Contract No: SSP/00187

STATEMENT OF REQUIREMENT (SOR)
For

VIRTUS Pulse 2
(Project SAKER)

VERSION 2.0

MINISTRY OF DEFENCE

Contents

Project requirement overview

1. The Authority has a requirement for a ballistic plate, SAKER, to protect a range of User sizes against a designated threat. In addition, a plate that protects to a higher level again in more appropriate size ranges, shall be required to offer the User flexibility in balancing protection against mobility. This second, more protective plate will be known as OSPREY 2. Pulse 1 of Project VIRTUS has already delivered an integrated system of ballistic protection and load carriage to DCC Force Elements (FEs). The intention of the VIRTUS Pulse 2 project is to deliver a second Pulse of increased capability to this system in the form of additional hard armour plates to enable the User to have increased flexibility in balancing protection against mobility. The requirement includes through life support, and the Contractor shall be required to undertake a wide range of activities to ensure that the Capability remains operationally effective.

Different Users of VIRTUS Pulse 2, operating in different regions and facing different adversaries, will require protection from different threats. These threats have been assessed by Defence Intelligence Capability Assessments and the protection requirements for the Pulse 2 plates (SAKER and OSPREY 2) are stated in Parts 3 and 4 of the System Requirements Document (SRD) at Annex ZA. Additional ballistic plates will allow Users to tailor their level of protection to best suit the threat they face at any time, whilst minimising weight and bulk.

The Authority requests an initial delivery [redacted] operational systems and [redacted] training systems at Equipment Delivery Date (EDD) [redacted]. The remaining [redacted] systems of SAKER operational plates and [redacted] of SAKER training plates shall be delivered by the end of [redacted].

Within this SOR the term “System” is taken to mean the pair of hard armour stand-alone plates that are to be inserted into both the VIRTUS front and rear plate pouches, as well as any accompanying item(s) required to hold them firmly in the desired position.

Options

2. The contract will provide exercisable options to allow up [redacted] SAKER operational systems and up [redacted] SAKER training systems to be procured to meet the Total Fleet Requirement (TFR) for the SAKER capability.

3. The contract will provide exercisable options to allow up to [redacted] OSPREY 2 operational systems and up to [redacted] OSPREY 2 training systems to be procured to meet the TFR for the OSPREY 2 capability.

STATEMENT OF REQUIREMENT (SOR)

4. Documentation is to be delivered in either a “DVD-ROM” or “CD-ROM” electronic format. All documents shall use UK English .Documentation shall be provided in a format compatible with Microsoft Office 2003.

VIRTUS PULSE 2 System Performance Table

5. The below table has been partially completed by the Authority, detailing the Mandatory and Key requirements of the tendered solution. The remaining System Performance cells are to be completed by the Tenderer prior to tender return. The Authority will complete their obligations in the System Performance column after relevant Phase 1 and 2 assessments have been conducted. The ‘System Performance’ column shall be completed in accordance with the Threshold and Objective measure of performance columns in the VIRTUS Pulse 2 System Requirement Document (SRD).
   All cells containing “[Tenderer to complete]” shall be completed by the Tenderer prior to tender return based on the Tenderer’s assessment of their system.
   All cells containing “[Authority to complete…]” shall be completed by the Authority prior to contract award, based on the Authority’s assessment of the system from the Phase 1 and Phase 2 assessments.

ID	System Requirement	Priority	System Performance	Remarks
1	The SAKER system shall provide protection from defined threats.	Key	The defined threats are: [redacted] [redacted] [redacted] The system shall protect against the threat with a confidence of [__]% that the true reliability of the equipment is [redacted] The finished exterior colour of the operational version of all plates is to be dull, complementing the Multi Terrain Pattern palette, and not one that anyone could consider as orange in normal daylight. The Contractor shall mark all Operational Plates with the following details: • Item Description. • NATO Stock Number (NSN). • Manufacturers Part Number (MPN). • Month and year of manufacture • Batch number • Unique Protective Plate identification number (serial number) • Contract number • Clear identification of correct side to be worn next to body • The wording “HANDLE WITH CARE” • 2D Barcoding The plate shall have an areal density of [*Tenderer to complete*] kg/m^2.	In accordance with standards in relation to confidence and reliability, as laid down in STANAG 29-20 Edition 3 and BS 6001 1:1999 ISO 2859-1:1999+A1:2011

ID	System Requirement	Priority	System Performance	Remarks
			Prolonged exposure to rain water, fresh water or sea water results in an increase in mass of not more than [*Tenderer to complete*]%. The plates shall be delivered in 5 sizes and shall cover the following percentiles of the male population (equivalent female percentiles are in brackets): [redacted] The system shall provide protection to the wearer from the ballistic threat over the maximum surface area. Protection from the required threat over the entire frontal area of the plate, less shots where the bullet centre falls within the edge zone. The edge zone is defined as the area [redacted] or less from the physical edge of the upper most layer of disruptor material of the plate. Shot placement during ballistic testing: [redacted]	
2	The OSPREY 2 system shall provide protection from defined threats.	Key	The defined threats are: [redacted]	In accordance with standards in relation to confidence and reliability, as laid down in STANAG 29-20 Edition 3 and BS 6001 1:1999 ISO 2859-1:1999+A1:2011

