



Defence
Safety Authority

DSA 03.OME Part 1: Defence Code of Practice (DCOP) 101

OME Design Requirements



Version Record

Version 1.1

Version Date: November 2024.

Version changes: Addition of elements of the previous JSP 520 Chapter 1, not covered in other DCOPs.

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Preface

Requests for Change

1. Proposed changes, recommendations, or amendments to DOSR Regulations and Guidance can be submitted to the DOSR Regulations and Publications Team:

Email Address: dsa-dosr-prg@mod.gov.uk

Postal Address: Juniper #5004, Level 1, Wing 4, Abbey Wood North, Bristol, BS34 8QW

2. Any post and grammar change proposals can be approved or rejected by the DOSR without involvement of the associated Working Group.

3. Technical change proposals should be submitted to the associated Working Group for review and approval or rejection.

4. When incorporating changes, care is to be taken to maintain coherence across regulations.

5. Changes effecting Risk to Life will be published immediately. Other changes will be incorporated as part of routine reviews.

Review Process

6. The DOSR team will ensure OME Regulations remain fit for purpose by conducting regular reviews through the DOSR Governance Committees, consulting with MOD Stakeholders and other Defence Regulators as necessary on interfaces and where there may be overlaps of responsibility.

Further Advice and Feedback

7. For further information about any aspect of this document, or questions not answered within the subsequent sections, or to provide feedback on the content, contact the DOSR Regulations and Publications Team.

Contents

| | |
|--|----|
| DSA 03.OME Part 1: Defence Code of Practice (DCOP) 101 | 1 |
| OME Design Requirements..... | 1 |
| Version Record..... | 2 |
| Copyright..... | 2 |
| Uncontrolled Copies..... | 2 |
| Preface | 3 |
| Requests for Change | 3 |
| Review Process | 3 |
| Further Advice and Feedback | 3 |
| Contents | 4 |
| Amendment Record..... | 4 |
| DSA 02.OME Regulation 101 | 5 |
| OME Design Requirements | 5 |
| DSA 03.OME DCOP 101 | 5 |
| Introduction | 5 |
| Legislation Compliance Requirements..... | 6 |
| Legislation Compliance Matrix (LCM)..... | 7 |
| Information Required in a Legislation Compliance Assessment..... | 7 |
| Competence | 8 |
| Selection of Safety and Environmental Protection Standards..... | 9 |
| Defence Regulatory Compliance..... | 9 |
| OME Design Requirements..... | 10 |
| Safety Culture | 10 |

Amendment Record

| No | Section | Para | Amendment Summary | Agreed | Date |
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| 1.1 | All | All | Addition of elements of the previous JSP 520 Chapter 1, not covered in other DCOPs. | DSA-DOSR | Nov 24 |

DSA 02.OME Regulation 101

OME Design Requirements

1. The Accountable Person shall ensure that MOD OME systems are designed and constructed such that the risks to health and the risk of an unsafe event during the Manufacture to Target or Disposal Sequence (MTDS) are As Low as Reasonably Practicable (ALARP) and Tolerable.

DSA 03.OME DCOP 101

Introduction

2. The MOD has legal and moral responsibilities to its employees and to 2nd party individuals who could be affected by its activities, with the Secretary of State (SofS) for Defence having overall responsibility for Health, Safety, Environmental Protection and Sustainable Development in the MOD.

3. The [Secretary of State \(SofS\) Policy Statement](#) states the following:

“The default position is that within the United Kingdom (UK) we comply with all applicable health, safety, and environmental legislation.

In circumstances where the nature of Defence and Security activities inevitably conflict with safety requirements and thus Defence has Derogations, Exemptions, or Dis-applications from health, safety and environmental legislation, or where other circumstances indicate the need for Defence regulation of activities, we maintain Departmental arrangements that produce outcomes that are, so far as is reasonably practicable, at least as good as those required by UK legislation.

Overseas, we will comply with the laws of Host States, where they apply to us, and in circumstances where such requirements fall short of UK requirements, we will apply UK standards so far as is reasonably practicable to do so.”

4. This forms the basis for Defence Health and Safety and Environmental Protection (HS&EP) Policy, found in the following documents:
 - a. [JSP 375 - Management of Health and Safety in Defence](#),
 - b. [JSP 376 - Defence Acquisition Safety Policy](#).
 - c. [JSP 815 - Defence Safety Management System \(SMS\)](#),
 - d. [JSP 418 - Management of Environmental Protection in Defence](#),
 - e. [JSP 816 - Defence Environmental Management System \(EMS\)](#),

- f. JSP 762 - Defence Ordnance, Munitions and Explosives Through-Life Management

Legislation Compliance Requirements

5. The Ministry of Defence must comply with applicable legislation and statutory provisions. The [Secretary of State \(SofS\) Policy Statement](#) states that where there are Disapplications, Exemptions, or Derogations from domestic or international law, MOD shall introduce regulation, standards, and management arrangements that are, as far as is reasonably practicable, at least as good as those required by legislation.

