

MRC Laboratory of Molecular Biology (LMB)

Background – The MRC Laboratory for Molecular Biology (LMB)

The MRC Laboratory of Molecular Biology (LMB) is a world-class research laboratory, dedicated to understanding important biological processes at the molecular level with the goal of using this knowledge to tackle major problems in human health and disease.

The LMB is one of the birthplaces of modern molecular biology. Many techniques were pioneered at the laboratory, including DNA sequencing, methods for determining the three-dimensional structure of proteins and the development of monoclonal antibodies.

Over the years, the work of LMB scientists has attracted twelve Nobel prizes, many Royal Society awards and numerous other scientific honours.

The LMB building is a state-of-the-art laboratory facility, which was completed in 2012, it has a floor area of 32,700m² (GIA) and accommodates over 600 staff. It has specialist research facilities with a highly complex engineering system to enable the ground-breaking science and allow flexibility to support future scientific developments.

1. Description of Works and Specification

The LMB is seeking a specialist contractor to undertake works to the LMB's reception area. The works are designed to open out the available space and create a new dedicated exhibition area that will showcase the LMB's unique and prestigious history. This will help with public engagement activities, widening the public understanding of the scientific achievements of the laboratory.

Drawings defining the scope of the works are included within the tender pack.

As a high-level description, the works involve the removal of a number of double height single skin Shuco façade panels and mullions to reveal underlying structural steels and then replacing these panels with a new single height glazed system encased within a new steel "goal-post" arrangement to aesthetically match the main entrance to the building in the reception area.

The single skin glazing (Planet Partitioning or equal approved) within the goal-post will also include an electrically driven sliding glass door (Dorma or equal approved).

Various supplementary façade panels will be required to be installed to "make good" areas that previously interfaced with the removed double height façade. The works also include the removal of a single height glazed partition currently enclosing a meeting room.

The contractor will be responsible for design elements not specified within the architectural scheme including structural engineering design for the steel goal-post arrangement and fixings.

The contractor is required to separate out the working space to facilitate the delivery of these works from the LMB's main reception area to allow as far as possible, the reception area to be unaffected by the works and normal business operations to continue.

Any noisy works should be scheduled to take place out-of-hours or during weekends to minimise impact on LMB operations.

Builders works associated with making good ceiling and floors following the removal of the double height façade will be the responsibility of the Client to arrange.

2. Tender for the Complete Installation

The Works covered by the Tender must include inter alia the design development, production of working drawings, fabrication, works testing, supplying and delivering to site, erecting, connect up, testing, commissioning, performance testing and handing over in working order the complete installations described in the Tender Documents.

The Tender shall be for a complete and fully compliant installation and must also include all incidental sundry components necessary for the complete execution of the work. The Tender shall include the proper commissioning, performance testing and operation of the installation and the delivery of O&Ms and any design development contract drawings. No additional cost will be allowed for want of knowledge in this respect.

3. Programme

The programme submitted as part of the tender is to be rigidly adhered to and progress in activities must be captured by the contractor and made available to the Client. Updated programmes are required to be submitted to the client at appropriate periods with the frequency of issue to be agreed as part of pre-contract mobilisation discussions.

The contractor shall properly organise the work so as to fulfil the programme, co-ordinate and generally manage their work and deliveries from their suppliers.

The contractor may revise the programme, critical path analysis and procurement schedule at any time but must publish the revision and must take account of overarching contractual end dates and any delay damages that will become applicable.

4. Scope of Work

The contractor shall be responsible for all works detailed in the Specification and shown on the Tender Drawings, and in particular the following items: -

- Undertaking specific detailed design as indicated herein.
- Provision of co-ordinated CAD installation/working drawings for all services, builders work and detailed wiring diagrams for all equipment and control panels as necessary to deliver the works.
- Inspecting all plant, equipment and materials as delivered or where specified at the manufacturers works.
- Fixing or installing correctly all plant, equipment and materials.
- Ensuring all associated work delivered in order to fulfil the contract such as electrical wiring, connecting pipework, builders work, etc., is properly executed.
- Testing and commissioning the complete installation including adjusting and balancing as necessary, and in line with the applicable British Standards for the various systems.
- Demonstrating that the equipment is capable of the performance and method of operation specified to the satisfaction and acceptance of the Client.
- Demonstrating that the overall and complete systems perform correctly in the required manner and as intended by the Specification to the satisfaction and acceptance of the Client (including return visits for seasonal tests if applicable).
- Providing all installation/working, builders work and record drawings on CAD. Showing the complete installation and structure, architectural form and other services systems. All drawings must be provided on AutoCAD format and pdf.
- Providing electronic Operation Instructions and Maintenance Manuals for the complete systems.
- Providing the full set of test results in an approved format for all tests, commissioning and balancing operations.
- Instruct the Employers Staff in the use and operation and maintenance of the installations. Handing over all specified tools, keys, spares, oils, chemicals, etc.