ID	System Requirement	Priority	System Performance	Remarks
			[redacted] [Authority to complete based on Phase 2 assessment] The system shall protect against the threat with a confidence of [__]% that the true reliability of the equipment is at least [redacted] The finished exterior colour of the operational version of all plates is to be dull, complementing the Multi Terrain Pattern palette, and not one that anyone could consider as orange in normal daylight. The Contractor shall mark all Operational Plates with the following details: • Item Description. • NATO Stock Number (NSN). • Manufacturers Part Number (MPN). • Month and year of manufacture • Batch number • Unique Protective Plate identification number (serial number) • Contract number • Clear identification of correct side to be worn next to body • The wording "HANDLE WITH CARE" • 2D Barcoding The plate shall have an areal density of [*Tenderer to complete*] kg/m^2. Prolonged exposure to rain water, fresh water or sea water results in an increase in mass of not more than [*Tenderer to complete*]%. The plates shall be delivered in 5 sizes and shall cover the following percentiles of the male population (equivalent female percentiles are in brackets): [redacted] The system shall provide protection to the wearer from the ballistic threat over the maximum surface area. Protection from the required threat over the entire frontal area of the plate, less shots where the bullet centre falls within the edge zone. The edge zone is defined as the area [redacted] or less from the physical edge of the upper most layer of disruptor material of the plate. Shot placement during ballistic testing: [redacted]	

ID	System Requirement	Priority	System Performance	Remarks
			[redacted]	
3	The SAKER and OSPREY 2 systems shall remain correctly and securely positioned during use.	Key	Once fitted, the system remains in desired position within the VIRTUS plate pouch throughout all operational activity, without the need for any deliberate User interaction. The desired position is defined against specified anthropometric landmarks in DSTL Annex Y to this Statement of Requirement (the "DSTL/TR098554 v1.0.").	
4	The SAKER and OSPREY 2 Training system shall be used for training purposes; ballistic protection is not required but must fully represent the SAKER and OSPREY 2 systems as described in ID 1 & 2.	Key	A training system that replicates the operational version, in terms of areal density , form and rigidity. The training plate is not required to provide any ballistic protection. The system shall be easily identifiable as either an operational or training version by all personnel expected to come into contact with it. The finished exterior colour of the training version of all plates is to be bright orange. The Contractor shall mark all Training Plates with the following details: • Item Description • NATO Stock Number (NSN) • Manufacturers Part Number (MPN) • Month and year of manufacture • Contract number • Clear identification of correct side to be worn next to body • The wording "ONLY FOR USE IN TRAINING – THIS PLATE DOES NOT PROVIDE BALLISTIC PROTECTION" • 2D Barcoding	

<table>
<tr><th>ID</th><th>System Requirement</th><th>Priority</th><th>System Performance</th><th>Remarks</th></tr>
<tr><td></td><td></td><td></td><td>Any component that is intended to hold the plate in its intended position (Operational and Training) is to be of such design that it in no way obscures the written designation contained in the previous paragraph at any time.</td><td></td></tr>
<tr><td>5</td><td>The SAKER and OSPREY 2 systems shall maintain physical integrity and protective level in a wide range of climatic conditions.</td><td>1</td><td>There shall be no degredation to ballistic performance when subjected to prolonged exposure to rain water, fresh water or sea water.

The Climatic categories expected in these areas are defined in DEFSTAN 00-35, Part 4, Issue 4, Chap 1, Table 1 as:

<table><tr><th>Climatic Category</th></tr><tr><td>Extreme Hot Dry A1</td></tr><tr><td>Hot Dry A2</td></tr><tr><td>Intermediate A3</td></tr><tr><td>Wet Warm B1</td></tr><tr><td>Wet Hot B2</td></tr><tr><td>Humid Hot, Coastal Desert B3</td></tr><tr><td>Mild C0</td></tr><tr><td>Intermediate Cold C1</td></tr><tr><td>Cold C2</td></tr><tr><td>Severe Cold C3</td></tr><tr><td>Extreme Cold C4</td></tr><tr><td>Marine Hot M1</td></tr><tr><td>Marine Intermediate M2</td></tr></table>
[Tenderers to note that ballistic testing is only to be carried out at a single temperature of +20°C; represented by the pre-ticked climatic conditions]</td><td></td></tr>
<tr><td>6</td><td>The SAKER and OSPREY 2 systems shall withstand the rough handling associated with its use whilst suffering no reduction in ballistic performance.</td><td>1</td><td>The plate shall be robust enough to ensure that it remains in a serviceable condition and shall maintain physical integrity and protective level after [redacted] with daily use over a range of military DCC tasks.
Any method to secure the plate in position shall also be robust enough to remain in a serviceable condition after a 6 [redacted] with daily use over a range of military DCC tasks.</td><td></td></tr>
<tr><td>7</td><td>The SAKER and OSPREY 2 systems shall integrate with all equipment that the User is</td><td>1</td><td>All equipment required for integration is listed in Annex B to VIRTUS Pulse 2 SRD.
General military tasks and actions are detailed below:

