MHRA

Relocation of Micro Lab & Refurbishment of CL3

Project No: ACC16-2023

MHRA
4-5-2024

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Works Specification

Works Information

The project will entail the relocation of the Microbiology function from an area within the CBRM building to the main site building, including refurbishment of the vacated lab to cater for the new occupants. There will also be some smaller works to create a storage area to house media materials and equipment, give access to the new CL2 Lab housed within the EM suite area, install a ducted fume hood within the Media Lab, and general decoration of the Lab.

The receiving EM suite of labs within the main building will require major refurbishment to ensure it is suitable for the Microbiology work including ventilation and filtration which could be housed externally or in the plant room (the current system is housed in the plant room but is some 20 years old and in a poor state of repair), as well as the lab layout and equipment provision.

It is anticipated the successful supplier will be experienced in Lab refurbishments on both Containment and Clean room installations.

Those contractors that are selected to tender will be asked to show examples of their works on similar related projects that they have previously undertaken and is to include a site visit by key members of the MHRA project team if required.

1 Description of the works

An area located at the west end of the North Labs Corridor (currently known as the EM Suite) has been identified as the location for the relocated Microbiology laboratory.

The area will need to be completely reconfigured to meet the requirements of the new occupants, and will need to divide into the following areas:

- Office space for ILS staff
- Microbiology Lab Lobby ISO standard 7/8 (Grade C)
- Microbiology Lab to ISO standard 5/7 (Grade B) and housing an MSC Class II (Grade A ISO Standard 5)
- Main Preparation Lab to CL2 standard, with two designated areas:
    - Microbiology preparation
    - Media Preparation nonsterile area
    - Small storage area to rear with shelving.
- Separate storage area accessed from “link corridor” for media samples.
- Media lab with access to the Main preparation Lab and installation of vented fume hood. General decoration and making good. Please note the south wall has some water damage that will need resolving (N.B. several services run along this wall adding to difficulty in repair and make good.)

Walls and doors will need to be arranged to facilitate the above, and new ventilation meeting the requirements for the repurposed EM Suite location. Although it is not expected that any of the removed walls will be supporting structures, it is still anticipated that a structural survey will be required to confirm this. Any work such as new doors or core drilling for services must be accounted for in any structural survey.

The EM suite area at present houses several specialist pieces of equipment and supplied gases it is anticipated these will be removed prior to work commencing but there will still be a need to remove the remaining equipment, and allowance should be made to accommodate this.

The work breaks down into the following phases:

- Final emptying of EM suite of equipment
- Preparation prior to refurbishment including removal of electrics plumbing walls etc, to create an empty shell ready for installation as per agreed design.
- Installation of Micro Lab and additional areas to design specifications.

- Relocation of staff to office area, and smaller works to provide media storage area.
- Refurbishment of vacated micro area to meet user requirements.

Vacated Area
The vacated micro lab in CBRM is a mix of the following:

- CL3 Lab and lobby
- Small clean room with MSC
- Preparation Lab to CL2 standard with a small office write up area.
- The CL3 lab and lobby are served by a dedicated Ventilation system (supply and extract)
- The Clean room, preparation Lab and Office are from a large AHU serving other areas as well these.

All labs in both areas will be individually pressure air tested with MHRA calibrated site tester as part of the commissioning stage to prove room integrity. The sustained pressure in the lab under test conditions are ≤1m³/m²/hr. @ +50Pa.

The Users preferred provision with respect to service outlets etc. is recorded on the plan layout drawing. The reflected ceiling/wall and floor plans indicated are required or existing locations i.e., air grilles, luminaires, and other ceiling-mounted items. The drawing plan will show the required layout by the area owner and the project manager. Detailed discussions will take place for any issues to be resolved or highlighted prior to award. This will be discussed during the site visits. However, all items are indicative and represent a nominal option; they do not represent an engineer-designed and validated engineering solution, which is the remit of others and to the instruction of the Client.

