



Defence
Safety Authority

DSA 02.OME

Defence Ordnance, Munitions and Explosives
(OME) Regulations



Version Record

Version 3.0

Version Date: July 2024

Version changes: see amendment table.

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Foreword

As the Defence Ordnance, Munitions and Explosives (OME) Safety Regulator (DOSR) of the Defence Safety Authority (DSA), I am responsible for regulation of OME safety and environmental protection across Defence activities; specifically, activities associated with OME, Directed Energy Weapons (DEW), Ranges, Lasers, and Major Accident Control, through the provision of the MOD regulatory regime for the OME domain. As a DSA Regulator, I am empowered to enforce the Defence OME regulations. The Regulations contained within DSA 02.OME are mandatory and take precedence where OME is involved; full compliance with DSA 02.OME is required. Where full compliance with DSA 02.OME is not possible, engagement with DOSR, through our waiver process, is required. It is the responsibility of decision makers at all levels to ensure that personnel, including contractors, involved in the management, supervision and conduct of defence activities involving OME are competent and fully aware of their responsibilities.

The regulations are based on mandatory provisions, in the form of legislation, and on the recommendations of the DOSR Stakeholder Committee, its functional Safety Committees for OME, Ranges and Major Accident Control and applicable NATO safety Groups (e.g. AC/326-CNAD Ammunition Safety Group and the NATO Range Safety Working Group (NRSWG)), all of which contribute to the setting of Defence standards and principles.

DSA 02.OME is written with the intention of supporting all MOD personnel in carrying out their activities associated with OME in a safe and environmentally responsible manner whilst also assisting them with their legal obligations, compliance with Defence Regulations and with NATO standards and doctrine. This in-turn should enable decision makers to make informed OME-related risk decisions that provide proportionate and appropriate degrees of protection from the inherent risks of OME. Ultimately, this is fundamental to the continuing safeguarding of members of the public, UK Defence personnel, the environment, and our assets and by extension, the effectiveness of our operational capability.

Stephen Gillstroem McLean

Defence OME Safety Regulator
Defence Safety Authority

July 2024

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Preface

Status

1. This document incorporates and supersedes previous versions of DSA 02.OME and the legacy JSPs 390, 403, 482, 498 and 520. It will be updated as part of a continuous improvement programme on a regular basis from the period of document issue date.

Requests for Change

2. Proposed changes, recommendations, or amendments to DOSR Regulations and Guidance publications 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

3. Any post and grammar change proposals can be approved or rejected by the DOSR without involvement of the associated Working Group.
4. Technical change proposals should be submitted to the associated Working Group for review and approval or rejection.
5. When incorporating changes, care is to be taken to maintain coherence across regulations.
6. Changes effecting Risk to Life will be published immediately. Other changes will be incorporated as part of routine reviews.

Review Process

7. 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

8. 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.

Amendment Record

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
1.0	Preface	Not applicable	Front Cover updated	Pubs-1	15/06/2020
1.0	Preface	Not applicable	DSA Vision Statement updated	Pubs-1	15/06/2020
1.0	Preface	4 & 9	Removed 'PRG'	Pubs-1	15/06/2020
1.0	Preface	10	Email address updated	Pubs-1	15/06/2020
1.0	Introduction	8	Removed '/Exemption'	Pubs-1	15/06/2020
1.0	Introduction	11-20	Inserted new 'Waivers' paragraphs	Pubs-1	15/06/2020
1.0	02 OME (21)	AMC	Removed 'and Exemptions'	Pubs-1	15/06/2020
1.0	02 OME (21)	AMC	Removed 'or Exemption'	Pubs-1	15/06/2020
1.0	02 OME (22)	AMC	Inserted additional AMC text	Pubs-1	15/06/2020
1.0	02 OME (23)	AMC	Inserted additional AMC text	Pubs-1	15/06/2020
2.0	Whole document	Whole document	Numbering scheme altered to enhance and reference document.	Regs ATL	05/07/2021
2.0	Whole document	Whole document	References to non-extant to JSPs removed.	Regs ATL	05/07/2021
2.0	Whole document	Whole document	PT changed to PT/DT.	Regs ATL	05/07/2021
2.0	Whole document	Whole document	DE&S SSR changed to SSR or equivalent.	DOSR TL	05/07/2021
2.0	Introduction	7	Updated to reflect new Part 5 lasers and DEW	Regs ATL	05/07/2021
2.0	AMC	9	Update to definition of AMC	DOSR TL	05/07/2021
2.0	Part 1	Reg 102 - AMC	Word "independent" added.	CP 65	05/07/2021