• Crawl</td><td>Military Tasks are referenced in the Capability Directorate Combat Dismounted Close Combat Training - Volume II Skill at Arms - Personal Weapons, DISMOUNTED</td></tr>
</table>

ID	System Requirement	Priority	System Performance	Remarks
	required to use and not adversely affect the ability to perform physical actions and negotiate obstacles when undertaking tactical manoeuvres and general military tasks.		• Walk • Run • Jump • Adopt fire positions • Conduct patrol activity (All Field Orders of Dress). • Climb ladders • Ascend and descend steps • Traverse walls • Enter buildings (incl mouse holes) • Cross ditches • Manoeuvre through woods • Manoeuvre through thick undergrowth • Manoeuvre through confined spaces	CLOSE COMBAT FIELDCRAFT, BATTLE LESSONS & EXERCISES
8	The SAKER and OSPREY 2 systems shall be comfortable to a wide range of DCC Users.	1	The systems shall remain comfortable throughout all operational activity, without the need for any deliberate User interaction. The comfort is articulated in DSTL Annex X Human Factors Assessment of the Future Soldier Vision 2 Combat clothing. Skelton, C DSTL/TR097777 1.0. [*Tenderer to delete as appropriate*]. During at least 24 hours continuous use the User shall feel: Low level of abrasions, Low level of Pressure points Low General discomfort No discomfort]	
9	The SAKER and OSPREY 2 systems shall provide the User with the means to inspect the plate and identify whether the plate has been damaged in a manner likely to lead to a reduction of ballistic performance.	1	Instructions shall be provided for a manual check / examination that will indicate any damage likely to lead to a reduction of ballistic performance. [redacted]	

			[redacted]	
10	The SAKER and OSPREY 2 systems shall include labelling on each discrete component that provides NATO codification, as well as descriptive and sizing information in a standardised format.	1	The labelling of plates and components shall comply with the Codification requirement set out in paragraphs 45 to 66 of this document. All parts of the system shall be uniquely classified allowing the identification, management, tracking and controlling of the VIRTUS Pulse 2 assets within the supply chain. – in accordance wth DEFSTAN 00-600 Issue: 3 dated 2014.	
11	The SAKER and OSPREY 2 systems shall be supplied with documentation for Users and Maintainers.	1	Documentation shall be provided with the system to enable the User and Maintainer of the VIRTUS Pulse 2 System with all the necessary information on how to safely use and maintain the equipment. See Training requirement paragraphs 32 to 44 in this document. Documentation shall include: - Sizing - Fitting - General usage - Maintenance	
12	The SAKER and OSPREY 2 systems shall be sustained & repaired throughout its service life.	1	The Contractor shall repair and refurbish the SAKER and OSPREY 2 systems. See Reliability and Repair requirement paragraphs 76 to 81 in this document.	
13	The SAKER and OSPREY 2 systems shall be managed for supply chain obsolescence.	2	Component level risk assessment shall be supplied to the Authority, updated on a yearly basis. [In accordance with the Obsolescence Management Report described within paragraphs 81 to 84 of this document]	
14	The SAKER and OSPREY 2 systems shall provide the required physical integrity for a significant time before any component's ballistic performance reduces to below threshold requirement.	1	[*Tenderer to complete*] The Contractor guarentees no reduction to ballistic performance for any component for [ ] years Service Life [redacted] years for systems unopened in their original packaging. The system shall be stored by MoD under climatic conditions defined in DEFSTAN 00-35. Extreme Hot Dry A1 Hot Dry A2 Intermediate A3	The SAKER and OSPREY 2 systems shall be tested periodically by the Authority to confirm ballistic performance throughout its service life. This will be achieved by retaining a quantity from the first batch in first year of production for testing in subsequPPent years.

			Wet Warm B1 Wet Hot B2 Humid Hot, Coastal Desert B3 Mild C0 Intermediate Cold C1 Cold C2 Severe Cold C3 Extreme Cold C4 Marine Hot M1 Marine Intermediate M2	
15	The SAKER and OSPREY 2 systems shall be cleanable.	1	No degradation of system effectiveness due to cleaning. System component parts shall be cleaned with In-Service cleaning detergents and untreated water.	
16	The SAKER and OSPREY 2 systems shall be trackable.	1	The Authority requires the ability to identify, manage, track and control all the VIRTUS Pulse 2 assets within the supply chain. Each system component shall be visually identified by type when packed for storage or transportation. Each system component shall be identified by type, when packed for storage or transportation. Such identification shall be readable from [Log IT.] In accordance with DEFSTAN 05-132 and DEFSTAN 81-41 Issue: 8 dated 2014.	
17	The SAKER and OSPREY 2 systems shall survive strategic transit (Logistical configuration).	1	Suitable for safe transport with no adverse effects on system functions by: Land, Sea and Air in compliance with all applicable international transport regulations. Directly from storage: In a stored state or in bulk or single items. Referenced in Packaging, Handling, Storage & Transport, paragraphs 45 to 66 of this document. In accordance with DEFCON 129 and DEFSTAN 81-41, Part 1, Issue 6 PHS&T.	Transportable elements compatible with 20' ISO container handling standard. Palletised loads are on a NATO standard pallet. DEFSTAN 81-41 Issue: 8 dated 2014.