Access to the labs will be via the rear fire exit to the EM suite, or through the North lower Lab corridor (however this will be a working thoroughfare so best avoided if possible). Access to the CBRM building can be arranged via an exit adjacent to the Micro Lab but will need to be controlled and cannot be left open. A storage unit will need to be provided to keep contractor materials in, as space is limited at MHRA. The container can be located close to both areas, and this can be shown during the site visit.

2 Drawings and SOP's

List the drawings and SOP's that apply to this contract.
ElectricalIsolationNotice SN6373

3095 CablingInfrastructure-GeneralRequirementsforInstallations

GeneralRequirementsforExternalContractors SN6598
EM Design Drawing Version 3 for Tender

Micro Clean Room Classification

Existing EM suite Air & Water Systems Schematic-Model

Existing EM suite Clg Water, Compressed Air, Medical Gases & Waste Layout

Existing EM Suite floor plan with dimensions

Existing EM Suite Plant Room HVAC Layout edited-Model

22-CBRM LAB-GF JL for Tender

BS EN ISO 14644-4:2022 – Cleanrooms and associated controlled environments - Design, construction, and start-up.

3 Specification

Site visits are compulsory for all Tender returns, and any Tender submitted without a visit will be disqualified. A full survey is to be undertaken to establish and verify actual site dimensions, prior to further design work and the subsequent construction phase.
The Contractor must ensure minimum disruption to connecting areas and maintain access for on-site staff if required.
Site specific training must be provided as required for engineering staff and end users.
The contractor will demonstrate how they intend to provide rapid support and fault rectification of any issues or problems within the warranty period.
RAMS specific to the work will be supplied and signed. They must be signed by the author/approver and read and signed by everyone undertaking the work.
The existing EM suite area will be stripped back to accommodate the new layout for the office, preparation lab and newly formed positive pressure labs.
The air handling, supply and extract will need to accommodate all the requirements of the area and may require more than one to cope with the different demands of each distinct space.
Recirculated Microbiological safety cabinets that MHRA will provide, will be sited in each of the labs and will not form part of the extract system, but special attention will need to be thought through to site them safely within the lab without being affected by supply or extract air flows.
A fume cabinet will be supplied but will be ducted and extracted by the contractor.
Other items to be installed will be plasterboard partition walls, trunking & electrics, Trend BMS, Cat 7 class F data cabling, benching and shelves, doors, swipe access, luminaries, fire alarm modifications.

The proposed plan layouts are included within this tender package.

Energy conservation

Any new lights must be LED with energy-saving ideas and solutions included where applicable.
New Ventilation plant must be energy efficient with any energy saving measure highlighted e.g., heat recovery from exhaust systems. Any new domestic hot water services should have a return leg, and retro fitted for existing if not already provided.

Where HEPA filtration is required on the supply side, housings are to be fully sealable in accordance with Clean Room regulations, and the HEPA's to be gel sealed against the housing. As this is a major penetration to the lab, very special care will need to make sure that NO leakage egresses through. Differential pressures must be provided so we can see the cleanliness of the filters. This can be shown with a magnehelic or equivalent gauge or digital display.

All HEPA filters are to be standard size throughout (610 x 610 x 149, other sizes may be used if more suitable but must be a standard size) the building to avoid duplication of spares and are to be H14 99.99% efficient or better. All terminal HEPA's to be able to be safe changed from inside the laboratory. All filters must be DOP tested. Our Trusted and preferred supplier for filters is Jasun filters.

EM Suite Works

General Requirements

The rooms will be stripped of lighting, power sockets, and surface mounted alarms.
Cables will be pulled back outside the room. Any recoverable furniture, benching etc will be identified and removed carefully for storage.

A contractor's skip can be in the local area but must be maintained so no rubbish is left around it or be blown around by the wind. "Contractors engaging in refurbishment or new works on MHRA sites are required by law to control their waste arising's. If waste skips are being brought onsite these should, where possible, be controlled by the site service provider; ensuring that a 'duty of care' is maintained. **If a contractor brings his own skip onsite, they should provide details and waste licenses/permits of the waste contractor and site where the waste will be disposed of as described above."**

Existing labs 5074-5077 and 5079 will have the non-supporting walls and ceilings removed (subject to structural survey). New partition walls will be erected to form the new layout. This is shown on the drawing.
A costed option should be included for replacement windows.