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
2.0	Part 1	Reg 102 - Guidance material	References updated.	CP 55	05/07/2021
2.0	Part 1	Reg 103 - Guidance Material	References updated.	CP 53	05/07/2021
2.0	Part 1	Reg 104 - Guidance material	References updated.	CP 53	05/07/2021
2.0	Part 1	Reg 105 - Guidance Material	References Updated.	CP 53	05/07/2021
2.0	Part 1	Reg 107 - AMC and Guidance Material	Detail added with reference to SDS, and references updated.	CP 37	05/07/2021
2.0	Part 1	Reg 108 and related text.	Update as provided by DOSG.	CP 83	05/07/2021
2.0	Part 1	Reg 109 and related text.	Update as provided by DOSG.	CP 84	05/07/2021
2.0	Part 1	Reg 111 and related text.	Update as provided by DOSG.	CP 85	05/07/2021
2.0	Part 1	Reg 112	Updates as agreed DNSR/DOSR.	CP 66	05/07/2021
2.0	Part 1	Reg 113	New Regulation.	CP 53 and 71	05/07/2021
2.0	Part 1	Reg 114	Nail driving and other industrial tools - text removed.	CP 64	05/07/2021
2.0	Part 2	Reg 202 and related text	Update as proposed by DOSR and agreed ex committee by IEs.	CPs 21, 60 and 61	05/07/2021
2.0	Part 2	Reg 203 and related text	Update as proposed by DOSR and agreed ex committee by IEs.	CPs 21, 60 and 61	05/07/2021
2.0	Part 2	Reg 205 and related text	Update as proposed by DOSR and agreed ex committee by IEs.	CPs1, 59 and 69	05/07/2021
2.0	Part 2	Reg 206	Update as proposed by DOSR and agreed ex committee by IEs.	CP 72	05/07/2021
2.0	Part 2	Reg 207	Update as proposed by DOSR and agreed ex committee by IEs.	CP 73	05/07/2021

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Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
2.0	Part 2	Reg 208	Update as proposed by DOSR and agreed ex committee by IEs.	CP 74	05/07/2021
2.0	Part 2	Reg 210 and related text	As agreed by CFFE WG and endorsed by OME WG.	CP 78	05/07/2021
2.0	Part 2	Reg 211 and related text	Update as proposed by DOSR and agreed ex committee by IEs.	CP 75	05/07/2021
2.0	Part 3	Reg 307 - Guidance	Addition of additional guidance material.	CP 80	05/07/2021
2.0	Part 3	Reg 308 - Guidance	Addition of additional guidance material.	CP 80	05/07/2021
2.0	Part 3	Reg 309 - Guidance	Addition of additional guidance material.	CP 80	05/07/2021
2.0	Part 3	Reg 310	Update to include requirement to report incidents involving Military Lasers.	CP 81	05/07/2021
2.0	Part 4	All	A review has been undertaken of the whole section by the MACR WG and SC and enhanced regulations and DCOPs created. As this Part has been modified it has not been marked in yellow highlight.	MACR WG	05/07/2021
2.0	Part 5	All	A new Part 5 has been created for Lasers and DEW. As this Part is new it has not been marked in yellow highlight.	OME WG	05/07/2021
2.1	Part 2	Reg 205	New wording - Prior to any deployment of MOD explosives to overseas locations, a safety review shall be carried out of the facilities available at the host location, and any other location(s) transited through on route, where the MOD explosives are handled or stored.	DOSR ASSURANCE TL	08/07/2021
2.2	Part 2	Reg 204 - AMC	New limit - Warships in Harbour (WiH) certification applies for vessels carrying <100,000 kg NEQ in the quiescent (undisturbed) state.	DOSR TL CP 89	23/08/2021
2.3	Part 5	Regs 502 and 503	Improved definition of competences	MLST and DOSR	16/12/2021
2.4	Preface	10	Contact details updated	Pubs-1	30/09/2022
2.4	Introduction	11	Inserted additional ALP 16 text	CP 100	30/09/2022
2.4	Introduction	12a	Inserted additional waiver text	CP 98	30/09/2022
2.4	Introduction	14	Inserted Waiver Form Text	CP 96	30/09/2022
2.4	Introduction	16	Updated Waiver Requirements	CP 93	30/09/2022
2.4	Introduction	17	DOSR Office details updated	Pubs-1	30/09/2022