Project Management

6. The Contractor is responsible for updating and maintaining all documents in paragraph 4.1 for the duration of the contract.

6.1 Documents required in the delivery of Project Management:

6.1.1 Project Management Plan
6.1.2 Project Schedule
6.1.3 Project Progress Reports
6.1.4 Risk Management Plan
6.1.5 Risk and Issue Register
6.1.6 Safety and Environmental Management Plan

7. The Contractor shall;
   7.1 Plan, manage, coordinate, and administer all aspects of the Contract, including the administration of any subcontractors.

   7.2 Establish effective controls for the delivery of the Design and Deliverables.

   7.3 Provide early indication to the Authority of problems encountered and their resolution activities in order to reduce risk to Performance, Time and Cost parameters.

8. The Contractor shall provide a Project Management Plan (PMP) that includes a detailed resourced Project Schedule Gantt Chart in a Microsoft Project 2010 and/or Primavera P compatible format that indicates all the activities, interdependencies, key milestones and all supporting activities necessary to deliver the project against the Delivery Schedule from the Commencement Date until completion of the Contract;

9. The Contractor shall produce and maintain a resourced Project Schedule which shall be issued fortnightly to the Authority, detailing any changes to the schedule. The schedule shall detail all activities anticipated from Contract Award. The Authority requires the ability to monitor progress and identify milestones, resources and dependencies as described.

10. The Contractor shall provide and keep updated as part of the PMP a list identifying the Contractor's Project Management Team who shall have the appropriate project management qualifications, competences and any necessary security clearances to discharge effectively their Obligations in this Contract.

11. The Contractor shall clearly identify where an individual undertakes more than one of the Contractor's Project Management Team roles.

12. The Contractor shall submit to the Authority for approval prior to implementation all changes to the PMP that the Contractor may propose. No changes shall be executed without such prior approval, in writing, from the Authority.

13. The Contractor shall invite Authority representation at all Project Review meetings giving not less than 5 working days' notice (See Annex P, Meeting Schedule). Project Review meetings shall be held at a UK venue agreed with the Authority, initially on a monthly basis. The frequency of these Project Review meetings will vary as the contract progresses. The project review agenda will be submitted by the Contractor no less than seven calendar days prior to the meeting and will cover as minimum the following topics:

    13.1 Project Schedule;
    13.2 System Acceptance;
    13.3 Safety and environmental;
    13.4 Contract performance review;
    13.5 Subcontractor performance review;
    13.6 Supply chain activities;
    13.7 Risk and Issues Register and RACI
    13.8 Quality management issues (to inc. Quality Performance Indicator review);
    13.9 Supportability / ILS;

13.10 Review of previous actions;

14. Project review meeting minutes shall be produced by the Contractor and submitted for Authority agreement prior to final issue within 3 working days of each meeting and shall be agreed as a standing agenda item during the next meeting.

15. The Contractor shall support the Authority in delivering a cost effective VIRTUS Pulse 2 solution by attending other relevant meetings as required by the Authority, defined in the Meeting Schedule, Annex P. The Authority will provide a minimum of seven calendar days' notice where such attendance is required.

16. The Contractor shall provide fortnightly schedule and progress reports to the VIRTUS Pulse 2 Project Manager. This will allow the Authority's project team to maintain current knowledge of the project progress between Project Review Meetings as described in the Statement of Requirement.

17. The Progress Report shall detail the Contractor's progress and planned activity against each of the contract's deliverable elements as listed below:

    17.1 System Design
    17.2 Equipment Manufacture
    17.3 Technical Documentation
    17.4 Safety Documentation
    17.5 Project Schedule
    17.6 Project Risk

18. Progress Reports should be issued by email fortnightly from contract award. Extraordinary progress reports are to be raised by the contractor in the event that an issue or risk arises that will affect any aspect of project delivery before the next progress report is due.

19. Project management support of the above points shall be ongoing throughout the duration of the contract.

Risk Management

20. The Contractor shall plan and manage risks in accordance with JSP 892 and the Project Risk Management Plan. Risk Management correctly implemented will enable key cost, schedule and performance drivers to be identified enabling actions to be correctly focused to enable the VIRTUS Pulse 2 Project to be successful. The Contractor is required to generate and maintain the project risk documentation for the duration of the contract.

21. The Contractor shall maintain the Risk and Issues Register which shall describe how the Contractor will identify, record and manage risks, issues and opportunities in a structured and timely manner to ensure risks are mitigated to As Low As Reasonably Practicable (ALARP), issues are addressed and agreed opportunities are exploited. A maintained Risk and Issue Register is a key document in delivering successful projects. The authority requires visibility of all project risks / issues and their progress throughout the project.

22. The Risks and Issues Register shall contain the following as a minimum for each risk or issue:

    22.1 ID Number – A unique identifier;
    22.2 Owner – Person responsible for the risk or opportunity once it has been identified;
    22.3 Description – The cause and impact of the risk or the nature of the opportunity;
    22.4 Risk Assessment – level of risk by probability and impact (including an assessment of the pre and post mitigation levels);

22.5 Actions – Action or actions that have to be or have been taken to mitigate the risk or take advantage of the opportunity;
22.6 Status – Open/Closed and last updated comments.

