manufacturers recommendation; finishes to doors; including standard etch primer or polyester powder coat to BA or RAL colour or anti-graffiti powder coat or stainless steel; threshold strips; all ironmongery as manufacturers recommendation; including escape sash lock for fire door (lockable externally with sash override internally); all fixings; all as spec L20/515B; as drawing 9165 DD550 and 9165 DD132</u>			
C	Single door; 2110x1010 overall size; ED002 (1nr)	Item		
D	extra over; all sealing and airtightness around door to both sides; airtightness tape as spec P10/315C; weathertight tape as P10/315A; as drawing 9165 DD131	Item		
	Sub-Contractor Designed Items (see Preambles - A1500)			
	<u>Vehicle Bay and Entrance doors; bifolding weathered steel gates on mechanised arm operated from within parking bay; access controlled weathered steel entrance door; galvanised steel frame and gate posts; weathered steel wraps over front face and gaps between panels to match gaps elsewhere (i.e.14mm); all ironmongery including hinges, locking bolts and access requirements; galvanised steel espagnolette bolts, mounted internally; all necessary adjustments for integration of mag lock and powered door operator (see MEP drawings and specifications); all items for Primary support structure (as spec B15/130A); Rainscreen cladding system; Rainscreen panels (Corten); Air gaps; Secondary support/framing systems; Incorporated components; all as spec H92/110A; as drawing 9165 DD116 and 9165 DD130</u>			
E	Weathered steel access gate and bifolding doors	Item		
	End of Sub-Contractor Designed Items			
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Internal Walls			
	<u>Blockwork walls: 10N blockwork walls in class ii mortar; 100mm blocks laid flat; low shrinkage by Forticrete, or similar approved; including forming all openings as required; all fireproof sealant to openings; to locations as detailed on 3104 200 and 3104 201; as drawings 3104 250, 3104 251 and 3104 300: all as SE spec Section 6 and 7</u>			
A	215mm thick (688m2)	Item		
B	extra over; movement joints; Ancon PPS 225mm wall tie with debonding sleeves at 200mm vertical crs; 2 nr 25mm wide rockwool intumescent expansion joint seal, duel seal refer to manufacturers literature for installation; all sealing around blockwork to both sides; airtightness tape and primer/adhesive continuous 5mm bead all as spec P10/315C; as drawing 3104 310 - detail 13; approx 5500mm long (15nr)	Item		
C	extra over; wall starters; Ancon Staifix universal wall starter system ties at 200 crs vertically as drawing 3104 310 - detail 26; including all sealing and airtightness around blockwork to both sides as architects specification; airtightness tape and primer/adhesive continuous 5mm bead all as spec P10/315C and drawing 9165 DD120; to approx 5500mm high walls (11nr)	Item		
D	extra over; Naylor ULTRAFIRE 215-9 lintel; mortar bed; with 150mm seating to each end; 215mm high x 215mm wide to suit opening width (to ID001, ID002, ID003, ID004, ID005, ID008); as drawing 3104 310 - detail 11 (6nr)	Item		
E	extra over; Naylor ULTRAFIRE 215-9 lintel; mortar bed; with 150mm seating to each end; 215mm high x 215mm wide to suit opening width (to ID006, ID007); as drawing 3104 310 - detail 11 (2nr)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Internal Doors			
	<u>IDT001: 4 hour fire resistant door (2042x1280): Armasecure steel hinged security door; Armashiled Building Security: galvanised steel; single swing; self closer; FD240 (S); 240/240 Integrity/insulation; all seals; including frame and architraves to manufacturers recommendation; PPC steel reveals; 4 hr fire protection mastic as door suppliers recommendations; finishes to doors, frames and architraves as manufacturers recommendation (colour TBC); threshold strips; all ironmongery as manufacturers recommendation; including Abloy EL560 Electromechanical Lock integrated with access control; including door closers; battery back-up; all fixings; all as spec L20/515A: as drawing 9165 DD550</u>			
A	Single doors; 2110x1400 overall size; ID001, ID002, ID003, ID004, ID005, ID008 (6nr)	Item		
	<u>IDT002: 1 hour fire resistant door (2060x930): Armasecure steel hinged security door; Armashiled Building Security: galvanised steel; single swing; self closer; FD60 (S); 60/60 Integrity/insulation; all seals; including frame and architraves to manufacturers recommendation; PPC steel reveals; 4 hr fire protection mastic as door suppliers recommendations; finishes to doors, frames and architraves as manufacturers recommendation (colour TBC); threshold strips; all ironmongery and locking mechanism as manufacturers recommendation; including door closers; battery back-up; all fixings; all as spec L20/515C: as drawing 9165 DD550</u>			
B	Single doors; 2110x1010 overall size; ID006, ID007 (2nr)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A) To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Wall finishes			
	<u>Rainscreen cladding timber board: Medite Tricova Extreme; Mediate Europe Ltd; all installation requirements; all fixings and fasteners; installed to manufacturers recommendations; including insect mesh to back of panels; enclosing cavity as spec N16/325; as drawings 9165 DD101, 9165 DD113, 9165 DD115, 9165 DD116, 9165 DD117, 9165 DD118; all as spec H92/115A</u>			
A	15mm thick; to vehicle parking bay, continues into parapet (184m2) (provisional)	Item		
	<u>Plaster to walls; proprietary lime:sand render/plaster (airtightness); 10mm thick Baunit RK 38 lime plaster base coat; 3mm thick Baunit RK 38 plaster finish final coat; including to all opening reveals; all accessories including airtightness tapes/seals; all as spec M20/330B</u>			
B	Generally; to internal face of external walls (843m2)	Item		
	<u>Paint to walls; emulsion paint to walls; Keim Ecosil 2 coat system (water based, solvent and VOC free); 2 nr initial coats Keim Ecosil Grund; 2 nr finishing coat Keim Ecosil; colours TBC (allow for maximum 5 colour variations); including to all opening reveals to rooms; all as spec M60/110A</u>			
C	To entrance GF/FF (112m2)	Item		
D	To staircase areas (62m2)	Item		
E	To plant (75m2)	Item		
F	To entrance lobby/temporary storage (171m2)	Item		
G	To storage 1 (170m2)	Item		
H	To storage 2 (426m2)	Item		
J	To storage 3 (426m2)	Item		
K	To cold storage (426m2)	Item		
L	To gas suppression (81m2)	Item		
M	To mezzanine (207m2)	Item		
	<u>Paint to walls; timber board paint; Osmo Country Colour; 1 nr initial coat; 1 nr finishing coat; custom colour cobalt blue; including to all opening reveals to rooms; all as spec M60/160B</u>			
N	To vehicle access (153m)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Floor Finishes			
	<i>Preamble; the Contractor is to be made aware of the requirement for installation of roller racking rails (please see note on drawing 9165 DD100). The Contractor is required to coordinate with the racking contractor (Rackline) with regards the installation of the roller racking rails prior to laying screeds - please see Preliminaries clause A13/135 for further details.</i>			
	<u>Proprietary quick drying levelling screeds; 75mm thick; TBP Pozament Cemscreed; Tarmac Building Products; trowelled finish; movement joints as recommended by manufacturer and above slab movement joints; including polyethylene sheet as spec M10/280; all as spec M10/130F</u>			
A	To vehicle access (63m2)	Item		
B	To entrance (34m2)	Item		
C	To plant (30m2)	Item		
D	To entrance lobby/temporary storage (43m2)	Item		
E	To storage 1 (254m2)	Item		
F	To storage 2 (254m2)	Item		
G	To storage 3 (254m2)	Item		
H	To cold storage (254m2)	Item		
J	To mezzanine; including 4hr intumescent mastic to perimeters as drawing 9165 DD105 and Spec Z22/310B (254m2)	Item		
	<u>Proprietary quick drying levelling screeds; 35mm thick; TBP Pozament Cemscreed; Tarmac Building Products; trowelled finish; movement joints as recommended by manufacturer; including polyethylene sheet as spec M10/280; all as spec M10/130G</u>			
K	To entrance FF (14m2)	Item		
L	To gas suppression (30m2)	Item		
	<u>Paint to floors; Dulux trade high performance floor paint (two pack epoxy floor paint); preparation, application and number of coats as per manufacturers recommendation; all as spec M60/180A</u>			
M	To vehicle access (63m2) (provisional)	Item		
N	To entrance (34m2)	Item		
P	To entrance FF (14m2)	Item		
Q	To plant (30m2)	Item		
R	To entrance lobby/temporary storage (43m2)	Item		
S	To storage 1 (254m2)	Item		
T	To storage 2 (254m2)	Item		
U	To storage 3 (254m2)	Item		
V	To cold storage (254m2)	Item		
W	To gas suppression (30m2)	Item		
X	To mezzanine (254m2)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<u>Skirtings: softwood; pencil rounded; Ex25mm x Ex150mm; including gloss paint finish all as spec M60/130; all as spec P20/110A</u>			
A	To entrance (31m2)	Item		
B	To entrance FF (26m2)	Item		
C	To entrance lobby/temporary storage (31m2)	Item		
D	To storage 1 (74m2)	Item		
E	To storage 2 (74m2)	Item		
F	To storage 3 (74m2)	Item		
G	To cold storage (74m2)	Item		
H	To mezzanine (74m2)	Item		
	<u>Aluminium chequerplate over rubber gasket to door reveal: Aalco Swanley; aluminium; all as spec H72/480; as drawing 9165 DD131 and 9165 DD132</u>			
J	1400x350mm; to ED001	Item		
K	1000x450mm; to ED002	Item		
	<u>Matwell frame: UMFA18; Gradus Accessories; recessed; all as spec N10/290; including all adjustments for installation requirements; location as drawing 9165 GA100; as drawing 9165 DD131</u>			
L	To entrance; size to match matting below (1nr)	Item		
M	extra over; entrance matting; Topguard FR Primary Barrier Matting; Gradus Matting; 2600x2743mm; all as spec N10/300A (1nr)	Item		
N	extra over; treated SW piece between matwell and external door as G20/210; airtightness tape to seal junction as spec P10/315C; primer/adhesive continuous 5mm bead below matwell as spec P10/315C	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	Ceiling Finishes			
	<u>Suspended ceiling grid and board; external grade MF ceiling grid (contractors choice); 400x1200mm ccs for main support channels; 1500mm ceiling void; Medite Tricoya Extreme board; all fixings and fasteners; weathertight tape detail to edges as P10/315A; all as spec H92/115A; as drawing 9165 DD114</u>			
A	To vehicle access (63m2)	Item		
B	extra over; forming parking bay light detail to east and north wall; all adjustments to MF ceiling and Medite Tricoya Extreme board to form light detail; as drawing 9165 DD117 and DD118 (15m)	Item		
	<u>Paint to ceilings; decorative finish/sealer; Keim Lazur Concretal; colour ref 9554; preparation, application and number of coats as per manufacturers recommendation; including to steelwork concrete reveals; all as spec M60/160G</u>			
C	To entrance (34m2)	Item		
D	To entrance FF (18m2)	Item		
E	To entrance lobby/temporary storage (43m2)	Item		
F	To storage 1 (293m2)	Item		
G	To storage 2 (293m2)	Item		
H	To storage 3 (293m2)	Item		
J	To cold storage (293m2)	Item		
K	To mezzanine (254m2)	Item		
	<u>Paint to ceilings; timber board paint; Osmo Country Colour; 1 nr initial coat; 1 nr finishing coat; custom colour cobalt blue; including to all opening reveals to rooms; all as spec M60/160B</u>			
L	To vehicle access (63m2)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A) To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<p>Furniture, Fittings & Equipment</p> <p><u>Bollards: Rhino RS001 Stainless Steel Bollard: Marshalls plc; all fixings for base plate: all as spec Q50/190; location as drawing 9165 GA100</u></p>			
A	To vehicle access; 1000mm high (9nr)	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	<p>Sundries</p> <p><u>Insert below items and associated costs for works which are not listed in the foregoing Section of the Work Schedules but are indicated or referred to on the Drawings and/or in the Specification, or are required to complete the excavation and disposal works:-</u></p>	Item		
SECTION 2 - MAIN WORKS (BUILDING 104A)				
To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<u>COLLECTION</u>			
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	SECTION 2 - MAIN WORKS (BUILDING 104A) To General Summary	£		