The Contract Documents, tender proposal and pricing document shall be deemed to include, whether or not specifically mentioned or shown, any materials, accessories or works as may be necessary for the satisfactory completion of the Contract Works in accordance with accepted current practice or procedure.

5. Alternative Makes/Delivery Periods

The Tender shall be priced strictly in accordance with the Tender Documents. Alternative manufacturers of plant and equipment will be accepted on an equal and approved basis to those noted in the Tender Documents subject to the provisions noted below.

Alternatives will not be accepted for items for which a change would cause a significant disruption to the design or construction of all or any part of the Works.

The contractor shall ensure that any alternative they propose is at least equal or equivalent product to the specification and is compatible with all other system in the Works and with the building as designed.

6. Legal Requirements

Without prejudice to the generality of the foregoing the Contractor must observe, perform and comply with all the relevant provisions of the following together with any amendments thereto alongside all other statutory requirements that apply to building construction operations and the tasks required to be undertaken to fulfil the scope of service:

- Workplace (Health, Safety and Welfare) Regulations 1992 (WHSWR)
- Management of Health and Safety at Work Regulations 1999 (MHSWR)
- Health and Safety at Work Act 1974 (HASAWA)
- The Control of Asbestos Regulations 2012
- Personal Protective Equipment (PPE) Regulations 1992
- Provision and Use of Work Equipment Regulations (PUWER) 1998
- Manual Handling Operations Regulations 1992
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR)
- The Control of Noise at Work Regulations 2005
- Electricity at Work Regulations 1989
- Requirements for Electrical Installations: BS 7671:2018 - Requirements for Electrical Installations, IET Wiring Regulations (New 18th Edition) 2018
- Control of Substances Hazardous to Health Regulations 2002 (COSHH)
- Construction (Design & Management) Regulations 2015
- The Gas Safety (Installation & Use) Regulations 1998
- Lifting Operations & Lifting Equipment Regulations 1998 (LOLER)
- The Environmental Protection Act 1990
- The Regulatory Reform (Fire Safety) Order 2005 (RRO)
- The Control of Legionella Bacteria in Water Systems ACOP & Guidance L8.
- The Notifications of Cooling Towers and Evaporative Condensers Regulations 1992
- Pressure Systems Safety Regulations 2000 (PSSR)
- F-Gas Regulations 2015

The works shall be carried out in accordance with the requirements and regulations of all relevant local authorities, fire brigades, and water, gas and electricity authorities.

Prior to installation of the works, it is the contractor's responsibility to ensure that their installations fully comply with the requirements of all statutory bodies. Any costs/programme implications associated with remedial works to installed works due to

statutory authority requirements will be at the sole expense of the Sub-contractor.

Unless otherwise specified, the whole of the works shall comply with the requirements of all relevant British Standard Codes of Practice

7. Site Visit

It is highly recommended that the Contractor visits the site before submitting their tender to allow for all matters affecting the work, including restrictions imposed by the Employer, local conditions and accessibility of the site to be factored into the tender. Access to site shall be arranged in advance through the Client. If the Contractor fails to attend site during the tender period any costs incurred as a result of this omission will not be considered.

8. Mobilisation

During Contract mobilisation and by appointment only, the site will be available to the contractor for additional surveys to familiarise themselves and their teams with the site and work areas that they will be responsible for managing through the duration of the contract.

Based upon the scope of work (as described herein) and taking into account the any programme issued as part of the contractor's tender submission (specifically taking account of contract start and end dates), the appointed Contractor will supply a final works programme for review and approval by the Client at least one calendar month in advance of the contract start date.

The programme of works should specifically highlight significant milestones in the delivery of the works and provide a breakdown of all the tasks that will be undertaken, including any obligations that the MRC are required to complete.

All relevant site-specific risk assessments and method statements must be issued for review by the Client during this mobilisation period.

9. Operating hours

The LMB facility is operational 24/7 365, but service support staff are only available on site between the core hours of 8am and 4pm (Mon-Fri). Consequently, all construction works must be undertaken within these core hours unless specific alternative arrangements have been agreed in advance with the Client. Arrangements to undertake works outside core hours would typically be acceptable to the Client if there was a business impact that could be reduced by activities being undertaken outside of these core periods (e.g. to accommodate noisy works).

