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| **To:** R-Cloud Supplier | **Part\_A** **From:** Prakash PremaCommercial OfficerRoom G02, Building 5, Dstl Porton DownSalisbury, Wiltshire, SP4 0JG |
| **REQUIREMENT *(to be completed by Dstl Technical Authority)*** **Date tender required: By 12:00 hours, Friday 18 September 2020**  |
| **Originator/Project Manager’s Name:** John Essex-Lopresti | **Department:** MSA |
| **Bldg/Room:** Dstl Porton Down | Tel: 01980 952728 |
| **Task Title:** | **Antenna Materials and Concepts Development** |
| **iCAS Req no:** | 1000155326 |
| **Anticipated Start:** October 2020 | **Anticipated End:** June 2023 |
| **SECURITY CLASSIFICATION OF THE WORK *(A Security Aspects Letter (SAL) may be required, to be issued by Dstl)*** **OFFICIAL [x]  OFFICIAL-SENSITIVE [ ]  SECRET [ ]  TOP SECRET [ ]** Further details and the full requirements can be found at the Gov.UK website at: <https://www.gov.uk/government/publications/security-policy-framework>. |
| **DATE OF RETURN OF PROPOSAL****:**   12:00 Hours, 18 September 2020 |
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| **TASK DESCRIPTION AND SPECIFICATION** **Summary:**There has been much research over recent years on materials and structures offering extraordinary radio frequency properties and with potential to impact antenna designs and their performance. This competition sets a challenge to suppliers versed in the development of antennas to engage, leverage and adapt the very latest academic research and innovation in such materials to produce and demonstrate novel antennas and antenna concepts. This challenge is set in the context of the dismounted soldier and the need for antennas with increased radiation efficiency and gain, reduced power consumption, ability for effective communication links in different orientations, more conformal and less obtrusive designs, and versatility in terms of application across a range of frequency requirements.This requirement for Work Package (WP) 1 will deliver a Concept Development and Design Study for such antennas. An optional follow on Work Package (WP2) will produce and test physical prototypes of the antennas.Firm pricing is required for WP 1. A fully consted proposal for WP2 shall be one of the deliverables of WP1. An indicative total budget of £200,000 is provided for WP 1 with an additional indicative total budget £200,000 available for WP 2. **Background.**Antennas are critical to soldier communications as well as other dismounted capabilities; they represent the interface across which information and capability is delivered and through which much of the electrical energy carried by the soldier (i.e. batteries) is channelled. Soldier system equipment will face continual challenges into the future by the growing complexity of the electromagnetic operating environment and in response to increasingly more capable adversaries. MOD needs to be proactive in its response to such challenges. Agile and multifunctional systems are therefore of much interest, as are antennas that reduce physical burden on the soldier. In the case of the latter, more conformal and less intrusive (physically and visibly obtrusive) antennas with high gain and low power consumption are highly desirable.There has been much research over recent years on materials and structures that can be adapted to antenna applications. These include, but are not restricted to: artificial magneto-dielectrics, tuneable dielectrics, variable conductors, metallic periodic structures and electromagnetic bandgap structures, metamaterials and metasurfaces (also referred to as artificial magnetic conductors, artificial impedance surfaces, and artificial ground planes). *The intent of this research project is to invite innovation in the adaptation and fabrication of novel materials to produce demonstrable low burden antennas with improved performance. Essentially to demonstrate the art of the possible enabled by such materials. Also of interest is how these materials might enable new concepts of operation that deliver the same benefits to the soldier. An example for guidance might be optimal beamforming and control of how radiation propagates away from and around the soldier to maximise the effectiveness of the system. Such an approach would mitigate the poor omnidirectional performance currently found with body worn antennas resulting from body absorption losses.*The research has a materials focus (i.e. applied use of materials and their fabrication). Proposals based purely on antenna design theory at the exclusion of a sufficient materials component (or novel application of a material) will be considered out of scope. For clarity, implementation of existing materials in novel configurations that provide unique and tailored properties/functionality (e.g. metamaterials etc.) is in scope.The delivered outcome of this research shall be at Technology Readiness Level (TRL) 4.**Requirement and approach:**This research will leverage from the growing field of functional materials and structures for the design and development of novel antenna systems for dismounted soldier applications. A collaborative approach, employing a partnership of academic and industrial partners is anticipated to achieve the project goals. In order to enhance collaboration with MOD’s international partners during and post contract, it is desirable that all project participants (companies and individuals) are of UK or other nationality aligned with NATO1 or TTCP2 membership.1 <https://www.nato.int/cps/en/natohq/nato_countries.htm> 2 <https://www.dst.defence.gov.au/partnership/technical-cooperation-program> Taking inspiration from the growing pallet of RF materials and their enabling properties WP1 will deliver a Concept Development and Design Study agaist an antenna challenge/specification described below. The outputs of WP1 shall be a comprehensive design study, detailing and reporting fully matured antenna designs together with a fully costed proposal to build and evaluate these as part of the WP2 option. The WP2 option seeks to develop the WP1 antenna designs into prototypes and evaluate these in a laboratory setting. Submissions against both WP1 and WP2 are required in order to be compliant with this invitation to tender.**Mandatory Requirements****WP1 – Concept Development and Design Study**Undertake Concept Development and Design Study. This work shall leverage the latest developments in functional RF materials and materials fabrication techniques and provide antenna designs and operating concepts that deliver against the antenna challenge set out below. The outcome will be one or more fully developed antenna design concepts together with supporting evidence as to how they will deliveragainst the challenge. Solutions are required against the frequency requirements set out in the challenge. It is expected that the designs will be supported by analysis that either simulate or provide other evidence as to the likely benefits. This should also allow for de-risking of the options to inform down selection and provide greater confidence in a successful outcome. Analysis should be at the full system level and reflect the inherent aim of reducing SWaP (e.g. if non-passive approaches are to be employed then a full energy balance is expected, as is a practical and demonstrable means of delivering the associated effects). The reporting of this task shall be supported with sufficient literature and theoretical description to convey fully the operating principle. It should also detail the fabrication details associated with producing and demonstrating the antenna which must be practical and achievable. The above design study shall include a fully costed proposal to produce and demonstrate the antenna principle and measured benefits for the WP2 option – Further development and evaluation.As part of the submission process suppliers will be expected to provide details of one or more antenna concepts against the requirement together with details of the underpinning materials science for consideration under Phase 1. Evidence to support the feasibility and the technical benefit against the project aims shall be included.**Deliverable 1** (T0 + 1 month). WP1 start up meeting. To include delivery of a PowerPoint presentation including an overview of the WP technical scope and approach, project plan and schedule, deliverables, risks and any other issues.**Deliverable 2** (T0 + 3 months) WP1Quarterly Progress and Technical Review (QPTR)1.**Deliverable 3** (T0 + 6 months) WP1 QPTR 2.QPTRs to deliver an interim technical report (MS Word) and summary PowerPoint presentation. Interim reports shall include details of work performed during the reporting period, including candidate antenna concepts for the WP2 option, progress against project plan and schedule, review of deliverables, risks and any other issues. The PowerPoint presentation shall provide a summary of the same.**Deliverable 4** (T0 + 9 months). Final technical report (MS Word) and PowerPoint presentation. The final report shall include details of all work performed during WP1 (as described in the requirement) and shall include a fully costed proposal for WP2. The PowerPoint presentation shall include a summary of the project background, details of the antennas developed and their benefits and the proposed test and evaluation for WP2. This presentation shall be a standalone deliverable targeted towards a stakeholder audience.**Option (ROM cost):****WP 2 – Further development and evaluation**Work under this option will produce and develop antennas designed in WP1 and evaluate these for their effectiveness against the user needs described in the antenna challenge (e.g. demonstrate an intrinsic improvement in gain, coverage for soldiers when in the prone position, reduced burden, etc.). Laboratory experimentation is required at this stage as opposed to user trials (e.g. anechoic chamber testing of antennas mounted on a surrogate set in different orientations to measure radiation patterning and gain, antenna mounted in different positions, etc.) as well as standard tests to measure bandwidth performance (e.g. antenna return loss, S11). It is expected that there will be at least one re-iteration in the produce/evaluate process with the opportunity for MOD to provide input to the final prototypes. At the end of the project the supplier shall deliver at least one working prototype of each antenna to Dstl for use under the terms of the contract.The delivered outcome of this research shall be TRL4.**Deliverable 5** (T0 + 10 months). WP2 start up meeting. To include delivery of a PowerPoint presentation including an overview of the WP technical scope and approach, project plan and schedule, deliverables, risks and any other issues.**Deliverable 6** (T0 + 13 months). WP2 QPTR1**Deliverable 7** (T0 + 16 months). WP2 QPTR2**Deliverable 8** (T0 + 19 months). WP2 QPTR3**Deliverable 9** (T0 + 22 months). WP2 QPTR4QPTRs to deliver an interim technical report and summary PowerPoint presentation. Interim reports shall include, but not limited to, details of work performed to during the reporting period, progress against project plan and schedule, review of deliverables, risks and any other issues. The PowerPoint presentation shall provide a summary of the same.**Deliverable 10** (T0 + 25 months). Final technical report (MS Word and or PDF) and PowerPoint presentation. The final technical report shall include details of all work performed during WP2. The PowerPoint presentation shall include a summary of the project background, details of the antennas developed, their measured performance benefits, and recommendations for future development and exploitation. This presentation shall be a standalone deliverable targeted towards a stakeholder audience.**Deliverable 11** (T0 + 25 months). Delivery to Dstl of at least one functioning prototype of each antenna developed under the project.***Antenna challenge***1. The requirement is for antenna systems that deliver the following *top level needs*:
2. Reduce burden on the soldier. This includes reducing the Size, Weight and Power (SWaP) as well as producing low profile antenna designs that are less intrusive on the user, with reduced visual signature and increased freedom to manoeuvre. In terms of SWaP, the overall efficiency of the antenna systems is seen as a key factor; improving this is a valuable means to reducing the weight of batteries being carried by the soldier and increasing operational range;
3. Antennas with increased radiation efficiency and gain. Again enhanced radiative power and coverage for the same input power is highly desirable;
4. Provide coverage suitable for a soldier communication system and ideally with improved beam forming / antenna coupling for soldiers in different orientations (e.g. including antenna effectiveness when a soldier is in the prone position);
5. Be sufficiently robust in the context of the Dismounted Close Combat (DCC) soldier.
6. The requirement is performance driven against the *top level needs* and specifications. It is agnostic as to whether the solution is a textile/fabric or a solid item carried on or around the soldier as long as it delivers the desired effect. However, the solution must be inherently robust in terms of the following:
7. Physically robust to the challenging DCC environment;
8. Resilient performance in extremes of environmental conditions (hot, cold and wet) and practical aspects such coverage with dust / mud and creasing, if applicable;
9. Versatile in terms of fitting the antennas onto the soldier system (e.g. ease of switching between different antennas if required).