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
2.4	Part 1	Contents	Typo corrected	Pubs-1	30/09/2022
2.4	Part 1	Contents	OME 118 text updated	Pubs-1	30/09/2022
2.4	Part 1	Reg 102	Typo corrected	CP 99	30/09/2022
2.4	Part 1	Reg 102	AMC updated	CP 94	30/09/2022
2.4	Part 1	Reg 102	New References added	CP 94	30/09/2022
2.4	Part 1	Reg 105	Text updated	CP 99	30/09/2022
2.4	Part 1	Reg 105	New References added	CP 99	30/09/2022
2.4	Part 1	Reg 117	Updated	CP 95	30/09/2022
2.4	Part 1	Reg 118	New Regulation - OME 118 Certification of Defence Ordnance, Munitions and Explosives (OME)	DOSR TL	30/09/2022
2.4	Part 2	Reg 202	Text and references updated	CP 101	30/09/2022
2.4	Part 2	Reg 202	Footnote removed	CP 101	30/09/2022
2.4	Part 2	Reg 202	Typo corrected	CP 103	30/09/2022
2.4	Part 2	Reg 203	Text updated	CP 90	30/09/2022
2.4	Part 2	Reg 205	Reg title updated	CP 1	30/09/2022
2.4	Part 2	Reg 205	Rationale and Provenance updated	CP 91	30/09/2022
2.4	Part 2	Reg 205	Inserted additional reference	CP 100	30/09/2022
2.4	Part 2	Reg 207	Text updated	CP 97	30/09/2022
2.4	Part 3	Contents	Ranges 313 text updated	Pubs-1	30/09/2022
2.4	Part 3	Reg 310	Text updated	CP 51	30/09/2022
2.4	Part 3	Reg 313	New Regulation – Fieldcraft Training Areas (FTA)	DOSR TL	30/09/2022
2.4.1	Part 1	Reg 106	GM updated – Reference to Pt 2 Ch 4 removed. New DCOP 106 Reference inserted.	Pubs-1	10/11/2022
2.4.1	Part 3	Reg 308	GM updated – References to Pam 51 & Pam 4 removed. New OSP Reference inserted.	CP 105	10/11/2022
2.4.2	Part 4	Reg 402	Additional text inserted to clarify location of Guidance Material.	CP 106	22/05/2023
3.0	Foreword	All	Updated to reflect change in DOSR-TL.	DOSR TL	05/07/2024
3.0	Introduction	All	Updated to reflect introduction of JSP 815 and 816. Updated to reflect up-issue and introduction of DSA 01 Operating model series.	DOSR TL	05/07/2024

