Ministry of Defence

de&S

DEFENCE EQUIPMENT & SUPPORT (DE&S)

ARTILLERY SYSTEMS DELIVERY TEAM

GROUND BASED SURVEILLANCE RADAR (GBSR) INTEGRATED LOGISTICS SUPPORT PLAN

Contract Number: 701547527

Redacted

Document Control

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FIGURES

REFERENCE DOCUMENTATION

Ident	Document Reference	Issue	Title
[1]	Defence Standard 00-600, Part 1	Issue 1, dated 14 April 2019	Integrated Logistics Support requirements for MOD projects
[2]	https://www.defencegateway.mod.uk/sites/dlf *Access for the purposes of delivering this Contract will be on request to the Authority*	Version 3.2 dated 26 March 2020	Defence Logistic Framework (DLF)
[3]	Joint Service Publication (JSP) 822 Part 1 & Part 2	Issue 2.3 dated June 2019	Defence Direction and Guidance for Training and Education
[4]	IEC62402:2019	15 July 2019	Obsolescence Management
[5]	Defence Standard 05-057	Issue 7 dated 28 July 2018	Configuration Management of Defence Material
[6]	Knowledge in Defence (KiD) *Access for the purposes of delivering this Contract will be on request to the Authority*	Version 1.013 dated March 2020	Knowledge in Defence (KiD)
[7]	Defence Standard 00-042 Part 3	Issue 5 dated 20 May 2016	Reliability and Maintainability Assurance Activity – R&M Case
[8]	Defence Standard 05-135	Issue 2 dated 14 July 2019	Avoidance of Counterfeit Material
[9]	ISO Specification 9001-2015	Edition 5 dated September 2015	Quality Management systems

ABBREVIATIONS

BER	Beyond Economic Repair
CADMID	Concept Assessment Development Manufacture In-Service Disposal
CILSM	Contractor Integrated Logistic Support Manager
CLS	Contractor Logistic Support
CM	Configuration Management
CMP	Configuration Management Plan
COTS	Commercial Off The Shelf
CSR	Configuration Status Record
DEFCON	Defence Condition
DLF	Defence Logistic Framework
DMP	Disposal Management Plan
DSAT	Defence Systems Approach to Training
EoL	End of life
ES	Equipment Support
GBSR	Ground Based Surveillance Radar
GFA	Government Furnished Assets
HFI	Human Factors Integration
ILS	Integrated Logistic Support
ILSP	Integrated Logistic Support Plan
IOC	Initial Operating Capability
IP	Initial Provisioning
ISP	Integrated Support Plan
ITAR	International Traffic in Arms Regulations
ITT	Invitation To Tender
KiD	Knowledge in Defence
LIR	Logistic Information Repository
LNB	Life of Need Buy
Log Demo	Logistic Demonstration
LORA	Level of Repair Analysis
LSC	Logistical Support Committee
LSD	Logistic Support Date
MILSM	Military Integrated Logistic Support Manager
ML	Maintenance Level
MOD	Ministry of Defence
MOTS	Military Off The Shelf
NATO	North Atlantic Treaty Organisation
NSN	NATO Stock Numbers
OMP	Obsolescence Management Plan
OMR	Obsolescence Management Report
PD	Product Description
REME	Royal Electrical Mechanical Engineers
R&M	Reliability & Maintainability
SA	Supportability Analysis
SOW	Statement of Work
SSP	Supply Support Plan
SSR	Supply Support Report
S&TE	Support & Test Equipment
T&Cs	Terms & Conditions
TDMP	Technical Documentation Management Plan
TDoL	Technical Documentation on Line
T&TE	Training and Training Equipment
TTLS	Technical Through Life Support
UK NCB	UK NATO Codification Bureau
WBS	Breakdown Structure
TLC	Through Life Cost

SECTION 1 – PROJECT BACKGROUND

Single Statement Of User Need

1. The user requires a man-portable, low power, 24/7 Ground-based Surveillance Radar (GBSR) to replace the Manportable Surveillance & Target Acquisition Radar (MSTAR) with the ability to categorise moving vehicles and personnel and detect and adjust fall of shot in all weather conditions.

Background

2. MSTAR Mk 1 entered service in Oct [redacted] to meet requirement GSR 3938 and replaced the then obsolete ZB-298. It has been through numerous upgrades, the last being a Mid-Life Improvement (MLI), which commenced in [redacted] on a rolling programme until [redacted], with [redacted] complete systems. This brought the system to its current Mk IV status. MSTAR Mk 4 went out of service in Dec [redacted] and is being managed as obsolescent equipment.

3. MSTAR Mk4 is a self-contained, man-portable, battlefield radar system for detecting and locating moving targets and for directing and monitoring subsequent engagement of the targets by artillery fire. Individual and multiple moving targets may be detected at ranges of [redacted] r personnel. Surveillance can be provided over an arc of up to 6400 mils. A Fall of Shot (FoS) mode provides information to enable artillery and mortar fire to be adjusted onto target.

Key User Requirements (KUR)

There are currently 10 proposed Candidate KURs.

Ser:	UR ID:	User Requirement
01	UR-4.4	[redacted]
02	UR-4.5	[redacted]
03	UR-4.6	[redacted]
04	UR-4.8	[redacted]
05	UR-4.10	[redacted]
06	UR-4.17	[redacted]
07	UR-4.19	[redacted]
08	UR-4.21	[redacted]
09	UR-5.1	[redacted]
10	UR-7.1	[redacted]

SECTION 2 – INTEGRATED LOGISTIC SUPPORT

Introduction

4. Integrated Logistic Support (ILS) is the discipline used to ensure equipment supportability and associated cost drivers are identified and considered at all stages of the project lifecycle and where viable used to influence the design.

5. It is MOD Policy that ILS is applied to all procurement projects based on the tailored application of Defence Standard 00-600 [1], following the guidance in the Defence Logistics Framework[1] (DLF) [2].

Aim

6. The aim of this GBSR ILSP is to provide guidance to the Contractor on the Authority's requirements regarding the application of ILS and through life support. The approach to ILS has been tailored to the project based on the maturity of the design solution and inability to influence design for supportability.

