



Information Systems & Services – BATCIS  
DT

# **BATUS Safety System (BSS)**

## **Statement of Requirement for Provision of Post Design Services to the BATUS Safety System under BATCM/0309**

Issue 1 29 April 2019



Ministry  
of Defence

## AUTHORISATION

Prepared by ISS Dev-BATCIS-TAC PM3-PPM ([Redacted]) and ISS Dev-BATCIS-TAC TechSp2-Eng ([Redacted])  
Signature  
Date: 29/04/2019

Approved by ISS Dev-BATCIS-InSvcDepHd ([Redacted]) and ISS Dev-BATCIS-RM Future ([Redacted])  
Signature  
Date: 16/01/2019

## AMENDMENT HISTORY

Issue No.	Details of Amendment	Amended By	Date
0.1	Initiation (First Draft)	ISS Dev-BATCIS-TAC PM3-PPM	12/11/18
0.2	2 <sup>nd</sup> Draft – Commercial Comments	ISS Comrcl-D-51	12/11/18
0.3	3 <sup>rd</sup> Draft – Culmination of Project/Commercial discussions of 2 <sup>nd</sup> Draft	ISS Comrcl-D-51	14/12/18
0.4	Final Draft for ITN	ISS Comrcl-C2-09	15/01/19
0.5	Update to incorporate changes agreed in negotiations	ISS Dev-BATCIS-TAC PM3-PPM	26/03/19
0.6	Final Draft for ISFT	ISS Comrcl-D-51	11/04/19
1	Final Draft for formal Offer of Contract	ISS Comrcl-D-51	29/04/2019

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## List of Abbreviations

<u>Term</u>	<u>Definition</u>
AESP	Army Equipment Support Publications
AFV	Armoured Fighting Vehicle
BATCIS	Battlefield and Tactical Communication and Information Systems
BATUS	British Army Training Unit Suffield
BSS	BATUS Safety System
CNR	Combat Net Radio
DTC	Domo Tactical Communications Ltd
ICD	Interface Control Document
ICSS	Information and Communications System Support
IU	Initiator Unit
MOD	Ministry of Defence
NSN	NATO Stock Number
OPFOR	Opposition Forces
PM	Project Manager
PMR	Project Management Review
SoR	Statement of Requirements
WU	Warning Unit

## Background

1. The BATUS (British Army Training Unit Suffield) Safety System (BSS) is a risk mitigation measure employed by Commander BATUS to enhance safety during training at BATUS and is currently supported by Domo Tactical Communications (DTC) Ltd.
2. The BSS acts as a fail-safe to Combat Net Radio (CNR or BOWMAN), which remains the primary means of command and control between safety staff and the training audience at BATUS. However, with the current CNR capability, there is no break in facility over-the-air; hence the reason for BSS being designed and introduced. BSS can override the BOWMAN communication system whether transmitting or receiving, but remains independent of CNR, as it only works through the systems headphone interface.
3. The BSS consists of three main elements: an Initiator Unit (IU); a Warning Unit (WU); and a vehicle-mounted antenna. The system is fitted to: the AFVs within the battlegroup; safety staff; and Opposition Forces (OPFOR - military representing enemy). Its primary role is to enable safety staff to direct the crews of the AFVs to stop the vehicle and cease firing to prevent the loss of life due to driving over dismounted troops, firing at incorrect targets, or any other imminent safety related event, where they have been unable to do so over the CNR. The BSS WU connects into the BOWMAN radio harness and, when the IU is activated, a “stop-stop-stop” voice message is broadcast through the BOWMAN headsets. Initiation can be activated up to 1km within line of sight.
4. The system predates BATCIS, having been brought into service under the Information and Communications System Support (ICSS) Delivery Team. The main thread of history is from personal accounts from those posted to BATUS at the time of its inception. From these accounts, it has been deduced that the system came into service on the recommendation of a coroner’s report post-incident. This incident resulted in a fatality after an AFV drove over a dismounted soldier. The AFV crew could not be halted by safety staff because there was no means of interrupting CNR in an emergency. This system remains an indispensable safety measure.

## Work Packages

1. **Note:** Reports shall be **Soft / Electronic / Printable / Auditable** using any (where specified) or a combination (as appropriate) of **MS Word, PDF, MS Power-Point or Excel** formats.

