

Statement of Requirement (SoR)

Reference Number	PA0000002092
Version Number	0.1
Date	15/01/2024

1.	Requirement
1.1	Title
	CBAAC Mini-Cabinet Line
1.2	Summary
	<p>This requirement is for the design, build and installation of a 'CL4 mini cabinet line' for the Virology capability at Dstl Porton Down. It should consist of 5 Microbiological Safety Cabinets (MSC), with four having independently vented and fumigable pass boxes; all MSCs will have roughly the dimensions 2000mm (L) 950mm (D) 700mm (H). The cabinet line will also have Dunk tanks, an Interconnecting and independently vented tunnel and an extraction system utilising a single plenum.</p> <p>The Supplier must also provide a mock-up of the cabinet line to enable operators, safety and facilities teams to assess the ergonomics, usability and compatibility of the end-product with existing infrastructure and processes.</p>
1.3	Background
	<p>Directly supports the Chemical and Biological Analysis and Attribution Capability (CBAAC) required to analyse suspect samples on behalf of a wide range of Defence and Security Stakeholders. [REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>
1.4	Requirement
	Microbiological Safety Cabinet (MSC) line requirements

A cabinet line consisting of 5 Class III MSCs linked via an interconnecting and independently vented tunnel (cabinets and tunnel carcasses all manufactured in 316L stainless steel and acrylic for visors).

Will have the following components:

- Unpacking Cabinet (with large independently vented and fumigable pass box to fit rigi bin, dimensions below)
- Dirty Analysis Cabinet (sufficient size to house our imaging equipment, dimensions below, no pass box)
- Clean Analysis Cabinet (fitted with an independently vented and fumigable pass box and integrated dunk tank below)
- Aerobiology Cabinet No 1 (fitted with an independently vented and fumigable pass box)
- Aerobiology Cabinet No 2 (fitted with an independently vented and fumigable pass box)
- Interconnecting, independently vented and controlled Tunnel (fitted with a dunk tank)

All cabinets will have roughly the dimensions 2000mm (L) 950mm (D) 700mm (H) and must:

- Draw a minimal negative pressure of -200 pascals (for each cubic metre of cabinet volume) and meet a breach velocity of at least 0.7 m/s with one glove removed (as set out in EN12469)
- Have a negative gradient to the interconnecting tunnel drawing a minimal pressure of -250 pascals.
- Have a negative gradient to the pass boxes drawing a minimal pressure of -150 pascals.
- Be Fitted with a standard single H14 high efficiency particulate air (HEPA) filter inlet and double H14 HEPA extract per cabinet (as a requirement within BS EN 12469 and defined in BS EN 1822 High Efficiency Air Filters)
- Have doors of sufficient size to fit rigi waste bins that have dimensions 400mm (L) 400mm (D) 360mm (H)
- Have loading doors for access to the interconnecting tunnel whilst maintaining a controlled environment.
- Include x6 power sockets and separate fumigation sockets, fumigation sockets linked to central timer controls on PLC
- Pass boxes will each have a fumigation power socket linked to central timer controls on PLC
- Be fitted with a blank communication panel (other manuf. to provide actual panel)
- Have a minimum of 8 gauntlets with a 200mm aperture (4 per side) spaced to allow removal of packaging and movement of goods from the pass box/ dunk tank and into tunnel. Additional gauntlets will be fitted on each of the pass boxes to facilitate loading.

Dirty Analysis Cabinet must:

- Be of adequate size to fit our imaging equipment with dimensions 1253mm (L) 565mm (D) 488mm (H).
- Have a slide out table arrangement to facilitate maintenance of imaging equipment. The system must support the equipment (50kg) at 1 metre overhang from the isolator cabinet, enabling connection to a trolley for machine removal.

Dunk tanks must: be of adequate size to fit a biojar with dimensions 190mm (L) 150mm (D).

Interconnecting tunnel must:

- Draw a minimal negative pressure of -250 pascals (for each cubic metre of tunnel volume) and meet a breach velocity of at least 0.7 m/s with one glove removed (as set out in EN12469)
- Be Fitted with a standard single H14 high efficiency particulate air (HEPA) filter inlet and double H14 HEPA extract per cabinet (as a requirement within BS EN 12469 and defined in BS EN 1822 High Efficiency Air Filters)
- Have sufficient gauntlets to facilitate the loading and unloading of kit in and out of all five MSCs.
- Be fitted with a dunk tank
- Have 2x sliding trays, the length of the tunnel, to facilitate movement of items
- Fumigation power sockets linked to central timer controls on PLC

The extraction system: will be integrated with room thimble extract systems utilising a plenum. A requirement of installation will be that the system must be balanced to make sure that more air is extracted via the thimble than from the cabinet exhaust. This makes sure that the net flow of air is from the laboratory into the thimble, and not the reverse.

Cabinet line mock-up: a full scale mock-up is required to facilitate the design process. This will enable operators, safety and facilities teams to assess the ergonomics, usability and compatibility of the end-product with existing infrastructure and processes in an interactive process proven to be a useful part in the design of high containment equipment.

