

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

Title of Requirement	Redacted under Military sensitive technical information exemption LR-TRED-F2
Requisition No.	1000166342
SoR Version	0.1

1.	Statement of Requirements
1.1	Summary and Background Information
	<p>Dstl has worked with a supplier to develop a GNSS denied navigation system for use on Remotely Piloted Aerial Systems (RPAS). The principle of the system is to allow an operator to upload a mission to the RPAS and for it then to autonomously conduct long distance flying serials (ideally Beyond Visual Line of Sight (BVLOS)) to deliver or collect a payload at extended ranges.</p> <p>This task is complimentary to the previously placed task and is the selection and modification of a RPAS to be fitted with both:</p> <ol style="list-style-type: none"> 1. The Dstl developed GNSS denied navigation system (GFE); 2. A payload bay designed for the delivery and collection of irregular shaped payloads. <p>In order to increase soldier survivability through standoff from the threat, the employment of RPAS to conduct high risk and dangerous tasks is becoming ever more common.</p> <p>This effort will develop and demonstrate an integrated LR-TRED-F system capable of placing and collecting payloads at range improving user survivability through increased operator standoff from the risk area.</p> <p>The project requires the successful bidder to select and modify an RPAS capable of extended range flight operations (ideally BVLOS) including the delivery and collection of irregular payloads part way through the flight.</p> <p>Integration and testing must be complete ahead of a live demonstration(s) operated by the bidder in the UK no later than the close of financial year 22/23 with the potential for any earlier completion of the platform integration being demonstrated sooner.</p>
1.2	Requirement

The project will be delivered in two phases to allow sufficient time for the integration of the LR-TRED-F navigation system. The phases are set out below.

	Phase 1	Phase 2	(Optional) Phase 3
Date	FY 2021/2022	FY 2022/2023	FY 2023/2024
ROM Cost	£ Redacted under FOI Exemption	£ Redacted under FOI Exemption	£ Redacted under FOI Exemption
Outline description of work (subject to suppliers bid)	Selection of platform, ground based electronic integration with navigation system	Flight tests, development of payload bay and demonstration	Whiteboard options to be determined

With the phases in mind and ROM costs broken out per financial year the bidders will provide costed options and technical evidence against the delivery of the requirements listed below.

UIN	Requirement	Threshold	Objective
LR-TRED-F1	Platform capable of long distance flight operations able to conduct a flight with a total distance of [x].	40km	> 40 km (bids will be ranked based on how far they exceed the threshold)
LR-TRED-F2	Platform capable of vertical take-off and landing from launch position and at least one landing and take-off during the maximum flight distance as specified in F1.	Compliant	As threshold
LR-TRED-F3	RPAS position and control data to GCS	Identify and present key information required to be sent	As threshold

		to GCS with an appropriate communication bearer.	
LR-TRED-F4	Payload bay capable of dropping and collecting irregular shaped objects	15 cm x 15 cm 2kg	30 cm x 30 cm 5kg
LR-TRED-F5	Ground Control Station (GCS) functions	Allow mission planning and monitoring of mission progress during flight (ideally BVLOS) flight	As threshold with dynamic re-tasking
LR-TRED-F6	Integration of LR-TRED-F GNSS denied navigation system onto platform and demonstration of successful system integration	Compliant	As threshold
LR-TRED-F7	Further demonstration flights in the UK	Bidder will include costs for future demonstration flights in addition to LR-TRED-F6. Including but not limited to a pilot controlled BVLOS demonstration flight (if platform is capable) and a GNSS denied navigation system	As threshold