Item Number	Description	SoR Detail	Evidence Criteria
1	Managed System and Product to ensure capability	<p>The Contractor shall maintain the availability, integrity, safety, knowledge base, security, and performance of the BATUS Safety System through a proactive programme. This is to be managed via the Authority PM. Any availability issues are to be highlighted at the earliest opportunity.</p> <p>Additional tasks will be put through the Tasking Process as detailed in Clause 47.1 to the Contract.</p>	<ul style="list-style-type: none"> <li>Managed programme of activities as set out in the sections below.</li> </ul>
2	Tasking Process	<p>The Contractor shall support the task management process.</p> <p>Timescales and priority per task will be agreed at task start point.</p> <p>Any design problems, risks, and issues which the Contractor feels require tasking consideration are to be reported to the Authority PM within 5 working days of identification.</p>	<ul style="list-style-type: none"> <li>Tasking Process followed as detailed at Clause 47.1 of the Contract.</li> <li>Individual tasks fulfilled in accordance with the task's deliverables, and provided in accordance with agreed schedule and completion date.</li> </ul>

3	Technical Support	<p>The Contractor shall provide Technical Support via phone calls and email correspondence as appropriate in support of Post Design Services.</p> <p>The Contractor shall host three (3) Programme Review meetings per year, one (1) of which will be ad-hoc at a date to be agreed between the Authority and the Contractor. All meetings are to be held at the Contractor's facilities. This will include: issuing invites alongside an agenda to the relevant Authority stakeholders and ensuring the presence of necessary Contractor stakeholders; producing minutes, which provide a record of discussion, detail any outstanding actions for all stakeholders, and provide a provisional date for the subsequent meeting. Minutes produced are to be issued to the Authority PM via email within five (5) working days of the associated meeting.</p>	<ul style="list-style-type: none"> <li>• Advice provided as required, all MOD queries passed from the Authority via BATCIS to the Contractor.</li> <li>• Invites and meeting documentation delivered within the specified timelines.</li> <li>• Programme Review meetings to be held in May and November, with ad-hoc meeting to be arranged as required.</li> </ul>
4	Obsolescence	<p>The Contractor shall be solely responsible for managing product obsolescence throughout the duration of the Contract period.</p> <p>The Contractor shall take a proactive approach to obsolescence management. All identified obsolescence issues are to be raised to the Authority PM within 10 working days of identification.</p>	<ul style="list-style-type: none"> <li>• Obsolescence Register included for discussion at the Programme Review meetings detailed in sub-heading 1.3.</li> <li>• Obsolescence-related taskings completed within agreed timescales.</li> </ul>

		<p>If the Authority wishes to take action to address any such obsolescence issues, a task will be raised in accordance with the Tasking Process as described at Clause 47.1 of the Contract.</p> <p>The Contractor shall maintain an obsolescence register detailing supplier, product, NSN/part number, and stock data. If required, a solution is to be presented at the Programme Review meeting.</p> <p>Where appropriate and agreed, obsolescence price information will be provided by the Contractor on a case-by-case basis.</p>	<ul style="list-style-type: none"> <li>• Obsolescence price information provided when appropriate.</li> </ul>
5	Documentation	<p>The Contractor shall maintain the following documentation with version control and details of any amendments:</p> <ul style="list-style-type: none"> <li>• AESP 5820-F-510 (to be reviewed by the Contractor every 4 years): To facilitate completion of reviews, the Authority will ensure the Contractor has access to the appropriate documentation. Reviews are estimated to be required x 1 in 2019 and x 1 in 2024.</li> <li>• Safety Case 3210SC: This shall be uploaded to eCassandra. Reviews are estimated to be required x 1 in 2019, x 1 in 2021, and x 1 in 2023.</li> </ul>	<ul style="list-style-type: none"> <li>• Listed documentation maintained in the specified manner throughout the life of the Contract.</li> <li>• Completion of all appropriate AESP 5820-F-510 reviews as directed by the Authority when firm dates are known and agreed.</li> <li>• Completion of all appropriate Safety Case 3210SC reviews as directed by the Authority when firm dates are known and agreed.</li> </ul>