Contractors attempting to gain access to the site outside of these periods without prior approval from the Client may be restricted from entering the sites by security personnel.

10. Site Access

All attendances (including sub-contractor attendances) for works or subsequent remedial works must be confirmed to the Client via email no later than 5 working days prior to the planned attendance on site.

Details must be provided of the members of contractor staff or subcontracted staff who will be attending to undertake the work alongside any supplementary Risk Assessments or Method Statements that have not previously been issued (see point 8). This will allow appropriate time for the Client to check risk assessments and method statements in advance of the visit and to arrange any necessary security clearances to be undertaken by the LMB.

Contractors must undergo a site-specific induction on their first visit to site and may be required to have periodic refresher inductions as deemed necessary by the Client.

On the day of any works visit itself, as well as reporting to LMB Reception to arrange for inductions / visitor passes etc to be completed, contractors must report to one of the MRC's Service Coordinators prior to any work being initiated to discuss the work methodology, arrange any required permits and to arrange a member of the E&F Team as liaison for any supervision or assistance required to ensure the works are appropriately managed and have minimal impact on the facilities' operations.

Once works are completed for the day, contractors must **not depart** without having discussed the progress or outcome of their visit with one of the MRC's Service Coordinators. As a consequence of this, it is reiterated that site supervision finishes at 4pm and good time must be allowed for service report sign off and discussions.

Reception and Security staff are not permitted to sign-off works on behalf of the MRC.

Contractor staff are expected to behave in a professional manner at all times. The Client reserves the right to debar contractor personnel from site who do not behave in an appropriate manner.

11. Disruption and Shutdowns

It should be noted that the works are to be carried out in a live, business critical building that operates continuously. All intervention works that may impact on the operation of the existing facilities must be carefully planned and coordinated with all parties well in advance to minimise disruption.

The sequencing of the works needs to reflect this fact and that the reception area must remain functional during office hours, ensuring that any down time is kept to the absolute minimum. A permit to work shall be signed off by LMB prior to any works starting. All interventions that may disrupt electrical or mechanical services shall be undertaken during approved timeframes, which are likely to be outside of normal hours, therefore there is a requirement for the Contractor to work 'out of hours' and to phase the works to coordinate with approved intervention periods.

Timings for the beginning and end of any shutdown must be outlined in any submitted programme of works and thereafter shall be carefully coordinated between the Contractor and the Employer to suit necessary time frames to wind down the site, carry out the changeover works and return the site to full operational state ready for business to resume. Works that do not involve an intervention to or shutdown of business-critical equipment can be carried out during normal working hours but any high-risk works must be carried out during an approved intervention period.

The organisation and coordination of the works will require close liaison between the Employer and the Contractor. The Contractor shall provide detailed work programmes for the installation works, with particular emphasis on the shutdown periods. Work programmes shall be provided in advance and in good time to allow full review, comment and any subsequent revisions to be incorporated and resubmitted for approval.

12. H&S requirements

As part of the contract, the contractor is required to introduce, implement and utilise all the necessary procedures, method statements, risk assessments and health and safety training to ensure that works are undertaken in a safe manner. The Client will require the contractor to provide evidence of such compliance as appropriate during the contract period. As previously stated, as part of the mobilisation, site surveys should be undertaken to ensure that site specific method statements and risk assessments are generated that take account of all relevant site conditions. Risk assessments and method statements associated with the works must be issued to the Client to later than 48 hours prior to the works being undertaken. Where risk assessments and method statements are not provided in accordance with the above, works will not be permitted.

The Contractor must be aware that within the LMB certain designated laboratories use materials that present chemical, biological and ionising radiation hazards. Access to these areas is not permitted unless under the strict supervision of LMB staff and potentially only after specialist supplementary inductions have been completed. Areas operating at ACDP Containment Level 2 / 3 or using ionising radiation are clearly signed on the outside of the laboratory.

13. Welfare facilities

Contractors shall have full use of MRC welfare facilities in the building through the duration of their site visit. Accessible toilets are available throughout the facilities and a restaurant facility is available on Level 4 of the LMB Building. Addenbrooke's also has dedicated restaurants that serve a variety of hot and cold food. It is important to ensure that these facilities are not abused by the Contractor in any way; any dirty overalls or work-boots are to be removed / cleaned before using the canteen.

14. Site restrictions

Noise: Comply generally with BS 5228. Do not use pneumatic drills and other noisy appliances without consent of the MRC E&F Manager / Services Co-ordinator.

