

Annex A to Schedule 2 - Statement of Work

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1. Background

Essential to equipment through life management are arrangements to assure safety and provide logistics support. To achieve this, it is usual to engage a specialist who will act as the Design Authority (DA) and provide these services. This Statement of Work (SoW) sets out the requirements for these services for ADEWS Radomes.

At present, there are 23 Radomes within the ADEWS fleet, managed by the Antennas, Structures and Radomes Support (ASR Spt) team. Radome sizes range from 6.1m to 23.5m in diameter. The radome structures vary from composite sandwich to solid GRP. The anticipated In-Service Life of each radome is 20 years from installation.

2. Summary of Tech Requirements

1. The contract technical requirements comprise the following:
- 1.1. Technical Through Life Support (TTLS) for, and development of radomes and their ancillaries.
 - 1.2. Provision of radome Design Authority (DA) and Technical Support.
 - 1.3. Manage obsolescence of radomes and ancillaries to ensure that proactive measures are taken to address obsolescence risks and maintain the integrity and functionality of radome installations.
 - 1.4. Field services encompass installation, recovery, commissioning, decommissioning, testing, maintenance, repair, technical support, training, upgrades, and modifications.
 - 1.5. Amend safety documents to reflect changes.
 - 1.6. Maintain a Master Records Index (MRI) for each radome that defines its configuration and that of its ancillaries.
 - 1.7. Amend environmental documents to reflect changes.
 - 1.8. Logistics support and spares.

2. Technical Requirements are split into Core and Non-Core activities:
- 2.1. Core Activities – Those activities which are a standing task throughout the contract, and which do not require specific tasking.
 - 2.2. Non-Core Activities – Those activities which are not a standing task throughout the contract, and which require specific tasking using a Task Acceptance Form (TAF).

¹ Ancillaries means all other equipment embodied into the radome including air conditioning, air supported radome blowers, lightning protection, aircraft warning lights and electrical power systems.

4. Core Activities

- 1. Maintain a contact list of stakeholders to carry out core/non-core tasks.
- 2.1. Appoint a Contract Manager and deputy who will manage the control, co-ordination, monitoring and reporting of this entire Statement of Work (SoW). POC and deputy named, and contact details provided at Contract commencement.
 - 2.1.1. The Contract Manager (or their named deputy) shall be the initial POC between the Authority and the Contractor for all activities carried out under this SoW and shall be contactable by telephone and email 0900 – 1600 Mon – Fri (excluding public holidays).
 - 2.1.2. Respond to any query within a maximum of 2 working days of the query being communicated to the Contractor and a final response within 5 working days, unless otherwise agreed by the Authority.
 - 2.1.3. Provide telephone and email support for contract and technical matters during UK working hours of 0900-1600 Monday to Friday, excluding bank holidays.
- 3.1. Contract monitoring. The Contractor shall host and provide administrative and secretarial support for quarterly progress meetings to include:
 - 3.1.1. Agenda.
 - 3.1.2. Record discussion and Actions.
 - 3.1.3. Issuing minutes
 - 3.1.4. Provide a monthly report of tasking and expenditure on the contract.
 - 3.1.5. Review the Supplier performance against the contract and the effectiveness of the Supplier/Authority relationship.
 - 3.1.6. Discuss extant and proposed tasking.
 - 3.1.7. Performance of the Authority, and of the Supplier against the Key Performance Indicators in a Red, Amber, Green format.
 - 3.1.8. Core Activities.
 - 3.1.9. Non-Core activities.
 - 3.1.10. Equipment Safety.
 - 3.1.11. Environmental and Sustainability matters.
 - 3.1.12. Commercial and Financial matters.
 - 3.1.13. Quality matters.
- 4. Quality assurance of the contract, its implementation, and deliverables and produce a project specific Quality Plan.
- 5. Produce a register of work to record of all core and non-core work undertaken.
- 6. Maintain and control all documentation produced because of this contract for the contract period + 5 years during which time the MOD may request it free issue at any time.

5. Non-Core Activities

- 1. Undertake tasks as defined by the Authority on TAFs. Typically, these will include:
 - 1.2. Sections 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7 of the Technical Requirements.
- 2. Tasking Methodology: Separate tasking using TAFs applies only to non-core activities and shall be used by the Authority to define a task and for the Supplier to cost it. Authorisation to proceed with a task shall be given only by the Authority via provision of a purchase order. A TAF can be initiated by the Contractor or the Authority. TAF responses from the contractor shall not exceed 5 working days unless otherwise agreed.