Section 3

Schedule of Works - Mechanical

Item	Item Description	Unit	Amount	
			£	p
SECTION 3 - MECHANICAL				
<p>The Tenderer is to state on the Summary of Tender, the various lump sums for which he is prepared to execute the various sections of the works and which together make up the total tender price on the basis of a 'FIXED PRICE' Contract based on the Contract completion date stated in the Preliminaries to the Main Contract. Any items not specifically described on the Tender Summary price are to be included in the most appropriate heading or listed under the 'Others' item at the end of this Section.</p> <p>The Tenderer will be expected to provide a full schedule of rates at the time of placing an order, for the purposes of assessing any contract variations.</p> <p>Please note: for mechanical provisional sums (<u>Section M2 of 'Mechanical Form of Tender'</u>) please see Schedule of Works - 'Section 9 - Provisional Sums'.</p> <p>Mechanical Services Installation</p> <p>Mechanical services installations; in accordance with E3 Consulting Engineers drawings and specifications referred to in Appendix 'A' to this document</p> <p><u>M1 - Miscellaneous</u></p> <p>A M1.1 - Installation drawings Item</p> <p>B M1.2 - Record drawings Item</p> <p>C M1.3 - BIM Level 2 Item</p> <p>D M1.4 - O&M manual Item</p> <p>E M1.5 - Client demonstration and instructions Item</p> <p>F M1.6 - Site supervision and other preliminaries Item</p> <p>G M1.7 - 12 months preventative maintenance cost Item</p> <p><u>M3 - Heating and Cooling Systems</u></p> <p>H M3.1 - Gas suppression plantroom frost protection system Item</p> <p>J M3.2 - Air cooled process chiller and associated equipment Item</p> <p>K M3.3 - Pipework, fittings and other equipment Item</p> <p>L M3.4 - Water treatment, glycol charge, testing and commissioning Item</p> <p><u>M4 - Ventilation</u></p> <p>M M4.1 - Main repository heat recovery air handling unit Item</p> <p>N M4.2 - Ductwork & Fittings Item</p> <p>P M4.3 - Grilles, Louvres Item</p> <p>Q M4.4 - Primary attenuation Item</p> <p>R M4.5 - Smoke dampers and associated installations Item</p> <p>S M4.6 - Gas suppression smoke extract fans and dampers Item</p> <p>T M4.7 - Gas suppression over pressure damper installation Item</p>				
SECTION 3 - MECHANICAL To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	M4.8 - Gas suppression façade damper installations	Item		
B	M4.9 - Testing and commissioning	Item		
	<u>M5 - Domestic Water Services</u>			
C	M5.1 - Incoming mains water service	Item		
D	M5.2 - Pipework and fittings	Item		
E	M5.3 - Electric trace heating	Item		
F	M5.4 - Water treatment, testing and commissioning	Item		
	<u>M6 - Soils, Wastes, Condensate Drains and Sanitaryware</u>			
G	M6.1 - Condensate drainage system	Item		
H	M6.2 - Floor gully and associated drainage	Item		
J	M6.3 - Testing and commissioning	Item		
	<u>M7 - Thermal Insulation</u>			
K	M7.1 - Cooling system insulation installation	Item		
L	M7.2 - Ventilation system insulation installation	Item		
M	M7.3 - Domestic water services insulation installation	Item		
	<u>M8 - Controls Systems</u>			
N	M8.1 - Equipment (control panels, meters, sensors etc)	Item		
P	M8.2 - Controls wiring	Item		
Q	M8.3 - Engineering input and software	Item		
R	M8.4 - Testing and commissioning	Item		
S	M8.5 - Seasonal commissioning	Item		
	<u>M9 - Fire Protection Systems</u>			
T	M9.1 - Gas suppression supply and installation	Item		
U	M9.2 - Option for reserve gas store	Item		
V	M9.3 - Battery and electrical back systems	Item		
W	M9.4 - Testing and commissioning	Item		
X	M9.5 - Long term warranty	Item		
Y	<u>Others; tenderer to insert below items and associated costs for works which are not listed in the foregoing section of the Work Schedules but are indicated or referred to on the Drawings and/or in the Specification, or are required to complete the Works</u>	Item		
SECTION 3 - MECHANICAL To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	<u>Allow for Main Contractor's Profit and Overheads on the preceding Mechanical Sub-Contractor's Tender</u>%	Item		
SECTION 3 - MECHANICAL To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<p><u>COLLECTION</u></p> <p>Page 3/1</p> <p>Page 3/2</p> <p>Page 3/3</p>			
	<p>TOTAL - SECTION 3 - MECHANICAL To General Summary</p>	£		