Do not use or permit employees to use radios or other electronic equipment at any time. General ISV's and plant spaces must be kept secure and locked on entry and locked on exit. Photography is not permitted other than for the specific requirements of fulfilling the contract duties.

Smoking is only permitted in designated external areas.

Contractors must wear appropriate visitor ID when on-site so that individuals can be identified by members of the Security team when working unsupervised in plant areas.

15. CDM Regulations

The construction (Design and Management) Regulations 2015 apply to this project and the contractor shall be fully aware of the duties as laid down in these Regulations. The CDM Co-ordinator shall provide a Health and Safety Plan to the Principal Contractor for this project, in this case the Main Contractor. The Principal Contractor will be responsible for the development and implementation of the Health and Safety Plan during the construction phase.

Any sub-contractors shall ensure they obtain a copy of the Health and Safety Plan and any amendments and ensure that their personnel comply with any construction phase Health and Safety Rules as identified in the Plan and have been given suitable training.

The contractor shall ensure that the Principal Contractor is provided with all the required information including Method Statements

16. Materials and Goods

Materials and workmanship shall be the best of their respective kinds in accordance with the specification. All materials shall (unless otherwise stated) conform to the statutory requirements detailed herein. The installation shall be constructed from entirely new materials and equipment.

All materials shall be in accordance with the Building Regulations and the relevant current British Standards, Code of Practice, Drafts for Development, and Building Research Establishment recommendations.

Where there is in existence a relevant British Standard, BS code of practice, draft BS, DIN Standard, ISO Standard or British Board of Agreement certificate applicable to the design, execution or performance of the Works or any part thereof then the recommendations and requirements of such documents shall be considered a minimum standard for the work described and must be complied with. Should two standards conflict the Sub-contractor should draw attention to this at tender stage and state the option chosen.

Where more than one manufacturer is able to supply any particular material or article, the Sub-contractor shall obtain the whole quantity required to complete the work, including spares where required, from one manufacturer or supplier, or obtain prior approval to multi-sourcing or to any change in the source of supplier.

All materials are to be transported, unloaded, stacked, stored and fixed or applied by the contractor in strict accordance with manufacturers' instructions, including relevant safety precautions.

In cases of any difference or conflict between the requirements of the manufacturers' instructions or specifications and the technical sections of the Specification, the Sub-contractor shall identify the difference involved and seek instruction from the Project Manager / Contract Administrator.

All materials used in the system will be resistant to the growth of fungi and micro-organisms and to attack by insects, animals or birds. Where required to design the Works, the Works Contractor will confirm what preventative measures have been taken to ensure resistance to such attack. The Installation will not contain any toxic materials which by physical contact or by inhalation of gases could prove harmful to the occupants of the building. The materials used in the Installation will not give off any odours.

Any materials considered by the Client or their agents to be unsound, or not in accordance with the Specification, shall be immediately removed by the contractor at their own expense. Any and all work carried out imperfectly or with faulty materials must be removed by the contractor at their own expense and properly replaced by the contractor to the satisfaction of the Client.

Should the contractor neglect or refuse to do this, the Client shall have the power to employ other persons for this purpose and to pay the same out of any monies that may be or shall become due to the contractor or may recover the amount of such expense by action at law.

17. Workmanship

It is implicit that all works must be carried out in a professional workmanlike manner by appropriately trained, competent personnel. The Client reserves the right to reject work that is considered to be defective. Working areas must be kept tidy and in good order at all times. Any rubbish, litter or waste generated by the works must be appropriately disposed of prior to leaving the site at the end of the working day.

On completion of the Contract, the Sub-contractor shall remove from the site all tools and plant used for the execution of the Works together with all rubbish, packing cases and material and redundant material or equipment, and they shall make good or reimburse for making good any damage to buildings, roads or other parts of the site, where in the opinion of the Client such damage has been caused by or is the responsibility of the contractor.

18. Protection of the Works

The contractor shall provide adequate protective measures to prevent wilful, accidental, environmental or resultant damage to the works and any other items liable to be damaged. These measures should be clearly set out within the method statement issued as part of the tender submission. The contractor will be responsible for the adequacy and maintenance of the protection, including its Fire Resistance, afforded. Replacement parts or equipment or

making good will not be accepted in lieu of protective measures. The contractor shall, as necessary, include for maintaining, altering and adapting the protective measures as the work proceeds

The contractor shall diligently carry out the works so as not to injure any person or persons, any property or belongings of any person or persons and shall take all necessary protective measures to ensure their safety.

If present at the time of practical completion the contractor shall allow for removing all their protective measures, taking care not to damage the Works and thoroughly clean down and prepare the Works for handover and immediately remove all protective materials or equipment from the Project.