6. Additional Information

- 1. It is essential that the Supplier recognises and can deliver Design Authority and spares support for the full range of Radomes at Appendix B, noting that they are supplied by five companies one of which no longer exists. Radome manufacturers are:
 - 1.1. Communications & Power Industries LLC (formally L3Harris Essco).
 - 1.2. Lightweight Structures/TODD – No longer exist.
 - 1.3. Alan Dick.
 - 1.4. FDS.
- 2. Where the supplier is not the Original Equipment Manufacturer (OEM) for radomes and ancillaries, the supplier is required to put in place formal arrangements with the OEM to access the technical data (intellectual property) necessary in support of its contractual obligations. Typically, this would include but not be limited to activities such as structural appraisals, condition inspections and radio frequency modelling. It will be the sole responsibility of the Contractor to make these arrangements.
- 3. In cases where Original Equipment Manufacturer (OEM) information is unavailable, the contractor is expected to utilise their professional judgement and expertise to address and resolve any issue related to radome construction and maintenance. The contractor shall ensure that all Intellectual Property Rights (IPR) arrangements are adhered to, and any solutions or modifications developed independently must comply with the relevant standards and best practices. The contractor's ability to make informed decisions and provide reliable answers in the absence of OEM data is crucial to maintaining the integrity and functionality of the radome systems.
- 4. Similarly, arrangements for the supply of OEM spares or equivalent shall be required.

3. Technical Requirements

3.1. DA and Technical Support (Non Core)

Key Requirements:

- 1. System Design: System/radome designs for modifications and the production of modification leaflets. Providing guidance to the design process, detailed design, and validation.
- 2. Compliance with Specifications: Ensuring that radome designs comply with all specified requirements, standards, regulations, and performance criteria set forth by the Authority.
- 3. Technical Expertise: Providing technical expertise and guidance to the Authority regarding radome design principles, materials selection, structural analysis, electromagnetic performance, and environmental considerations.
- 4. Risk Management: Identifying and mitigating design risks associated with radome performance, structural integrity, environmental factors, and compatibility with existing infrastructure.
- 5. Quality Assurance: Implementing quality assurance processes and procedures to ensure that the radome designs meet high-quality standards and reliability requirements.

- 6. Collaboration: Collaborating with stakeholders, including project managers, engineers, subcontractors, and suppliers, to address any design-related issues or concerns.

- 7. Design Reviews: Conduct design reviews and assessments to evaluate the quality of radome designs, identify any deficiencies or deviations, and recommend corrective actions as needed.

- 8. Continuous Improvement: Striving for continuous improvement in radome design processes, methodologies, and technologies to enhance performance, efficiency, and reliability.

- 9. Safety Panel Reviews: Participate in safety panel reviews to address safety risks and ensure radome designs comply with safety standards. The outcomes of these reviews will directly contribute to the safety case report for radomes, ensuring the safety and operational integrity of the systems.

3.2. Obsolescence & Standards Monitoring (Non Core)

Key Requirements:

- 1. Advise the Authority of significant impacts to changes of Standards and Regulations affecting Radomes and ancillaries as they arise.
- 2. Identify and categorise components, with a focus on those stipulated by the authority for obsolescence management.
- 3. Track life-cycle status and end of life notifications for stipulated components.
- 4. Conduct risk assessments and prioritise stipulated components.
- 5. Identify and qualify alternative sources for stipulated components.
- 6. Keep detailed records of obsolescence management activities for stipulated components.
- 7. Update the current obsolescence management plan for stipulated components.
- 8. Communicate risks and plans with the authority and provide regular updates.

3.3. Field Services (Non Core)

Key Requirements:

- 1. Installation Services: Site assessment and preparation, radome and ancillaries assembly, integration with existing infrastructure.
- 2. Commissioning and Testing: System startup, functional testing, technical investigations and reports, acceptance testing, Condition Inspections and Structural Analysis (CISA) in line with Authority's requirements, to include Mechanical and Electrical ancillaries.
- 3. Radio Frequency (RF) modelling on radomes.
- 4. Maintenance Services: Scheduled maintenance and preventive measures on radomes and their mechanical and electrical ancillaries.
- 5. Repair Services: On-site repair on radomes and their mechanical and electrical ancillaries, rapid mobilisation, categorised response for urgent issues. Where applicable a retrospective TAF shall be raised to cover the authorisation of such services.

- 6. Response Categories:

- 6.1. Urgent Response:
 - Description:** Urgent issues requiring prompt attention to minimise disruption or risk to radome operations.
 - Examples:** High-priority technical inquiries, performance degradation impacting operations, urgent troubleshooting assistance.
 - Initial Response Time:** Expedited (within 4 hours).
 - Task Completion Times:**
 - UK: Expedited (within 3 business days).
 - Overseas: On-Site presence required within 5 business days. For issues that can be addressed through remote support, the contractor should resolve the issue within 2 business days.