Supply & Extract AHU units.

The existing HVAC ductwork will need to be replaced to give the required air flows and pressure regimes. The existing unit is housed in the plantroom two floors above and is in a poor state of repair, the new unit can be housed either in the plant room or externally to the rear on the grassed area, or a combination of both. Any use of the plant space will need to be housed in the current footprint of the existing system, as space is of a premium in the plant room area. The only internal access to the plantroom is via a flight of stairs from the floor below, there is a double door entry (door to nowhere or gantry doors) at the end of the plant room, however this is impeded by the metal fire exit below and limited space in front of these to load through these doors. These issues can be seen on the Tender walk round. Should your design, require more holes to be cut through the roof or wall membrane, all holes, upstands, and membrane is to form part of your return and be costed. Equally if your design requires less holes, please allow to cap off any penetrations making them watertight. Note. The ceiling is a concrete slab with supporting beams protruding into the area and these will need to be taken into consideration for running services at ceiling level.

New Walls

The new wall covering will consist of:
Two layers of 12.5 mm plasterboard fixed to either a wood or proprietary metal suspension system. The joints must be offset from the joints of the other plasterboard and all edges are to be butted together with joint filler. All screw holes and joints will be sealed with joint filler.

All areas that require vinyl coverings are to be fully prepared prior to covering. The interfaces of the walls to ceilings and walls to floor must be fully sealed using trims, that will form a sealed joint. All plasterboard joints are to be taped and jointed, prior to vinyl covering.

New Ceilings

The new ceiling will be a metal frame and plasterboard construction. All the joints of the plasterboard and all edges are to be butted together with joint filler. The interfaces of the walls to ceilings and walls to floor must be fully sealed and be compatible with the wall trims. All plasterboard joints are to be taped and jointed. The finished ceilings will have a minimum of two coats of Dulux diamond white emulsion applied. Access hatches must be provided where serviceable parts are located and for inspecting the void., The office area can have a tiled grid ceiling suited for this type of area.

New Doors

All doors within the EM Suite works will be to B M Trada standard build and installation. The clean lobby and room will have the above standard with GRP doors suitable for use within clean room environments.

The new doors will be the same design and colour to the existing doors within the suite. All ironmongery, door closures, flush bolts, vision panels and handles will be as existing. All doors throughout the suite will be a leaf and a half (except where detailed otherwise), giving a clearance of approximately 1100mm.

Electrical

- Each lab/area will need to have its own dedicated circuit, protected by a trunking mounted RCD.
- RCDs are to be installed within the trunking within the office/lab current site specification is a Legrand (40 amp I-thermal) and 30mA trip rating to BS EN61008-1
- Distribution Boards to Memshield 3 type boards with applicable MSBs/RCBOs as required.
- All new electrical work shall be carried out in accordance with *IEE Wiring Regulations Eighteenth Edition and relevant current.*
- *Isolations will be carried out in accordance with SOP 6373*
- CPC (circuit protective conductors) shall either be an incorporated core or a separate cable, for SWA's the armour is for mechanical protection and must not be used as a CPC.
- All lab/office lighting refurbishments would require the addition of a double pole switch to enable future local isolation maintenance procedures, to be inserted into every circuit to isolate live and neutral within the Lab/office lighting circuits.