6. The MOD is not immune from prosecution under the following legislation. The below is not an exhaustive list, and the Accountable Person should satisfy themselves that they are compliant with all relevant legislation:

a. [The Health and Safety at Work Act 1974 \(HASAWA\)](#)

(1) The Health and Safety at Work Act makes provision for securing the health, safety, and welfare of persons at work, for protecting others against risks to health or safety in connection with the activities of persons at work, for controlling the keeping and use and preventing the unlawful acquisition, possession, and use of dangerous substances, and for controlling certain emissions into the atmosphere.

b. [The Management of Health & Safety at Work Regulations 1999.](#)

(1) The Management of Health and Safety at Work Regulations 1999 were introduced to reinforce the Health and Safety Act 1974. They explicitly outline what employers are required to do to manage health and safety and apply to every work activity.

c. [Environmental Protection Act 1990](#) (EPA).

(1) The EPA is the centrepiece of UK legislation regarding environmental protection. There are three environmental issues that place statutory duties on employers and are directly related to the health and safety function, these are: air pollution, water pollution and waste disposal. These statutory duties are contained in the EPA.

d. [The Corporate Manslaughter and Corporate Homicide Act 2007.](#)

(1) The Corporate Manslaughter and Corporate Homicide Act 2007 allows companies and other organisations where there had been a gross failing in the management of health and safety with fatal consequences to be prosecuted. The MOD has a duty of care to employees when operating under normal conditions which should be maintained wherever practicable, but has exemptions because of its unique role in the following areas:

- (a) Operations, including peacekeeping operations and operations for dealing with terrorism, civil unrest, or serious public disorder,

where members of the armed forces come under attack or face the threat of attack or violent resistance.

(b) Activities carried out in preparation for, or directly in support of, such operations.

(c) Training of a hazardous nature, or training carried out in a hazardous way, which is necessary, to improve or maintain the effectiveness of the armed forces with respect to such operations. Basic and trade training for example is not covered, the MOD has a duty of care to ensure that its employees are trained to carry out the tasks required of them.

(d) Any duty of care owed by the MOD in respect of activities carried out by members of Special Forces.

Legislation Compliance Matrix (LCM)

7. It is the responsibility of the Authorised Person (AP) and the supplier of OME system to ensure that all relevant legislation is identified and applied accordingly. A legislation compliance assessment should be undertaken for the OME system, which should result in the production of a Legislation Compliance Matrix (LCM). The LCM should:

- a. Record all legislation deemed applicable to the OME system, that:
 - (1) extends to the UK,
 - (2) is made in the UK and extends outside its boundaries,
 - (3) is applied by host nations to UK Armed Forces operating abroad.
- b. Apply scrutiny to OME design features to ensure legislative compliance.

Information Required in a Legislation Compliance Assessment

8. The legal team compiling the LCM should understand the following:

- a. what the equipment is,
- b. what the equipment is designed to do,
- c. how the equipment achieves its requirements, including the end effect of the equipment.

9. The nature and extent of the information required for the LCM will vary according to the equipment, the stage of development, and the risks and hazards associated with the equipment.

10. Information requested by the legal team for the legislation compliance assessment may include:

- a. Equipment Acquisition Business Case,

- b. A technical description of the equipment, including a statement of the design purpose, method of use, and targets envisaged,
- c. Equipment accuracy, likely informed by trials and testing,
- d. Equipment effects, including the nature of expected injury to persons, likely damage to property and any secondary effects,
- e. Equipment reliability, including failure rates or sensitivity of fuses etc.
- f. Equipment impact on public health and the natural environment.

11. In cases where the compliance assessment has identified non-compliance with legislation, and exemption or permissive exemption is available, and the non-compliance is considered to be essential for the maintenance of operational capability, an exemption case requesting approval to invoke the exemption or derogations should be submitted to the delegated Authority via the Accountable Person.

Competence

12. Health and Safety legislation requires certain duties to be carried out by Competent Persons. In the [Management of Health & Safety at Work Regulations 1999](#), a competent person is defined as:

“a person who has sufficient training and experience or knowledge as to enable them to assist in securing compliance, on the part of the employee, with the necessary safety legislation and maintenance procedures”.

13. In Defence Policy, [JSP 375 - Management of Health and Safety in Defence](#), a competent person is defined as:

“A person who has the training, skills, experience, and knowledge necessary to perform a task safely, and is able to apply them. Other factors, such as attitude and physical ability, can also affect someone's competence. See the [HSE website – What is Competence?](#) for information on competence.”

14. Managers are responsible for ensuring that personnel with delegated safety and environmental protection responsibility and authority are suitably qualified and experienced and possess current knowledge to carry out their duties to meet the statutory, MOD regulatory and technical requirements of their role or post. Personnel are to operate within the limits of their own competence.

15. The relevant functional competencies for key personnel should be identified and the necessary training should be provided to develop and maintain competence levels, and to supervise / oversee where individuals require further development. Safety competencies should include an understanding of risk-based safety management methods needed to tailor them to meet specific OME equipment requirements.

