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

Title of Requirement	Microstructural characterisation to inform inputs within a probabilistic modelling framework for rapid assessment of new materials
Requisition No.	RQ000034958
SoR Version	0.1

1.	Statement of Requirements
1.1	Summary and Background Information
	Dstl is seeking a method that allows fundamental microstructural mechanisms, features and behaviours to be understood and applied at the macroscale in applied Finite Element Analyses (FEA). This will increase confidence in traditional, deterministic, FEA predictions and, when applied within a Probabilistic Modelling (ProbMod) framework, will allow Dstl to rapidly assess new materials and microstructures to support decision making and streamline exploitation of materials S&T as well as support a "materials by design" approach.
	FEA plays a key role in predicting and understanding how structures behave in their intended application. These models can efficiently highlight and optimise desirable properties/features of materials through rapid assessment of many configurations in the end-user application. This significantly reduces the burden of large campaigns of costly and time-consuming trial and error experimentation and allows us to focus on low TRL research.
	Currently, whilst sophisticated, such models still rely on simple empirical descriptions of the behaviour of the underlying materials. Dstl intend to use a deeper understanding of the material to improve our material models and methods, which can be reverse-engineered to better inform the design of new materials and to account for inherent material variation.
	Dstl is seeking an exploration of techniques that allow the material behaviours (for high deformation effects; defect aggregation and failure) seen at the microscale to be represented at the component scale.
	Research has been carried out in this area at low strain rates and the methods used to bridge different length scales are generally prohibitively computationally expensive. This work will cater for the extreme conditions these materials will be subjected to in Defence applications and will focus on extracting the necessary outputs for the component scale simulation to maintain high computational efficiency.
1.2	Requirement
	The best method for bridging TRLs is not fully understood and WP1 is designed to agree, based on the commercial offer, how this work will be conducted going forward.
	WP1: Multiscale modelling for high strain rate Defence applications literature review (3 months and ~ £25k)
	Following SOR review and response. The background literature search will include details of (but

not limited to):

- Microscale mechanisms and how they affect behaviour at continuum level?
- Microstructural characterisation techniques
- Fundamental physics required for different material classes
- Techniques used to bridge length scales and how these can be adapted for use in Defence applications
- Uncertainty propagation and quantification at different length scales
- Methods used to understand population and sample variability (strength + damage)
- Review feasibility of implementing mechanistic approaches using Artificial Intelligence
- Investigate whether standard material models cater for the behaviours exhibited?
- Investigate whether different methods required for different material classes?

## D-1: Multiscale modelling for high strain rate Defence applications literature review:

The literature review will detail the findings and detailed comparison of the above criteria from the literature search. The review will include enough information to make a valid comparison of commonly used multiscale modelling techniques and TRL bridging laws as well as information on material property uncertainty and characterisation techniques. This information should be used to identify the most appropriate methods available to support Dstl's internal modelling activity.

# WP2 - Multiscale modelling for high strain rate Defence applications (1 month and ~£10k):

Following SOR review and response. A proposal will be generated, in consultation with Dstl, based on the outputs from the literature search to finalise the plan of work to be conducted in Option 1 and option 2. The strategy will include details of (but not limited to):

- Selection of a material (or materials) that can be used to demonstrate the process
- Details of the material's desired application (including strain rate)
- Characterisation of selected material
- Selection of technique to bridge TRLs to achieve applied (implementable) solutions
- Development of suitable failure and strength continuum models
- Verification and Validation (V&V) of continuum models
- Applied FEA model
- Reverse-engineer applied FEA model using probabilistic modelling to identify optimal failure and strength model parameters
- Use optimised parameters to optimise material structure
- Applied experimentation

The strategy will be robust such that the process can be validated against experimental data in order to defend any assumptions made about how this process can be used to develop new materials.

# <u>D-2 – Multiscale modelling for high strain rate Defence applications proposal:</u>

The proposal will use the outputs from the literature search and expertise from the Contractor to construct a baseline process for multiscale modelling for high strain rate applications. This should include information on the reverse engineering process to design and optimise microstructures that improve performance. The proposal will include enough information and evidence to provide confidence that this will support DstI internal modelling activity.