Safety and Environmental Case Report

23. The Contractor shall provide a draft Safety and Environmental Management Plan (SEMP) 30 working days days post Contract Award. The Safety & Environmental document shall form a body of evidence that provides a compelling, comprehensive and valid case that the risks associated with the use of VIRTUS Pulse 2 are 'As Low as Reasonably Practicable' (ALARP) and broadly tolerable in accordance with DEFSTAN 00-56, JSP454 and POSMS & POEMS as required under MOD policy.

24. The Contractor shall provide a Safety & Environmental Case Report Part 2 (Design) 30 working days post system acceptance. A Hazard Log is to be developed and delivered in eCassandra or Excel. Environmental Impact Assessment with supported Environmental Feature Matrix for manufacture, in-service and disposal stages extracting information from the Disposal Plan to support the assessment.

    A Certificate of Conformity (CoC) is required to ensure products meet the minimum set of regulatory, technical and safety requirements as outlined in the SRD at Annex ZA and the ITEAP at Annex D. A CoC template has been provided at Annex K.

25. Tenderers are to provide a Material Safety Data Sheet (MSDS) for the VIRTUS Pulse 2 System. This is to be delivered in conjunction with the SEMP 30 working days post system acceptance.

Integrated Logistic Support

26. The Contractor shall provide full visibility of all aspects of Integrated Logistic Support. This will enable the Authority to support the VIRTUS Pulse 2 System from entering In-Service to Disposal. The contractor shall provide an updated Integrated Support Plan (ISP) detailing how the Authority ILS requirements are met, including an ILS schedule of work that integrates with the project plan and includes all ILS elements within the contract for the management and execution of the ILS Programme in accordance with DEFSTAN 00-600 Issue 3, as detailed below.

27. The ISP shall provide the following information.

    27.1 Outline proposed ILS Strategy for this project.
    27.2 The Prime Contractor shall identify in their tender response the major equipment suppliers.
    27.3 Nominate a manager responsible for all ILS and logistics aspects of the system's support and detail his/her Terms of Reference.
    27.4 A number of plans and reports, as highlighted in paragraph 28 below.

28. A number of sub element Plans and Reports are required, which are to be included in the ISP, specifying how the separate elements of the support system are to be designed, implemented, integrated, operated and validated. These are outlined below.

    Reports required as part of the ISP:

    28.1 Failure Modes Effects & Criticality Analysis (FMECA) Report. Damage Modes Effects Analysis (DMEA) Report.
    28.2 Level of Repair Analysis (LORA) Report.
    28.3 Reliability and Maintainability Report.

28.4 Maintenance Report.
28.5 Obsolescence Report.
28.6 Bill Of Materials

Element Plans required as part of the ISP:

28.7 Logistic Demonstration Plan
28.8 Technical Documents.
28.9 Codification Plan.
28.10 Packaging, Handling, Storage & Transport Plan.
28.11 Configuration Management Plan.
28.12 Training Plan.
28.13 Disposal Plan.

29. The Contractor shall produce a Logistics Demonstration Plan (LDP) as part of ISP. The Contractor shall present a final version to the Authority within 30 working days from Contract Award.

30. The LDP will include but not limited to:

30.1 Presentation of VIRTUS Pulse 2 system (complete to CES) in its final build standard.
30.2 The LDP will be used to implement the Logistic Demonstration and the corresponding Logistic Demonstration Report.
30.3 Demonstration of cleaning activities for the SAKER and OSPREY 2 systems.
30.4 Presentation of all Technical Documentation.
30.5 Demonstration of codification, including equipment and documentation.
30.7 Presentation of storage facilities for all VIRTUS Pulse 2 items to be held on Contractor premises, (including storage and segregation of E0, A2 and A1 VIRTUS Pulse 2 system, storage of spares, etc.).
30.8 Demonstration of the tracking and repair of unserviceable assets through the Supply Chain.
30.9 Demonstration of Contract Support services.
30.10 Demonstration of Quality and Configuration Management.

31. ILS Reviews shall be incorporated within the Project Review Meetings and not held as a separate activity.

Training

32. The Authority requires the ability to provide a User and Maintainer Training Package that can be cascaded to the User community so they can operate and maintain VIRTUS Pulse 2 equipment effectively. This will be provided by the Training Plan (TP). The Contractor shall illustrate through the TP the training required and how it will be implemented in an optimum manner.

33. The Contractor shall ensure that the training is in accordance with:

33.1 Defence Systems Approach to Training (DSAT)
33.2 JSP 822 Part 1 Version 3
33.3 JSP 822 Part 2 Version 3

34. The Contractor shall ensure that the training package shall include, but not be limited to:

34.1 Quick Reference User Guides, to be packaged with each individual Operational plate
34.2 2 x classroom based Train The Trainer (T3) sessions
34.3 Other paper based information sources such as tri-folds, leaflets, posters and magazines in

conformance with Annex L, User Guide Standard Requirements Spec and Annex M, DE&S Corporate Identity Standard.

35. The Contractor shall submit the final version for review and acceptance by the Authority within 30 working days of Contract Award.