Systems mounted close to the body should pay full consideration to the effects of body absorption on radiation propagation and mitigating measures are invited, as appropriate. Similarly, soldier battledress and equipment such as ballistic plates can also cause adverse effects. Positioning of antennas and consideration to such effects should therefore be considered for the proposed solutions. On a similar theme, low Specific Absorption Rate (SAR) approaches are attractive to enable high power equipment.The requirement seeks novel ways of achieving the above challenges by the use of novel functional materials and concepts of operation. The challenge is set against the following requirements (R1 & R2) which represent the **Mandatory Requirements**:R1. The antenna concept shall operate at a nominal frequency of 1 GHz while delivering the main user needs described above. The target bandwidth shall be 100 MHz.R2. Suppliers are to show (i.e. in differently scaled antennas) the versatility of the concept design to meeting lower and higher frequency requirements (e.g. 300 MHz and 2.5 GHz for guidance or as low and as high as possible). This exercise shall assess the upper and lower capabilities of the approach and document the physical limitations and technical challenges.**Desirable Requirements**Applying to both WP1 and WP2 there is a desirable requirement to extend the antenna challenge to include the following stretched targets. These should not be at detriment or compromise to the *top level needs*.R3. The antenna concept shall operate at a nominal frequency of 1 GHz while delivering the main user needs described above. It will have the additional ability to tune or select operating frequencies departing 10% from this frequency while independently restricting the operating bandwidth towards a target of 1%.R4. The antenna concept shall provide operation in the range 300 MHz to 2.5 GHz in a single antenna (or as wider range as possible around the 1 GHz central point) through instantaneous operating bandwidth and as a stretched target by the ability to select a desired frequency within that range while restricting the operating bandwidth to 10% around that point.All deliverables shall allow MOD full user rights (DEFCON 705).**Deliverables**