**<u>Dstl decision point 1 - </u>** Dstl review WP2 and can stop project at this point (before starting option 1) if Dstl consider that the desired outcome is not achievable

### 1.3 Options or follow on work

# Option 1- Demonstration of multiscale modelling approach (18 months and ~£100k):

The agreed proposal will be carried out to demonstrate that the method, focussing on bridging TRLs at different length scales, is suitable for high strain rate Defence applications (e.g. blast and ballistics).

D-3a – Multiscale modelling demonstration report

The report will include information on the multiscale modelling approach, characterisation, bridging TRLs, model validation and details on the outcomes. The report will include enough information and evidence to demonstrate the advantage of using this method over the models currently being used to represent material behaviour by Dstl. Details on how the models can be applied by Dstl is also an essential requirement.

The findings of the report will be in the format whereby they can be published in the literature and/or shared with wider industrial partners.

D-3b – Multiscale modelling demonstration presentation

The method will be reported in the form of a presentation that will summarise the process and results.

# Option 2 – Demonstration of reverse engineering approach for material design and Accreditation and standards for best practice PrM in (21 months and ~£125k):

The agreed proposal will be carried out to demonstrate that the reverse engineering approach can be used to optimise microstructures to support the design of new materials.

D-4 – Reverse engineering for material design report

The report will follow on from the Multiscale modelling report (D-3a). The applied model will be reverse-engineered to optimise material micro-structures. The report will include enough information and evidence to demonstrate the process can be used to optimise microstructures and inform the design of materials. Details on how the models can be applied by Dstl is also an essential requirement.

The findings of the report will be in the format whereby they can be published in the literature and/or shared with wider industrial partners

D-5 – Standard for multiscale modelling in high strain rate applications

The final deliverable will be a standard written to define the process that should be followed for multiscale modelling of materials in high strain-rate applications. This should include enough detail for the process to be followed by SMEs in Government, Industry and Academia.

# 1.4 | Contract Management Activities

The contractor shall track the progress of the work, and provide monthly updates. The updates shall detail the progress made as well as any issues/risks that become apparent. The update may take the form of a report or a virtual/face to face meeting.

1.5	Health & Safety, Environmental, Social, Ethical, Regulatory or Legislative aspects of the requirement
	Per framework. The contractor should make COSHH data available as required.

1.6	Deliverables & Intellectual Property Rights (IPR)					
Ref.	Title	Due by	Format	Expected classification	What information is required in the deliverable	IPR Condition
D-0	Monthly progress and technical review	Monthly Review	PowerPoint		Presentation pack to include, but not limited to:  Review of deliverables  Update on technical progress  Progress report against project schedule  Review of risks/issues  Any Other Business (AOB)	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.
D-1	Multiscale modelling for high strain rate Defence applications literature review	0+3	.pdf		Assessment of characterisation techniques at various length scales  Comparison of commonly used multi-scale modelling techniques, bridging TRLs and assessment of applicability at high strain rate Information on material property uncertainty and characterisation techniques.	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.

D-2	Multiscale modelling for high strain rate Defence applications proposal	0+4	.pdf	Detailed plan on how to use multiscale modelling for high strain rate applications  Reverse engineering process to design and optimise microstructures  Evidence to provide confidence that this will support Dstl internal modelling activity.	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.
D-3a	Multiscale modelling report	0+25	.pdf	Detailed record of the multiscale modelling approach, characterisation and bridging TRLs  Demonstration of uncertainty propagation through length scales  Validation of model development stages  Demonstration of model use at the macroscale in an applied scenario  Benchmark against conventional macroscopic models  Details on how the approach can be applied by Dstl (or future subcontractors)	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.

D-3b	Multiscale modelling presentation	0+25	.pptx	Overview of the multiscale modelling approach, characterisation and technique used to bridge TRLs  Overview of uncertainty propagation through length scales  Summary of model use at the macroscale in an applied scenario  Summary of advantages of this process  Discussion on limitations of applicability (e.g. material class, threshold strain rate etc.)	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.
D-4	Reverse engineering for material design report	0+43	.pdf	Demonstration of how the applied model can be reverse-engineered to optimise material micro-structures  Provide evidence that this process can inform the design of materials  Details on how this can be used by MoD (or future subcontractor)  Discussion on limitations of applicability (e.g. material class, threshold strain rate etc.)	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.