- Cable trays shall be perforated and supplied in nominal 2,400mm lengths manufactured from galvanised mild steel complying with BS 1499 (Classification CR4/GP). Cable tray accessories shall be supplied by the Cable Tray Manufacturer; only where these are inadequate to meet special conditions can site-fabricated accessories be accepted with the approval of the Supervising Officer. Holes cut in cable trays for the passage of cable shall be drilled and suitably bushed.
    - Fixing of cable trays shall unless otherwise stated be at intervals not exceeding 1,200mm and at 200mm from bends of intersections. Fixing shall be either by brackets made by the Cable Tray Manufacturer of brackets made from "Unistrut" and/or "Unirax" sections whichever are preferred.
    - Trays up to but not including 150mm wide shall be 20 SWG thick: all cable trays shall be of the return flange-type.
    - Unless otherwise required wiring, tray and accessories shall be finished in hot dip galvanised after manufacture and sections of wiring trays shall be jointed together with 6mm diameter mushroom headed safety bolts and nuts to comply with BS 1494, Part 1. Adequate copper earthing strips shall be fitted at every joint. A minimum clear space of 25mm shall be left behind all cable trays.
- The bonding of the electrical installation is to be carried out to the requirements to the current IEE Regulations and the Electricity Boards recommendations, special attention to be paid to the bonding of extraneous metalwork.

Lighting

- Surface mounted LED lighting on the plaster board ceiling to provide 450 lux @ bench level switched by PIR / Daylight control. Agreed lights are to be on the emergency lighting circuit.
- Emergency lighting will be a non-maintained bulkhead installed to an agreed position usually at the exit area within the Lab.
- Trunking to provide power to the lights will all be surface mounted. Screw fixings through the trunking into the ceiling or walls must be sealed. Marco Elite 60 dado trunking to be utilised for Lab electrical outlets.

- Office lighting to meet DSE requirements and industry best practise for areas using

Power distribution and containment Trunking

- Marco Elite 60 dado trunking to be utilised for Lab power outlets. This trunking accommodates the Cat 7 data coms cable and meets the IT standard for data cable bends and terminations.
- Site standard MK accessories (white two gang switched outlets).
- Power to MK outlets to be a minimum of 4mm CSA.

Inspection & Testing

- The installation shall, upon completion, be inspected and tested in accordance with the standard procedure within the IEE Regulations.
- The Contractor's attention is drawn to the electronic components within the control system, which must be disconnected before carrying out any tests.
- Upon completion of the project the whole installation shall be inspected and completion and inspection certificate will be submitted in accordance with the IEE Regulations Appendix 1.5

Plumbing and Sinks

All sinks will be hard piped up to the outlet flexible piping will not be allowed. Photos will be taken for all new installations for referencing in the Legionella Logbook.

MSC's:

- The MSC in each of the labs must be on the lab circuit. The MSCs will be backed up by separate UPS within the lab. It will be the Contractors responsibility to fit, test and commission.

Labels

- All items of equipment and sockets, data outlets etc. shall be fully identified with a label showing which distribution board or cabinet they are fed from.

Penetrations

- It is imperative that penetration of the room fabric for fixings, services etc. is kept to an absolute minimum to provide containment. Of particular importance are fixings for proprietary dado trunking and shelf support structure, where all fixings should be sealed. All electrical sockets will be run in surface mounted dado trunking – Marco Elite 60 Trunking System. Within the labs it is expected that all services to that area will be via one port. The recommended method of bringing the cables into the lab is an IP65 rated electrical housing junction box. Where the cable pass through they must have tight sealable glands.
- All supply and extract ductwork that is to be extended to meet the new wall and ceiling surface, is to be fully sealed and tested prior to mounting surface mount grilles.

Data Outlets

The data cable will be CAT 7 class F. Please see drawing. Nexans approved installers will be required to install, test, and certify the installation. Please see separate IT specification for requirement.

Trend

The following Trend Points for equipment are required in each area:

- CL2 Lab, a total of 12 points required.
- Clean Room, a total of one point plus a spare.

- New Media Prep area, a total of 2 points.
- New Media Storage area, a total of 4 points plus a spare.

In addition, as well as Trend sensors associated with the new ventilation plant, space temperature monitoring will be required for the following areas:

- Office
- CL2 Lab
- Clean Lobby
- Clean Room
- Media Preparation area
- New Storage area off link corridor

Twenty (20) equipment points plus temperature monitoring for each room across the suite. The Clean room and Lobby will also require a visual indication of pressure within the area. A detailed specification of the BMS Trend system requirements is provided.
Trend BMS outlets are to be installed for monitoring temperature conditions on the freezers and incubators conditions and space temperatures. Our trusted and preferred contractor is DDE.