7. For GBSR, the ILS programme is based on the need to optimise supportability and Through Life Cost (TLC). GBSR will be a Commercial Off The Shelf (COTS) or Military off the Shelf (MOTS) procurement, therefore, the ILS Programme will predominantly focus on:

a. Maximising equipment availability at optimum TLC, via Supportability Analysis focused on Level of Repair and spares optimisation.

b. Reliability and Maintainability (R&M) Assurance, via R&M Case Report data.

c. Equipment fielding including the requirement for a Logistic Demonstration (Log Demo).

d. Configuration Management.

e. Supply Support, spares ranging and scaling including NATO Codification.

f. Operator and Maintainer Training.

g. Technical Documentation.

h. Packaging Handling Storage & Transportation Plan.

i. Avoidance of new facilities and the reuse of existing in-Service Support and Test Equipment (S&TE), where viable.

j. In-Service Support focused on the maintenance concept.

k. Obsolescence Management.

l. End of Life (EoL) / Beyond Economic Repair (BER) Disposal Options.

[1] DLF: https://www.defencegateway.mod.uk/sites/dlf - Access to the DLF for the purposes of delivering this project will be on request to the Authority.

Procurement Concept

8. The procurement strategy is based on a competitive tender down selection process. As part of the tender process, supportability documentation, as required by the Statement Of Work (SOW) will be submitted through the DSP process for evaluation. The System Requirement evaluation process will be used as the basis for the tender evaluation and final down selection.

9. It is envisaged that GBSR will have an Authority informed, Contractor led support solution. It is understood that the Authority will own the equipment and spares, however the Contractor will be accountable for support for the first [redacted] years of service with [redacted] x [redacted] Yr option years from GBSR Initial Operating Capability (IOC). After this initial period follow on support will continue with the Prime Contractor, subject to further contract negotiation or could be subsumed into a separate support contract, for the remaining in-service life

ILS Strategy

10. GBSR is based on the procurement of a non-developmental COTS/MOTS equipment. The overarching ILS Strategy for GBSR is to ensure the equipment is readily supportable at optimum TLC, without the requirement for additional manpower, facilities or bespoke support infrastructure.

11. The ILS process is based on the supply of existing information and support concepts to enable the Authority to evaluate supportability of the GBSR equipment and enable integration within the existing support infrastructure.

12. The Support strategy is likely to be based on undertaking In-Service Maintenance Level (ML)1 operator and ML2 maintainer activities, the equipment being returned to the Contractor for all depth ML4 maintenance.

13. Training will be based on a Train the Trainer solution.

14. The outline support concept is based on:

a. Scheduled maintenance and In service repair at Line Replacement Unit level, Maintenance Level (ML) ML1 to ML2, as summarised below.

b. No requirement for additional in-service manpower to support operation or maintenance.

c. Identifying and providing justification for any proposed additional GBSR bespoke S&TE.

d. Utilisation of existing facilities and infrastructure.

e. Initial Provisioning spares held at LEIDOS Donnington to support operations and maintenance.

Maintenance Level

15. When deciding on the location for the conduct of equipment maintenance, consideration should be given with respect to how far “forward” maintenance activity can reasonably and effectively be optimised to maximise availability. More detailed corrective maintenance activity may be better provided in “depth”, where for example, access to specific specialised and /or limited resource may be required.

16. Scheduled maintenance has an impact on equipment operational availability, there should be no requirement to return GBSR equipment to "depth" ML4 for any scheduled maintenance tasks.

17. When establishing an optimal location for any maintenance activity, the level of maintenance that can be effectively conducted therein should be considered in tandem. Typical, maintenance levels and depths of maintenance activity are described, with ML1 and ML2 consisting of in-service tasks undertaken by the operator/maintainer, ML3 tasks undertaken at Brigade Level and ML4 tasks being undertaken by Industry:

a. **ML1.** Servicing and day to day preparation. It may include such operations as functional testing, replenishment, servicing, re-arming, role changing, minor modification, fault diagnosis and corrective maintenance by replacement, adjustment or minor repair.

b. **ML2.** Equipment Support (ES) planning and maintenance conducted at unit level, by replacement, adjustment, calibration, modification or minor repair using generally provisioned resources, such as ES materiel spares packs; this is the first level of ES delivered by Royal Electrical Mechanical Engineers (REME).

c. **ML3.** ES planning and maintenance conducted at formation level and in greater planning detail and depth than level 2. It includes such operations as formation ES planning, resupply of ES materiel, repair, partial reconditioning and modification requiring special skills or equipment; but which is short of a complete strip, reconditioning and reassembly. Generally, REME battalions deliver level 3 ES within the theatre of operations. REME workshops and medical regiment Light Aid Detachments also conduct level 3 ES limited to specific equipment's.

d. **ML4.** Full overhaul, reconditioning, major conversions, or major repairs and calibration, usually outside the theatre of operations and conducted by Defence Contractors.

SECTION 3 – ILS DOCUMENTATION

ILS Plan (ILSP)

18. This document describes the Authority's approach to the application of ILS for GBSR, tailored in accordance with Defence Standard 00-600 [1] and the DLF [2]. The ILSP is not a contractual document and is issued as part of the Invitation to Tender (ITT) to provide guidance on interpreting the supportability requirements.

ILS Strategy

19. The ILS Strategy describes the methodology for identifying and procuring the necessary support resources. As a COTS/MOTS procurement, the ILS Strategy for GBSR is aligned to the early identification of support concepts, obtaining TLC estimates and identifying and procuring the necessary support resources.

20. The GBSR ILS Strategy is documented in this ILSP and therefore a standalone ILS Strategy document will not be generated.

The ILS Statement of Work

21. The ILS Statement of Work (SOW) is a contractual document. It describes the activities that the contractor is required to complete. It includes the tasks to be undertaken, the reporting requirements and the requirement for and timing of reviews in the D&M SoW at Annex A of the Contract.

Additional ILS Related Documentation

22. The GBSR Tender Evaluation Methodology, which includes ILS.

23. The ITT T&Cs include references to Defence Conditions, Defence Standards and information relating to the ILS Elements and ILS Deliverables.

SECTION 4 – ILS ORGANISATION & MANAGEMENT

MOD ILS Manager (TTLS)

24. The MOD ILS Manager (TTLS) supports the Project Manager for the overall planning and execution of all supportability activities related to the acquisition of GBSR. The MILSM will ensure timely planning and action in a co-ordinated and economic manner. The MILSM will manage / provide oversite of:

a. The development of the tailored ILS programme and associated documentation.

b. The implementation of the plans, co-ordination and control of the Authority ILS activities during the project.

c. The development of the overall support concept in conjunction with the Project Team and the Contractor.

Contractor ILS Organisation

25. The ILS section in the D&M SOW requires the Contractor to nominate a Contractor ILS Manager (CILSM) for the GBSR Project. The CILSM will be required to develop and implement an Integrated Support Plan (ISP) identifying and describing how the Contractor will plan, manage and conduct their ILS scope of work during In-Service. The Contractor's ILS Organisation and responsibilities will be defined within the ISP.