D-5	Standard for multi- scale modelling in high strain rate applications	0+46	.pdf		Define the process that should be followed for multiscale modelling of materials in high strain-rate application	This work is DEFCON 705 but it is expected that the contractor will provide some baseline data in a limited rights versions of the reporting.
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# Milestone payment invoices should not be submitted until the deliverable has been accepted in writing (email) by Dstl. All deliverables will be subject to inspection by the Dstl Technical Authority (Sub Work Package Technical Lead) including a demonstration that the deliverable functions according to the Dstl technical requirements and the supplier's technical proposal.

1.7

**Deliverable Acceptance Criteria** 

- 1. Outputs are to be delivered to Dstl, Porton Down and be subject to the acceptance of the Authority's Technical Leads. The Authority will accept or reject deliverables within 30 days of acknowledged receipt. In the case of rejection the Authority will provide the reasons for rejection and the necessary actions to be taken to enable acceptance.
- 2. Documentation is to 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; Documentary deliverables to be provided in soft copy form transmitted electronically or on physical media. Hard copies are optional.

Report deliverables are to describe the 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.

2	Evaluation Criteria								
2.1	Method Explanation								
	Techni	Technically highest compliant affordable score.							
	Technically highest compliant affordable score. The budget for the core work for this requirement is £35,000. The budget for the options work is £225,000								
	The set	weighting for the technical and social value questions v	vill be 90% technical and 10% social value.						
	The Cor	mmercial questions will be answered on a PASS/ FAIL I	pasis.						
	Variant	bids will NOT be accepted for this competition							
2.2	Technic	al Evaluation Criteria							
	Markinç	g scheme:							
	Technic	al assessors and stakeholders will use the following ma	rking scheme.						
	ID	Evaluation Question	Evaluation Criteria	Weighting					
	1	Provide evidence (up to 3 examples) of your knowledge and experience of physics-based constitutive models for impact, crash and dynamics applications	<ul> <li>100% - The Response provides evidence of staff / project team detailing their experience of physics-based models in three of the specified applications.</li> <li>60% - The Response provides evidence of staff / project team detailing their experience of physics-based models in two of the specified applications</li> </ul>	3%					

		<ul> <li>30% - The Response provides evidence of staff / project team detailing their experience of physics-based models in one of the specified applications.</li> <li>0% - No evidence provided.</li> </ul>	
2	Provide evidence (up to 3 examples from recent publications) of your knowledge in 1) fundamental material behaviours and 2) microstructural mechanics, including 3) cracking of metals	100% - The Response provides evidence of staff / project team detailing their experience and understanding of fundamental material behaviours, microstructural mechanics and cracking of materials.	9%
		<b>60%</b> - The Response provides evidence of staff / project team detailing their experience of and understanding in two of the specified areas.	
		<b>30%</b> - The Response provides evidence of staff / project team detailing their experience in one of the specified areas.	
		0% - No evidence provided.	
3	Provide evidence (up to 3 examples from recent publications) of your experience in <b>specimen</b> manufacture for microscale evaluation	100% - Three examples provided for specimen manufacture for microscale evaluation.	9%
		<b>60%</b> - Two examples provided for specimen manufacture for microscale evaluation.	
		<b>30%</b> - One examples provided for specimen manufacture for microscale evaluation.	
		0% - No evidence provided.	
4	Provide evidence (up to 3 examples from recent publications) of your track record of developing or parametrising models across length scales,	100% - Three examples provided to demonstrate track record for developing or parametrising models across length scales, including crystal plasticity models incorporating material invariant parameters.	13%

	including crystal plasticity models incorporating material invariant parameters	60% - Two examples provided to demonstrate track record for developing or parametrising models across length scales, including crystal plasticity models incorporating material invariant parameters  30% - One example provided to demonstrate track record for developing or parametrising models across length scales, including crystal plasticity models incorporating material invariant parameters  0% - No evidence provided to demonstrate track record for developing or parametrising models across length scales, including crystal plasticity	
5	Provide evidence (up to 3 examples from recent publications) of your track record in analytical treatment of face-centred cubic (FCC) metals	models incorporating material invariant parameters  100% - Three examples provided to demonstrate experience in the analytical treatment of FCC metals.  60% - Two examples provided to demonstrate experience in the analytical treatment of FCC metals.  30% - One example provided to demonstrate experience in the analytical treatment of FCC metals.	9%
6	Provide evidence (up to 3 examples from recent publications) of experience applying Machine Learning in multiscale analysis	0% - No evidence provided to demonstrate experience in the analytical treatment of FCC metals.  100% - Three examples provided to demonstrate application of machine learning in multiscale analysis.	6%