Section 4

Schedule of Works - Electrical

Item	Item Description	Unit	Amount	
			£	p
SECTION 4 - ELECTRICAL				
<p>The Tenderer is to state on the Summary of Tender, the various lump sums for which he is prepared to execute the various sections of the works and which together make up the total tender price on the basis of a 'FIXED PRICE' Contract based on the Contract completion date stated in the Preliminaries to the Main Contract. Any items not specifically described on the Tender Summary price are to be included in the most appropriate heading or listed under the 'Others' item at the end of this Section.</p> <p>The Tenderer will be expected to provide a full schedule of rates at the time of placing an order, for the purposes of assessing any contract variations.</p> <p>Please note: data services ducts will be installed prior to the Main Works Contract (direct by the Client). Please see Preliminaries clause A13/115 for further details.</p> <p>Please note: for electrical provisional sums (<u>Section E2 of 'Electrical Form of Tender'</u>) please see Schedule of Works - 'Section 9 - Provisional Sums'</p> <p>Electrical Services Installation</p> <p>Electrical services installations; in accordance with E3 Consulting Engineers drawings and specification referred to in Appendix 'A' to this document</p> <p><u>E1 - Miscellaneous</u></p> <p>A E1.1 - Installation drawings Item</p> <p>B E1.2 - Record drawings Item</p> <p>C E1.3 - BIM Level 2 Model Item</p> <p>D E1.4 - O&M manual Item</p> <p>E E1.5 - Client demonstration and instructions Item</p> <p>F E1.6 - Site supervision and other preliminaries Item</p> <p>G E1.7 - Seasonal commissioning attendance Item</p> <p>H E1.8 - Strip out existing services Item</p> <p>J E1.9 - 12 months maintenance (see general spec) Item</p> <p><u>E3 - Incoming Electrical Supply</u></p> <p>K E3.1 - Incoming Electrical Supply Item</p> <p>L E3.2 - Testing and commissioning Item</p> <p><u>E4 - Low Voltage Switchgear and Cables</u></p> <p>M E4.1 - Switchpanel and submains cables Item</p> <p>N E4.2 - Submains cables and containment Item</p> <p>P E4.3 - Surge protection Item</p> <p>Q E4.4 - Testing and commissioning Item</p> <p><u>E5 - Distribution Boards</u></p> <p>R E5.1 - Distribution board with split smart sub-metering Item</p> <p>S E5.2 - Testing and commissioning Item</p>				
SECTION 4 - ELECTRICAL To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<u>E6 - Final Circuits and General Equipment</u>			
A	E6.1 - General wiring, containment and accessories	Item		
B	E6.2 - Testing and commissioning	Item		
	<u>E7 - Lighting and Emergency Lighting</u>			
C	E7.1 - Internal luminaires	Item		
D	E7.2 - Internal lighting controls	Item		
E	E7.3 - External luminaires	Item		
F	E7.4 - External lighting controls	Item		
G	E7.5 - Central battery units	Item		
H	E7.6 - Testing and commissioning	Item		
J	E7.7 - Final programming and setting up	Item		
	<u>E8 - Fire Alarm System</u>			
K	E8.1 - Wiring installation and containment	Item		
L	E8.2 - Analogue Addressable Fire Alarm system supply and installation	Item		
M	E8.3 - Fire alarm interfaces with gas suppression	Item		
N	E8.4 - Fire alarm interfaces with mechanical systems	Item		
P	E8.5 - Testing and commissioning	Item		
	<u>E9 - Wiring to Mechanical Plant and Controls</u>			
Q	E9.1 - Wiring and containment to mechanical plant and equipment	Item		
R	E9.2 - Testing and commissioning	Item		
	<u>E10 - Earthing</u>			
S	E10.1 - Main earth terminal and equipotential bonding	Item		
T	E10.2 - Supplementary equipotential bonding	Item		
U	E10.3 - Testing and commissioning	Item		
	<u>E11 - Security Systems</u>			
V	E11.1 - Intruder detection system	Item		
W	E11.2 - CCTV systems	Item		
X	E11.3 - Access Control Systems	Item		
Y	E11.4 - Testing and commissioning	Item		
	SECTION 4 - ELECTRICAL To Section Collection	£		

Item	Item Description	Unit	Amount	
			£	p
	<u>E12 - Voice and Data Communications</u>			
A	E12.1 - Incoming data service	Item		
B	E12.2 - Fibre optic cables	Item		
C	E12.3 - Equipment cabinets	Item		
D	E12.4 - Data wiring, patch panels and socket outlets	Item		
E	E12.5 - Data network testing and commissioning	Item		
	<u>E13 - Lightning Protection System</u>			
F	E13.1 - Risk assessment	Item		
G	E13.2 - Air Terminations System	Item		
H	E13.3 - Down Conductors	Item		
J	E13.4 - Earth Terminations	Item		
K	E13.5 - Samples	Item		
L	E13.6 - LPS installation	Item		
M	<u>Others; tenderer to insert below items and associated costs for works which are not listed in the foregoing section of the Work Schedules but are indicated or referred to on the Drawings and/or in the Specification, or are required to complete the Works</u>	Item		
	<u>Allow for Main Contractor's Profit and Overheads on the preceding Electrical Sub-Contractor's Tender</u>			
N%	Item		
	SECTION 4 - ELECTRICAL To Section Collection	£		

Item	Item Description	Unit	Amount	
			£	p
	<u>COLLECTION</u>			
	Page 4/1			
	Page 4/2			
	Page 4/3			
	TOTAL - SECTION 4 - ELECTRICAL To General Summary	£		