| **Deliverable** | **Required?** | **Delivery Date**(Expressed as weeks / months from Contract award) |
| --- | --- | --- |
| **Progress Reports** | [x]  | Monthly Progress Reports by email. |
| **Customer Presentation(s)** | [x]  | Customer presentations shall be delivered to the Dstl Technical Partner and MOD Subject Matter Experts at the start up meeting, QPTRs, and final technical review.WP1Deliverable 1 at T0 + 0 monthsDeliverable 2 at T0 + 3 monthsDeliverable 3 at T0 + 6 monthsDeliverable 4 at T0 + 9 monthsWP2 optionDeliverable 5 at T0 + 10 monthsDeliverable 6 at T0 + 13 monthsDeliverable 7 at T0 + 16 monthsDeliverable 8 at T0 + 19 monthsDeliverable 9 at T0 + 22 monthsDeliverable 10 at T0 + 25 months |
| **Summary Report(s)** | [x]  | Summary reports shall be presented at QPTRWP1Deliverable 2 at T0 + 3 monthsDeliverable 3 at T0 + 6 monthsWP2 optionDeliverable 6 at T0 + 13 monthsDeliverable 7 at T0 + 16 monthsDeliverable 8 at T0 + 19 monthsDeliverable 9 at T0 + 22 months |
| **Technical Report(s)** | [x]  | Final technical reports and final summary presentationsWP1Deliverable 4WP2 optionDeliverable 10 |