16. All individuals with significant OME safety and environmental protection management responsibilities and / or those claiming to be suitably qualified and experienced should be assessed against appropriate National Standards, for example, the National Occupational Standards (NOS) for Explosives Substances and Articles (ESA).

17. The Authorised Person (AP) should operate with a Letter of Delegation for managing OME System Safety. Should there be further delegation, it should be ensured that staff receiving delegations are competent and have at their disposal the necessary resources to carry out tasks delegated to them. The AP is ultimately responsible for managing system safety throughout the life of the OME.

Selection of Safety and Environmental Protection Standards

18. To comply with the SofS policy statement, the MOD requires evidence within the Safety and Environmental Case that the management and technical standards adopted by the Duty Holder are consistent with best civil and international best-practice as a minimum. Further details on the development of safety and environmental cases are found in DSA 03.OME Part 1 DCOP 103 - OME Safety and Environmental Case(s) and Report(s).

19. To achieve maximum harmonisation, it is current MOD policy to utilise civil standards where appropriate and an agreed order of preference is specified in the "Selection of Standards for use In Defence Acquisition" paper, dated 5th June 2008. The specified order is as follows:

- a. European standards.
- b. International standards.
- c. UK civil standards.
- d. Commercial standards widely recognised by industry.
- e. International Military Alliance standards.
- f. UK MOD Defence standards.
- g. UK MOD Departmental standards and specifications.
- h. Other Nation's military standards.
- i. Recognised industry / partnership / consortium standards.

20. Safety and environmental protection standards should be selected according to their effectiveness in mitigating risks and their appropriateness to the system and through-life operating environment. Civil standards may not meet the specified safety and environmental protection requirements, sufficiently mitigate risk, or undermine capability. In these cases, the AP should follow an appropriate military standard selected from the next level of the standards hierarchy.

Defence Regulatory Compliance

21. DSA requires that all OME systems are assessed for compliance against [DSA 02.OME Regulations](#). Accountable Persons should also be aware of DSA domain regulations that are relevant to the OME equipment being acquired.

OME Design Requirements

22. The OME design requirements should be developed to sound design practice and standards. All MOD OME systems (including DEW) should be designed and assessed against all relevant legislation, regulation, policy, and standards.

23. The standard identified as the Acceptable Means of Compliance for DSA 02.OME Regulation 101 is Def Stan 07-085: Design Requirements for Weapons and Associated Systems. There should be emphasis on safety and environmental protection requirements arising from safety and environmental protection legislation, regulations, standards, and Defence policy.

24. Each AP should identify and record safety and environmental protection requirements, in consultation with the Capability Sponsor (CS). Safety and environmental protection assessments should be initiated at the earliest possible stages of the acquisition cycle, addressing the different issues that arise as the Project matures, or requirements alter, throughout the acquisition cycle and MTDS.

25. These requirements should be sufficient for the system to meet the Safety and Suitability for Service (S3) requirements, found in:

- a. STANAG 4297 / AOP-15: Guidance on The Assessment of the Safety and Suitability for Service of Non-Nuclear Munitions for NATO Armed Forces
- b. Def Stan 00-056 - Part 1: Safety Management Requirements for Defence Systems.

26. The AP should begin implementation of processes that identify hazards and provide an assessment of that OME's response to a wide range of credible stimuli at the earliest possible stages of the project.

27. Planning and Implementation activities are those with a direct effect on the safety of the OME equipment or system, involving the specification, procurement, use, ownership, management, and disposal of the OME. As a general principle, authorities responsible for Planning and Implementation cannot subsequently provide assurance of that activity. The Accountable Person is responsible for satisfying OME Safety Planning and Implementation requirements for equipment acquisition.

Safety Culture

28. A 'Safety Culture' is defined by the Health and Safety Executive as:

"the product of the individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety programmes".

29. Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventative measures. There are numerous issues that all personnel should strive to achieve within the organisation. Three key measurable considerations in establishing this safety culture that are to be adhered to are:

a. A 'Just' Culture. Safety Culture requires an atmosphere in which individuals are not unduly punished or blamed for their mistakes. Although the MOD strives to achieve this, the organisation is also subject to rules and legal regulation. As such a 'Just' culture is implemented to encourage a free flow of safety information across the organisation. The 'Just' culture is one in which individuals are not free of blame if they are culpably negligent, and where the MOD gives due regard to honesty. Errors and mistakes are inevitable, and safety management can only be improved if the organisation can learn from its mistakes.

b. Incident Reporting and Investigation. A key part of Safety Management is measuring performance to know how safe the MOD operations are, and to identify problem areas for improvement. Information about real incidents, whether they caused damage or not, are to be used to learn about actual problems and to improve the management of safety.

c. Continuous Improvement. The safety achievement of a system is not static and will usually tend to degrade over time as people become complacent and less vigilant. Monitoring and feedback are used to maintain and improve the safety performance. Continuous Improvement can be achieved in several ways through Auditing and Performance Review activities. Safety management should not be viewed as single exercise and personnel are to continuously strive to improve safety performance.