Section 5

Schedule of Works – Builders Work in Connection with Services

Item	Item Description	Unit	Amount	
			£	p
SECTION 5 - BUILDER'S WORK IN CONNECTION WITH SERVICES				
Preamble				
<p>The Tenderer is to price in the tender document for the works shown on the Drawings and described in the Specifications. The Work Schedules are provided as a pricing document but do not purport to be an accurate or full description of the whole of the works required. If they are found to be at variance with the Drawings and/or Specifications then the latter shall prevail. Quantities and dimensions given in descriptions are provided as a general guide and to assist with identification of items of work. Where quantities are not provided the Contractor shall measure and calculate the Quantities. It is the Contractor's responsibility to check and verify any Quantities. These works are not measured in accordance with SMM7/NRM, as such, it is the Tenderers responsibility to satisfy themselves that all quantities are correct and that all works required by the Drawings and Specifications are incorporated and priced in their tender submission.</p> <p>The Tenderer's attention is particularly drawn to the fact that the builder's works items included in this section are not necessarily exhaustive, and allowance should be included for any further builder's works that are required to be carried out in connection with the mechanical and electrical services installations. Tenderers shall be deemed to have made due allowance for the cost of all such additional works (a 'Sundries' heading is available at the end of this section to allow listing and pricing of such items) in their pricing below.</p> <p>For service penetrations the Tenderer is required to comply with all requirements regarding sealing for fire ratings (protection/stopping) see Architects Specification 'P12 Fire stopping Systems' and M&E drawings and Specification. The Tenderer is also required to comply with all requirements to provide fully sealed service penetrations for pressure and thermal integrity (Passivhaus) as detailed on the Drawings and Specifications. The cost of this is deemed to be included in the rates below.</p> <p>Builder's Work in Connection with Mechanical and Electrical Services Installations; as drawings 4405 X 00 BW 9010 and 4405 X 01 BW 9010</p> <p><u>External wall openings: including all making good; fully sealed for fire rating (protection/stopping); fully sealed for pressure and thermal integrity (Passivhaus); including Naylor ULTRAFIRE 215-9 lintel, mortar bed, with 150mm seating to each end. 215mm high x 215mm wide to suit opening width; as drawings 4405 X 00 BW 9010 and 4405 X 01 BW 9010</u></p>				
A	200x200; opening for chilled water (1nr)	Item		
B	500x150; opening at high level for electrical services (1nr)	Item		
C	500x500; external wall openings for gas extract at low level (4nr)	Item		
D	500x500; opening in façade at mezzanine low level for gas extract (1nr)	Item		
E	600x300; opening in wall for pressure relief duct connection (1nr)	Item		
F	1000x1000; opening in external wall/facade for pressure relief at 2/3 HT (5nr)	Item		
G	100 dia.; through façade for waste discharge at low level (1nr)	Item		
<p><u>Internal wall openings: including all making good; fully sealed for fire rating (protection/stopping); fully sealed for pressure and thermal integrity (Passivhaus); including Naylor ULTRAFIRE 215-9 lintel, mortar bed, with 150mm seating to each end. 215mm high x 215mm wide to suit opening width; as drawings 4405 X 00 BW 9010 and 4405 X 01 BW 9010</u></p>				
H	300x300; for build in smoke damper at high level (5nr)	Item		
J	500x150; opening at high level (2nr)	Item		
K	400x300; opening at HL (1nr)	Item		
L	600x300; opening in wall for pressure relief duct connection (1nr)	Item		
M	600x300; opening at HL (1nr)	Item		
N	750x150; opening at high level for electrical services (5nr)	Item		
P	800x200; opening at HL (1nr)	Item		
Q	1000x200; opening at HL (1nr)	Item		
SECTION 5 - BUILDERS WORK IN CONNECTION WITH SERVICES To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	200 dia.; core drill for gas pipework at high level sealed to suit (2nr)	Item		
B	200 dia.; core drill at high (1nr)	Item		
<u>Ground floor slab openings; including all making good; fully sealed for fire rating (protection/stopping); fully sealed for pressure and thermal integrity (Passivhaus); as drawings 4405 X 00 BW 9010</u>				
C	100 dia.; for gully in floor slab (1nr)	Item		
<u>Upper floor slab openings; including all making good; fully sealed for fire rating (protection/stopping); fully sealed for pressure and thermal integrity (Passivhaus); as drawings 4405 X 00 BW 9010 and 4405 X 01 BW 9010</u>				
D	150x150; slot in floor for electrical services riser (1nr)	Item		
E	1000x300; opening in slab above for gas pipework riser (1nr)	Item		
F	50 dia.; build in floor gully for waste to below (1nr)	Item		
<u>BW.D: electromagnetic lock to be fitted within the door; concealed wiring route through door and door frame; chase in conduit to blockwork to provide concealed cable route from door frame to conduit box adjacent door; as drawings 4405 X 00 BW 9010 and 4405 X 01 BW 9010</u>				
G	BW for doors (7nr)	Item		
<u>Blockwork shaft: floor to ceiling; including 500x500 opening at low level for gas extract; 600x100 opening at mid level for pressure relief; as drawing 4405 X 00 BW 9010</u>				
H	600x300; blockwork shaft	Item		
<u>Concrete base; 100 high for chiller; including all necessary formwork and shuttering; including protection frame to protect chiller from vehicle damage; as drawing 4405 X 00 BW 9010</u>				
J	Concrete base; to vehicle access	Item		
<u>External and works outside site boundary; as drawing 4405 X XX BW 9010</u>				
<i>Preamble: (1) all works in this section are to be carried out in line with E3 specifications and NJUG requirements. See drawing 4405 X XX BW 9010 for additional details.</i>				
<i>(2) The Contractor is to be made aware of the Structural Engineers Specification Section 8 'Paving and External Works'. The Contractor is deemed to have made all allowances for the specifications and workmanship as detailed in this section for the items listed below.</i>				
<i>(4) The Contractor is deemed to have made allowances for all formwork, earth work support and working space allowance within the rates they have provided below.</i>				
<u>Break out the floor within building 104 to install LV cable duct to rise via slow sweep bends and terminate in floor; all works to enable connection through existing Building 104 structures for new LV connection; make good floor and all areas disturbed by the works; as drawing 4405 X XX BW 9010</u>				
K	To Building 104	Item		
<u>LV trench works; incoming LV cable in trench min 600mm covering soft dig. C/W with sharp bed and identification tape; all excavations and disposals; beddings and surrounds; reinstatement of all existing surfaces upon completion (hard and soft standings); as drawing 4405 X XX BW 9010</u>				
L	LV trench; from Building 104A (74m)	Item		
M	LV trench; for root mounted bollards (42m)	Item		
N	extra over; concrete base for bollards; including all excavation and disposal; sub-bases and making good surfaces upon completion; to structural engineers specification (4nr)	Item		
<u>Trench for 2x100 dia. connection to external lighting and access control bollard; incoming LV cable in trench min 600mm covering soft dig. C/W with sharp bed and identification tape; all excavations and disposals; beddings and surrounds; as drawing 4405 X XX BW 9010</u>				
P	Trench (4m)	Item		
<u>Data duct trench works; extend data ducts from cable draw chamber; min 450mm covering soft dig. C/W with sharp bed and identification tape; all excavations and disposals; beddings and surrounds; reinstatement of all existing surfaces upon completion (soft standings); as drawing 4405 X XX BW 9010</u>				
Q	Data duct trench (38m)	Item		
SECTION 5 - BUILDERS WORK IN CONNECTION WITH SERVICES To Section Collection			£	

Item	Item Description	Unit	Amount	
			£	p
	<p><u>Camera trench works (for 100 dia. connection to cameras); min 600mm covering soft dig. C/W with sharp bed and identification tape; all excavations and disposals; beddings and surrounds; reinstatement of all existing surfaces upon completion (soft standings; as drawing 4405 X XX BW 9010</u></p>			
A	Between Buildings 104 and 104A (11m)	Item		
B	extra over; 1 m3 concrete base for CCTV column; including all excavation and disposal; subbases and making good surfaces upon completion; to structural engineers specification (1nr)	Item		
C	Adjacent Building 104A (2m) (provisional)	Item		
D	extra over; 1 m3 concrete base for CCTV column; including all excavation and disposal; subbases and making good surfaces upon completion; to structural engineers specification (1nr)	Item		
	<p><u>Incoming water; opening through below ground external wall; opening through sub-base and ground floor slab; pipe laid in duct; insulation requirement if dimension A is less than 750mm or if pipe passes through ventilated floor void; fully sealed where required for pressure and thermal integrity (Passivhaus); refer to WRAS guidelines; as drawings 4405 X 00 BW 9010 and 4405 X XX BW 9010 (Detail 1 - Water main)</u></p>			
E	Incoming water main	Item		
	<p><u>Water pipe trench works; water pipe in trench, min 750mm cover in soft dig C/W sharp sand bed and identification tape; all excavations and disposals; beddings and surrounds; reinstatement of all existing surfaces upon completion (hard and soft standings; as drawing 4405 X XX BW 9010</u></p>			
F	Water pipe trench (44m)	Item		
	<p><u>150mm ducted entry to building to terminate in floor view slow radius bend; including all making good; fully sealed for pressure and thermal integrity; as drawing 4405 X XX BW 9010</u></p>			
G	Ducted entry	Item		
	<p><u>2 nr ducts connected into Building 104A plant room. Min 450mm cover C/W sharp sand bed; including all making good; fully sealed for pressure and thermal integrity; as drawing 4405 X XX BW 9010</u></p>			
H	Duct connections	Item		
	<p><u>Excavate holes in soft dig for 16 nr concrete earth pits at each downtape position; make good on completion</u></p>			
J	Earth pit excavations	Item		
SECTION 5 - BUILDERS WORK IN CONNECTION WITH SERVICES To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
A	<p>Sundries</p> <p>Insert below items and associated costs for works which are not listed in the foregoing Section of the Works Schedules but are indicated or referred to on the Drawings and/or in the Specification, or are required to complete the Works:-</p>	Item		
SECTION 5 - BUILDERS WORK IN CONNECTION WITH SERVICES To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<u>COLLECTION</u>			
	Page 5/1			
	Page 5/2			
	Page 5/3			
	Page 5/4			
	TOTAL - SECTION 5 - BUILDER'S WORK IN CONNECTION WITH SERVICES To General Summary	£		