Card Swipe Access Control

The door from the EM Suite Lobby into the CL2 Lab has an existing swipe card and this may be repurposed to provide access control to the door below

- CL2 into Clean Room Lobby and interlocked with Lobby door, access into Clean Room

The doors from the Clean Lobby into the Clean Room will require interlocking with access into the clean room requiring a push button that releases the door once the Lobby door is closed. The opposite will apply on the way out. Diester readers must be used that are GovPass compatible as per existing site wide solution.
In summary the following is required:

- Proximity Swipe Card from Clean Lobby
- On the inside a Break Glass Exit to be installed in case of emergencies.
- On the inside a Release to Exit push button
- Door A (Clean Lobby) & B (Clean Room) are interlocked via magnetic blocks so when Door B is opened, Door A cannot be opened and vice versa.
- When Door A is closed, Door B is unlocked by pressing the door release button.
- Exit from Door A requires Door B to be closed and an exit push button pressed.
- There is a Break Glass Exit for Door A and B in case of emergencies.
- A Dead bolt manual key lock is to be installed in Door A so that it can be isolated.
- The mag locks must release in the event of a fire as per MHRA fire evacuation procedure. (Tyco are our trusted and preferred contractor).

JCI fire Alarms and Smoke Heads

The contractor shall contact ADT/JCI Fire for all required works around the Fire alarm sensors or removals and relocations. Updates will be required on our fire alarm systems and graphics in reception.

Room Accessories

There will be a requirement to have coat hooks, sink splashbacks and panels, towel holders and soap dispensers and potentially other items associated with the room use. Doors will require room numbers and other H&S signage. Please allow a small sum to accommodate these ad-hoc items as required.

Individual Room Requirements

Entrance Lobby

- Riser to left of entrance will be reduced in size and a suitable access door provided.
- Wall infilled where riser size reduced.
- Area to be filled and made good and a minimum of two coats of Dulux diamond white emulsion to walls and ceiling.
- Door to corridor replaced with fire rated door to BM Trada supply and installation.

Office

- The office will have Interface series 1 Denim carpet tiles (338405) or similar fitted.
- Glass wall fitted between Lab and Office to give an open airy feel.
- Lighting to comply with DSE regulations.

DADO Power Sockets	*14 Twins*
Dado mounted Data	*8 Dual*
Pressure Regime	*N/A*
Air Change rates	*Minimum 6/HR*
Temperature	21°C +/- 2°C
Smoke Head Alarm	*1*
Shelves	*Yes*
RCD	*1*
Benching (see drawing)	*Perimeter of room*

Main Laboratory

- Painted white using a minimum of 2 coats of Dulux diamond white emulsion.
- The floor is to be finished in grey vinyl.
- Trespa benching will form part of the perimeter benching and be cantilever bench framing (epoxy-coated steel; RAL colour Black, 30% gloss) with solid grade laminate work surfaces 5 deep, 950mm FFL with 40mm upstand at the rear (Trespa 'Athlon' colour Sand) benching arrangements as indicated on layout.
- The room will have Cat 7 class F data ports, power sockets above and below the benching and trend BMS ports under-bench to monitor fridges, freezers, and incubators.
- Two Oxygen emergency wall fans to be removed and made good.
- Equipment (see table)

Above Bench Power Sockets	*20 Twins*
Under Bench Power Sockets	*6 Twins*
Above Bench Trend/ Under Bench Trend	*12 Total*
Above Bench Data	*Duel*
Pressure Regime (Indicative to be confirmed on award)	*-15 Pa*
Air Change rates	*15-20/HR*
Temperature	21°C +/- 2°C
Smoke Head Alarm	*1*
Trespa Benching	*Yes*
Shelves	*Yes*

