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

Title of Requirement	Retroreflection Suppression in [redacted] Sights
Requisition No.	RQ0000009794
SoR Version	**0.1**

1.	**Statement of Requirements**
1.1	**Summary and Background Information**

Summary

Dstl wish to develop a strategy proposed by Qioptiq Limited (Excelitas) for reducing the retroreflection (RR) signatures of electro-optic (EO) REDACTED UNDER FOI EXEMPTION [redacted]

A previously Dstl-funded task with Qioptiq Limited to look at options highlighted the potential suitability of the proposed strategy.

The solution must meet the performance metrics provided in this document. Additionally, a demonstration of the proposed solution as a TRL 6 (or higher) demonstrator in a militarily relevant environment is an **essential** deliverable.

Background

Retroreflection is defined as light being reflected back at a source from an aligned optical device, and occurs in almost any optic with reflective surfaces perpendicular to the sight's axis when these surfaces are situated at focal planes within the optical system. The light passes through the lens, reflects off the focal plane (or potentially other reflective surfaces within the optic) and returns through the lens directly back towards the light source. REDACTED UNDER FOI EXEMPTION [redacted]

REDACTED UNDER FOI EXEMPTION [redacted]

	Retro-fitted filters are not a viable solution; polarising filters reduce light intake by at least 50%, [redacted] A previous study instigated by Dstl and performed by Qioptiq Limited, in conjunction with Qioptiq's own internal research, resulted in the identification of the approach to be pursued here. This is the subject of a patent application by Qioptiq/Excelitas but Dstl has a requirement to investigate the efficacy of the RR reduction technique via an optimisation and demonstration phase in the first year of what may be a multi-year contract subject to success and funding.
1.2	**Requirement**
	Detection of optical and electro-optical imaging systems is an established capability. [redacted] Consequently, Dstl has been tasked with arranging the practical implementation and assessment of a retroreflection reduction solution REDACTED UNDER FOI EXEMPTION [redacted]. Qioptiq's approach based on 'Near-Image Bending' has been identified as having the potential to provide an effective solution and this is the technology that Dstl is requesting be developed in the first instance, REDACTED UNDER FOI EXEMPTION [redacted] REDACTED UNDER FOI EXEMPTION [redacted] REDACTED UNDER FOI EXEMPTION [redacted]

REDACTED UNDER FOI EXEMPTION

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The deliverable **must** meet at least the bronze standard in each category, and the solution will be graded based on the minimum achievement (i.e. a solution that reaches gold in every category except price, where it reached silver, would be graded as silver). Any change in ability to meet standards must be discussed with the Dstl Project Manager and Technical Partners in the first instance.

REDACTED UNDER FOI EXEMPTION

REDACTED UNDER FOI EXEMPTION

REDACTED UNDER FOI EXEMPTION

[redacted]

Project Deliverables

The following must be delivered by Qioptiq Limited to Dstl during this phase of the project:

[redacted]

- A report with Qioptiq's assessment of the RR suppression achieved (affirmed by Dstl testing where possible), in particular detailing:

  [redacted]

- Monthly updates on progress.

The following table summarises the deadlines for these deliverables. Any change in the ability to meet deadlines must be discussed with the Dstl Project Manager and Technical Partners in the first instance.

Table 2: A summary of the main project deliverables and deadlines.

Government Furnished Assets (GFA)

GFA No.	Description:	Available Date	Issued by	Return Date
GFA-1	A maximum of two representative [redacted] devices (actual number to be decided based on the project needs)	At contract start date	Dstl	End of contract
GFA-2	Access to the Pershore Dark Tunnel, operated by Malvern Optical	As required but subject to booking requirements	Dstl	N/A

Quality Control and Assurance

The contractor will need to be accredited to ISO9001 Quality Management Systems (QMS).

1.3 Options or follow on work

Tasking Order Arrangement

Dstl wishes to include in this R-Cloud Task the provisions for a Tasking Order Arrangement whereby potential additional work could be provided under the contract. Such potential additional work may include but not limited to:

- Further development of the commercially sensitive technology;
- Initiation and/or development of alternative retroreflection reduction strategies, potentially including the use of off-axis designs, metasurfaces, metamaterials and other novel technologies.

Dstl sets out to confirm that the above list is provided for reference, and as an example of the type of work that might be subject to additional tasking. At this stage these examples are not funded and Dstl does not offer a guarantee that any additional tasks may be placed.

Where Dstl does identify a requirement, Dstl will request that the supplier provides a detailed proposal for each additional task and this will undergo technical and commercial review to ensure it is in scope with the aims of this requirement and offers value for money. Firm Prices for any additional requirements shall be submitted by the Supplier to Dstl and shall utilise rates within the allowable rates detailed on the R-Cloud rate card.

No work is to be undertaken without formal amendment to the contract, without which any such work undertaken will be at the Supplier's risk.

