



Ministry
of Defence

DE&S SAFETY AND ENVIRONMENT BULLETIN (SEB)



Serial Number: SEB/008

Keeping our Safety and Environmental Practitioners informed

Defence Standards 00-56, 00-55 and 00-27

When it takes effect:	Jun 15
Valid for:	12 Months
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This SEB has been produced to keep staff informed of the changes to S&E Defence Standards and contains information on the review and publication of:

- Def Stan 00-56 Part 1 Issue 6, Safety Management Requirements for Defence Systems.
- Def Stan 00-55 Part 1 Interim Issue 3, Requirements for Safety of Programmable Elements in Defence Systems.
- Def Stan 00-27 Issue 3, Measurement of Impulse Noise from Military Weapons, Explosives and Pyrotechnics (MWEPE) and Selection of Hearing Protection.

DEF STAN 00-56

1. The purpose of this Standard is to support MOD acquisition organisations that deliver Products, Services and/or Systems (PSS) by setting safety management requirements on Contractors that enable procurement of PSS that are compliant with safety legislation and regulations and with MOD safety and acquisition policy.

2. The Standard has completed its review programme, which included significant MOD and Industry consultation. Issue 6 retains the goal-based approach to meet safety management requirements and provides notes to clarify and support the requirements clauses and sub-clauses. It also provides:

- Guidance on Contracting and Tailoring with templates for compliancy matrices.
- Data Item Definitions to support the definition and production of deliverables.
- Guidance on the concept of integrity which applies across the entire system hierarchy, eg from an aircraft carrier to a bolt and across a range of technologies, including structures and complex electronics.

3. The review considered resolution of a number of issues:

- The MOD Duty Holder, ie Risk to Life and ALARP.

- Current perceptions of safety acquisition by a naming convention for inherent processes and requirements eg Information Set, Information Set Summary, Command Summary, Scopes of Contract, Supply and Analysis.
- Capturing the broad scope of Defence procurement, ie from bullets to aircraft carriers, supply of Service contracts, domain specific requirements and capture of new and legacy equipment requirements and change of use.
- Contracting and tailoring, ie use of tailoring and compliance matrices.

4. The intent is that compliance with the requirements of this Standard will place MOD in a position to discharge its obligations with regard to the management of Risk to Life associated with the in-service use of PSS. Further information can be found on the [QSEP Safety Defence Standards webpage](#).

DEF STAN 00-55

5. The purpose of this Standard is to provide requirements and guidance for the achievement, assurance and management of safety of Programmable Elements (PE) within Products, Services and Systems (PSS). Its intent is to be applied to any MOD project and can be applied in any phase of a project's life. It is intended that this Standard complements Def Stan 00-56 but can be used without, where the Contractor can demonstrate equivalence in compliance to other safety standards, in addition to the requirements of this Standard.

6. This Standard uses the concept of Design Integrity to provide MOD with a means of determining whether the PE are fit for purpose for use in specified environments and applications. The Standard identifies that the Risk to Life is associated with the unintended behaviour of PE in Products, Services or Systems (PSS). The PE Failure Assessment should identify and assess the consequences of PE unintended behaviour. PE Design Integrity is delivered through objectives derived from the principles outlined in the Integrity Annex of Def Stan 00-56. Those objectives are:

- Objective 1. PE Safety Requirements shall be defined to address the PE contribution to PSS Hazards.
- Objective 2. PE Safety Requirements shall be maintained throughout requirements decomposition.
- Objective 3. PE Safety Requirement satisfaction shall be demonstrated.
- Objective 4. Impacts from failures due to emergent causes of PE unintended behaviour shall be identified and mitigated.
- Objective 5. The confidence established in addressing the (other) PE safety objectives shall be commensurate to the contribution of the PE to PSS risk

7. The strategy of this Standard is the utilisation of open standards that demonstrably satisfy the objectives and clauses of this Standard. Guidance is provided on the selection of open standards with specific examples covering RTSA DO-178, ISO 61508 and RTSA DO-254. Guidance on addressing the unique military risk and DIDs for PE Safety Management Plan and PE Safety Summary are also provided. This Standard has been published as Interim Issue 3 to enable use and comment. Post consultation (Dec 2015), it will be reviewed and up-issued. Further details can be found on the [QSEP Safety Defence Standards webpage](#).

DEF STAN 00-27

8. This Standard was published on 2 Jun 2015. The purpose of this Standard is to provide guidance on the methodology for measurement of the noise from Military Weapons, Explosives and Pyrotechnics

(MWEF) to support the procurement process for such devices. This is particularly intended for the testing and development stage of the MWEFs to facilitate appropriate measurement of impulse noise that enables a suitable and sufficient risk assessment.

9. This Standard is compliant with current legislation and MOD Policy. It provides requirements for the selection of suitable and effective hearing protection for exposed personnel. The minimum requirements for measurements required by Issue 3 support that selection of appropriate personal hearing protection. The methodology recommended by Issue 3 represents current good practice and has been validated by the Health and Safety Laboratory Issue.

10. MOD Project/Delivery Teams (or other Tasking Authorities) using this Standard will need to engage with noise and risk; subject matter expert (SME) and specialists to ensure that the appropriate requirements are included in the tasking or contract. The Standard does not define the operating scenarios only methodology for measurement and selection of hearing protection. Supporting advice and guidance can be found on the [QSEP Noise Intranet webpage](#). This website includes detail on the DE&S Noise Helpdesk and Noise Clinics and access to the HSL Enabling Contract.

11. ASEMS Part 1 Policy, SEP Leaflet 06/2013 Issue 2.0, will be available on the [Acquisition Systems Guidance website](#) (formerly AOF), and it will mandate the use of Def Stan 00-27 Issue 3 for the measurement of impulse noise from MWEF and the Selection of Hearing Protection. The leaflet provides information on the development of the Standard and outlines its scope. The Leaflet also provides advice and guidance on access to the Health and Safety Laboratory Framework Agreement.

USE OF DEFENCE STANDARDS

Def Stan 00-55 and 00-56

12. It is expected that New Projects will use the current published Issue for contracting [See Para 13]. Legacy projects contracted to earlier Issues may continue to use those Issues. Copies are available through the DStan Helpdesk. However, it may be prudent for some projects to consider contract amendment to use the latest Issue; but this will be dependant on the benefit analysis, eg through life cost and impact of such a decision, and agreement between MOD and the Contractor.

Def Stan 00-27

13. Measurement of impulse noise and selection of hearing protection shall be carried out in accordance with this Standard. Previous versions of this Standard (and approved MOD published guidance) were delivered in accordance with good practice at the time of publication. Publishing of this Issue does not obligate re-measurement or re-evaluation work carried out using previous Issues of this Standard, but it is recommended that a risk assessment is carried out, in consultation with noise SMEs, to identify whether such action would be necessary.

DSTAN Policy

14. It is DStan policy that any changes to Defence Standards will now result in an up-issue and not follow the previous amendment process. In future, for these safety Standards, an impact statement will be issued to enable MOD and its Contractors to evaluate the revision to ensure unnecessary contractual changes are avoided.

Released under the Authority of

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