RCloud Tasking Form – Part B: Statement of Requirement (SoR)

Title of Requirement	Improving understanding of intracellular pathogens at high containment.
Requisition No.	RQ0000010415
SoR Version	**0.1**

1.	**Statement of Requirements**
1.1	**Summary and Background Information**
	Dstl and the University of Exeter have a strategic relationship with shared research interests in the pathogenesis and treatment of intracellular pathogens, including *Coxiella burnetii* and *Burkholderia pseudomallei.* The project will utilise molecular biology techniques to further our understanding of mechanisms of infection and improve available therapeutic options. The MOD has a continued requirement to mitigate the threats from potential biological warfare agents (BWAs) to the UK and its interests. The development of effective medical countermeasures is key to meeting this requirement. This includes fundamental research into the mechanisms by which potential BWAs cause disease and respond to therapeutics. Alongside the internal programme of research, fulfilling this mandate requires the input and unique expertise of academic partners. Such research requires a means to safely handle and manipulate dangerous pathogens, specifically in an established Containment Level 3 facility. *Coxiella burnetii* is the causative agent of the disease Q fever and continues to pose significant threat to both the military and public health worldwide. The treatment of Q fever is protracted (typically around 18 months) and the risk of relapse means improved therapeutic options are required. As an intracellular pathogen, the natural environment for *C. burnetii* is very specific and requires particular knowledge and expertise to grow and perform research in the laboratory. Dstl and the University of Exeter have developed these internationally recognised skills over the last decade. *B. pseudomallei* is the causative agent of the disease Melioidosis. *B. pseudomallei* is highly infectious and is particularly difficult to treat due to intrinsic resistance to antibiotics and the ability to persist/lay dormant within the host leading to relapse of infection. The molecular mechanisms by which *B. pseudomallei* causes disease and evade treatment is multifactorial prolonging/exasperating the development of reliable medical countermeasures. Dstl and the University of Exeter have developed these internationally recognised skills over the last decade.

	Medical countermeasures include vaccines, antibiotics and immunomodulators. Their development requires an understanding of the molecular mechanisms by which an organism can survive and replicate within a host. These skills include molecular biology, immunology, vaccinology and microbiology. This project will perform research into these mechanisms using skills outside of Dstl's required capabilities and strengthen the interdisciplinary network between Dstl and University of Exeter.
1.2	**Requirement**
	- The University of Exeter (UoE) are required to undertake fundamental research to build knowledge of pathogens of interest to Dstl, including developing medical countermeasures to treat infections caused by these pathogens. - UoE are required to work on *Coxiella burnetii* and/or *Burkholderia pseudomallei.* - The research must improve our understanding of *C. burnetii and/or B. pseudomallei* using a range of cutting edge techniques such as genetic manipulation, protein assays, imaging techniques, infection models, immunological tools, computational biology or -omics analysis. - UoE are required to deliver research that contributes to the sustainment and development of the Containment Level 3 facility at the UoE to provide UK high containment resilience. - UoE are required to actively collaborate with Dstl, via the generation of 1x joint publications, 1x joint PhD studentships or 1x joint funding applications minimum over the course of the contract, UoE to choose which option they wish to take. - UoE are required to second researchers' time as costed in R-Cloud Tasking Form Part C to fulfil the deliverables of this requirement and jointly develop personnel professionally with Dstl through an optional 4 month placement as detailed in Section 1.3 The supplier will be required to provide quarterly reports and annual reports. Details are captured in the Deliverable Table (Section 1.6)
1.3	**Options or follow on work** *(if none, write 'Not applicable')*
	Costed Option 1: Placement with Dstl providing access to Dstl facilities and equipment. Decision to take up option by month 10 of each year. - Security requirement – Official - Facilities – containment labs - Role and responsibilities – Researchers in UoE and Dstl are required to do the same work activities. Therefore the researchers will not be required to do anything different than they are currently required to.

