Statement of Requirement (SoR)

Reference Number	**Dstlx / RQ0000031473 / PA0000001353**
Version Number	**1.0**
Date	**09/03/2023**

1.	Requirement
1.1	**Title**
	Dose-response of peracetic acid on vertical surfaces
1.2	**Summary**
	Dose-response of peracetic acid (PAA) formulations on vertical porous and non-porous urban surfaces (laboratory and semi-field scale using agricultural spray delivery methods at SSAU) under different environmental conditions. This contract includes options for SSAU to plan and execute work for developing spray equipment and processes for new delivery platforms selected by NTAG-R, when these platforms have been identified.
1.3	**Background**

	• The capability requirements for the current project match those used at SSAU during the previous NTAG-R Defra and DTRA funded projects, where SSAU developed these capabilities (hardware and experimental processes) that include: o Bespoke equipment and expertise developed by SSAU to enable reproducible nebulisation of test surfaces with bacterial spores. The same method must be carried forward to the current project to enable information obtained in this project to be compared with historical data. Reproducing this capability with another project partner would require unnecessary cost, time (approximately 6 month effort) and technical risk. o In addition to specialist surface nebulisation requirement, there are no partner facilities that also provide **all** of the following capabilities: ▪ Application of NTAG-R decontaminants to vertically orientated surfaces at target doses and then their exposure to controlled environmental conditions. ▪ Microbiological assessments of decontaminant performance.
1.4	**Requirement**

M1. Dose-response Tranche 2 (mop-up from Tranche 1 delivered in FY22/23) - Extend environment chamber tests (vertical) to assess new formulation 2:
Orientation: vertical,
Sprayer: agricultural sprayer,
Formulation: formulation 2 (F012a),
Conditions: harsh, mild, average
Surfaces: steel, wood, brick, limestone
Contact time: 120 min contact time,
Application: 500 L/ha, 1000 L/ha, 2000 L/ha.
Other: Nebulise same time and heat shock check on spore stock and population control from coupon recovery.

[redacted]

M2. Dose-response Tranche 2 (mop-up from Tranche 1 delivered in FY22/23) - Extend environment chamber tests (vertical) to assess formulation 1:
Orientation: vertical,
Sprayer: agricultural sprayer,
Formulation: formulation 1 (F004a)
Conditions: Up to 2 conditions
Surfaces: Up to 2 surfaces
Contact time: 120 min contact time,
Application: 500 L/ha, 1000 L/ha, 2000 L/ha.

M3. Dose-response - Repeat subset of environment chamber tests (horizontal, airbrush):
Orientation: horizontal,
Sprayer: airbrush,
Formulation: formulation 1 (F004a),
Conditions: harsh and mild,
Surfaces: steel and wood,
Contact time: 120 min contact time,
Application: 500 L/ha, 1000 L/ha, 2000 L/ha.
Other: Nebulise same time and heat shock check on spore stock and population control from coupon recovery.

M4. Dose-response - Repeat subset of environment chamber tests (horizontal, track-sprayer):
Orientation: horizontal,
Sprayer: agricultural sprayer,
Formulation: formulation 1 (F004a),
Conditions: harsh and mild,
Surfaces: steel and wood,
Contact time: 120 min contact time,
Application: 500 L/ha, 1000 L/ha, 2000 L/ha.
Other: Nebulise same time and heat shock check on spore stock and population control from coupon recovery.

M5. Dose-response - Extend environment chamber tests (horizontal) to assess new formulation 2:
Orientation: horizontal,
Sprayer: Agricultural sprayer
Formulation: formulation 2 (F012a),
Conditions: harsh, mild, average

[redacted]

	Surfaces: steel, wood, brick Contact time: 120 min contact time, Application: 500 L/ha, 1000 L/ha, 2000 L/ha. Other: Nebulise same time and heat shock check on spore stock and population control from coupon recovery.
1.5	**Options or follow on work** *(if none, write 'Not applicable')*
	M6. Option 1 planning meeting in August 2023: Discuss scope of work for Option 1 and costing. **M7.** Option 1 (October 2023 to March 2024): Tranche 1 of developing spray equipment and processes for new technologies identified by NTAG-R. **M8.** Option 2 planning meeting (February 2023): Discuss scope of work for Option 2 and costing. **M9.** Option 2 (April 2024 to March 2025): Tranche 2 of developing spray equipment and processes for new technologies identified by NTAG-R and support to trials.

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 DE Condit** *(Comm later)*
6	Trials support	30 May 2023	SME support at Porton Down Range and/or	N/A	UK OFFICIAL	Subject Matter Expertise and advice regarding the spray ability of formulations, droplet size and their delivery [redacted]	DEFC
7b	Droplet size experimentation	1 September 2023	PowerPoint presentation. Excel spreadsheet of raw data.	4	UK OFFICIAL	Experimental methods including calibration data, videos and, or photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) videos and or photographs, and control data. [redacted]	DEFC

M1	Dose-response Tranche 2: Extend environment chamber tests (vertical) to assess new formulation 2 (F012a).	1 September 2023	PowerPoint presentation. Excel spreadsheet of raw data.	4	UK OFFICIAL	Experimental methods including calibration data, videos and, or photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) videos and or photographs, and control data. [redacted]	DEFC
M2	Dose-response Tranche 2: Extend environment chamber tests (vertical) to assess formulation 1.	1 September 2023	PowerPoint presentation. Excel spreadsheet of raw data.	4	UK OFFICIAL	Experimental methods including calibration data, videos and, or photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) videos and or photographs, and control data. [redacted]	DEFC
M3	Dose-response - Repeat subset of environment chamber tests (horizontal, airbrush)	1 September 2023	PowerPoint presentation. Excel spreadsheet of raw data.	4	UK OFFICIAL	Experimental methods including calibration data, videos and, or photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) videos and or photographs, and control data. [redacted]	DEFC