19. Setting out

The contractor shall set out the works and take all necessary site measurements to ensure that the works are built in accordance with the drawings and within any specified tolerances. The contractor shall be totally responsible for the accuracy of the setting out their works and of site measurement. The contractor shall, where required, check the setting out of other Contractors works which affect their own works.

The contractor will be held responsible for all costs arising from any error caused by their inaccurate setting out or failure to take site dimensions or errors in such site dimensions of failure to build within the specified tolerances.

Before the work begins on site the contractor shall submit their proposed methods of dimensional setting out, construction and checking that will satisfy the accuracy's required by the contract.

Setting out shall comply with BS 5964 as a minimum. Where this is in conflict with the Specification, the Specification will take precedence. Where permitted deviations are referred to in the Specification they are deemed to be a total deviation. Sub-contractors shall co-operate with other working in discreet areas to ensure that permitted deviations do not lead to out of tolerance dimensions between adjacent works.

Where systems to be installed under this Contract are to be run adjacent to or near to other system the setting out of the services shall be the responsibility of the Sub-contractor.

20. Minimising Business Disruption

The Contractor must take all the necessary precautions to avoid any disruption to the Client's business operations, including through noise control, whilst carrying out the works. Where PPM activities require shut-down of plant, particularly where they have a greater impact on overall system control, in order for the items to be appropriately maintained, this

must be arranged through liaison with the Client's on-site supervisor and notification of this disruption must be provided in good time and in advance of the visit.

21. Energy efficiency and performance optimisation

Where appropriate, Contractors are expected to highlight to the Client where items of plant are operating in an energy inefficient manner or outside of optimal performance specifications and suggest methodologies that could be used to increase the efficiency of operation.

22. Warranties

All contractors supplied new or replacement parts and remedial works should be warranted for 12 months from the period of installation.

23. Billing

The Client expects prompt issue of invoices in accordance with payment schedules (as defined within the contract documentation). Works that are invoiced prior to works being completed will not be paid.

24. Contract Meetings

Depending upon the scope and nature of the works, the contractor should allow for periodic contract meetings by contractor senior management staff as part of their duties to the Client in the delivery of the works.

25. Equipment

Any equipment / tools / steps / lifting equipment etc required by the Contractor to undertake the works, must be deemed "safe and appropriate for use" and comply with the relevant legal requirements.

26. Spares

Prior to contract completion, the Contractor is required to provide the Client with a list of recommended "on-site" spares that should be held by the Client for any new assets covered under the works. A quote should then be generated for any items that may be required so that these can be made available on site prior to contract completion.

27. Environment and Sustainability

Where possible and where there is no detrimental effect on material performance Contractor's should use environmentally friendly products and consumables. Unless specifically agreed with the MRC, Contractors are responsible for the correct disposal of

waste generated as part of the works / attendances. All waste should be appropriately disposed of in line with current waste legislation.

28. Testing, Commissioning & Record Information

All services affected and modified by the proposed works shall be tested and commissioned, in accordance with the relevant codes of practice, regulations and manufacturer's recommendations. All commissioning data shall be recorded and all certification required by relevant BS and EN Standards shall be provided and included in the O&M manual. As Installed record drawings, test certificates, O&M information and H&S information for all systems shall be provided. All record information shall be provided in electronic and paper format. All systems affected by the works shall be updated and recommissioned to reflect the new layouts and system configurations, including BMS and fire alarm.

29. Revisions and Variations

Where schemes are subject to revision or instruction, the installation/working drawings, and finally the record drawings, must show the full effect of such revision. Where the scheme revision involves change to the architectural or structural details immediate notice must be given to the Project Manager / Contract Administrator / Client.

Only if the contractor can give proof that a significant departure from the intent of the Tender Drawings has been necessary will a variation be recorded. This will neither include normal detail design development relating to inclusion of, nor development of, factors within the contractor's design responsibility.

Where scheme revisions are required due to the contractor's variation or revision then all cost for such revision will be the contractor's responsibility including for any Client's consultancy costs.

Where drawings are revised and updated during construction these shall be issued to the Project Manager / Contract Administrator / Client for comments on the revision only.

30. Practical Completion

Practical Completion of the scheme shall be granted when: all contract works are complete; all services are installed and have been satisfactorily commissioned; all approved "as built" working drawings and operation and maintenance manuals of the building and services have been presented to the Client; the Client's Building Manager and their staff have been given sufficient training on the management of the services; all tools and spare parts specified in the contract have been delivered to site.