Section 6

Schedule of Works – Externals

Item	Item Description	Unit	Amount	
			£	p
	SECTION 6 - EXTERNAL WORKS AND LANDSCAPING			
	<p>Preambles</p> <p>The Tenderer is to price in the tender document for the works shown on the Drawings and described in the Specifications. The Work Schedules are provided as a pricing document but do not purport to be an accurate or full description of the whole of the works required. If they are found to be at variance with the Drawings and/or Specifications then the latter shall prevail. Quantities and dimensions given in descriptions are provided as a general guide and to assist with identification of items of work. Where quantities are not provided the Contractor shall measure and calculate the Quantities. It is the Contractor's responsibility to check and verify any Quantities. These works are not measured in accordance with SMM7/NRM, as such, it is the Tenderers responsibility to satisfy themselves that all quantities are correct and that all works required by the Drawings and Specifications are incorporated and priced in their tender submission.</p> <p>The Contractor is to be made aware of the Contamination Assessment Report (Appendix D) and Site Investigation Report (Appendix E) contained within these tender documents. The Contractor is required to review the Contamination Assessment Report and Site Investigation Report and price accordingly for the below Schedule of Works items based on the findings and conclusions of the report. The Contractor is also required to review and adhere to the Structural Engineers Drawings and Specifications (Appendix A).</p> <p>The Contractor should be aware that as the excavation works are in made-ground there is the potential for contaminants and hazardous materials. The Contractor is therefore required to follow the recommendations, guidance and instructions contained within the Pre Construction Information (Appendix B) and Structural Engineers Specification (Appendix A) when undertaking excavation and disposal of materials, as well as all other guidance or instructions contained within these Tender Documents.</p> <p>The Contamination Assessment Report (Appendix D) details the finding of asbestos fragments during sampling. It will be the responsibility of the Contractor to arrange the disposal of asbestos materials found during the excavation, along with any other potential contaminants and hazardous materials found during the works.</p> <p>All grassed areas are to be re-instated with hard wearing turf (e.g. Rye-Gold Turf from North West Turf Ltd) upon completion of the works. The cost of this work is deemed included within the Contractors tender price.</p> <p>Please note: the 4 nr external lighting bollards and 1 nr entry lighting bollard are detailed and specified within the M&E information (Appendix A). These items have not been measured in this 'Externals' section and are to be measured and priced within the associated 'Electrical' section of this Schedule of Works (please see drawing 9165 GA010 and X XX BW 9010 for locations).</p> <p>The contractor is deemed to have made allowances for all formwork, earth work support and working space allowance within the rates they have provided below</p> <p>Externals</p> <p><i>Preamble: the Contractor is to be made aware of the Structural Engineers Specification Section 8 'Paving and External Works'. The Contractor is deemed to have made all allowances for the specifications and workmanship as detailed in this section for the items listed below.</i></p> <p><u>Remove 1nr existing tree and scrub surrounding: to east of proposed new building: as drawing GA002</u></p>			
A	Tree/scrub removal (provisional)	Item		
	SECTION 6 - EXTERNALS To Section Collection	£		

Item	Item Description	Unit	Amount	
			£	p
	<u>Proposed concrete hardstanding tamped finish; including all excavation, disposal and surface compactions; min. 200mm c32/40 concrete slab; with a393 mesh to structural engineers specification; including slab edge thickenings; form edge of concrete with 18mm WPB ply on braced and staked support structure to ensure straight edges. remove after curing; laid on visqueen eco-membrane 500um; minimum 200mm dtp1 sub-base compacted to a tight finish; minimum 350mm class 6f capping material; including geotextile membrane: Terram 1000 or similar approved; concrete finish to be coarse tamped to full width of concrete (no trowelled edging); including topsoil fill from excavation to perimeter; as drawing 9165 GA010 and 9165 DD900</u>			
A	Concrete hardstanding tamped finish (77m2)	Item		
B	extra over; FL excel movement joints to manufacturers specification (33m)	Item		
	<u>Proposed concrete hardstanding exposed aggregate finish; including all excavation, disposal and surface compactions; min. 200mm c32/40 concrete slab; with a393 mesh to structural engineers specification; including slab edge thickenings; form edge of concrete with 18mm WPB ply on braced and staked support structure to ensure straight edges. remove after curing; laid on visqueen eco-membrane 500um; minimum 200mm dtp1 sub-base compacted to a tight finish; minimum 350mm class 6f capping material; including geotextile membrane: Terram 1000 or similar approved; 10 x 100mm steel weatherbar set in resin with 15mm projection. with 20mm flex cell board between slabs; concrete finish to be exposed aggregate Adomast Safetard applied followed by low pressure water jetting to expose aggregate to full width of concrete (no trowelled edging); including topsoil fill from excavation to perimeter; as drawing 9165 GA010 and 9165 DD900</u>			
C	Concrete hardstanding exposed aggregate finish (86m2)	Item		
D	extra over; Flexcell movement joints to manufacturers specification (12m)	Item		
	<u>Blister paving; tactile flags/slabs; Blister Profile Tactile Paving; Hardscape including all excavation, disposal and surface compactions; all as spec Q25/320; as drawing 9165 GA010</u>			
E	400x400 (2m2)	Item		
	<u>20mm Cotswold gravel; including all excavation, disposal and surface compactions; laid in geotextile lined trench 150mm deep (with 110mm UPVC land drain (loosely wrapped in geotextile) laid within - measured elsewhere); laid on fill from excavations; including topsoil fill from excavation to perimeter; grading requirements for land drain surround material as drawing 3104 600; as drawing 9165 GA010 and 9165 DD900</u>			
F	20mm Cotswold gravel (145m2)	Item		
G	extra over; edging to drainage trench; 25 x 150 uc4 treated softwood boards laid flush to adjacent ground and held with 50 x 50 stakes driven to 250mm deep at 1m intervals; mitred junctions at stakes (111m)	Item		
	Sundries			
H	Insert below items and associated costs for works which are not listed in the foregoing Section of the Works Schedules but are indicated or referred to on the Drawings and/or in the Specification, or are required to complete the Works:-	Item		
SECTION 6 - EXTERNALS To Section Collection		£		

Item	Item Description	Unit	Amount	
			£	p
	<u>COLLECTION</u>			
	Page 6/1			
	Page 6/2			
	TOTAL - SECTION 6 - EXTERNALS			
	To General Summary	£		