8	Provide evidence (up to 3 examples from recent publications) of understanding manufacturing of prototype concepts	<ul> <li>30% - One example provided to demonstrate treatment of sensitivity, uncertainty and stochastics within multiscale analysis.</li> <li>0% - No evidence provided to demonstrate treatment of sensitivity, uncertainty and stochastics within multiscale analysis.</li> <li>100% - Three examples provided to demonstrate understanding manufacturing of prototype concepts.</li> <li>60% - Two examples provided to demonstrate understanding manufacturing of prototype</li> </ul>	9%
7	Provide evidence (up to 3 examples from recent publications) of treatment of sensitivity, uncertainty and stochastics within multiscale analysis	<ul> <li>100% - Three examples provided to demonstrate treatment of sensitivity, uncertainty and stochastics within multiscale analysis.</li> <li>60% - Two examples provided to demonstrate treatment of sensitivity, uncertainty and stochastics within multiscale analysis.</li> </ul>	9%
		<ul> <li>60% - Two examples provided to demonstrate application of machine learning in multiscale analysis.</li> <li>30% - One example provided to demonstrate application of machine learning in multiscale analysis.</li> <li>0% - No evidence provided to demonstrate application of machine learning in multiscale analysis.</li> </ul>	

		<ul> <li>30% - One example provided to demonstrate understanding manufacturing of prototype concepts.</li> <li>0% - No evidence provided to demonstrate understanding manufacturing of prototype concepts.</li> </ul>	
9	Provide a description of your proposed approach to using multiscale modelling in high strain rate applications, including a Gantt chart describing timeline within the initial contract period spanning 12 months and breakdown of work into appropriate subtasks	<ul> <li>100% - Response specifies high strain rate and contains both Gantt chart and sub-task breakdown.</li> <li>60% - Response specifies high strain rate and contains either Gantt chart OR sub-task breakdown.</li> <li>30% - Response specifies high strain rate and contains Gantt chart and sub-task breakdown but no high strain rate.</li> <li>0% - No evidence provided.</li> </ul>	6%
10	Provide a description of the characterisation equipment and facilities to support the generation data for model development/parametrisation. This evidence should include a description of any in-house or subcontracted manufacturing capabilities and a description of any computational capability including references to relevant hardware and software capabilities.	<ul> <li>100% - The response provides evidence of suitable and currently in-house numerical and experimental capabilities.</li> <li>50% - The response provides evidence of suitable and current access to (not in-house) numerical and experimental capabilities.</li> <li>0% - The response provides no evidence against criteria listed.</li> </ul>	6%
11	Provide a description of your proposed approach to use multiscale modelling approaches to optimise material microstructure and design of materials. This should include statements demonstrating 1) an understanding of influential microstructural features, 2) how these can be included in a multiscale	<ul><li>100% - The response provides evidence against all of the criteria listed.</li><li>60% - The response provides evidence against two of the criteria listed.</li></ul>	6%

	modelling framework 3) how microstructural analysis tools can be used to inform design of materials	<ul> <li>30% - The response provides evidence against one of the criteria listed.</li> <li>0% - The response does not provide evidence for any of the criteria listed.</li> </ul>	
12	Provide a description of your proposed approach to propagate uncertainty in material behaviour through multiscale modelling approach. This should include a statement to 1) demonstrate understanding probabilistic modelling 2) demonstrate understanding of material variability at the component scale.	<ul> <li>100% - The response provides evidence against all of the criteria listed.</li> <li>50% - The response provides evidence against one of the criteria listed.</li> <li>0% - The response does not provide evidence for any of the criteria listed.</li> </ul>	6%
13	Please provide information detailing any known risks, assumptions, dependencies and exclusions with regards to the work. This should include information such as 1) Lead times to procure any components, 2) access to equipment, 3) need for/access to Government Furnished Assets/Information (GFX) and 4) Environmental and safety considerations for operating the equipment.	<ul> <li>100% - The response provides evidence against all of the criteria listed.</li> <li>60% - The response provides evidence against at least two of the criteria listed.</li> <li>30% - The response provides evidence against at least one of the criteria listed.</li> <li>0% - The response does not provide evidence for any of the criteria listed.</li> </ul>	3%
14	Please provide details of the organisations' approach to arranging meetings and reporting on project progress. This evidence should include details of 1) preferred contact method (in-person and/or via telepresence), 2) format of interim deliverables such as sprint reviews etc., 3) frequency of update meetings and 4) amount of contact time required with stakeholders/customers.	<ul> <li>100% - The response provides evidence against all criteria listed.</li> <li>75% - The response provides evidence against three of the criteria listed.</li> <li>50% - The response provides evidence against two of the criteria listed.</li> <li>25% - The response provides evidence against one of the criteria listed.</li> </ul>	3%