	- Estimated duration – 4 months
1.4	**Additional Terms and Conditions**
	Contractors Personnel - Research Workers a. The Authority accepts that the University of Exeter (UOE) may nominate a number of students, supervisors or other representatives, agents or employees ("Research Workers") to work alongside DSTL staff at Porton Down for the duration of the Contract. b. Names for all the agreed Research Workers must be submitted to the Commercial and Project Manager along with correctly completed a Personal Particulars - Research Worker Forms no later than 10 (Ten) working days prior to work commencing to allow the necessary security checks to be carried out and any administrative procedures to be completed. c. UOE shall take all reasonable steps to avoid changes in the Research Workers once accepted. Where such a change is necessary, UOE shall obtain the prior written consent of the Authority, which shall not be unreasonably withheld. d. Should it be necessary to change the Research Workers assigned to and accepted for the work under the Contract UOE shall notify the Authority in writing prior to the personnel starting work on the Contract. A Personal Particulars Research Workers Form shall be completed for each additional person and sent to the Authority's Commercial Manager. The appropriate Dstl and MOD administrative procedures shall need to have been completed to the satisfaction of the Authority before any additional UOE personnel may start work on this Contract. e. All Research Workers engaged in support of the Contract shall have appropriate qualifications and competence and be in all respects acceptable to the Authority. The Authority reserves the right to reject any proposed Research Worker(s) whom it considers unsuitable for any reason. The decision of the Authority shall be final and it shall not be obliged to provide any reasons. f. The only exception to process described in this condition is when any proposed Research Workers hold a full current SC clearance with no restrictions. In that case, even if the classification of the contract work is below SECRET a Personal Particulars form is not required. The SC provides the Authority with the requisite level of assurance that the individual is who they say they are and is appropriate to work on the contract. UOE will be required to provide appropriate evidence to demonstrate to the satisfaction of the Authority that the proposed Research Workers hold a full current SC clearance
1.5	**Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**
	• Risk assessments required to work at high containment, including HG3 organisms. • CL3 facilities meet required HSE legislation. • Home office licences in place for any animal research.

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** *(Commercial to enter later)*
QP	*Quarterly progress update*	*Every 3 months after contract award*	*Virtual Powerpoint presentation or similar*	*n/a*	Redacted	*Presentation pack to include but not limited to:* • *Update on technical progress* • *Current operation of CL3 facilities in Exeter.* • *Commercial aspects, including IP updates.* • *Review of deliverables.* • *Risks/issues.*	*DEFCON 705 shall apply*
AR – 12m	Annual report	CA + 12 months	Written Report	n/a	Redacted	Project background, materials and methods, results, discussions. Data in an Excel or GraphPad Prism format, relevant scientific graphs and diagrams. Future plans inc. risks	DEFCON 705
AR – 24m	Annual report	CA + 24 months	Written Report	n/a	Redacted	Updates since last report, materials and methods, results, discussions. Data in an	DEFCON 705

						Excel or GraphPad Prism format, relevant scientific graphs and diagrams. Future plans inc. risks	
AR – 36m	Final report	CA + 36 months	Written Report	n/a		Project background, materials and methods, results, discussions. Data in an Excel or GraphPad Prism format, relevant scientific graphs and diagrams. Scope for future projects and publications.	

1.7	**Deliverable Acceptance Criteria**
	All Reports included as Deliverables under the Contract e.g. Progress and/or Final Reports etc. must comply with the which defines the requirements for the presentation, format and production of scientific and technical reports prepared for MoD. Interim or Progress Reports: The report should detail, document, and summarise the results of work done during the period covered and shall be in sufficient detail to comprehensively explain the results achieved; a description of current substantive performance and any problems encountered and/or which may exist along with proposed corrective action. An explanation of any difference between planned progress and actual progress, why the differences have occurred, and if behind planned progress what corrective steps are planned. Final Reports: shall describe the entire work performed under the Contract in sufficient detail to explain comprehensively the work undertaken and results achieved including all relevant technical details of any hardware, software, process or system developed there under. The technical detail shall be sufficient to permit independent reproduction of any such process or system. All Reports shall be free from spelling and grammatical errors.

2	**Evaluation Criteria**
2.1	Method Explanation
	Single source
2.2	Technical Evaluation Criteria
	There is no formal scoring criteria, however the proposal will be adjudged on compliance with the Dstl Statement of Requirement (SOR). The university to confirm their ability to comply with the SOR.
2.3	Commercial Evaluation Criteria
	There is no formal scoring criteria, however the proposal will be evaluated on NAPNAC principles (no acceptance price no contract). The proposal is to be priced in-line with the agreed framework (R-cloud) rates with all materials and T&S broken down.