RCD	*1*
Hand wash sink including towel holder and soap dispenser	*1*
Lab Sink	*1*
Equipment	*Pharmacy Fridge, minus 20 Freezer, minus 80 Freezer, 7 incubators plus allow for one spare*

Clean Room Lobby

- Full vinyl on walls and floor
    - **Floor:** 2 mm Polysafe Mosaic PUR flooring **(Orient Grey)** with clean room coving to be installed to manufacturers requirements. All joints are to be welded and sealed.
    - **Walls and Ceiling:** Polyclad **(Dove White)** with clean room coving up to be fitted as per manufacturing requirements. All joints are to be welded and sealed.
- Step over with under storage for shoes, and gowning supplies
- Hand wash sink with soap dispenser and towel holder.

Above Bench Power Sockets	*2*
Trend Pressure sensor and Mag/digital display in CL2 Lab	*1*
Trend temperature sensor	*1*
Above Bench Data	*1 Duel*
Pressure Regime (Indicative to be confirmed on award)	*+15 Pa*
Air Change rates	*To meet* ISO 7/8 (Grade C)
Temperature	21^{o}C +/- 2^{o}C
Smoke Head Alarm	*1*
Trespa Benching	*Yes*
Shelves	*No*
Step over with under storage	*Yes*
Interlocked door with swipe card access	*Yes, with clean room door*
RCD	*1*
Handwash Sink with Towel Holder and soap dispenser	*1*
Equipment	*Pharmacy Fridge*

Clean Room

- Full vinyl to wall and floors
    - **Vinyl:** Colour WHITE.
    - **Floor:** 2 mm Polysafe Mosaic PUR flooring **(Orient Grey)** with clean room coving to be installed to manufacturers requirements. All joints are to be welded and sealed.
    - **Walls and Ceiling:** Polyclad **(Dove White)** with clean room coving up to be fitted as per manufacturing requirements. All joints are to be welded and sealed.
- MSC (MHRA supplied)

- Pharmacy grade fridge (MHRA supplied)
- Design qualification (DQ). Provide documented evidence that the proposed design of the facility meets requirements.
- Installation qualification (IQ) Documented evidence that the facility has been installed in accordance with the agreed design.
- Operational qualification (OQ) Evidence that the installation operates as specified and within the agreed specification parameters.

Above Bench Power Sockets	*3 Twins*
Under Bench Power Sockets	*None*
Trend room pressure sensor	*1*
Trend temperature sensor	*1* °C/RH
Above Bench Data	*Duel*
Trend Pressure sensor and Mag/digital display in Clean Room Lobby	*1*
Pressure Regime (Indicative to be confirmed on award)	*+30 Pa*
Air Change rates	*To meet* ISO 5/7 (Grade B)
Temperature	21°C +/- 2°C
Smoke Head Alarm	*1*
Trespa Benching	*Yes*
Shelves	*Yes*
Interlocked doors	*Yes, with Lobby door*
RCD	*1*

Media Area

The Media Area will have a storage area built to house equipment and glass door fronted shelving to accommodate glassware. The media preparation area will have benching configured as per the drawing and a ducted Fume hood installed (supplied by MHRA and installed by the contractor). The storage area and Media lab will require a Trend Temperature sensor set up to record the area stored conditions. The media lab has had water damage to the south wall and will require making good and painting as well as the rest of the room. A door will be installed into the North wall for access to the media preparation lab.

Storage area

Pressure Regime	*N/A*
Air Change rates	*N/A*
Above Bench Power Sockets	8 Double Sockets
Trend Equipment Sensors	6
Trend Temperature Sensor	1
Smoke Head Alarm	*1*

CBRM Refurbishment Work

The area suffers from extremes of temperature in Summer and Winter possibly due to several external walls, we would like to explore options to resolve this issue that may utilise different methods such as external insulation, Solar film, brise soleil. There is also an issue with a vacuum pump required for the process in the The Contractor **must** demonstrate how they have considered this issue and supply costed resolutions. The room pressures will remain as existing for all rooms within the current area.