**See above for Summary and Technical Reports****Standard Acceptance Criteria (Reports)**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)](http://wiki/o/Defence_Research_Report_Specification) 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.Final Reports: shall describe the entire 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 or system developed there under. The technical detail shall be sufficient to permit independent reproduction of any such process or system. All Reports shall be free from spelling and grammatical errors and shall be set out in accordance with the Statement Of Requirement (1) above.Failure to comply with the above may result in the Authority rejecting the deliverables and requesting re-work before final acceptance. |

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| **Please offer a proposal based on this pricing mechanism:****Firm Price [x]  Ascertained cost [ ]**  **Maximum Price Target Cost [MPTC] [ ]**  |
| **Will we accept innovation tenders? Yes**  |
| **Cyber Risk Assessment**The cyber risk Level for this requirement is Very Low Risk Assessment Reference **RAR-J3X9WU95** .  |
| **SECURITY CLASSIFICATION OF THE WORK *(A Security Aspects Letter (SAL) may be required, to be issued by Dstl)*** **OFFICIAL [x]  OFFICIAL-SENSITIVE [ ]  SECRET [ ]  TOP SECRET [ ]** Further details and the full requirements can be found at the Gov.UK website at: <https://www.gov.uk/government/publications/security-policy-framework>. |

**Send completed form to Commercial Services for issue to Contractors.** **Any Task placed as a result of your tender will be subject to R-Cloud Terms and Conditions V3.0**

**TENDER EVALUATION CRITERIA**

All tenders received by the closing date will be assessed against the tender evaluation process detailed below.

The Customer will use an evaluation model consisting of three criteria, weighted as follows:

* Commercial: PASS/FAIL
* Technical: 70%
* Pricing: 30%

The highest-scoring technically compliant bid will receive a score of 70 and the technical scores for the remaining bids will be calculated using a percentage (%) difference method as follows:

$$Technical Score = Total Available Marks × \left(\frac{Tender Technical Mark}{Highest Technical Mark}\right)$$

A simplified worked example is shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Tenderer** | **Score** **(Note: figures quoted are for example purposes only)** | **Calculation** | **Score Awarded** |
| 1 | 106 | - | 70 |
| 2 | 93 | 70 x 93/106 | 61.5 |
| 3 | 90 | 70 x 90/106 | 59.5 |

The lowest-priced compliant bid will receive a score of 30 and the price scores for the remaining bids will be calculated using the percentage (%) difference method as follows:

$$Pricing Score = Total Available Marks × \left(\frac{\begin{array}{c}Lowest Priced Technically and \\Commercially Compliant Tender\end{array}}{Tender Price}\right)$$

A simplified worked example is shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Tenderer** | **Tender Price** **(Note: figures quoted are for example purposes only)** | **Calculation** | **Score Awarded** |
| 1 | £63,000 | 30 x 55000/63000 | 26 |
| 2 | £55,000 | - | 30 |
| 3 | £79,000 | 30 x 55000/79000 | 21 |

The scores for the Technical and Price elements will be added together and the overall highest score shall be awarded a contract. Therefore, using the examples shown above, Tenderer 1 would be awarded the contract with an overall score of 96. In the event that two or more tenders score the same overall, the Tenderer achieving the highest score in the Technical section shall be awarded a contract.