Section 7

Schedule of Works – Drainage

Item	Item Description	Unit	Amount	
			£	p
	SECTION 7 - DRAINAGE			
	<p>Preambles</p> <p>The Tenderer is to price in the tender document for the works shown on the Drawings and described in the Specifications. The Work Schedules are provided as a pricing document but do not purport to be an accurate or full description of the whole of the works required. If they are found to be at variance with the Drawings and/or Specifications then the latter shall prevail. Quantities and dimensions given in descriptions are provided as a general guide and to assist with identification of items of work. Where quantities are not provided the Contractor shall measure and calculate the Quantities. It is the Contractor's responsibility to check and verify any Quantities. These works are not measured in accordance with SMM7/NRM, as such, it is the Tenderers responsibility to satisfy themselves that all quantities are correct and that all works required by the Drawings and Specifications are incorporated and priced in their tender submission.</p> <p>The Contractor is to be made aware of the Contamination Assessment Report (Appendix D) and Site Investigation Report (Appendix E) contained within these tender documents. The Contractor is required to review the Contamination Assessment Report and Site Investigation Report and price accordingly for the below Schedule of Works items based on the findings and conclusions of the report. The Contractor is also required to review and adhere to the Structural Engineers Drawings and Specifications (Appendix A).</p> <p>The Contractor should be aware that as the excavation works are in made-ground there is the potential for contaminants and hazardous materials. The Contractor is therefore required to follow the recommendations, guidance and instructions contained within the Pre Construction Information (Appendix B) and Structural Engineers Specification (Appendix A) when undertaking excavation and disposal of materials, as well as all other guidance or instructions contained within these Tender Documents.</p> <p>The Contamination Assessment Report (Appendix D) details the finding of asbestos fragments during sampling. It will be the responsibility of the Contractor to arrange the disposal of asbestos materials found during the excavation, along with any other potential contaminants and hazardous materials found during the works.</p> <p>All Drainage to be constructed in accordance with Building Regulations Part H and the Civil Engineering Specification for the Water Industry, 6th Edition and in accordance with the notes on drawings 3104 600, 3104 610, 3104 611, 3104 612, 3104 613, 3104 614, 3104 615, 3104 616.</p> <p>All grassed areas are to be re-instated with hard wearing turf (e.g. Rye-Gold Turf from North West Turf Ltd) upon completion of the works. The cost of this work is deemed included within the Contractors tender price.</p> <p>The Contractor is to be made aware of the Structural Engineers Specification Section 8 'Paving and External Works'. The Contractor is deemed to have made all allowances for the specifications and workmanship as detailed in this section for the items listed below.</p> <p>The Contractor is deemed to have made allowances for all formwork, earth work support and working space allowance within the rates they have provided below</p> <p><u>Below Ground Drainage</u></p> <p><u>New pipework runs within existing building; including all excavation, disposal, backfilling; all jointing pipes and accessories; including granular beddings and surrounds; including all works for pipework through foundations as drawing 3104 612; Class F as drawing 3104 611; location as drawing 3104 600</u></p>			
A	100mm dia.; average run depth less than 750mm; vehicle access gully to MH1 (5m)	Item		
B	extra over; rest bends (internal) including concrete base and surround; flexible bends/couplings; as drawing 3104 610 (1nr)	Item		
C	300mm dia.; average run depth less than 750mm; siphonic inlet manhole to MH1 (1m)	Item		
D	extra over; rest bends (internal) including concrete base and surround; flexible bends/couplings; as drawing 3104 610 (1nr)	Item		
	SECTION 7 - DRAINAGE To Section Collection			

Item	Item Description	Unit	Amount	
			£	p
	<u>New pipework runs; including all excavation, disposal, backfilling; all jointing pipes and accessories; including granular beddings and surrounds; Class S as drawing 3104 611; location as drawing 3104 600</u>			
A	100mm dia.; average run depth less than 750mm; vehicle access gully to MH1 (2m)	Item		
B	150mm dia.; average run depth less than 750mm; from RWP (13m)	Item		
C	extra over; rest bends (external) including concrete base and surround; flexible bends/couplings; including rodding eyes combined with backdrop pipe (as detail on drawing 3104 600); as drawing 3104 610 (5nr)	Item		
D	extra over; branch connections; from RWP runs to main pipework run; including all excavation, disposal, backfilling; all branching pipes and accessories; including concrete beds and branch detail walls; all works to form branch connections as drawing 3104 613 (3nr)	Item		
E	300mm dia.; average run depth less than 1000mm; channel gully to MH1 (3m)	Item		
F	300mm dia.; average run depth less than 750mm; siphonic inlet manhole to MH1 (2m)	Item		
G	400mm dia.; average run depth less than 1250mm MH1 to MH4 (50m)	Item		
	<u>Land drain; perforated pipe land drain (laid in gravel filled trench - measured elsewhere); UPVC; wrap pipe using geotextile membrane; falls towards MH3; all jointing pipes and accessories; as drawing 3104 600</u>			
H	110mm dia.; perforated land drain (154m)	Item		
J	extra over; rodding eyes to land drains (4nr)	Item		
	<u>New gullies; Hepworth or similarly approved; including all excavation, disposal, jointing pipes and accessories, beddings and minimum 150mm concrete surround.</u>			
K	450mm x 200mm; medium duty Cast or Ductile Iron grating (1nr)	Item		
L	450mm x 200mm; medium duty Cast or Ductile Iron grating; internal to vehicle access; including all necessary adjustment to substructure (1nr)	Item		
	<u>Manholes; including all excavation, disposal and backfillings; concrete base slab; PPIC base; concrete chambers, surrounds and sections; concrete benchings and toppings; concrete cover slabs and mortar haunchings; access covers and frames; steps; pipework connections and couplings; alternative head details where required; vertical backdrops as drawing 3104 615; details as drawing 3104 614 and 3104 616; location as drawing 3104 600</u>			
M	Manhole; MH1, MH2, MH3 (3nr)	Item		
	<u>Manholes with sump; including all excavation, disposal and backfillings; concrete base slab; concrete chambers, surrounds and sections; concrete benchings and toppings; concrete cover slabs and mortar haunchings; access covers and frames; steps; pipework connections and couplings; details as drawing 3104 615 and 3104 616; location as drawing 3104 600</u>			
N	Manhole with sump; MH4 (1nr)	Item		
	<u>Siphonic inlet manholes; including all excavation, disposal and backfillings; concrete base slab; PPIC base; concrete chambers, surrounds and sections; concrete benchings and toppings; concrete cover slabs and mortar haunchings; siphonic inlet manhole open grate vented lid and frame; steps; pipework connections and couplings; alternative head details where required; all necessary adjustments to ground slab and substructure for installation; details as drawing 3104 614 and 3104 616; location as drawing 3104 600</u>			
P	Siphonic inlet manhole; to vehicle access (1nr)	Item		
	<u>Soakaway; including all excavation disposal and backfilling; cellular crate soakaway units to manufacturers details (total volume 85m³; free volume 80.8m³); 100mm of course sand or non-angular granular material base; 100mm minimum thickness of course sand or non-angular granular material surround; permeable geotextile surround; continue crate units into side of manhole for fast water transfer; reinstatement of topsoil and grass areas on completion; as drawing 3104 600 and 3104 615</u>			
Q	Soakaway; 19000x3000x1500	Item		
SECTION 7 - DRAINAGE To Section Collection				

Item	Item Description	Unit	Amount	
			£	p
A	<p><u>Testing: jet wash and test the new installation for leakages: to all external drainage around the building.</u></p> <p>Testing</p>	Item		
B	<p><u>Sundries</u></p> <p><u>Insert below items and associated costs for works which are not listed in the foregoing Section of the Work Schedules but are indicated or referred to on the Drawings and/or in the Specification, or are required to complete the Works:-</u></p>	Item		
SECTION 7 - DRAINAGE				
To Section Collection				

Item	Item Description	Unit	Amount	
			£	p
	<p><u>COLLECTION</u></p> <p>Page 7/1</p> <p>Page 7/2</p> <p>Page 7/3</p>			
	<p>TOTAL - SECTION 7 - DRAINAGE To General Summary</p>	£		

Section 8

Dayworks and Contingencies

Item	Item Description	Unit	Amount	
			£	p
	SECTION 8 - DAYWORKS AND CONTINGENCIES			
	<p>Preamble</p> <p>The Contractor may be required to execute certain works where the payment will be on the basis of 'dayworks'. It is intended that this section of the Work Schedules will give the Contractor an opportunity to tender for his daywork charges on a competitive basis.</p> <p>All hours stated in the schedule of daywork rates are Provisional only and the Contractor will be required to keep an accurate record of time spent each day by his workmen and materials and plant used on each separate instruction given by the Architect/Contract Administrator.</p> <p>The daywork sheets shall be numbered and fully describe the instructions to which they refer and shall be summarised and submitted to the Architect for verification, with a copy to the Quantity Surveyor, not later than the end of the week following that in which the work has been executed. The Contractor shall arrange for signed copies of the daywork sheets to be returned to him by the Architect/CA. A signed copy of the daywork sheets should then be fully priced out and sent to the Quantity Surveyor within one month of the work being executed.</p> <p>Overheads</p> <p>The term overheads applicable to labour, materials and plant shall be deemed to include the relevant items from the following:</p> <ul style="list-style-type: none"> Head office charges and staff costs Site supervision and site staff including foreman's time and extra charges made to leading or foreman craftsmen and gangers Overtime and extra payments for night or weekend working where not specifically ordered or subsequently sanctioned in writing by the Architect to be worked on daywork Time lost due to inclement weather Bonuses and all other incentive payments Apprentices' study time Employers contribution to National Insurance, including staff pension funds Compliance with the Finance Acts Contributions for annual and public holidays Fares and time allowances for traveling Subsistence and periodic leave allowances Safety and welfare facilities Third party and employer's liability insurance Sick pay or insurance in respect thereof Obligations under the Redundancy Payments Act 1965 or any other re-enactment, replacement or modification thereof Tool and other similar allowances Use, repair and sharpening of small tools All non-mechanically operated plant, specially erected scaffolding and staging and trestles, protective clothing, artificial lighting, storage facilities and the like that may be in general use on the site Construction Industry Training Board Levies All other liabilities and obligations whatsoever 			
	SECTION 8 - DAYWORKS AND CONTINGENCIES To Section Collection	£		