CBRM Main Lab including the Office.

The lab will require some general decoration as specified. Additional Cat 7a data cables are required.
The office would also be at the same pressure as the Lab, it will no longer be used as an office, but shelving installed for the storage of consumables. General decoration to refresh the area.

Above Bench Power Sockets	*As existing 13 DSOs*
Under Bench Power Sockets	*As existing None*
Under Bench Trend	*As existing 6*
Above Bench Data	*2 duals in Office, None in Lab so an additional 3 duels required*
Pressure Regime	*As Existing*
Air Change rates	*15-20/HR*
Temperature	21°C +/- 2°C
Smoke Head Alarm	*1*
Trespa Benching	*As existing*
RCD	*As existing*

CBRM Clean Room

Above Bench Power Sockets	*As existing 6 DSOs*
Under Bench Power Sockets	*As existing None*
Under Bench Trend	*As existing None*
Above Bench Data	*2 Duals*
Pressure Regime	*+5 Pa*
Air Change rates	*15-20/HR*
Temperature	21°C +/- 2°C
Smoke Head Alarm	*As existing*
Trespa Benching	*As existing*

CBRM CL 3 Lobby

This area needs to be sealed to the accepted standard as it is a CL 3 lobby area. There is a room fumigation unit between this room and the CL3 Lab this needs to be removed and the wall completely sealed.

Power Sockets	*As existing*
Trend Pressure Sensor	*As existing*
Trend Temperature Sensor	*As existing*
Pressure Regime	*-30 Pa*
Air Change rates	*15-20/HR*
Temperature	21°C +/- 2°C
Smoke Head Alarm	*As existing*
Step over	*As existing*

Sink	*As existing*
RCD	*As existing*

CBRM CL 3 Lab

This room was refurbished a few years ago with the walls and floor sealed and recovered in vinyl, the wall with the fumigation unit (to be removed) will need to be made good and a handwash sink installed in its position with a hand towel and soap dispenser provided. An alternative fumigation socket will be required to replace the wall unit.
At present the room uses bottled gas housed within the Lab for Compressed Air and Nitrogen Gas the intention is to run these services in from external sources via a Roxtec box to remove the need for room bottles. Compressed air supplies already run close to the Lab (there is one in the preparation Lab that could be repurposed for the CL3 Lab), and there are LN2 Dewars housed in an external cupboard just to the North of the clean room which could also potentially house a Nitrogen Gas bottle.
The Lab will require 3 double data outlets using CAT7a data cabling as there is no provision at present.

Above Bench Power Sockets	*As existing*
Under Bench Power Sockets	*As existing*
Under Bench Trend	*As existing 4 Points*
Above Bench Data	*3 Duel*
Pressure Regime	*-45 Pa as existing*
Air Change rates	*15-20/HR As existing*
Temperature	21°C +/- 2°C
Smoke Head Alarm	*As existing*
Trespa Benching	*As existing*
Nitrogen gas from external gas bottle	*1 Required*
Compressed Air from building compressors	*1 Required*
New hand wash sink including hand towels and soap	*1*
RCD	*As Existing*
Fumigation socket and system	*New system or existing controls adapted to suit new socket and boiler*

4 Constraints on how the *Contractor* Provides the Works

4.1 Permit to Work

The Employer operates a permit to work system these include the following as required by the work: -

- Authorization to access
- General Permit to work.

All permits will be issued as necessary by authorized staff. No work is to commence without the possession of the relevant permit to work. These must be returned to the issuer on completion of the works for filing.

There are no health risks to contractors' personnel from the Employers activities if the Employers controls are complied with fully.

4.2 Programme of works

Please supply a Gantt Chart Schedule in your tender return. This should show all lead times. It is preferable that this is supplied in Microsoft Project but an excel spreadsheet would be accepted.

4.3 Design Change Post Contract Award

Any change to this specification after the tender has been received and the contract awarded will be controlled using the MHRA's Design Change form that is signed by both the Institute's project leader and the contractor's representative. The form will identify the change and its effect on costs and timescales. An example of this form can be found in the attachments.