26. The MILSM acts as the interface and provides a focal point for the CILSM in relation to all aspects of the GBSR ILS programme of work.

Section 5 – ILS WORK BREAKDOWN STRUCTURE

27.
28.
29.

30. Figure 1 provides details of GBSR ILS Work Breakdown Structure (WBS) which will be redefined as the project matures and transits through the Assessment, Demonstration, In-Service & Disposal (CADMID) lifecycle.

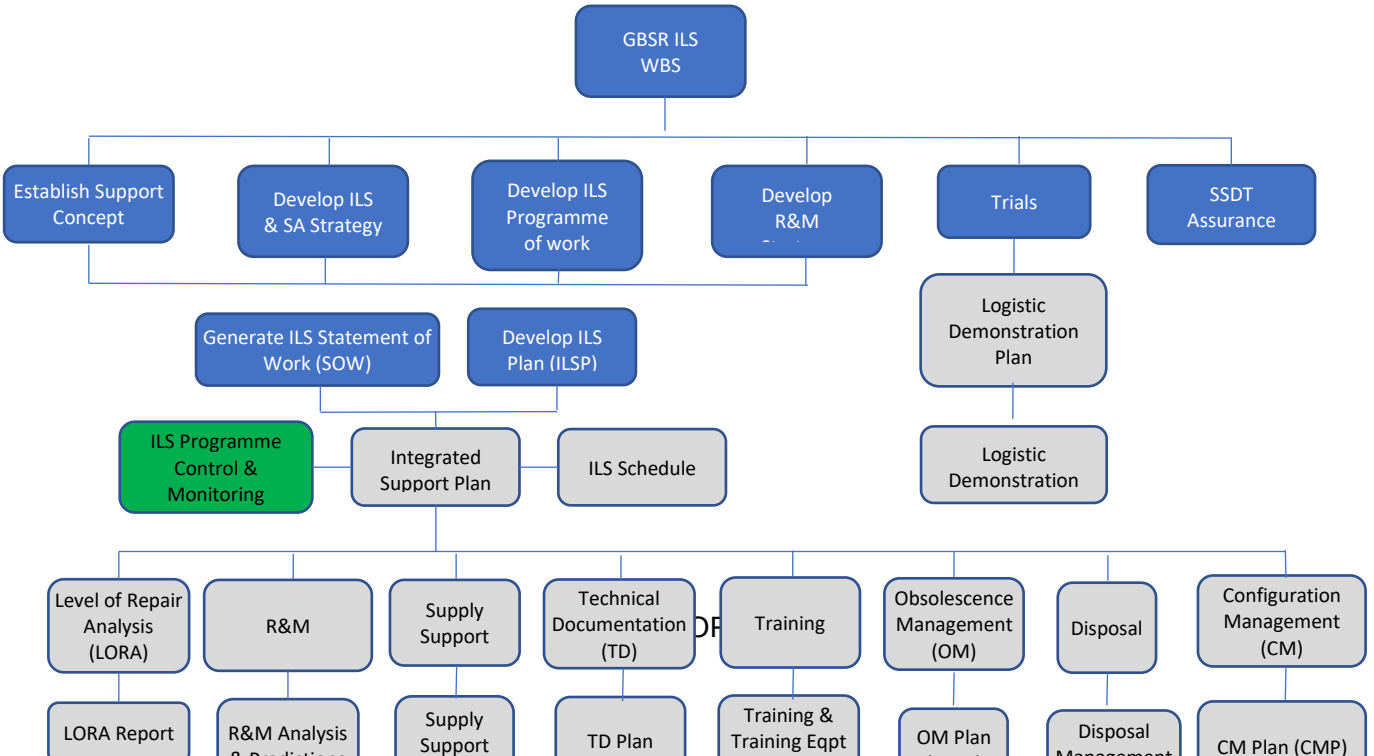


Figure 1 GBSR ILS Work Breakdown Structure

SECTION 6 – ILS PROGRAMME & SCHEDULE

Integrated Support Plan

31. GBSR is expected to be a COTS/MOTS procurement with a correspondingly tailored and compressed ILS programme. As such, the Contractor is required to generate an ISP which describes the contractor's ILS organisation, their intended approach for complying with the ILS requirements and their plan to provide the contractual ILS deliverables.

32. A draft ISP and draft element plans will form part of the ITT response to the ILS section in the D&M SOW, guided by this ILSP. The ISP and element plans shall be subsequently updated post contract award.

33. The ISP requirements are defined in the SOW and the Schedule of Requirements.

Logistic Support Date

34. The Logistic Support Date (LSD) is established to ensure the support solution is sufficiently robust (support is available in range, but not necessarily in scale) to maintain the equipment on entry into service. No LSD has been defined at this stage in the programme. The expectation is that the GBSR LSD will be set at one (1) month prior to Initial Operating Capability (IOC).

In-Service Reviews

35. ILS reviews will be incorporated within the Monthly Project Meetings and during Logistic Support Committee Meetings (LSCs) which will take place twice yearly during the In-Service period.

Risk

36. ILS Risks will be identified and managed as part of the overall project-based Risk Management Plan. The major ILS Risks should be reported and tracked via the project-based Risks and Issues Register.

Supportability Analysis Strategy

37. Supportability Analysis (SA) is the principle tool to ensure the objectives of the ILS programme are achieved. The detailed analytical tasks are based on 5 (five) distinct workstreams:

a. Programme Planning and Control.

b. Mission and Systems Support Definition.

c. Preparation & Evaluation of Alternatives.

d. Determination of Support Resource Requirements.

e. Supportability Assessment.

38. Tailoring of the application of SA is key to the cost-effective application of ILS, ensuring all critical support and cost drivers and risks are identified.

39. The GBSR solution is based on the acquisition of a mature Non-Developmental COTS/MOTS product. The research and design stages have been completed meaning GBSR will not be subject to a full developmental cycle. Where SA cannot influence design, it will be used to evaluate the supportability of proposed systems. It should focus on the evaluation of existing data and support concepts in order to generate the information required in the ILS section of the D&M SOW, delivered in accordance with the Schedule of Requirements and conforming to DStan 00-600.

Availability Reliability and Maintainability

40. Availability, Reliability and Maintainability (AR&M) shall be managed throughout all phases of the GBSR project

41. Incident Sentencing Panels (ISP), as shown at 116. to this Plan, will be used to support the formal qualification and acceptance by the Authority of the progressive AR&M Case. This will confirm that the Contractor has delivered against the AR&M requirements and/or qualify areas that the Contractor must address, for the Authority to accept delivery. The ISP therefore will fully evaluate all Incidents recorded or noted that occur during testing, ascertaining their cause, applicability, severity and impact on the System and the justification for meeting/failing AR&M requirements.