		0% - The response does not provide evidence	
		against any of the criteria.	
15	Please provide details on the organisations' approach to <b>quality assurance</b> . This evidence	<b>100%</b> - The response provides evidence against all criteria listed.	3%
	should include details of any 1) accreditation status		
	with relevant project management organisations. (PMI, Prince2, APM etc.), 2) details of any	<b>80%</b> - The response provides evidence against at least 4 of the criteria listed.	
	accreditation status with relevant technical	least 4 of the chiena listed.	
	professional bodies (IET, IoP etc.), 3) details of any	60% - The response provides evidence against at	
	ability to perform health and safety accreditation of develop products/solutions/systems in house and 4)	least 3 of the criteria listed.	
	details of any other relevant training/experience.	40% - The response provides evidence against at	
		least 2 of the criteria listed.	
		20% - The response provides evidence against at	
		least one of the criteria listed.	
		<b>0%</b> - The response does not provide any evidence	
		against criteria listed.	

# Non Scored technical questions

ID	Evaluation Question
1	How many staff have appropriate clearance?
2	Please provide the technical background of Staff
3	Please provide your approach to internal quality controls

Note: Dstl reserves the right to fund more than one compliant bid.

Note: Bids receiving less than 50% of the available technical score will be considered to be non-compliant.

# 2.3 Commercial Evaluation Criteria

Evaluation Criteria	Weighting	Scoring
	or	
	Pass or Fail	
Your response must show	Pass/ Fail	Pass
-The proposed price must exclude VAT.		The proposed price:
		- Is FIRM priced.
-The proposed price must be a FIRM price.		- Excludes VAT.
-The proposed price is inclusive of		- And is inclusive of bid costs.
bid costs.		The proposed price is below
- The proposed price is below £35,000.		£35,000
	Your response must show  -The proposed price must exclude VAT.  -The proposed price must be a FIRM price.  -The proposed price is inclusive of bid costs.  - The proposed price is below	Your response must show Pass or Fail  Your response must show Pass/ Fail  -The proposed price must exclude VAT.  -The proposed price must be a FIRM price.  -The proposed price is inclusive of bid costs.  - The proposed price is below

Please provide a price breakdown	Your response must	Pass/ Fail	The proposed price:  - is not FIRM priced or  - is inclusive of VAT or  - is exclusive of bid costs.  - The proposed price is above £35,000
that excludes VAT. This may include some of the following headings:  - Direct labour cost (man hours and wage rates)  - Materials - Brought-out parts  - Specials Jigs, Tools and Test Equipment  - Overheads  - Profits etc.	- Each breakdown must show the calculations that lead to the headings total cost.  -Any additional costs not covered in the provided headings should be noted down.	rass/ rail	Pass  - The response provides the headings in sufficient detail to provide a full price breakdown.  Fail  - The response does not provide the headings in sufficient detail to provide a full price breakdown.

Please confirm in writing that the price quoted will be valid for a period of sixty (60) Calendar days.	Your response must confirm in writing that the price quoted is valid for 60 calendar days.	Pass/ Fail	Pass  - The bid confirms in writing that the price provided will be valid for sixty (60) days.  Fail
Please provide a FIRM price for	Your response must show	Pass/ Fail	- The response does not confirm in writing the price will be valid for sixty (60) days.  Pass
the options listed in the Statement of Requirement (SoR)	- A proposed price for the options discussed in the SoR - The proposed prices must be FIRM priced - The proposed prices must exclude VAT Within the £225,000 budget		- Your response provides the following  - A proposed price for the options discussed in the SoR and  - This is FIRM prices and  - Is exclusive of VAT and  - Within the £225,000 budget  Fail
			<ul><li>your response does not provide</li><li>A completed price for the options discussed in the SoR or</li></ul>