- 6.2. Routine Response:
 - Description:** Routine inquiries or issues that do not pose an immediate threat to radome operations or safety.
 - Examples:** General technical questions, non-urgent maintenance requests, routine updates, or inquiries.
 - Initial Response Time:** Standard (within 1 business day).
 - Task Completion Times:**
 - UK: Standard (within 5 business days).
 - Overseas: On-Site Presence required within 10 business days. Routine issues that can be handled remotely should be resolved within 5 business days.

- 7. Technical Support and Training: Providing hands-on technical support for operational issues, questions and troubleshooting. Conducting training for client personnel on radome system and ancillaries operation, maintenance, installation, and troubleshooting during and after installation.

- 8. Upgrades and Modifications: Implementing hardware or software upgrades to improve radome performance or longevity. Modifying the radome system to meet changing operational needs or integrate new technologies.

3.4. Safety Documents (Non Core)

Key Requirements:

- 1. Amendment of Existing Safety Documents:
 - 1.1. Identify Changes: Document modifications and operational changes.
 - 1.2. Review Existing Safety Documents: Compare and evaluate impacts on safety analyses and mitigation measures.
 - 1.3. Update Hazard Identification and Risk Assessments: Identify and reassess risks , update mitigation measures.
 - 1.4. Revise Safety Documentation: Amend reports and supporting documents. Submit for approval.
 - 1.5. Stakeholder Communication: Engage with stakeholders.

3.5. MRI (Non Core)

Key Requirements:

- 1. Radome Models and Specifications: Specifications and technical details for each radome model.
- 2. Location-Specific Documentation: All documentation organised by deployment location. Including but not limited to site surveys, environmental considerations, and local regulations. Site-specific drawings and plans.
- 3. Manufacturing Records: Documentation of materials, fabrication, and quality control.
- 4. Installation Documentation: Site-specific installation instructions and as-built drawings by location.
- 5. Test and Inspection Reports: Test and inspection records during manufacture, installation, and acceptance by location.
- 6. Maintenance, Fault, Repair, and Configuration Change Records: Maintenance schedules, logs, and repair documentation by location.
- 7. Certification and Approvals: Certification, permits, and approvals for radomes and locations.
- 8. Configuration Management: Configuration baselines, version control, and change management records.

- 9. Obsolescence Monitoring: Obsolescence risk assessments, mitigation plans, and alternative sourcing.

- 10. Safety and Risk Assessments: Safety assessments, concessions, and risk analyses for installation and operation.

- 11. Environmental Impact Assessments: Reports evaluating the environmental impact of radome deployment.

- 12. Supply Chain Documentation: Records of suppliers, subcontractors, and vendors.

- 13. Training and Certification Records: Records of training programs conducted for personnel involved in radome installation, operation, and maintenance. Certifications and qualifications of personnel responsible for radome-related tasks.

- 14. Incident and Non-Conformance Reports: Reports on incidents, accidents, or non-conformance.

- 15. Performance Monitoring and Evaluation: Performance monitoring data and evaluation reports.

- 16. Warranty and Service Agreements: Warranty documents and service agreements.

- 17. Project Closeout Documentation: Final inspections, acceptance criteria, and project handover procedures. Lessons learned and recommendations.

- 18. Custody and Care of documentation: Commercial / Contract Management and Tasking Documentation.

3.6. Environmental Documentation (Non-Core)

Key Requirements:

- 1. Amendment of Existing Environmental Impact Statements (EIS). Reevaluate impacts and baseline conditions.
- 2. Identify Environmental Changes: Document radome changes and new environmental factors.
- 3. Update Environmental Assessments: Conduct additional studies, revise mitigation.
- 4. Revise EIS Documentation: Update reports and supporting documents, submit for approval.
- 5. Stakeholder Engagement: Communicate changes, address concerns.
- 6. Monitoring and Reporting: Update monitoring plans, track mitigation effectiveness.

3.7. Logistic Support and Spares (Non core)

Key Requirements:

- 1. Supply spare parts as needed within time frame agreed in the corresponding TAF.
- 2. From time to time, temporarily store items of Authority equipment.
- 3. Establish a reliable network of suppliers with multiple sourcing options (UK and overseas as necessary).
- 4. Streamline order and fulfilment processes with clear guidelines.
- 5. Ensure all parts meet quality and performance standards with proper documentation.
- 6. Optimise sourcing and negotiate favourable pricing with suppliers.
- 7. Provide support for identifying and installing spare parts.
- 8. Keep accurate and accessible records of all transactions.
- 9. Commit to defined response times for spare parts requests.
- 10. Maintain clear communication on parts status and delivery schedules.
- 11. Redesign or reverse engineering of obsolete stipulated components.