42. The AR&M Case will summarise the contracted evidence against the R&M requirements specified in the Contract. It is intended to monitor AR&M for transition and through-life, using DRACAS (see Annex A). Following acceptance into service, DRACAS Reports will be monitored as part of the Quarterly Performance Reviews (QPRs).

43. The QPRs will also be used for identifying potential Post Design Services (PDS) for modifications and upgrades to the System; noting that a key element of agreeing resolution actions will be the review of AR&M design data (listed below) including FMECA reviews.

a. Data recorded and reported in review period.

b. Performance including AR&M trends/characteristics, top ranking spares by usage, major cost drivers.

c. Comparison of achieved AR&M against SOW requirements.

d. Total quantity of incidents, including total quantity per period;

e. Quantity of ‘open’ incidents and sentences.

f. List of open incidents and sentences by date, with actions;

g. List of closed incidents and sentences.

h. List of incidents by trend, i.e. by appropriate system or sub-system.

i. List of any systems considered to require investigation.

j. List of any incidents deemed relevant to system safety.

44. Provision of data to enable Incidents to progress through the FRACAS process to ensure a ‘ closed loop and/or for any potential change, update and implementation as part of PDS.

Packaging, Handling, Storage & Transportation Plan – PD 0009-01

45. The Aims and Objectives of the updated PHS&T Plan are to detail the Contractors management control of integrating PHS&T aspects into the overall Supply Support, Software and Support Solution design elements of the Product for Items of Supply that will/could enter and/or be warehoused within the Authority's Joint Supply Chain.

Integrated Support Plan (ISP) – PD 0001-02

46. The ISP and Element Plans provide the basis for the support strategies and processes required to support GBSR during introduction to Service, the In-Service period and through to disposal.

47. The ISP will become a contractual document, providing details of the Contractors' planned approach for complying with the contractual ILS requirements detailed in the ILS section (D&M SOW). The level of detail in the ISP and element plans needs to reflect the mature GBSR equipment design. However, as an overarching ILS planning document the ISP needs to identify and scope the ILS activities the Contractor proposes to undertake and how these tasks will be managed, including:

a. Contractors' ILS Strategy aligned to the Authority's ILS Strategy and Defence Standard 00-600 Part 1 [1].

b. The Contractors' GBSR organisational structure, including associated sub tier Supply Chain.

c. Details of the Contractor to Authority interface.

d. ILS Meeting/review proposals.

e. Master ILS Schedule integrated with the programme schedule.

f. Change Management.

g. Supportability related risk management.

48. As detailed in the ILS section (D&M SOW)**Error! Reference source not found.**, the following ILS Element Plans will be submitted as separate coordinated deliverables and referenced within the ISP:

a. Technical Information and Technical Documentation Management Plan (TDMP).

b. Supply Support Strategy & Supply Support Plan (SSP).

c. Training & Training Equipment Plan.

d. Obsolescence Management Plan (OMP).

e. Maintenance Plan

f. Configuration Management Plan (CMP).

g. Disposal Strategy and Disposal Management Plan (DMP).

h. Packaging, Handling, Storage & Transportation Plan (PHS&T)

i. Level of Repair Analysis (LORA) Report

j. Reliability & maintainability (R&M) Case Report

Technical Information and Technical Documentation Management Plan (TDMP) – (PD 2001-03

49. A GBSR TDMP is required to provide details of how the Contractor, in interaction with the supply chain, plans to develop and issue the suite of TD within the required timeframe. The ILS section (D&M SOW) provides details of the Authority's expectations with respect to the TDMP.

50. Technical Documentation is required to support GBSR operation and maintenance. The Technical Publications will need to be available via Technical Documentation On-Line (TDoL) so that configuration control can be maintained.

The TD must not contain International Trade in Arms Regulations (ITAR) sensitive information, which prevents upload onto TDoL and cannot have a security of marking above Official Sensitive.

51. Technical Information is required to enable the Authority and front-line commands to safely manage the equipment through life and dispose of the equipment in accordance with extant legislative requirements at EoL.

Supply Support Plan (SSP) – PD 3002-02

52. Supply Support concerns ensuring spares are available in the supply chain and can be ordered to support the equipment, as and when required, during the in-service period.

53. The ILS section (D&M SOW) provides details of the Authority's expectations with respect to Supply Support and the SSP. The Contractors' SSP needs to document the Contractors' approach to spares modelling (to include the modelling tool(s) used), Initial Provisioning (IP) in accordance with DEFCON 82, NATO Codification, Re-Provisioning, Repair and Overhaul.

54. IP is the process of identifying, listing and presenting the support items and spares necessary to provide adequate spares support for an initial in-service period of two (2) years. The main output of IP is that the correct range and scale of spares are in place to support GBSR for the first 2years of In-Service use.

55. Monitoring of In-Service spares usage by the Authority, during the initial 2 years of use, will be used to inform future spares procurement decisions, allowing for timely re-provisioning.

56. Re-Provisioning is the routine process of re-stocking items that have been consumed. Spares replenishment will be required to maintain GBSR availability through life and orders need to be placed considering the procurement lead time. Those items, if any, with long lead times need to be clearly identified.

57. Repair & Overhaul procedures cover the management of the repair of GBSR main equipment and spares to re-establish serviceability. It includes all the activities from the time the repair order is placed through to delivery or availability of the repaired articles.

58. It is MOD policy that all items held within the Defence Inventory are codified, by the allocation of a unique NATO Stock Number (NSN) in accordance with NATO and UK National Codification Bureau (UK NCB) procedures. The selection of items requiring NATO codification is based on the parts list and the maintenance strategy.

59. The allocation of NATO Stock Numbers enables the Authority to transfer equipment and spares through the Military Supply Chain. As part of the GBSR Contract the Contractor needs to supply details of the items of equipment which require codification and the supporting codification information, as specified in the terms and conditions which refer to DEFCON 117.

60. All GBSR items to be procured as spares and NATO codified must be introduced to the relevant Base Inventory System being Stores System 3 (SS3).

61. Priming Equipment Packs (PEP). The agreed Range and Scale of Spares contained in the PEP are to be procured and delivered to meet the first 30 days of an operational deployment. PEP Spares (Deployment Stock) shall also be earmarked by the provisioners preventing use of these Spares for normal peace/training activities. The contractor is also required to model and cost an additional 90 days of stock (Sustainment Stock) on top of the PEP. The Deployment Stock and Sustainment Stock together will form the Contingent Operation Stock (COS).