- Training to be delivered on routine maintenance of cabinets for the facilities team.
- Training for operators on the safe operation of the cabinets to include: start up, shutdown of equipment, loading and unloading of materials, monitoring pressures, alarms, interlocks and use of control panels.
- Maintenance performed by manufacturer and revalidation every 6 months provided within contract for the first 12 months. It is expected that subsequent maintenance after the first year will be provided by manufacturer subject to written contracts outside the scope of this call.
- Support will include emergency call outs

Installation to include:

- Full installation of cabinet line and plenum
- Full installation of ductwork
- Commissioning and ductwork balancing of the equipment including Thorough Examination and Test (TEt)
- Connections to CO₂

Project management Plan:

The proposal shall include a clear project management plan for the design, delivery and installation of the cabinet line. This should include but not be limited to an explanation of

	the different phases of the work, milestones, and schedule and include details of any requirement for Dstl technical input.
1.5	Options or follow on work <i>(if none, write 'Not applicable')</i>
	Not applicable.

1.6	Deliverables & Intellectual Property Rights (IPR)						
Ref.	Title	Due by	Format	TRL*	Expected classification (subject to change)	What information is required in the deliverable	IPR DEFCON/ Condition <i>(Commercial to enter later)</i>
D-1	Design and build mock-up / prototype	31/08/24			UK OFFICIAL	As specified in Requirements Section 1.4	
D-2	Design, build and install cabinet line consisting of 5 Class III MSCs linked via an interconnecting tunnel.	31/01/25			UK OFFICIAL	As specified in Requirements Section 1.4	

***Technology Readiness Level required**

Notes- IPR should be inserted / checked by commercial staff before sharing with the supplier(s) to ensure accuracy.

1.7	Standard Deliverable Acceptance Criteria
	<p><i>This could be 'as per Framework T&C's' once an appropriate framework is later confirmed (links to section 13 of RCA). Consider the timeframe for our review of deliverable(s) (acceptance/rejection).</i></p> <p>N/A</p>
1.8	Specific Deliverable Acceptance Criteria
	<p>MSCs will be manufactured to specifications in standard BS EN 12469:2000 this European Standard sets the minimum performance criteria for safety cabinets for work with micro-organisms and specifies test procedures for microbiological safety cabinets with respect to protection of the worker and the environment, product protection and cross contamination.</p> <p>BS 5726:2005 must be referenced</p> <p>The supplier must be accredited to ISO 9001:2015</p> <p>The equipment must meet EU safety, health and environmental protection requirements and shown by CE marking</p> <p>Cabinets must be wired to comply with UK standards</p>

2.	Quality Control and Assurance
2.1	Quality Control and Quality Assurance processes and standards that must be met by the contractor
	<p><input checked="" type="checkbox"/> ISO9001 (Quality Management Systems)</p> <p><input type="checkbox"/> ISO14001 (Environment Management Systems)</p> <p><input type="checkbox"/> ISO12207 (Systems and software engineering — software life cycle)</p> <p><input type="checkbox"/> TickITPlus (Integrated approach to software and IT development)</p> <p><input checked="" type="checkbox"/> Other: (Please specify below)</p> <p>See Section 1.4 - Fully compliant to BS EN 12469:2000</p>

2.2	Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement
	Design and installation must comply with the HSE ACDP guidelines: Management and operation of microbiological containment laboratories

3.	Security	
3.1	Highest security classification	
	Of the work	UK Official
	Of the Deliverables/ Output	UK Official
3.2	Security Aspects Letter (SAL)	
	Not applicable If yes, please see SAL reference- <i>Enter iCAS requisition number once obtained</i>	
3.3	Cyber Risk Level	
	Not applicable	
3.4	Cyber Risk Assessment (RA) Reference	
	TBC If stated, this must be completed by the contractor before a contract can be awarded. In accordance with the Supplier Cyber Protection Risk Assessment (RA) Workflow please complete the Cyber Risk Assessment available at https://www.gov.uk/guidance/supplier-cyber-protection-service	

4.	Government Furnished Assets (GFA)				
GFA to be Issued - Yes <i>If 'yes' – add details below. If 'supplier to specify' or 'no,' delete all cells below.</i>					
GFA No.	Unique Identifier/ Serial No	Description: <i>Classification, type of GFA (GFE for equipment for example), previous MOD</i>	Available Date	Issued by	Return Date or Disposal Date (T0+)

		<i>Contracts and link to deliverables</i>			<i>Please specify which</i>
		Information on the existing layout of the building/lab will be provided to the Supplier	During ITT	Technical Lead	

5.	Proposal Evaluation criteria
5.1	Technical Evaluation Criteria
	Technical evaluation criteria is attached in a separate document.
5.2	Commercial Evaluation Criteria
	<p><i>Commercial Assistance needed here before or after a requisition is raised. Framework evaluation criteria as per T&C's may apply.</i></p> <p>There is no formal scoring criteria, however the proposal will be evaluated on NAPNAC principles (no acceptance price no contract).</p>