36. The T3 packages for both User and Maintainer are to be delivered by SQEP staff no later than 6 weeks prior to the initial equipment delivery. The Contractor shall provide training material and a re-useable training pack for cascade training. A copy of the training session and all paper based information sources, including all instructor notes, will be provided in soft copy in accordance with DSAT and JSP 822 minimum requirements.

37. The Contractor will enable the Authority to provide the User and Maintainer of the VIRTUS Pulse 2 System with all the necessary information on how to safely use and maintain the equipment correctly. The Technical Documentation will form the primary source of information in conjunction with the Training Package.

38. The Technical Documentation Plan (TDP) shall demonstrate how the required set of Technical Documents, Army Equipment Support Publications (AESPs) will be developed within the available time lines either internally or by Sub-Contractors. This will identify activities such as internal reviews by the Contractor, reviews by the Authority, SME activity, Project Reviews, etc.

39. The Contractor shall provide the final Technical Documentation Plan (TDP) for review and acceptance by the Authority within 45 working days of Contract Award.

40. Following the strategy outlined in the TDP the contractor shall produce the following Operational and Maintenance technical documents in the recognised UK MoD format:

    40.1 User/Operator handbook (AESP 201).
    40.2 Illustrated Parts Catalogue (IPC) (AESP 711).
    38.3 Quick Reference User Guide (Part of or separate to an Aide Memoire).

41. The Contractor shall produce all Technical Documentation in accordance with the following standards:

    41.1 ‘Defence Technical Documentation Guidance’, (formerly JSP 543).
    41.2 DEF STAN 00-600, ‘Integrated Logistic Support, Requirements for MOD Projects’.
    41.3 ASD S1000D, ‘International Specification for Technical Publications’.
    41.4 (ASD-STE 100), ‘Simplified Technical English’.

42. The Contractor shall produce the Technical Documentation in accordance with the following approach:

    42.1 During the process of finalising the documents the Contractor shall provide the Authority with opportunities to review the documents to ensure the structure is deemed acceptable and follows the required standards.
    42.2 The Authority shall review updates to technical documentation as part of the Contract and return comments within 10 working days of receipt.
    42.3 The Contractor shall implement any Authority amendments within the Master documentation.
    42.4 The Contractor shall provide final drafts of all documents for final review by the Authority.

43. For the duration of the Contract the Contractor shall supply the Authority with technical data as and when required to allow the Authority to maintain technical publications.

44. Following the strategy outlined in the TDP the Contractor shall produce the Technical Documents in

the recognised UK MoD format, within 45 working days post Contract Award.

Packaging, Handling, Storage and Transport (PHS&T) and Codification

45. The Authority requires the ability to uniquely classify all relevant parts of the VIRTUS Pulse 2 system allowing the identification, management, tracking and controlling of the VIRTUS Pulse 2 assets within the supply chain. Codification provides the Authority with this ability by uniquely identifying all necessary parts of the VIRTUS Pulse 2 System.

46. The Contractor shall perform Codification of the VIRTUS Pulse 2 system in accordance with both the NATO Codification and CSISWeb New Item process contained in the DLF and DEFCON 117 and STANAG 2290. This shall be completed no later than 30 working days post Contract Award.

47. The Codification shall be of the final production standard of the VIRTUS Pulse 2 System, down to Maintenance Significant Items (MSI).

48. The Authority reserves the right to determine the VIRTUS Pulse 2 MSI that require codification. The Contractor shall present the VIRTUS Pulse 2 MSI list for approval by the Authority prior to codification.

49. The Contractor shall use NATO Stock Numbers (NSNs) generated by UK NATO Codification Bureau (UK NCB) for reference purposes for all VIRTUS Pulse 2 equipment and within all VIRTUS Pulse 2 documentation.

50. All NATO Stock Numbers (NSN) are to be updated within 30 working days of Contract Award.

51. The Authority will provide assistance to the Contractor in processing Codification requests. However the Contractor shall retain full responsibility for Codification.

52. The Contractor shall refer to:

    52.1 DEFCON 117, ‘Supply Of Information For NATO Codification And Defence Inventory Introduction.
    52.2 STANAG 2290, NATO Unique Identification of Items.

53. The Authority requires the ability to identify, manage, track and control all the VIRTUS Pulse 2 assets within the supply chain. To be able to do this the Authority requires the equipment to be correctly packaged and marked

54. Packaging must be in accordance with: DEFCON 129, ‘Packaging (For Articles Other Than Munitions) and DEF STAN 81-41, ‘Packaging of Defence Material’.

55. Marking must be in accordance with: DEF STAN 05-34, ‘Marking of Service Materiel’ (Obsolescent) and STANAG 2290, ‘NATO Unique Identification of Items’.

56. Labelling shall include but not be limited to:

    56.1 Item Description.
    56.2 Part Number.
    56.3 NSN plus bar code.
    56.4 2D barcoding.
    56.5 Manufacturer’s Part Number.
    56.6 Contract Number.
    56.7 Certificate of Conformance Number.
    56.8 Denomination of Quantity (DofQ) plus bar code.
    56.9 Primary Package Quantity (PPQ) plus bar code.