Commercial Evaluation. The Commercial Criteria shall be reviewed on a strict PASS / FAIL basis. Failure in any of the Commercial Criteria shall result in a non-compliant bid.

**Gate 1: Commercial Assessment**.

1. The proposal has been submitted as a Firm Price for all tasks identified under Work Package 1 and ROM costs for Work package 2. Pass / Fail
2. The proposal has been submitted within the specified budget for WP 1 and 2. Pass / Fail.
3. The proposal prices do not exceed the Rates submitted upon your RCloud application and acceptance. Pass / Fail
4. The proposal accepts the RCloud Terms and Conditions in full. Pass / Fail.
5. The Supplier submits a one priced commercial proposal and one unpriced Technical Proposal. Pass / Fail.

Bidders should note that if they Fail any of the Commercial Questions they shall not be considered for the

**Gate 2 Technical Assessment**.

Technical Evaluation

Technical evaluation will be carried out by a team of up to 3 assessors (minimum of 2), who will review the proposals independently and then bring their scores to a moderation meeting which will be chaired by the Dstl Project Manager. The final score attributed to each of the four questions detailed below for each Tenderer shall be an output of this moderation meeting. Once all questions have been moderated, Service Providers will be ordered according to their total score for their technical response and scores out of 70 calculated as based on the evaluation methodology detailed above.

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Weighting** | **Max Score** |
| Previous experience |  |
| Provide evidence of your knowledge of advanced RF materials relevant to the antenna application detailed in the requirement | 10 | 100 |
| Provide evidence of experience in the design, production and evaluation of novel antennas (or relevant RF devices) using advanced materials relevant to the antenna application detailed in the requirement. | 10 | 100 |
| Provide evidence of relevant test facilities and knowledge to evaluate and demonstrate the antenna attributes detailed in the requirement. | 10 | 100 |
| Networking |  |
| Provide evidence of interactions with RF materials and antenna research communities as well as end use and stakeholder communities, ideally in a dismounted soldier context. | 10 | 100 |
| Technical approach |  |
| Provide an account of the technical approach to the antenna design concept, highlighting the role of the materials utilized in the design and how these act to deliver the project aims, as described in the requirement. This shall include technical risks and mitigations. | 20 | 100 |
| Provide details of the approaches and techniques that will be used to optimise, develop, and manufacture the materials and antennas for evaluation. | 10 | 100 |
| Provide details of how the antennas will be assessed and characterised, including measures of success against the project aims described in the requirement. | 10 | 100 |
| Provide a description of your proposed approach to project management (including project risks and mitigations) and how you will engage with Dstl and MOD stakeholders throughout the project life. | 10 | 100 |
| Exploitation |  |  |
| Describe how the work can be exploited. This should include information on development necessary for equipment integration, manufacturing challenges and materials supply issues, safety considerations for trials, freedom to operate (e.g. intellectual property), opportunities for due-in other military and civilian applications etc. | 10 | 100 |

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| **Marking Scheme: No intermediate scores will be permitted.  Each individual question will be evaluated against the following scoring mechanism.** |
| **Rating** | **Characteristic** | **Score** |
| Excellent | The response addresses all elements of the requirement **with exceptional technical merit**, and provides a comprehensive, unambiguous and thorough explanation on how the requirement will be fulfilled.  | 100 |
| Good | The response addresses all of the elements of the requirement and provides sufficient detail and explanation on how the requirement will be fulfilled.  | 70 |
| Adequate | The response addresses the majority of the elements of the requirement but is weak in some areas and does not fully detail or explain how the requirement will be fulfilled.   | 30 |
| Inadequate | The response does not address or explain how the requirement will be fulfilled. | 0 |

**Example**

This is a worked example of how the technical evaluation would be scored. Each criteria has a weighting, which has a maximum score of 100. The score given will be multiplied by the weighting of the criteria to given the final score.