		<ul style="list-style-type: none"> <li>• Technical Drawings: These shall be held by the Contractor and can be requested by the Authority PM to provide support such as ICD cable pins to upcoming platforms to be fitted with the BSS.</li> </ul> <p>The Contractor shall fulfil any further documentation updates as requested by the Authority, via the Tasking Process as described at Item 2 of this SoR.</p>	<ul style="list-style-type: none"> <li>• Technical Drawings provided to the satisfaction of the Authority PM.</li> <li>• Taskings related to documentation updates completed within agreed timescales.</li> </ul>
6	The Contractor shall facilitate open information sharing	<p>The Contractor and associated sub-Contractors shall provide information as requested by the Authority in support of BSS interest from other platforms.</p> <p>Timescales and priorities for the provision of information shall be agreed on a case-by-case basis.</p> <p>Should a meeting be required to support such requests further, a task shall be raised by the Authority through the Tasking Process as described at Item 2 of this SoR.</p>	<ul style="list-style-type: none"> <li>• Provision of requested information provided to specified parties within agreed timescales.</li> <li>• Taskings raised to provide meetings to further support information requests completed within agreed timescales.</li> </ul>
7	Configuration of Hardware	<p>The Contractor shall maintain the configuration of hardware in response to any hardware changes driven by Sub-Contractor information or equipment failure reports.</p> <p>Any action required as an outcome of the equipment failure report shall be raised by the Authority through the Tasking Process as described at Clause 47.1 to the Contract.</p>	<ul style="list-style-type: none"> <li>• Configuration of hardware maintained throughout the life of the contract.</li> <li>• Configuration-related taskings completed within agreed timescales.</li> </ul>

			<ul style="list-style-type: none"> <li>• Failure reports are to be reviewed twice a year, in May and November.</li> </ul>
8	Inventory Checks, Reporting and Reconciliation	<p>The Contractor shall carry out inventory checks and reporting for the bonded stores listed in Appendix 1 to this Statement of Requirement twice per Contract Year.</p> <p>The Contractor shall also carry out an annual inventory check and reconciliation for the items listed in Appendix 1.</p> <p>As part of the first annual inventory check and reconciliation process, the Contractor shall ensure that all items as listed in Appendix 1 are labelled, bagged and assigned unique stock numbers to facilitate efficient ongoing management.</p>	<ul style="list-style-type: none"> <li>• Inventory checks completed and associated reports delivered in May and November of each Contract Year, or such other date as agreed by the Authority, to the reasonable satisfaction of the Authority PM.</li> <li>• Annual inventory checks and reconciliation completed and associated reports delivered for each Contract Year to the reasonable satisfaction of the Authority PM.</li> <li>• First Year 1 annual check and reconciliation exercise completed to the reasonable satisfaction of the Authority PM.</li> </ul>