Training and Training Equipment (T&TE) Plan

62. Training is a key activity. Trained and qualified operators and maintainers are required to support GBSR in service. The training solution will need to be delivered in accordance with Defence Systems Approach to Training (DSAT).

63. JSP 822 Part 1 and Part 2 [3] define the authoritative policy to ensure training is appropriate, efficient, effective and safe. All training is underpinned by DSAT which needs to be applied in the analysis, design, delivery, assurance management and governance of GBSR training.

64. JSP 822 [3]**Error! Reference source not found.** Part 1 defines the mandated activities and Part 2 provides guidance in complying with Part 1.

65. The GBSR Training and Training Equipment (T&TE) requirements are identified in the D&M SOW at Annex A of the Contract.

66. The GBSR T&TE Plan scope should include details of the Contractors Training organisation, how the training material will be developed, training assurance provided, and training delivery undertaken. An outline training delivery schedule is also required, integrated with the ILS Schedule.

Obsolescence Management Plan (OMP) – PD 0007-01

67. Obsolescence is inevitable, affecting equipment availability and WLC. However, with due consideration and management, obsolescence impact on equipment availability throughout the lifecycle and WLC can be minimised.

68. The authoritative guidance on the implementation of cost-effective risk based proactive and reactive Obsolescence Management is provided by IEC 62404:2019 [4].

69. The GBSR Obsolescence requirements are detailed in the ILS section (D&M SOW). Within this requirement set there is a need for the contractor to generate an GBSR OMP. The OMP should identify the:

a. Contractors Obsolescence Management organisation.
b. Proposed GBSR Obsolescence Management Strategy.
c. Contractors approach to Obsolescence Management, including risk assessment and obsolescence risk mitigation.
d. Use of Obsolescence Management Tools.
e. The methodology to identify and report on Obsolescence Issues.
f. The approach to Obsolescence resolution.

70. When an impending Obsolescence Issue is identified, an Obsolescence Management Report (OMR) will be required, to enable the Authority to understand the implications, timescales, and costed options to resolve, including the Contractor's recommended solution.

71. One of the potential options to resolve an obsolescence issue could be in the form of a Life of Need Buy (LNB), which could rely on a prompt implementation decision from the Authority. If a LNB or other obsolescence resolution decision needs the immediate attention of the Authority, the Contractor should immediately inform the Project Manager and/or MILSM by phone/email followed up with an OMR.

72. The funding of and implementation of Obsolescence resolution will be mutually agreed between the Authority and the Tenderer.

Configuration Management Plan (CMP) – PD 0013-01

73. Configuration Management (CM) is the control exercised over Form, Fit and Functional characteristics. CM provides a mechanism for controlling product functional and physical characteristics throughout the acquisition lifecycle and enables an orderly transition from Development through Manufacture to entry into service.

74. CM provides a record of changes throughout the life of the product and shows any dependencies between products and their sub systems or components. The record of changes against the baseline should be maintained by the Contractor and made available to the Authority.

75. MOD Policy is that CM is applied to the acquisition of Defence Material throughout all phases of the CADMID Lifecycle.

76. The ILS section in the D&M SOW defines the GBSR CM requirements. Configuration Management of equipment build standards, subsequent modifications, the supporting technical information and technical documentation is required.

77. The Authority's expectation is that the Contractor will be responsible for GBSR CM and the CM activities to be applied by the Contractor and Contractors' supply chain which will be defined in a CMP

78. Defence Standard 05-57 [5] provides details of the Authority's expectations with respect to the application of CM.

Software Support Plan (SSP) – PD 0005-03

79. The purpose of the Software Support Plan is to identify the items and procedures that are performed for the life-cycle support of the GBSR Software/Firmware. It should describe the methods used to ensure the existence of a complete life-cycle support capability for GBSR. DEFSTAN 00-600 provides details of the Authority's expectations with respect to the application of Software Management and Support.

Human Factors Integration Plan (HFI) – PD 0008-01

80. The effective Integration of all aspects of Human Factors within a complex engineering system such as GBSR is critical to ensuring the system can be utilised effectively by all its users. Ensuring all these elements are brought together in a coherent manner is vital, as is balancing the accessibility, operability and usability of all aspects of the system to minimise user workload, physiological and cognitive burden. The HFI Plan shall demonstrate how the Contractor's Human Factors management is to be conducted (including sub-contractors) from the start of the Assessment Phase up until the end of the contract. DEFSTAN 00-251 Part 3, Table 2, Issue 1 provides details of the Authority's expectations with respect to the application of Human Factors Integration.

Disposal Management Plan (DMP) – PD 0018-01

81. The Defence Equipment Sales Authority (DESA) is the lead organisation responsible for the sale of all MOD assets when declared surplus to requirements or at equipment EoL. Defence Standard 00-600 Part 1 [1] and Knowledge in Defence (KiD)[2] [6] provide associated guidance for disposal planning.

82. The GBSR Disposal Management requirements are detailed in the ILS section of the D&M SOW. The Contractor will be required to generate an GBSR Disposal Management Plan (DMP), detailing how GBSR equipment disposal will be addressed and managed through life.

83. Taking into consideration the GBSR materials and construction methods, the DMP needs to consider the regulatory framework and provide recommendations for the consignment and disposal of equipment at the end of service life and/or classed as BER during the in-service period. In part, disposal planning will need to focus on:

a. The identification of all items requiring special disposal.

b. Estimates of activities necessary to undertake disposal.

[2] KiD is accessible via https://www.aof.mod.uk/

c. Current Legislation, including applicability and legislative developments that the Contractor is aware of and could affect disposal at the projected EoL date.

d. Safety and Environmental aspects regarding disposal.

e. Declaration of hazardous materials content, as detailed in the T&Cs by reference to DEFCON 68.

84. All GBSR Assets Subject to Special Controls (ASSC) such as Foreign Military Sales, ITAR, Direct Commercial Sales, Proprietary or Intellectual Property Rights will need to be identified by the Contractor to aid disposal planning and implementation.

Packaging, Handling, Storage & Transportation Plan (PHS&T)

85. The Aims and Objectives of the updated PHS&T Plan are to detail the Contractors management control of integrating PHS&T aspects into the overall Supply Support, Software and Support Solution design elements of the Product for Items of Supply that will/could enter and/or be warehoused within the Authority's Joint Supply Chain.