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| --- | --- | --- | --- |
| **Criteria** | **Weighting** | **Max Score** |  |
| Previous experience |  |  |
| Provide evidence of your knowledge of advanced RF materials relevant to the antenna application detailed in the requirement | 10 | 100 | 10 |
| Provide evidence of experience in the design, production and evaluation of novel antennas (or relevant RF devices) using advanced materials relevant to the antenna application detailed in the requirement. | 10 | 70 | 7 |
| Provide evidence of relevant test facilities and knowledge to evaluate and demonstrate the antenna attributes detailed in the requirement. | 10 | 70 | 7 |
| Networking |  |  |
| Provide evidence of interactions with RF materials and antenna research communities as well as end use and stakeholder communities, ideally in a dismounted soldier context. | 10 | 70 | 7 |
| Technical approach |  |  |
| Provide an account of the technical approach to the antenna design concept, highlighting the role of the materials utilized in the design and how these act to deliver the project aims, as described in the requirement. This shall include technical risks and mitigations. | 20 | 100 | 20 |
| Provide details of the approaches and techniques that will be used to optimise, develop, and manufacture the materials and antennas for evaluation. | 10 | 70 | 7 |
| Provide details of how the antennas will be assessed and characterised, including measures of success against the project aims described in the requirement. | 10 | 30 | 3 |
| Provide a description of your proposed approach to project management (including project risks and mitigations) and how you will engage with Dstl and MOD stakeholders throughout the project life. | 10 | 70 | 7 |
| Exploitation |  |  |  |
| Describe how the work can be exploited. This should include information on development necessary for equipment integration, manufacturing challenges and materials supply issues, safety considerations for trials, freedom to operate (e.g. intellectual property), opportunities for due-in other military and civilian applications etc. | 10 | 30 | 3 |
|  |  | Total Score | 71 |

**Part B**

**To be completed by the Contractor -** **iCAS Req number:** 1000155326

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| **To:** | Prakash PremaCommercial ManagerRoom G02, Building 5, Dstl Porton DownSalisbury, Wiltshire, SP4 0JG | **From:** | **(Contractor to insert name and address)** |

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| **Proposal reference \_\_\_\_\_\_\_\_\_\_\_\_\_ (attached)** |
| **COST BREAKDOWN (Tasking Form Part C - to be completed by the Contractor)** |
| **Firm Price Quotation of £\_\_\_\_\_\_\_ (ex VAT) is submitted for Task No \_\_\_\_\_\_\_\_\_ and broken down as shown in Part C attached.****OR****Ascertained cost £\_\_\_\_\_\_\_\_\_\_\_ maximum price payable (Ex VAT)** |
| **Assumptions and Dependencies (if applicable)** |
| **Proposed Start Date: Proposed End Date:** |
| **Government Furnished Assets (Refer also to Part E)****If GFA is required from the Authority please provide a list with this proposal.****All GFA must be recorded in a formal list whilst in the possession of the Contractor.****For any purchased materials which will become GFE, please provide the known pricing with this proposal.** |
| **If performance of the Contract is to be carried out at Authority’s site please confirm insurance is in place in accordance with Clause 35.3 of the R-Cloud Terms and Conditions Y / N** |
| **If Controlled Information is issued – please provide a list (reference Clause 33)** |
| **Is any Contractor Commercial Sensitive Information included?** **If so, complete part D of this Tasking Form. Y / N** |
| **Note: The Research Workers form may require completion on award of any contract. Please complete and return if requested to do so. One form is required per Research Worker.** |
| **Signed on behalf of the Contractor:** |
| **Printed Name of signatory and Date:** |

Contractor – please return the completed Tasking Order Form by uploading it into the R-Cloud App for the relevant task. Acceptance by the Authority of the proposal to the Contractor will be through the issue of an R-Cloud notification containing a purchase order number which must be quoted on any relevant invoices. The terms and conditions of the Framework Agreement will apply.