**List of Bonded Stores**

Last Audited: 30/04/2018			
Item No.	Part No.	Description	Quantity
1	3205-22 PCB	Iss A PC Board	3
2	3305-22 PCB	Iss B PC Board	2
3	Q3204-21 PEC	Iss E Controller PEC	1
4	Q3204-22 PEC	Iss B Transmitter PEC	0
5	Q3205-22 PEC	Iss B IUHV Adaptor PEC	1
6	Q3305-21 PEC	Iss B WU Controller PEC	2
7	Q3305-22 PEC	Iss C Receiver PEC	0
8	Q3305-25 PEC	Iss B PSU PEC	4
9	3000-09	Iss C Label M3204	6
10	3000-10	Iss B Label M3205	25
11	3000-11	Iss C Label M3305	5
12	3000-13	Iss A Battery Label	29
13	3204-05-04	Iss A Battery Plate Alloc	11
14	3204-05-06	Iss A Safety Flap Lid (Red)	1
15	3204-05-08	Iss A Battery Insulator	1
16	3204-05-09	Iss A Battery Fastener Plated	4
17	3204-05-11	Iss A Screen Can	14
18	3204-05-12	Iss A Screen Can	9
19	3204-05-13-01	Iss B Spring Contact (LH)	4
20	3204-05-13-02	Iss B Spring Contact (RH)	6
21	3204-05-14	Iss A Battery Tab	2
22	3204-21 PCB	Iss D PC Board	3
23	3204-22 PCB	Iss B PC Board	2
24	3205-05-03	Iss B Retainer Anod	3
25	3205-05-04	Iss B Heel Pin Blk	1
26	3205-05-05	Iss C Nut St-St Blk	6
27	3305-05-07	Iss C Support Alloc	22
28	3305-05-08	Iss C Screen Alloc	2
29	3305-05-09	Iss C Spacer	11
30	3305-05-10	Iss C Spacer	47
31	3305-05-11	Iss B Spacer	17
32	3305-05-12	Iss C Spacer	9
33	3305-05-13	Iss B Spacer	26
34	3305-05-14	Iss C Stud	14
35	3305-05-15	Iss B L/H Heatsink Alloc	3
36	3305-05-16	Iss B R/H Heatsink Alloc	1
37	500-569-022	22U ZL 50V 0% Elec Ca	97
38	500-570-147	470U ZL 25V 20% Elec Ca	89
39	506-364-310	10uH PWR Inductor CDR 125	80
40	520-189	44.645MHz XTAL UM1 3 Pin	25
41	522-106	12.8MHZ TCXO M38 (DIL)	10
42	524-109	345-355 MHz Helical Filter	34
43	508-118	BUK555-200B Pwr Mosfet	23
44	512-104	24LC25611P EEPROM	6
45	515-100	6N139 Optocoupler	39
46	515-116	MC13135DW FMCOMMS.Rx SM	78

**BATCM/0309**  
**Annex A**  
**Appendix 1**

47	516-180	MAX883 ESA Linear Reg SM	4
48	551-221	7W PAT 105 Fixed SKT, SHL10	0
49	552-203	32W ELEVATED SKT STRIP	98
50	552-223	202-M-10-L-03-L Plug	33
51	552-230	202-F-10-C-03-U SKT	3
52	559-107	2x20 Spring Pin, Coiled	204
53	557-400-301	M4x30 SCR PAN SL SS N	35
54	557-400-062	M4x6 SCR CSK SL SS N	550
55	557-600-163	M6x16 SCR SKT CAPHD SS B	66
56	559-113	4MM E Type Extnl Circlip	815
57	554-184	Plug Cover Shell Size 8	60
58	S3204-PR	Iss 2 programmed Device	6
59	508-104	BF904 SM DG MOSFET	100
60	516-120	LM2578AM SM Regulator	95
61	519-129	Relay 2A 1/2 Crystal CAN	25
62	3304-05-01	Antenna Radome	4
63	SA1804	Blackened BNC Connector	0
64	AP009541	6-Core Composite Cable	0
65	62GB 5055 10 2SC	2 pin RA Amphenol connector	225
66	M3204	Initiator Unit	1
67	M3205	IU Vehicle Host (IUVH)	0
68	M3304	Receiver Unit (Antenna)	1
69	M3980	Remote Switch Unit	0
70	M3981	IUVH to IU Signal Cable	0
71	M3982	IUVH to IU RF Cable	0
72	M3305	Warning Unit	0
73	M3978	Initiator Unit Antenna	1
74	M3977	Manpack Harness Mk 2	0
75	M3306	Combined IU-WU	4
76	3306-01-11-01	Warrior Non-BGTI Interface Cable	4
77	M3204	Initiator Unit	0
78	M3205	IU Vehicle Host (IUVH)	0
79	M3304	Receiver Unit (Antenna)	0
80	M3980	Remote Switch Unit	0
81	M3305	Warning Unit	0
82	M3991A	Harness Interface Cable (Warrior – Non-BGTI FV)	0
83	M3991B	Harness Interface Cable (Scimitar)	0
84	M3991D	Harness Interface Cable (Warrior – BGTI FV)	0
85	M3991F	Harness Interface Cable (Challenger 2)	0
86	M3993	Power Cable (Warrior – Non-BGTI FV/BGTI FV)	0
87	M3994	Power Cable (Challenger 2)	0

*Any changes to this list as agreed by both the Authority and the Contractor will be formalised by way of a Contract Amendment in accordance with Condition 6 (Amendments to Contract) of the Contract Terms and Conditions.*