57. The Contractor shall implement the procedures and processes set in the PHS&T Plan so that the VIRTUS Pulse 2 system is correctly packaged for handling, transportation and storage.

58. Packaging of the VIRTUS Pulse 2 system shall be, at minimum, to Military Packaging Level J. And stay current with packaging regulations.

59. The Contractor shall ensure packaged VIRTUS Pulse 2 system are able to be stored and transported on NATO Standard Pallets (dimensions 48in x 40in / 1,200mm x 1,000mm) and in an efficient manner to reduce storage space. Additional guidance can be obtained in the Packaging, Handling, Storage and Transport process contained in the DLF.

60. The Contractor shall state any Storage Restrictions that need to be implemented to avoid any impact on the capability of the VIRTUS Pulse 2 equipment (e.g. shelf life of rubber components).

61. The Contractor shall mark all Operational Plates with the following details:

    61.1 Item Description.
    61.2 NATO Stock Number (NSN).
    61.3 Manufacturers Part Number (MPN).
    61.4 Month and year of manufacture
    61.5 Batch number
    61.6 Unique Protective Plate identification number (serial number)
    61.7 Contract number
    61.8 Clear identification of correct side to be worn next to body
    61.9 The wording "**HANDLE WITH CARE**"
    61.10 Relevant care instructions
    61.11 2D Barcoding

62. The Contractor shall mark all Training Plates with the following details:

    62.1 Item Description
    62.2 NATO Stock Number (NSN)
    62.3 Manufacturers Part Number (MPN)
    62.4 Month and year of manufacture
    62.5 Contract number
    62.6 Clear identification of correct side to be worn next to body
    62.7 The wording "**ONLY FOR USE IN TRAINING – THIS PLATE DOES NOT PROVIDE BALLISTIC PROTECTION**"
    62.8 Relevant care instructions
    62.9 2D Barcoding

63. All marking shall be indelible and clearly legible, and remain so through the In-service life of the equipment.

64. The Contractor shall ensure that all VIRTUS Pulse 2 plates are trackable via 2D barcoding and serial numbers, in accordance with SR 36 and DEFSTAN 05-132 'Marking of Service Materiel Items Using a Unique Item Identifier (UII)'.

65. Should it not be possible to mark an article due to size, material, etc. the Contractor shall seek guidance from the Authority on the appropriate action.

66. The Contractor shall refer to DEFCON 644, 'Marking of Articles' in conjunction with the above mentioned SR and DEFSTAN.

Configuration Management Plan

67. The Authority requires the Contractor to implement a method of maintaining Configuration Control of the VIRTUS Pulse 2 system during its In-Service phase. This will be achieved through the Configuration Management Plan (CMP). This report shall describe how VIRTUS Pulse 2 Configuration Management is to be developed by the Contractor in the Manufacture and In-service phase to support the system during its operational life by the Authority and the Contractor.

68. The Contractor shall revise and develop the CMP from a draft stage into a more detailed document and present the final version for review and acceptance by the Authority, no later than 30 working days from Contract Award.

69. The CMP shall be developed in accordance with:

    69.1 DEF STAN 05-57, 'Configuration Management of Defence Materiel';
    69.2 ACMP1-6 NATO Requirements for Configuration Version 2.

70. The Contractor shall illustrate through the CMP how the VIRTUS Pulse 2 configuration will be managed during its In-Service life by both the Contractor and Authority in an optimum manner.

Damage Modes Effects Analysis (DMEA) / Failure Modes and Effects Criticality Analysis (FMECA)

71. The Contractor shall develop the DMEA and deliver it in within 30 working days of Contract Award. This will enable the corresponding information to be incorporated within other aspects of the Contract (e.g. AESPs, Training, Spares, etc.).

72. The Contractor shall develop the FMECA and deliver it in within 30 working days of Contract Award. This will enable the corresponding information to be incorporated within other aspects of the Contract (e.g. AESPs, Training, Spares, etc.).

Through Life Support

73. The Contractor is required to provide in-service support for up to [redacted] years from contract award, covering the initial [redacted]. The Contractor shall produce as part of the ISP within the Tender Response a Level of Repair Analysis (LORA) Report in conjunction with the FMECA Report to validate the requirement for repairs. In order to determine the optimum location where the maintenance of VIRTUS PULSE 2 should take place within the standard Equipment Support Chain. The results of this analysis should be presented within the LORA report along with corroborating information and any assumptions made.

74. The Contractor shall produce and deliver an updated Maintenance Report within 30 working days of Contract Award. The Authority requires the Contrator to provide all operational and maintenance tasks to support the System in all of the environments encountered during its In-Service life. The MR will provide this information. The report shall detail how scheduled and unscheduled maintenance of the equipment is to be facilitated and resourced to support the VIRTUS Pulse 2 system in all environments encountered during its in-service life. Maintenance tasks required for the equipment to ensure continued operation in service to meet VIRTUS Pulse 2 requirements and in particular the FEMCA.