**TASKING FORM PART C - COST BREAKDOWN to be completed by the Contractor**

|  |  |
| --- | --- |
| **Task Title:** | **Antenna Materials and Concepts Development** |
| **Task Number:** | 1000155326 |
| **PROVISION FROM SERVICE**  | **Hourly Rate £** | **Qty** | **Subtotal** | **Total £** |
| **Manpower – identify each Grade, Hourly Rate (not to exceed the maximum Hourly Rates as set out in pricing matrix** **within the R-Cloud App). Hourly Rate is inclusive of profit and overheads, and quantity of hours.** |  |  |  |  |
| **Travel & Subsistence** **UK Road Mileage, Accommodation, etc.****provide detail – (reference Clause 12.16 of Framework Agreement)** |  |  |  |  |
| **Transportation (provide detail)** |  |  |  |  |
| **Range Facility (provide detail)** |  |  |  |  |
| **Materials and Equipment (provide detailed list)** |  |  |  |  |
| **Other (provide supporting detail)** |  |  |  |  |
| **PROVISION FROM SUBCONTRACTORS (limited to 25% of proposed total quoted price)** |
| **SERVICE** | **Cost £** | **Qty** | **Subtotal** | **Total £** |
| **Range Facility (provide detail)** |  |  |  |  |
| **Manpower – identify Each Grade, rates and number of hours (based on your Rate Card)** |  |  |  |  |
| **Travel & Subsistence** **UK Road Mileage, Accommodation, etc.****provide detail – (reference Clause 12.16 of Framework Agreement)** |  |  |  |  |
| **Transportation (provide detail)** |  |  |  |  |
| **Range Facility (provide detail)** |  |  |  |  |
| **Materials (provide detail)** |  |  |  |  |
| **Other (provide detail)** |  |  |  |  |
| **Materials (provide detail)** |  |  |  |  |
| **ADDITIONAL CHARGE** |
| **Handling Fee for sub-contracting in accordance with agreed rate** |  |  |  |  |
| **TOTAL COST OF TASK** | **£** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Cross reference these on Invoice.** | **Description** | **Amount £** | **Due Date** |
| **Milestone 1 / Progress payment** |  |  |  |
| **Milestone 2 / Progress payment** |  |  |  |
| **Milestone 3 / Progress payment** |  |  |  |
| **Milestone 4 / progress payment** |  |  |  |
| **Etc. add more rows as appropriate.** |  |  |  |
| **Retention if appropriate** |  |  |  |
| **TOTAL** |  |  |  |

Milestone (M/S) Payment Notes:

1. Dstl will not make any form of Payment on Contract award.
2. M/S Payment cost to be qualified as Value for Money (VFM) , justifiable charge.
3. Where Equipment is purchased in support of this Task, full payment will only be made following Contractor confirmed receipt of Equipment, If a deposit has to be paid at time of Contractor placing the Order, then this deposit payment, at Dstl’s discretion, may be approved if supported by documentation as proof of Contractor payment.
4. For tasks of less than 6 month duration, M/S payments are at Dstl’s discretion.

**Tasking Form Part D**

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| Contractor’s Commercially Sensitive Information Form R-Cloud Ref No:  |
| Description of Contractor’s Commercially Sensitive Information:  |
| Cross Reference(s) to location of sensitive information in tender:  |
| Explanation of Sensitivity:  |
| Details of potential harm resulting from disclosure:  |
| Period of Confidence (if applicable):  |
| Contact Details for Transparency/Freedom of Information matters: Name: Position: Address: Telephone Number: email Address:  |

**Tasking Form Part E**

Tooling and Equipment

In placing this Tasking Order Form the Contractor and the Authority acknowledge and agree that the cost of the declared and listed Tooling and Equipment, to complete the required Tasking Order is to be included within the agreed Firm Price.

It is agreed that low cost and/or consumable Tooling and Equipment is not needed to be included.

It is further agreed that the stated Tooling and Equipment shall become the property of the Authority on Contract Completion, whereupon the Contractor shall transfer the Tooling and Equipment to the Public Store Account and it shall thereafter be treated as Authority Issued Property.

The Contractor shall produce and maintain a list of all Tooling and Equipment associated with this Task and make the list available to Dstl for inspection upon Dstl request.

The listed Tooling and Equipment is to be clearly marked as property of the Authority.

The Contractor shall be responsible for the safe custody, maintenance and if required calibration of the listed Tooling and Equipment whilst it is in their possession.

On Contract Completion and for a period of 3 months thereafter the Contractor shall:

• provide the Authority with free and reasonable access to the Tooling and Equipment ,

• maintain the Tooling and Equipment in good working order at its own expense;

• Deliver the Tooling and Equipment back to Dstl (or such other organisation as may be directed) when requested by Dstl, to do so in writing and at your own expense and subject to 30 (thirty) Days advanced notice being provide,

• On expiry of the 3 month period following Contract Completion and subject to the Authority not having requested return of the listed Tooling and Equipment by an earlier date, the Contractor shall seek disposal instructions for the listed Tooling and Equipment from Dstl Commercial Services.