4.4 Site Access

Mon- Fri 09:00 to 17:00 (other hours by agreement with the Project Engineer)
Sat & Sun With the permission of the Project Engineer

Access to the site will be via the main access to MHRA, which is shared with the client's employees, and visitors. All vehicles will be stopped at the security cabin and all drivers will be required to comply with the client's security arrangements.
Any work outside of the above hours can be facilitated with agreement of the Project Engineer.
After 7pm no work can take place unless security and PE have agreed to this.
Security Clearence will be required prior to staff attending site, it is the Contractors responsibility to ensure this requirement is fulfilled.

4.5 House Keeping

Due to the clean environment required for the work of the institute, good housekeeping is always required. All waste material must be removed from site daily and storage for materials on site is not available.

4.6 Confidentiality

Contractors are expected to keep any information about the work of the Institute or staff always details totally confidential. The contractor is requested to sign a Non-Disclosure Agreement as attached and return with the Tender.

5 Services and other things provided by the *Employer*

5.1 Services

MHRA will provide services including water, use of welfare facilities, and electricity.

5.2 Free issue items

No Free issue items with this project

6 Location

The site Address is:

- MHRA Blanche Lane, South Mimms, Potters Bar, Hertfordshire EN6 3QG.

6.1 General

The contractor is always to comply with the Institute's H & S guidelines while on site. The H&S advisor on site has responsibility for ensuring compliance on the Institute's behalf and will form part of the project team.

All contractor employees will be given the site induction when attending site for the first time. There will be further inductions for specific specialist areas as and when required. Prior to attending site there will be a one-off baseline Personal Security Standard check, this will be organised by the Project Engineer responsible for the work.

Should, because of the contract, an incident or accident occur to either a member of the Institute's staff, property or contractor's employees, the person responsible for you on site (generally the Project Engineer) must be informed as soon as possible after the immediate emergency has been dealt with. The responsible person will then inform the H&S team.
Site rules, practices, and procedures to be established and enforced will include but not necessarily be limited to the following: -
- Contractors' personnel must comply fully with the client's security arrangements and procedures
- Operatives and visitors report to the site supervisor are inducted and sign in and sign out
- Smoking is not permitted on the site except in defined areas
- Radios and personal stereos are not permitted
- Personal protective equipment must be worn as required by their risk assessment
- Correctly rated and inspected electrical equipment are used where applicable

- Site Fire precautions and procedures are maintained by Contractor's personnel.
The Employer will continue to operate normally in the building. However, it will be necessary for some operational areas to be vacated for periods of time to allow works to be carried out. The Contractor will be required to liaise with MHRA so that a program can be established to suit operational requirements. Access to all areas for Employer's maintenance personnel must always be maintained unless alternative arrangements have been made with the Project Engineer.

The Contractor must ensure that his operations do not pose any risk to the Employers personnel or visitors to the complex.

There are no health risks to contractors' personnel from the Employers activities if the Employers security controls are complied with fully.

6.2 Storage of materials and tools

MHRA is very limited on internal space and therefore all material and tools will need to be stored in an area designated by the Project Engineer.

6.3 Stage handover and training

If a project has one or more stages/phases, then we will require a/several stage handover/s. This will require O&M details to enable maintenance to add the details to the PPM system. Additionally, training will be required for the new plant/equipment.

MHRA are interested in sustainability and environmentally friendly solutions. Please provide examples of where your company can provide increased energy efficiency.

6.4 Site Survey

All tenderers will be expected to carry out full site survey to verify the work required to fully comply with the scope of the specification. This is mandatory for all contractors tendering as non-compliance will result in tender disqualification.

6.5 Welfare facilities

The site has toilets, power and water which will be provided to contractors with the Employer's permission. The site also has a staff restaurant (the area in which the work is taking place) that the Contractors staff may use subject to persons being properly dressed (no bare torsos or shorts) and in clean and tidy clothing. We have first aiders on site.

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