			<ul> <li>The price is not FIRM priced or</li> <li>The price includes VAT or</li> <li>Is not within the £225,000 budget</li> </ul>
Please can your response confirm the acceptance of the R-Cloud terms and conditions as well any special conditions detailed in the tasking form.	Your response must  Provide confirmation that you accept the R-Cloud terms and conditions as well any special conditions detailed in the tasking form.	Pass/ Fail	Pass  - Your response confirms your acceptance of the R-Cloud terms and conditions as well any special conditions detailed in the tasking form.  Fail  -Your response does not confirm the acceptance of the R-Cloud terms and conditions as well any special conditions detailed in the tasking form.
Please provide a completed Supplier Assurance Questionnaire and a completed Security Aspects Letter	Your response Must  - Include a fully completed Supplier Assurance Questionnaire and - A fully completed Security Aspects Letter	Pass/ Fail	Pass - Your response contains - a fully completed Supplier Assurance Questionnaire and

Please provide written confirmation your organisation is willing to complete a Research Workers Form if you are chosen for contract award	Your response must show the following:  - A commitment to complete a Research Workers Form if you are chosen for contract award	Pass/ Fail	Fail  - Your response does not contain a fully completed Supplier Assurance Questionnaire or - A fully completed Security Aspects Letter  Pass  - Your response confirms your commitment to complete a Research Workers Form if you are chosen for contract award.  Fail  - Your response does not confirm your commitment to complete a Research Workers Form if you are chosen for contract award.
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Provide full details of the p contacts for commercial,		Pass/ Fail	Pass
management and technic	al, for following:		-Your response outlines the points
the proposed contract du	-The points of contacts for		of contacts for commercial,
	commercial, project management and technical, for the proposed		project management and
	contract duration.		technical, for the proposed
			contract duration.
			Fail
			-Your response does not provide the points of contacts for commercial, project management and technical, for the proposed
Commercial Evaluation			contract duration.
Commercial Evaluation The Commercial Criteria shabid.	all be reviewed on a strict PASS / FAIL basis. F Social Value	·	contract duration.
The Commercial Criteria shabid.	Social Value	·	contract duration.
The Commercial Criteria sha		·	contract duration.
The Commercial Criteria shabid.	Social Value	• Questions	contract duration.

Please confirm how you will reduce the disability employment gap and also tackle workforce inequality?	Your response must demonstrate the following:  1) Demonstrate action to increase the representation of disabled people in the contract workforce.  2) Demonstrate action to identify and tackle inequality in employment, skills and pay in the contract workforce.  3) Support in-work progression to help people, including those from disadvantaged or minority groups, to move into higher paid work by developing new skills relevant to the contract.  4) Demonstrate action to identify and manage the risks of modern slavery in the delivery of the contract, including in the supply chain  5)	3% out of 10%	<ul> <li>100% - The tender's response addresses all points from 1) – 4)</li> <li>75% - The tender's response addresses 3 of the points outlined in 1) – 4)</li> <li>50% - The tender's response addresses 2 of the points outlined in 1) – 4)</li> <li>25% - The tender's response addresses 1 of the points outlined in 1) – 4)</li> <li>0% - The tender's response addresses none of the points outlined in 1) – 4)</li> </ul>
Please confirm how you will ensure effective stewardship of the environment through the delivery of this contract?	Response must clearly demonstrate:  1) How you will deliver additional environmental benefits in the performance of the contract including working towards net zero greenhouse emissions.  2) Influence staff, suppliers, customers and communities through the delivery of the contract to support environmental protection and improvement.	4% out of 10%	100% - The response fully addresses both components of 1) and 2), explaining in detail how they will contribute to achieving these aims  50% - The response fully addresses one component of 1) or 2), explaining in detail how they

			will contribute to achieving these aims  0% - The response has not fully
			addressed either of the two components
Please confi how you w		3% out of 10%	100% - The tender's response addresses all of the points
increase su chain resilie and capac	businesses and entrepreneurs, start-ups and SMFs		outlined in 1) – 3)
	Demonstrate collaboration throughout the supply chain, and a fair and responsible approach to working with supply chain partners in delivery of the contract.		<b>60%</b> - The tender's response addresses two of the points outlined in 1) – 3)
	3) Demonstrate action to identify and manage cyber security risks in the delivery of the contract including in the supply chain.		
			<b>30%</b> - The tender's response addresses one of the points outlined in $1) - 3$
			<b>0%</b> - The tender's response addresses none of the points outlined in 1) – 3)

Note: Bids receiving less than 50% of the available Social Value score will be considered to be non-compliant.