Item	Item Description	Unit	Amount																																									
			£	p																																								
	<p>Labour</p> <p>The Contractor shall quote the rate he requires for his labourers and craftsmen in the following schedule and extend the rate by the hours stated.</p> <p>The rate quoted is to be an inclusive rate covering all charges including:</p> <p>Wages at the standard rates together with temporary plus rates and such extra payments or differentials as are fixed in respect of skill, responsibility, discomfort, inconvenience and risk paid in accordance with the rules and awards of the recognised wage-fixing bodies of the trades concerned in force in the area in which the work is carried out.</p> <p>Fixed price allowance</p> <p>Overheads as previously defined</p> <p>Profit</p> <p>The time of principals, foremen, gangers and leading hands will be charged at the hourly rate quoted for the trade practiced only when actually working with their hands.</p> <p><u>Schedule of Daywork Labour Rates</u></p> <table border="1"> <thead> <tr> <th></th> <th>Trade</th> <th>Provisional Nr of Hours</th> <th>Rate per hour</th> <th></th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Labourer</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> <tr> <td>B</td> <td>Carpenter/Joiner</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> <tr> <td>C</td> <td>Electrician</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> <tr> <td>D</td> <td>Bricklayer</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> <tr> <td>E</td> <td>Plasterer</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> <tr> <td>F</td> <td>Painter/Decorator</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> <tr> <td>G</td> <td>Groundworker</td> <td>100 hrs</td> <td>at £</td> <td>Item</td> </tr> </tbody> </table> <p>Labour</p> <p>The rate for young labourers and apprentices shall be a percentage of the rate for Labourers and Craftsmen respectively as defined in the current relevant Working Rule Agreement.</p> <p>Materials</p> <p>The cost of materials used in dayworks shall be charged at the invoice cost, except where they appear on the Basic List in which case the Basic List price will be used, together with the cost, of crates, packaging and carriage and the cost of returning crates and packaging less any credits given for same. All invoices are to be made available to the Quantity Surveyor at the time the relevant daywork sheets are submitted to him. Cash discounts received not exceeding 5% shall be retained by the Contractor. All trade discounts shall be allowed to the Employer.</p> <p>H Provide the Sum of £5000.00 for the provisional cost of materials to be used in connection with daywork as directed.</p> <p>The Contractor is to quote below the percentage addition to be made to the cost of materials to cover his overheads as previously defined and his profit.</p> <p>J% of £5000.00</p>		Trade	Provisional Nr of Hours	Rate per hour		A	Labourer	100 hrs	at £	Item	B	Carpenter/Joiner	100 hrs	at £	Item	C	Electrician	100 hrs	at £	Item	D	Bricklayer	100 hrs	at £	Item	E	Plasterer	100 hrs	at £	Item	F	Painter/Decorator	100 hrs	at £	Item	G	Groundworker	100 hrs	at £	Item			
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SECTION 8 - DAYWORKS AND CONTINGENCIES To Section Collection		£																																										

Item	Item Description	Unit	Amount	
			£	p
	<p>Plant already on site used in connection with Dayworks</p> <p>The cost of use of plant, scaffolding, haulage and the like already on site shall be charged at the rates and in accordance with the conditions set down in the latest Schedule relating to Dayworks issued by the Royal Institution of Chartered Surveyors with the exception that the rates will be applicable whether the items of plant are hired or in the ownership of the Contractor.</p>			
A	<p>Provide the Sum of £2500.00 for provisional charges for the use of plant, etc., in connection with daywork as directed.</p>	Item	2,500	00
	<p>The Contractor is to quote below the percentage adjustment to be made to the above mentioned rates to cover his overheads as previously defined and his profit.</p>			
B	<p>.....% of £2500.00</p>	Item		
	<p>Plant hired specially for use in connection with Dayworks</p> <p>The cost of hire of plant, scaffolding, haulage and the like specially required for use in connection with Dayworks shall be charged at the full amount of the invoice. Cash discounts received not exceeding 5% shall be retained by the Contractor. All trade discounts shall be allowed to the Employer.</p>			
C	<p>Provide the Sum of £2500.00 for provisional charges for the hire of plant, etc., in connection with daywork as directed.</p>	Item	2,500	00
	<p>The Contractor is to quote below the percentage adjustment to be made to the above mentioned rates to cover his overheads as previously defined and his profit.</p>			
D	<p>.....% of £2500.00</p>	Item		
	<p>Contingencies</p>			
E	<p>Provide the Provisional Sum of £85,000 for Contingencies</p>	Item	80,000	00
SECTION 8 - DAYWORKS AND CONTINGENCIES				
To Section Summary		£		

Item	Item Description	Unit	Amount	
			£	p
	<u>COLLECTION</u>			
	Page 8/1			
	Page 8/2			
	Page 8/3			
	SECTION 8 - DAYWORKS AND CONTINGENCIES To General Summary	£		

Section 9

Provisional Sums

Item	Item Description	Unit	Amount	
			£	p
SECTION 9 - PROVISIONAL SUMS				
Preamble				
Allow for the following Provisional Sums; in relation to which the Contractor is deemed to have made due allowance for the pricing of Preliminaries (including all General and Special Attendances) and for planning and programming the works within the Contract Period:-				
<u>Provide defined provisional sum for the following:</u>				
A	New trees; supply and plant new 4-5m tall English Oak Quercus robur trees; including all excavations, disposals and installation requirements; location as drawing 9165 GA002; see 'Appendix M - Ecology Report' for further details (2nr)	Item	3,000	00
B	New bat boxes; supply and install new Schweglar 2F general purpose bat boxes to be erected on suitable trees by experienced bat worker; location as drawing 9165 GA002 see 'Appendix M - Ecology Report' for further details (7nr)	Item	2,000	00
<u>Provide undefined provisional sum for the following:</u>				
C	Fire signage; as spec N15/110	Item	1,500	00
D	Portable fire extinguishers / fire blanket system; see spec N17/110 and N17/150	Item	2,500	00
E	Additional BWIC	Item	1,500	00
F	Regrading levels to external areas	Item	5,000	00
<u>Mechanical Services-Related</u>				
G	M2.1 - Modifications to AHU controls package by AHU specialist	Item	2,000	00
H	M2.2 - Modifications to the chiller controls by chiller specialist	Item	1,500	00
J	M2.3 - Release control for the facade dampers	Item	2,500	00
K	M2.4 - Specialist sealing to gas release ductwork from the temporary store	Item	1,500	00
<u>Electrical Services-Related</u>				
L	E2.1 - Switchgear		2,000	00
M	Additional external lighting		3,000	00
Main Contractor's Overheads and Profit in connection with Provisional Sums				
The Contractor is to insert below his percentage addition to the net cost of the Provisional Sums for Overheads and Profit (for the purposes of the tender only; assuming that the expenditure of these sums will be assessed on a 'fair and reasonable basis' in accordance with Clause 5.2 of the Contract). A Lump Sum equal to the total of the Provisional Sums multiplied by the percentage indicated is to be inserted in the Amount column and added to the page total. (Please note the percentage value inserted will be taken into account with evaluating any variations which occur during the course of the works)				
N%	Item		
SECTION 9 - PROVISIONAL SUMS To Section Collection			£	