75. This shall identify all maintenance tasks that are required to be performed in supporting the VIRTUS Pulse 2 Capability in its intended environments. This shall include, but not be limited to:

    75.1 Cleaning activities.

75.2 Maintenance activities.
75.3 Sufficient ancillaries to support the maintenance of VIRTUS Pulse 2 system, without the need for additional tools, which are not included in the MOD inventory. All support equipment is to be agreed with the authority
75.4 Storage restrictions (e.g. perishable items, internal batteries, time/COSHH etc.).
75.5 An analysis and recommendation of an Initial Spares Holding for 1 year. The Contractor shall, with the assistance of the Authority, identify the range and scaling of spare parts categorised by discard or repair analysis, in accordance with DEFCON 82.

Reliability & Repair

76. The Contractor shall be responsible for collection and delivery of all new and refurbished plates to and from an MOD facility, either Donnington or Bicester.

77. The Level Of Repair Analysis (LORA) report, shall determine the optimum location where the maintenance of SAKER and OSPREY 2 should take place within the standard Equipment Support Chain. The LORA report shall be completed in full and available within 30 Working Days of Contract Award.

78. The Authority requires assurance that the VIRTUS Pulse 2 system is reliable and is able to be efficiently maintained, these are critical to achieving cost effective operation and logistic support for VIRTUS Pulse 2 system. Reliability is pertinent to the frequency of failures and so drives the quantity of repairs, maintenance support and spares that will be required over time. The Contractor will provide assurance that they will conduct reliability and maintainability as part of the ISP.

79. The Authority requires assurance that the system is reliable, able to be efficiently maintained and that the figures used to calculate levels of Reliability & Maintainability (R&M) are both valid and achievable. As part of the ISP, the Contractor shall provide a detailed R&M Report within 30 working days of Contract Award.

80. Repair Turn Round Time (RTRT) for maintenance shall be no longer than 40 working days after receipt of equipment and delivery following completion of required maintenance works. The Contractor shall supply an updated repair flow chart for the Authority to view at the project initiation meeting.

81. Reporting of failures and delivery of defective items: either an Equipment Failure Report (EFR) or Component Failure Report, will be provided to the contractor with the defective item for investigation.

Obsolescence

82. The Authority requires assurance that the Contractor is able to supply and support VIRTUS Pulse 2 system throughout the contract duration without the performance and availability being impacted by obsolescence issues. The aim of the Obsolescence Management Report (OMR) is to report on the optimum compromise between the whole life cost of the equipment and its performance and availability. The Report shall identify all future obsolescence risks and include, where available, likely actions to mitigate the identified risk. It shall provide appropriate detail so as to provide the VIRTUS Pulse 2 ILSM sufficient evidence of cost and risks to allow for financial forecasting.

83. The Contractor will provide the Obsolescence plan, concentrating on the following aspects:

83.1 Existing analysis of VIRTUS Pulse 2 Obsolescence.
83.2 Obsolescence risks over the proposed potential 10 Year In-Service Life.
83.3 Existing processes to identify and resolve VIRTUS Pulse 2 Obsolescence risks and issues.

84. The Contractor shall present the final Obsolescence Management Report (OMR) to the Authority

within 30 working days of Contract Award. The information will correspondingly be available for incorporation within other aspects of the VIRTUS Pulse 2 Project.

Bill Of Materials (BOM)

85. The Contractor shall revise, develop and present the final version of the BOM to the Authority within 30 working days of Contract Award.

86. The BOM shall include the Complete Equipment Schedule (CES) and all Maintenance Significant Items (MSI). It should include the following detail along with a pictorial representation of all items of the VIRTUS Pulse 2 system:

    86.1 Material Part Numbers (MPNs) (System, sub-system and individual parts).
    86.2 Location of individual parts within VIRTUS Pulse 2, displayed as a schematic.
    86.3 Items within the CES which are replaceable by the:
        86.3.1 User/Maintainer.
        86.3.2 Contractor.

Disposal

87. The Contractor shall submit a final Disposal Plan (DP) within 30 working days from contract award.

88. The DP shall cover the following aspects:

    88.1 Detailed disposal options for all individual VIRTUS Pulse 2 components (and where appropriate sub-assemblies).
    88.2 Detailed procedures for the identified disposal options.
    88.3 Identification of any components that require special disposal.
    88.4 Identification of any environmental impacts of disposal, including opportunities to reclaim or recycle component parts.

89. The DP will aid in the production of, and act as a reference within, the Safety & Environmental Case Report.

90. The DP will identify and reference all applicable European Legislations (i.e. RoHS 2002/95/EC, WEEE 2002/96/EC, etc.)

Post Design Services (PDS)

91. The Authority may choose at any point during the contract term after System Acceptance to invoke PDS for the system. The VIRTUS Pulse 2 Project Board will convene to decide on the PDS approach and issue a PDS tasking form to the Contractor as per Annex I. Once the VIRTUS Pulse 2 Project Board have reviewed the response from the Contractor they may or may not choose to proceed with the PDS task. If approval is gained then all PDS tasks will be entered onto an approved PDS task list (see Annex J).

Quality

92. Contractors are required to hold Quality Management System (QMS) certification to ISO 9001:2008/15, with the appropriate scope to deliver contract requirements, issued by a Nationally Accredited Certification Body for the duration of the contract. The Contractor shall immediately inform the Authority of any amendments or if the QMS certification is revoked or suspended with immediate effect.