			controlled BVLOS flight.	
	LR-TRED-F8	Supplier should have appropriate aviation permissions to conduct BVLOS flight operations	Compliant bids will be given a score. Non-compliant bids will not be given a score but will still be considered for contract award. Suppliers must provide details of permissions.	As threshold
	LR-TRED-F9	Supplier should have appropriate communication permissions to conduct BVLOS flight operations as part of the demonstration. communication	Compliant bids will be given a score. Non-compliant bids will not be given a score but will still be considered for contract award. Suppliers must provide details communication system power, antenna and transmit range.	As threshold
1.3	Options or follow on work <i>(if none, write 'Not applicable')</i>			
	<p>Phase 3 is an optional year with the possibility for continued work pending the successful delivery of the requirements above. Dstl will agree with the Supplier additional work packages that will be delivered as required.</p> <p>If no options are selected contract is planned to end on 31st March 2023.</p> <p>The potential to extend the contract from the 1st of April 2023 until the 31st of March 2024 will be considered based on the technical progress of the project and supplier or Dstl identified options.</p>			

	<p>Additionally there is scope an uplift to year 1 and 2 as long as its within technical scope of the project. Suppliers can submit a costed technical option to Dstl for review and potential approval. Examples of additional work packages include but are not limited to;</p> <ul style="list-style-type: none"> • Payload bay integration with a specific payload; • Integration of platform with specific communications system; <p>Investigation into Beyond Radio Line of Sight flight control.</p>
1.4	Contract Management Activities
	Contract shall be managed as per the Dstl Management System particularly relating to Project Management Governance.
1.5	Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement
	ISO9001

1.6	Deliverables & Intellectual Property Rights (IPR)					
Ref.	Title	Due by	Format	Expected classification (subject to change)	What information is required in the deliverable	IPR Condition
LR-1	Technical updates	Monthly following kick off	.pptx	OS	Single slide covering progress to date, planned activities, issues, and requests for support/information.	Default RCloud Agreement Terms and Conditions shall apply
LR-2	Navigation System Integration Plan	AP12 2021/2022	.doc and pptx	OS	Plan for how the supplier will integrate the navigation system with their own platform and payload bay. Setting out the responsibilities and dependencies.	Default RCloud Agreement Terms and Conditions shall apply DEFCON 705
LR-3	End of year 1 report	AP12 2021/2022	.doc and .pptx	OS	End of year technical report will be delivered describing the development process to date as well as highlighting key activities for the following year. Final contents to be agreed with Dstl after contract award.	Default RCloud Agreement Terms and Conditions shall apply DEFCON 705
LR-4	Payload bay demonstration	Within FY 2022/20223	Physical demonstration and pptx	OS	Demonstration of payload bay design in lab based tests showing how it is capable of the collection and delivery of irregular shaped payloads.	Default RCloud Agreement Terms and Conditions shall apply DEFCON 705

LR-5	End of year 2 report	No later than AP12 2022/2023	.doc and .pptx	OS	<p>A final technical report will be delivered following the demonstration describing the complete development process for the systems and suggested updates following the performance at the demonstration.</p> <p>Final contents to be agreed with Dstl after contract award.</p>	<p>Default RCloud Agreement Terms and Conditions shall apply DEFCON 705</p>
LR-6	Integrated demonstration	No later than AP12 2022/2023	Physical demonstration at supplier location	OS	<p>Hold a demonstration of the system at the supplier location.</p> <p>Request to provide costs for additional demonstrations as part of the bid response.</p>	<p>Default RCloud Agreement Terms and Conditions shall apply DEFCON 705</p>

1.7	Deliverable Acceptance Criteria
	<ul style="list-style-type: none"> • The supplier will provide a demonstrator compliant with the System Requirements. • The supplier will run a demonstration, at their own location, of integrated system.

2	Evaluation Criteria
2.1	Method Explanation
	<p>This Tender will be evaluated on the basis of:</p> <p>Most Economically Advantageous Tender (MEAT) – Highest combined technically and financially scored Tender and meets the Commercial and Technical Criteria as detailed in the attached Evaluation Criteria.</p>
2.2	Technical Evaluation Criteria
	See attached LR-TRED-F2 Evaluation Criteria
2.3	Commercial Evaluation Criteria
	See attached LR-TRED-F2 Evaluation Criteria