The Limit of Liability under this Tasking Order Arrangement shall be £1,000,000.00 (Ex VAT) with the following profile:

FY2023/24 - £500,000.00
FY2024/25 - £500,000.00

1.4 Contract Management Activities

	Bronze, to be managed locally by the Dstl Project Manager
1.5	**Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement**
	No specific requirements

1.6	Deliverables & Intellectual Property Rights (IPR)				
Ref.	**Title**	**Due by**	**Format**	**Expected classification (subject to change)**	**What information is r deliverab**
D – 1	REDACTED UNDER FOI EXEMPTION	REDACTED UNDER FOI EXEMP	REDACTED UNDER FOI EXEMPTION	REDACT	REDACTED UNDER FOI EXEMPTION
D – 2	REDACTED UNDER FOI EXEMPTION	REDACTED UNDER FOI EXEM	REDACTED UNDER FOI EXEMPT	REDACT	REDACTED UNDER FOI EXEMPTION

D – 3	REDACTED UNDER FOI EXEMPTION [redacted]	28th February 2023	REDACTED UNDER FOI EXEMP [redacted]	REDACT	N/A
D – 4	REDACTED UNDE [redacted]	28th February 2023	REDACTED UNDER FOI EXEMPTION	REDACT	REDACTED UNDER FOI EXEMPTION [redacted]
D – 5	Live demonstration of the performance RED [redacted]	31st March 2023	REDACTED UNDER FOI EXEMPTION [redacted]	REDACT	N/A

1.7	**Deliverable Acceptance Criteria**
	The deliverables are all achieved in the appropriate formats by the agreed deadlines. All Reports included as Deliverables under the Contract e.g. Progress and/or Final Reports etc. must comply with the Defence Research Reports Specification (DRRS) 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; substantive performance; 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. Any final reports: shall describe the entire work performed under the contract in sufficient detail to explain comprehensively the work undertaken and result 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. **Specific Deliverable Acceptance Criteria** Demonstrations will take place at a mutually agreed location with the Pershore Dark Tunnel being Dstl's preferred location.

2	**Evaluation Criteria**
2.1	Method Explanation
	Best technically affordable tender The contract shall be awarded to the tender with the highest non-cost score that is within budget. The budget for this procurement is £300,000.00 (ex VAT) within FY2022/23. Any tenders received that are in excess of this budget will be automatically deemed non-compliant and will be excluded from the procurement.
2.2	Technical Evaluation Criteria
	Proposals must include a response to each evaluation criteria:

ID	Criteria	Score	Weighting
1	The proposal provides a detailed plan of how the proposed retroreflection reduction strategy will be implemented within the defined timescale	0-10	10%

2	A clear and viable plan is contained within the proposal detailing how a fully working demonstrator of the RR reduction technology [redacted] will be made available by the required date (28th of February 2023)	0-10	30%
3	The proposal provides the commitment to demonstrate [redacted] during a live test, as described in the Requirement, by the 31st of March 2023	0-10	30%
4	The proposal includes a projection of the performance levels that will be achieved with a projected level **no lower** than that defined by the Bronze specifications of Table 1 In the Requirement	0-10	25%
5	The proposal provides evidence that additional RR reduction measures could and would be rapidly progressed should the initially proposed measure ultimately fail to meet the defined performance requirements	0-10	5%

The following scoring guide will be used to evaluate against each criteria:

Score	Definition
10 (Excellent)	The response address all elements of the requirement, and provides a comprehensive, unambiguous and thorough explanation of how the requirement will be fulfilled.
7 (Good)	The response addressed all of the elements of the requirement and provides sufficient detail and explanation of how the requirement will be fulfilled.
4 (Adequate)	The response addressed the majority of elements of the requirement but is weak in some areas and does not fully detail or explain how the requirement will be fulfilled.
0 (Inadequate)	The response does not address or explain how the requirement will be fulfilled and fails to demonstrate the ability to meet the requirement.

Bids will be deemed to fall short of the Authority's technical requirement and therefore be technically non-compliant where a score of below 4 (Inadequate), prior to weighting, is recorded for any one of the criteria.

Application of Technical Evaluation Criteria Weightings

The above weightings will be applied to each scored section using the formula below. Weighted scores for each section will then be added together to result in the final non-cost score out of 100.

(Score / Maximum Score Available) x Weighting = Weighted Score

2.3	Commercial Evaluation Criteria

The commercial evaluation shall apply a series of Pass / Fail questions:

ID	Question	Marking
1	The Contactor's proposal falls within the maximum budget of £300K for FY22/23.	Pass/Fail
2	The Contractor's proposal has been submitted against a Firm Price, and within the allowable rates detailed on the R-Cloud rate card.	Pass/Fail
3	One full technical proposal, excluding all price detail has been submitted	Pass/Fail
4	One full Technical and Commercial proposal, including all price detail, has been submitted	Pass/Fail
5	Milestone Payment Plan submitted	Pass/Fail
6	The R-Cloud Part C Task Response Form has been completed and submitted	Pass/Fail
7	A completed Supplier Assurance Questionnaire (SAQ) has been submitted against the specified Cyber Risk Profile.	Pass/Fail
8	Completed Research Worker Forms (PPRW) have been submitted where appropriate or details of existing security cleared research workers identified	Pass/Fail

Please be aware that a fail on any of the questions will result in your proposal being considered as Non-Compliant, and excluded from this procurement.