M4	Dose-response - Repeat subset of environment chamber tests (horizontal, track-sprayer)	1 September 2023	PowerPoint presentation. Excel spreadsheet of raw data.	4	UK OFFICIAL	Experimental methods including calibration data, videos and, or photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) videos and or photographs, and control data. [redacted]	DEFC
M5	Dose-response: Extend environment chamber tests (horizontal) to assess new formulation 2.	1 September 2023	PowerPoint presentation. Excel spreadsheet of raw data.	4	UK OFFICIAL	Experimental methods including calibration data, videos and, or photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) videos and or photographs, and control data. [redacted]	DEFC
M6	Option 1 planning meeting in August 2023: Discuss scope of work for Option 1 and costing.	1 September 2023	Face-to-face meeting at Porton. Costed proposal.	1	UK OFFICIAL	Technical input to technical strategy, experimental plan and related project documentation. Costed proposal for Option 1 with defined milestones and tasks. [redacted]. Output determines scope for M7	DEFC
M7 (Option)	Option 1 (October 2023 to March 2024): Tranche 1	1 March 2024	Meeting attendance (face-to-face,	3-4	UK OFFICIAL	Technical input into prototype equipment development, performance testing and related	DEFC

	of developing spray equipment and processes for new technologies identified by NTAG-R.		up to 4 at PTN) PowerPoint presentation. Excel spreadsheet of raw data.			project documentation. Review of related document produced by Dstl. Experimental methods including calibration data and photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any environmental measurements) and control data. [redacted] – apportion against identified milestones, from meeting output from M6. M8 below being only identifiable milestone at this time (April 2023)	
M8 (Option)	Option 2 planning meeting (February 2023): Discuss scope of work for Option 2 and costing.	1 March 2024	Face-to-face meeting at Porton. Costed proposal.	1	UK OFFICIAL	Technical input to technical strategy, experimental plan and related project documentation. Costed proposal for Option 1 with defined milestones and tasks. [redacted] Output determines scope of M9	DEFC
M9 (Option)	Option 2 (April 2024 to March 2025): Tranche 2 of developing spray equipment and processes for new technologies identified by NTAG-R and support to trials.	1 March 2025	Meeting attendance (face-to-face, up to 4 at PTN) PowerPoint presentation.	3-4	UK OFFICIAL	Technical input into prototype equipment development, performance testing and related project documentation. Review of related document produced by Dstl. Experimental methods including calibration data and photographs of equipment used. Dated experimental results (tabulated data and graphs, including plate counts and any	DEFC

			Excel spreadsheet of raw data.			environmental measurements) and control data. [redacted] - apportion against identified milestones from M8, from meeting output from M6. No identifiable milestones at this time (April 2023)	

***Technology Readiness Level required**

1.7	**Standard Deliverable Acceptance Criteria**
	Delivery of milestone. 10 days for commentary from customer otherwise deemed acceptable. 10 days for comments to be addressed by supplier.
1.8	**Specific Deliverable Acceptance Criteria**
	n/a

2.	**Quality Control and Assurance**
2.1	**Quality Control and Quality Assurance processes and standards that must be met by the contractor**
	☒ **ISO9001** (Quality Management Systems) ☐ **ISO14001** (Environment Management Systems) ☐ **ISO12207** (Systems and software engineering — software life cycle) ☐ **TickITPlus** (Integrated approach to software and IT development) ☐ **Other:** (Please specify below)
2.2	**Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**
	Supplier to follow own safety process and procedures in execution of scope and delivery.

3.	Security	
3.1	**Highest security classification**	
	Of the work	UK OFFICIAL
	Of the Deliverables/ Output	UK OFFICIAL
3.2	**Security Aspects Letter (SAL)**	
	Yes If yes, please see SAL reference- *Enter iCAS requisition number once obtained*	
3.3	**Cyber Risk Level**	
	Very low	
3.4	**Cyber Risk Assessment (RA) Reference**	
	~~Click or tap here to enter text.~~777844601 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://suppliercyberprotection.service.xgov.uk/	

[redacted]

[redacted]

[redacted]

4.	Government Furnished Assets (GFA)				
GFA to be Issued - Yes					
GFA No.	**Unique Identifier/ Serial No**	**Description:** *Classification, type of GFA (GFE for equipment for example), previous MOD Contracts and link to deliverables*	**Available Date**	**Issued by**	**Return Date or Disposal Date (T0+)** *Please specify which*
GFA-1	AMS0039 0833	Aralab FITOCLIMA 600 PLH Environment chamber and ReptiSun T8 (10.0) tubular lights	T+0	Dstl	TBD

5.	Proposal Evaluation criteria
5.1	**Technical Evaluation Criteria**
	Commercial Assistance needed here before or after a requisition is raised. Framework evaluation criteria as per T&C's may apply.
5.2	**Commercial Evaluation Criteria**
	Commercial Assistance needed here before or after a requisition is raised. Framework evaluation criteria as per T&C's may apply.