Item	Item Description	Unit	Amount	
			£	p
	<p><u>COLLECTION</u></p> <p>Page 9/1</p>			
	<p>TOTAL - SECTION 9 - PROVISIONAL SUMS To General Summary</p>	£		

Appendix A

Drawings and Specifications

APPENDIX A - TENDER DRAWINGS AND SPECIFICATIONS LIST

ARCHITECTS – Architype		
Drg. No	Drawing/Specification Title	Rev
<u>Drawings</u>		
9165-GA001	Site Location Plan	-
9165-GA002	Site Plan	A
9165-GA003-Main Works	Indicative Site Setup Diagram- Main Works	-
9165-GA004	Contractor AR and Parking	-
9165-GA010	External Works Plan	C
9165-GA100	Proposed Ground Floor Plan	E
9165-GA101	Proposed Mezzanine Level Plan	E
9165-GA103	Roof Plan	D
9165-GA110	Ground Floor Slab Setting Out	B
9165-GA400	Ground Floor Fire Strategy	B
9165-GA401	Mezzanine Level Fire Strategy	A
9165-GA410	Elevations Fire Strategy	A
9165-GA600	Elevations	C
9165-GA851	Proposed Section A-A	D
9165-GA852	Proposed Section B-B	C
9165-GA853	Proposed Section C-C	B
9165-GA854	Proposed Section D- D	C
9165-DD010	Indicative Perforated Cladding Pattern	A
9165-DD100	Typical Foundation Detail	C
9165-DD101	Foundation Between Entrance/Parking	B
9165-DD105	Typical Intermediate Floor Detail	B
9165-DD110	Typical Parapet Detail	C
9165-DD111	Roof Between Entrance / Parking	E
9165-DD112	Typical Gravity Rain Water Pipe Detail	D
9165-DD113	Parapet South Wall of Parking Bay	A
9165-DD114	Bulkhead on South Wall of Parking Bay	A
9165-DD115	Parapet West Wall of Parking Bay	A
9165-DD116	Parking Bay Gate Head Detail	A
9165-DD117	Parking Bay Light Detail East Wall	A
9165-DD118	Parking Bay Light Detail North Wall	A

ARCHITECTS – Architype		
Drg. No	Drawing/Specification Title	Rev
9165-DD120	Typical Blockwork Meeting External Wall	B
9165-DD121	Typical External Corner of Cladding	B
9165-DD125	External Corner Parking Bay-Circulation	B
9165-DD130	Parking Bay Gate Configuration	A
9165-DD131	Main Door Details	B
9165-DD132	Escape Door Details	B
9165-DD133	Vent Detail	B
9165-DD150	Rainwater Pipe Axonometric	B
9165-DD300	Stairs Setting Out and Details	A
9165-DD550	Doors Schedule	B
9165-DD900	Landscape details	-
<u>Specifications</u>		
9165 IWM 104A 31-07-2017	Architects Specification	04
<u>Room Data Sheets</u>		
9165 RDS-V2-G01	G01 Room Data Sheet	02
9165 RDS-V1-G02	G02 Room Data Sheet	01
9165 RDS-V1-G03	G03 Room Data Sheet	01
9165 RDS-V1-G04	G04 Room Data Sheet	01
9165 RDS-V1-G05	G05 Room Data Sheet	01
9165 RDS-V1-G06, G07	G06 / G07 Room Data Sheet	01
9165 RDS-V2-G08	G08 Room Data Sheet	02
9165 RDS-V1-G09	G09 Room Data Sheet	01
9165 RDS-V1-G10	G10 Room Data Sheet	01
<u>Revit Model</u>		
9165 IWM Paper Store.rvt	Revit Model	E

STRUCTURAL – Momentum Consulting Engineers		
Drg. No	Drawing Title	Rev
<u>Drawings</u>		
3104 100	General Notes and Loading Plans	03
3104 200	Ground floor plan	03
3104 201	Mezzanine floor plan	03
3104 202	Roof plan	04
3104 250	Section A	02
3104 251	Section B	02
3104 300	Foundation details	03
3104 301	Foundation details	03
3104 310	Mezzanine details	03
3104 320	Roof details	03
3104 321	Roof details	02
3104 322	Roof details	02
3104 400	Construction sequence	01
3104 401	Construction sequence	01
3104 600	Surface water drainage GA	02
2104 610	Drainage details	-
2104 611	Drainage details	-
2104 612	Drainage details	-
2104 613	Drainage details	-
2104 614	Drainage details	-
2104 615	Drainage details	-
2104 616	Drainage details	-
<u>Specifications</u>		
3104 SPN	Structural specification	02
<u>Revit Model</u>		
3104-MOM-DUX-ZZ-M3-S	Revit model	03

MECHANICAL & ELECTRICAL – E3		
Drg. No	Drawing Title	Rev
<u>Mechanical Drawings</u>		
4405 X 00 M 1010	Ground Floor Chilled Water Layout	T1
4405 X 01 M 1010	First Floor Chilled Water Layout	T1
4405 X 00 M 2010	Ground Floor Ventilation Layout	T1
4405 X 01 M 2010	First Floor Ventilation Layout	T1
4405 X XX M 9020	Mechanical Services Schematic	T1
4405 X XX M 9030	Plant Room Detail	T1
4405 X XX M 9090	Mechanical Symbol Sheet	T1
<u>Electrical Drawings</u>		
4405 X 00 E 1010	Ground Floor Power and Data Layout	T1
4405 X 01 E 1010	First Floor Power and Data Layout	T1
4405 X 00 E 2010	Ground Floor Fire and Security Layout	T1
4405 X 01 E 2010	First Floor Fire and Security Layout	T1
4405 X 00 E 3010	Ground Floor Lighting Layout	T1
4405 X 01 E 3010	First Floor Lighting Layout	T1
4405 X 00 E 4010	Ground Floor Primary Containment Layout	T1
4405 X 01 E 4010	First Floor Primary Containment Layout	T1
4405 X R0 E 5010	Lightning Protection Layout	T1
4405 X XX E 2020	Fire Alarm Schematic	T1
4405 X XX E 2021	Security Schematic	T1
4405 X XX E 9020	LV Schematic	T1
4405 X XX E 9090	Electrical Symbol Sheet	T1
<u>Public Health Services</u>		
4405 X 00 P 1010	Ground Floor Water Layout	T1
4405 X 00 P 2010	Ground Floor Drainage Layout	T1
4405 X 01 P 2010	First Floor Drainage Layout	T1
4405 X 00 P 4010	Ground Floor Fire Suppression	T1
4405 X 01 P 4010	First Floor Fire Suppression	T1
4405 X XX P 4020	Gas Suppression Schematic	T1

MECHANICAL & ELECTRICAL – E3		
Drg. No	Drawing Title	Rev
<u>Site Services</u>		
4405 X 00 J 1010	Water Site Services Layout	T1
4405 X 00 J 2010	LV Distribution Site Services Layout	T1
4405 X 00 J 3010	External Lighting Layout	T1
4405 X 00 J 4010	CCTV Site Layout	T1
4405 X 00 J 5010	Data Site Services Layout	T3
4405 X 00 J 8011	Existing Site Services Layout	T1
<u>Builders Work</u>		
4405 X 00 BW 9010	Ground Floor Builders Work	T1
4405 X 01 BW 9010	First Floor Builders Work	T1
4405 X XX BW 9010	Site Services Builders Work	T3
<u>Specifications</u>		
4405 GSP 01	General Specification	T1
4405 MSP 01	Mechanical Specification	T2
4405 M FOT 01	Mechanical Form of Tender	T2
4405 ESP 01	Electrical Specification	T2
4405 E FOT 01	Electrical Form of Tender	T2

Appendix B

Pre-Construction Information

Appendix C

IWM Instructions and Guidelines for Contractors

Appendix D

Contamination Assessment Report

Appendix E

Site Investigation Report

Appendix F

Tree Protection Areas

Appendix G

Below Ground Drainage

Appendix H

Fire Strategy Report

Appendix I

BIM Execution Plan and BIM Information Requirements (EIR)

Appendix J

Planning Permission

Appendix K

Archaeological Desk Based Assessment

Appendix L

Topographical and Services Surveys

Appendix M

Ecology Report

Appendix N

Performance Bond Proforma