Exit Management Plan

86. GBSR Commercial will be producing an Exit Strategy as part of the Procurement Strategy. The contractor is to produce an Exit Management Plan..

SECTION 8 ILS REPORTS & ASSOCIATED INFORMATION

Level of Repair Analysis (LORA) Report – PD 1008-02

87. The optimum GBSR maintenance strategy needs to be derived by the application of Level Of Repair analysis (LORA). As an existing equipment the GBSR Corrective and Preventative maintenance tasks should have already been defined. The Contractor needs to determine the optimum ML for each maintenance task by considering; task complexity, manpower constraints, maintenance times, spares holding requirements, facilities, S&TE availability. LORA will also inform the Contractor' repair / discard recommendations across each ML.

88. The LORA information needs to be published in a LORA Report, which identifies each In-Service ML1, ML2 and ML3 preventative and corrective maintenance task, repair / discard recommendations and identifies and justifies the assignment of maintenance tasks to ML4.

89. To aid the Authority, details of any assumptions made by the Contractor as a basis for the LORA, should be documented in the LORA Report.

Reliability & Maintainability (R&M) Case Report – PD 1006-02

90. The R&M Case Report is a reasoned, auditable argument created to support the contention that the GBSR system satisfies the R&M requirements. The R&M Case report is the Authority's preferred mechanism for presenting R&M assurance evidence and provides an audit trail of the engineering considerations from requirements through to evidence of compliance.

91. As an existing equipment the Authority requires high level information / evidence from the Contractor, aligned to providing assurance that NVG equipment will satisfy the Authority's R&M requirements, as specified within the System Requirements.

92. R&M Case Report guidance is provided in Defence Standard 00-42 Part 3 [7].

Supply Support Report (SSR)

93. GBSR Supply Support requirements are detailed in the ILS section of the D&M SOW**Error! Reference source not found.**. The GBSR Supply Support SSR is the mechanism by which the Contractor is expected to provide the required Supply Support information to the Authority.

Logistic Demonstration (Log Demo)

94. The Log Demo provides the Authority with confidence that the equipment can be supported and maintained on entry into service. The Log Demo will need to be carried out by the Contractor and attended by the Authority as part of the evidence required towards LSD assurance.

Support And Test Equipment - PD 0011-01

95. Support and Test Equipment (S&TE) is the term used to encompass the following:

a. **General Purpose Test and Measurement Equipment (GPTME).** Those items that are common to more than one product, platform or system.

b. **Special Purpose Test and Measurement Equipment (SPTME).** Those items which are designed, developed, produced and used solely for one product, platform or system.

c. **Test Equipment** – both general purpose and Automatic Test Equipment (ATE) is defined as items of equipment used to:

- Provide an indication of system, equipment or component serviceability and/or
- Evaluate the ability of the system or equipment to meet precisely defined performance of measurement standards.

d. **Support Equipment** includes but is not limited to the following:

- Hand Tools, including Tool Kits and Tool Sets.
- Jigs.
- Support Equipment for on and off-equipment maintenance.
- Ground Support Equipment, including Manual Handling Equipment (MHE).
- Gaseous and Cryogenic Systems.
- Workshop Tools and Equipment.
- Warehouse Equipment.
- Special inspection equipment and depot maintenance plant equipment.
- Air Conditioners, Environmental Control Units, General Purpose Generators.
- Equipment for Working at Height.
- Equipment for Lifting.
- Calibration equipment.

96. The application of LORA will identify the S&TE resources necessary to support GBSR in-service. The identified GBSR resources will be compared to existing in-service equipment by the Authority and recommendations made to rationalise and need for additional GBSR specific GPTME or SPTME.

97. The expectation is that ML1 & ML2 maintenance tasks can be undertaken with the minimum requirement for S&TE, where necessary using GPTME and by exception SPTME.

Government Furnished Assets – PD 1011-01

98. GFA is an umbrella term covering equipment and other MOD assets that are provided to industry in support of contracts. GFA consists of:

a. Government Furnished Equipment (GFE);

b. Government Furnished Resource (GFR);

c. Government Furnished Information (GFI);

d. Government Furnished Facilities (GFF).

99. The management of GBSR GFA will be in accordance with the Contract T&Cs which include references to the appropriate Defence Conditions.

SECTION 9 – OTHER INFLUENCING ELEMENTS

Security

100. All Agencies, Tenderers, Sub-Contractors and Suppliers working on or in support of the GBSR project are required to ensure that information originating from the GBSR Project is protected in accordance with the Security Aspects Letter.

Counterfeit Control Management

101. Counterfeiting is applicable to all material, and the incidence of counterfeiting has increased dramatically in recent years, counterfeit components materials and Certificates of Conformity are increasingly prevalent. As the counterfeit risk has increased so has the level of awareness and need for mitigation measures.

102. The Authority's expectation is that Counterfeit Control and Management will be aligned to compliance with Defence Standard 05-135 [8] (Avoidance of Counterfeit Material).

Quality Assurance

103. Quality Assurance requirements are defined in the Contract T&Cs and are governed by ISO Specification 9001-2015 [9].

104. All the activities underpinning the GBSR Project should be under the control of appropriate Authority and Tenderer/Contractor based Quality Management Plans.

Follow-On Support

105. The Contractor is expected to forecast for a Technical Through Life Support period of 3 years. This will enable uninterrupted equipment to support to the end user. It is currently envisaged that all provisioning beyond the initial 3-year IP period will be subject to renegotiated contract(s) between the follow-on support provider and the Contractor.

ANNEX A – DATA RECORDING, ANALYSIS AND CORRECTIVE ACTION SYSTEM

Introduction

106. Data Recording, Analysis and Corrective Action System (DRACAS) shall be employed for the duration of the In-Service and Disposal phases of GBSR.

107. The main purpose of DRACAS is to assist in the Design Upkeep and Update of GBSR and therefore, any improvements to be considered for implementation are based on the optimal engineering and functional performance and cost parameters. DRACAS also provides:

a. Reliability Performance Monitoring.

b. Trend Analysis.

c. Evidence for Incident Investigations and analysis to aid corrective action decisions.

d. Evidence for Sentencing Panels in making sentencing decisions.

e. Documentary evidence of proof of close out of the incident and / or sentence is completed.

f. Evidence for Implementing Change including but not restricted to those part of Post Design Services (PDS).

Incident Classification

105. An incident is defined as “any event indicating a possible non-conformance with the specification” and therefore includes observations (Def Stan 00-049 refers).

