Statement of Requirement (SoR)

Reference Number	**1000166859**
Version Number	**0.3**
Date	**07/09/2021**

1.	**Requirement**
1.1	**Title**
	Defender ROV for Project A Experimentation
1.2	**Summary**
	The Dstl Project A Experimentation project (iCAS No. 711179) project requires a ROV and other ancillary equipment in order to conduct research into deep water search capabilities.
1.3	**Background**
	The Project A Experimentation project is conducting research to determine the capability of a small ROV to perform deep-water search activities.
1.4	**Requirement**
	The Dstl Project A Experimentation Project Team require a system to conduct trials to determine the ability for a small ROV to conduct deep-water search activity. To deliver the concept the ROV system must have the following capabilities: • Be man portable (maximum two-man lift for all system items). • Be able to be operated in a maritime environment in adverse weather conditions (system surface items to have adequate waterproofing). • Be able to operate at depths of up to 1000m.

	• Be equipped with multiple manipulators with multiple jaw configurations able to lift a mass of at least 11kg, cut wire/rope and perform dextrous operations with ropes and connectors to connect items together. • Be able to work in a current of at least one knot and ideally up to 4 knots. • Have built in autonomy to provide ROV stabilisation (e.g. auto hover, direction lock) and assisted search capabilities (e.g. race-track search of a defined area). • Be equipped with High Definition cameras (with LED lighting) and high-definition 2D sonar to enable items of interest to be located in zero visibility. • Be equipped with navigation systems (GPS, Doppler and Inertial) to provide accurate ROV location on the surface and underwater. • Have an open architecture to allow third-party systems (e.g. a 3D sonar) to be easily integrated with it. • Be maintainable by the user (component replacement) with only basic training. To include a suitable spares package. • Be easy to use (intuitive) with low skill fade. Include a training and support package The Videoray Defender is the only Commercial Off The Shelf (COTS) ROV available that currently meets these specifications. In addition the Dstl customer has stipulated that, in order to reduce the training and support burden, the ROV must be a Videoray Defender as they already have two of these systems conducting other trials. The above requirements can be met by purchasing the following COTS items: • Basic Defender ROV package including 7 thruster vectored vehicle, x16 zoom HD tilting camera, Dual LED Lights. Rated at 1000m. • 2km Depth-rated Float Block • 400m PPT - Neutral Performance Tether • XTDS - Tether Deployment system with 400 volt slip ring. • Ruggedised transportation case for Defender Deep Water configuration • Autopilot System (DVL, GPS & Integration & Software) Includes autopilot system comprising Doppler Velocity Log (DVL) depth rated to 1000m, ROV GPS and Defender ROV integration kit. 1000m Rated – PROTOTYPE. • Greensea EOD Workspace software, UPGRADE (one off). • Greensea EOD Workspace software, annual support for three years • Workhorse splash proof controller package includes: Touch screen computer with L/R controller pod, us, cable/case and Splash proof 400v power supply • 2km Fibre tether with deployment system & fibre-optic modem - PROTOTYPE, NiMH Vehicle Battery PODS - 1000m rated - PROTOTYPE. Portable Power Supply and 6T 24V high power Li-ION battery

	• BluePrint Oculus M750d Imaging Sonar and mission specialist Defender integration kit. 1000m Rated – PROTOTYPE. • Blueprint SeaTrac USBL Range rating - 1km. 1000m depth rated X110 beacon. • MSS Rotating Manipulator with five interchangeable jaw heads. • Defender Module Spares Kit including: 7 programmed thrusters, 2 LEDs, 1 comms module, 1 power module, 1 AHRS, 1 Camera module and 1 Defender Hardware/ Fastener kit. • MSS Defender 3-day Training Course for up to 5 candidates at Vobster Quay, Somerset • Videoray Defender CSMP Support Package for three years • Delivery to DSTL and Import charges for all items These items are available from (quote attached): [Redacted] Atlantas Marine Ltd Armoury Road, Yeovil, Somerset, BA22 8RL [Redacted] [Redacted]
1.5	**Options or follow on work**
	Three-years of support for the ROV and Greensea software has been included in the requirement.

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**
N/A. All items are COTS							

***Technology Readiness Level required**

1.7	**Standard Deliverable Acceptance Criteria**
	N/A. All items are COTS
1.8	**Specific Deliverable Acceptance Criteria**
	N/A. All items are COTS

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) N/A. All items are COTS and covered under warranty and the servicing package.
2.2	**Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**
	N/A. All items are COTS

3.	Security	
3.1	**Highest security classification**	
	Of the work	OFFICIAL SENSITIVE
	Of the Deliverables/ Output	UNCLASSIFIED
3.2	**Security Aspects Letter (SAL)**	
	Not applicable If yes, please see SAL reference- *Enter iCAS requisition number once obtained*	
3.3	**Cyber Risk Level**	
	Not applicable	
3.4	**Cyber Risk Assessment (RA) Reference**	
	313155423 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/	

4.	Government Furnished Assets (GFA)				
GFA to be Issued - No					
GFA No.	**Unique Identifier/ Serial No**	**Description:**	**Available Date**	**Issued by**	**Return Date or Disposal Date (T0+)**

5.	Proposal Evaluation criteria
5.1	Technical Evaluation Criteria
5.2	Commercial Evaluation Criteria