106. To assist in the Investigation of DRACAS incidents and/or observations, each recoded entry shall be classified to assign the severity and nature of the incident, these being:

a. **No Fault Found (NFF)** The fault and/or observation is/are not found and/or cannot be reproduced, when diagnosed and examined by the Contractor and/or their nominated Sub Contractors.

b. **Minor Fault/Failure** This type of fault and/or observation relates to User comfort and does not impact on or results in a de-gradation or loss of performance or capability and hence the status of the equipment remains, ‘Fully Fit (FF)’. Additionally Minor Faults are normally associated as candidates for inclusion as part of planned or future platform Major Update programmes.

c. **Medium Fault/Failure (also referred to as Basic Failure incidents, when associated with hardware)** This type of fault results in reduced performance and/or decreased capability and hence the status of the equipment is classified as, ‘Limited Role (LR)’.

d. **Major Fault/Failure (also referred to as Mission Failure incidents, when associated with hardware)** This type of fault is considered as unacceptable and directly impacts User Availability. The status of the equipment will be classified as ‘Non Task Worthy’ (NTW). Additionally, where these failures are associated with Safety and Environmental issues they will be subject to further governance.

e. **Catastrophic Fault/Failure (also referred to as Security Critical, Safety and Environmental matters)** This type of fault is considered as a totally unacceptable event. The capability of the equipment is completely lost and the equipment/system status is classified as NTW. Due to nature of these faults being associated with high impacts on Security, Safety & Environmental, and the equipment must be quarantined, until investigations have taken place to mitigate the severity of the incident to an acceptable level. Additionally, the quarantine action may also be applicable to the entire fleet and/or host interoperable system.

Data Recording

107. The Contractor shall record all incidents and observations reported by the User and identified by the Contractor and their sub-contractors, using the Logistic Information Repository (LIR). All DRACAS information contained in the LIR shall be in the format, structure and content as agreed in the Data Module Requirements List (DMRL).

Analysis – Incident Investigation

108. The Contractor shall propose resolutions to recorded incidents and/or observations through use of AR&M tools Failure Model and Effect Analysis (FMEA) and Fault Tree Analysis (FTA) to ensure all effects of the fault are identified. The ILS process of Support Analysis (SA) shall also be used, in cases of the 'Corrective Action' identifies a potential Update for immediate and/or future implementation.

Corrective Action – Data Reporting of Proposed Resolution

109. The Contractor shall report to the Authority all proposed resolutions to incident and/or observations by:

a. Level 4 Feedback on User's Incident Report on nature of fault, classification and proposed resolutions.

b. Update of the LIR with the Data Recording and Analysis (DRA) elements of DRACAS including the Incident Classification and Severity of failure and proposed and / or Immediate Resolutions, including:

1) Equipment Usage and Equipment Usage since Last Failure, including the Line Replacement Unit (LRU) Usage where applicable.

2) AR&M performance characteristics (Mean Time between Failure - MTBF) to reflect Equipment and LRU Usage. This shall also include the Failure Analysis, possible causes and modes of failure.

3) Failure Effects Analysis by Component, SRU, LRU, Local Equipment, Sub-System, System, Platform and Interoperability with other Systems.

4) Immediate Resolution and Recommended Contractor Repair proposal Identified at Inspection of Failed Equipment/Item/Function including Components/Functions Identified as Faulty.

c. Update of the LIR with the following information Corrective Action System (CAS) elements of DRACAS based on the progress of incident information to provide a 'closed loop' including:

1) Analysis of incidents and their causes (FMEA and FTA) by the Contractor to provide Corrective Actions (CA) and Updates where necessary.

2) AR&M estimates in performance parameters if there is a potential for an Update.

3) Supporting Evidence for implementing CAs. This will include the Contractor's SA, SSA and associated reports to justify and or support the recommended mitigation and implementation. This can be local and/or fleet wide Update, noting all issues of effects on interoperability and associated systems must be included.

4) Planning estimates and Update Programmes.

5) Actual dates when embodied of CA and Update.

6) Date Loop Closed containing the evidence and agreement details.

Sentencing Classification

110. Sentencing of failures is part of the DRACAS process and for GBSR this pertains to failures being classed either as Attributable or Non-Attributable.

111. Attributable Failures refer to:

a. Normal Wear and Tear.

b. Design Specification issues, failure or fault.

c. Manufacturing Defects.

d. Interactive Electronic Technical Publication (IETP) Documentation Defects and/or omissions by the Contractor.

112. Non-Attributable Failures refer to Human Intervention (HI) failures:

a. Battle Damage, external explosion, impact and/or damage through contact on operations and/or on training by friendly or enemy forces.

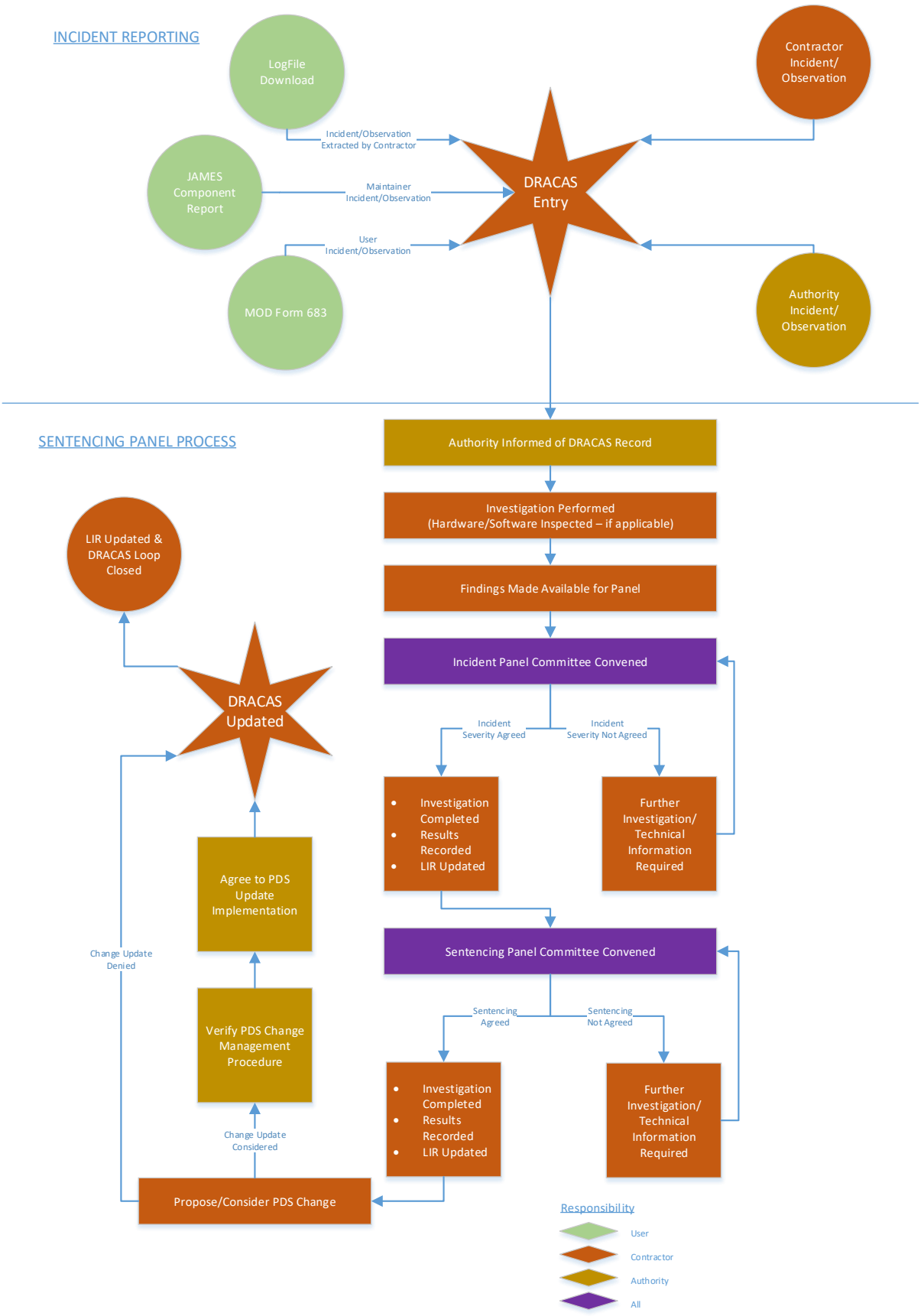
b. Misuse (or accident), negligence, accidental damage or storage or use of the equipment outside of its intended environment or specification limits unless agreed with the contractor in advance. Additionally, this includes damage through Natural Disasters.

c. Technical Documentation Defects and/or omissions by the Authority.

113. NFF failures can be both Attributable and Non-Attributable. The decision as to whether the NFF is Non-Attributable, shall be incumbent on the Contractor to provide evidence that the User failed to comply with laid down instructions/procedures. NFF failures will be assumed to be Attributable unless evidence contradicts otherwise.

114. All failures through life will be subject to Sentencing and must be reached in agreement by the Authority. Sentencing will also be used during any Warranty period, to facilitate the Contractor in recovering associated repair/inspection costs for equipment/function failures sentenced as Non-Attributable.

Incident and Sentencing Panel Process:



Information Reviewed at the Incident and Sentencing Panel

115. Incident and Sentencing LIR information reviewed at each panel will consist of:

a. Data recorded and reported in review period.

b. Performance including AR&M trends/characteristics, top ranking spares by usage, major cost drivers.

c. Comparison of achieved AR&M against SRD requirements.

d. Total quantity of incidents, including total quantity per period.

e. Quantity of ‘open’ incidents and sentences.

f. List of open incidents and sentences by date, with actions.

g. List of closed incidents and sentences.

h. List of incidents by trend, i.e. by appropriate system or sub-system.

i. List of any systems considered to require investigation.

j. List of any incidents deemed relevant to system safety.

k. Provision of data to enable Incidents to progress through the DRACAS process to ensure a ‘closed loop’ for the potential change and/or Update implementation as part of PDS.

Incident Sentencing Panel

116. The prime function of the Incident Sentencing Panel (ISP) is to examine and sentence all reported observations and incidents which may have an impact on AR&M qualities of the equipment and/or function. The ISP will provide a forum where In-Service data can be assessed, discussed and remedial actions agreed to the satisfaction of all parties involved.

ISP Composition

117. The composition of the ISP will include:

a. Authority TTLSM – (Chair).

b. Authority Reliability and Maintainability SME – Optional.

c. Contractor ILS/AR&M Representative – (Secretary).

d. User Representative as required (User Community Training and Maintainer Representatives e.g. QM Tech & SMIG 1st Artillery Brigade HQ, as required).

e. Incident Subject Matter Expert(s) as required.

f. Authority and Contractor Safety representative (if required).

118. The composition of the ISP will be that which can effectively assess the DRACAS information and determine the most appropriate course of action.

119. Formal voting is not to be used in incident sentencing. Where a consensus cannot be reached then sentencing may be deferred if further investigation is required. If a consensus cannot be reached then the incident should be sentenced by the Chairperson. Where significant areas of disagreement exist the conflict resolution chain will be; ISP Chairperson → LSC → Contract Resolution Process.

120. In accordance with Def Stan 00-044, once incidents have been formally sentenced, the sentence can only be changed by the ISP and/or the LSC. Incidents that have been sentenced by the ISP are submitted to the LSC and/or appropriate Governance area for ratification.

ISP Terms of Reference

121. The ISP will:

a. Review incident and observation data.

b. Determine the root cause of failure and/or observation in functional performance.

c. Perform further investigations where there is potential for a secondary and/or interoperability AR&M issue.

d. Assess and review any recommended immediate resolution and corrective actions to restore functionality to the failed equipment/function, including authorisation of Contractor repair costs as part of the Task Approval Form (TAF) process.

e. Determine any proposed change and subsequent refresher/familiarisation in the operation and maintenance of the equipment and function.

f. Determination and verification of any proposed Change as part of PDS on equipment design and functional specification.

g. Determine sentencing classification of all AR&M incidents and function related observations.

h. Maintain an auditable trail for each sentencing and incident decision made (meeting minutes, evidence presented, rationale for decisions and resultant actions) within the LIR.

i. Be responsible for the reporting of findings to other key Governance Areas, LSC, Risk, Security, Safety and Environmental.

j. Convene monthly and be reviewed quarterly at the LSC and/or the associated Governance area. **Note**: the scheduling of ISP will be continually reviewed to ensure scheduling is commensurate with the number of incidents and observations to be sentenced.

122. The Contractor's ILS/AR&M representative will be responsible for the minutes of the meeting. This ensures committee members will have full access to the technical information and rationale behind all proposed immediate resolutions, their implications and any subsequent remedial actions requiring agreement.

123. Once incidents have been formally sentenced, the sentence can only be changed by the ISP and/or the LSC, appropriate Governance area. All Incidents, observations that have been sentenced

and agreed are submitted to the LSC, appropriate Governance area for ratification.

124. The ISP meetings should be an open forum for discussion of all issues relating to the incidents and observations being sentenced, and should invite contributions from all members.