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
3.0	Introduction	Regulatory Waivers from Defence OME Regulations	Updated to improve guidance and clarity with respect to waiver application and DOSR waiver process. Updated contact details for waiver application process.	DOSR TL	05/07/2024
3.0	Part 1	Reg 101 and related text	Regulation updated for clarity from: "MOD OME systems shall be designed and assessed to recognised international standards." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 102 and related text	Regulation title changed. Regulation updated for clarity from: "The Accountable Person shall engage the services of an independent OME Safety Advisor to provide Independent Technical Evaluation (ITE) support throughout the CADMID/T life cycle and to provide SME advice that conforms to relevant UK OME safety legislation, regulation and policy." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 103 and related text	Regulation title changed. Regulation updated for clarity from: "The Accountable Person shall ensure that OME Safety and Environmental Case Reports (SECR) are produced periodically and at Key Project milestones in the MOD acquisition cycle from Initial Gate onwards." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
3.0	Part 1	Reg 104 and related text	Regulation title changed. Regulation updated for clarity from: "The Accountable Person shall establish a safety management approach that identifies and addresses specific safety issues at each stage of the MTDS." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 105 and related text	Regulation updated for clarity from: "The OME Safety Risk shall be ALARP and Tolerable throughout the life of the OME/the MTDS." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 106 and related text	Regulation title changed. Regulation updated for clarity from: "All military munitions and explosives shall be assigned a hazard classification by DOSR before they can be transported by road within Great Britain or stored within MOD establishments." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 107 and related text	Regulation updated for clarity from: "All EM within an OME system shall be qualified to internationally recognised standards." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 108 and related text	Regulation updated for clarity from: "OME IS, including subsystems and components, shall be compliant with and qualified to internationally recognised standards". Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
3.0	Part 1	Reg 109 and related text	Regulation updated for clarity from: "OME Programmable Elements (PE), which encompasses software and programmable hardware, shall be qualified to internationally recognised safety standards." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 110 and related text	Regulation updated for clarity from: "Environmental Testing of Climatic and Mechanical effects on OME shall be qualified using internationally recognised safety standards." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 111 and related text	Regulation updated for clarity from: "The interaction of OME with Electromagnetic Environmental Effects shall be quantified and qualified to internationally recognised standards. This shall encompass both emissions and immunity of OME." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 112 and related text	Regulation updated for clarity from: "All new non-nuclear munitions requirements shall comply with MOD IM policy and all in-service munitions shall be kept under review to identify opportunities to achieve IM Policy compliance and thereby reduce risk. Nuclear munitions shall comply with the requirements of JSP 538 Part 2: Guidance (V3.1 Jul 14) Chapter 2, Annex A: Safety Assessment Principles – Explosive Compositions." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024

Version No.	Section	Paragraph	Amendment Summary	Agreed	Date
3.0	Part 1	Reg 114 and related text	Regulation updated from: "Any gun barrel made for the use of Her Majesty's forces shall be proved to recognised standards." Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 115 and related text	References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 116 and related text	Regulation updated from: "Details of all OME related Incidents, including all near misses, shall be reported to the Munitions Incident Database (MID) Cell within Defence Equipment and Support (DE&S) Weapons Engineering." References updated.	DOSR TL	05/07/2024
3.0	Part 1	Reg 117 and related text	Regulation and related text updated to include reference to second level of Defence Assurance (2LOD) instead of second party assurance (2PA).	DOSR TL	05/07/2024
3.0	Part 1	Reg 118 and related text	Rational updated for clarity. AMC updated for clarity. References updated.	DOSR TL	05/07/2024
3.0	Part 1	throughout	SSR or equivalent changed to Accountable Person (AP) to encompass TLBs and align with DDS Policy – JSP 815 and JSP 816.	DOSR TL	05/07/2024
3.0	Throughout	throughout	Regulatory Provenance Added.	DOSR TL	05/07/2024
3.0	Part 3	Reg 313 and related text	Updated FTA Classifications in the table.	DOSR TL	21/08/2024

Introduction

Applicability

1. This publication applies to all personnel at all levels in the MOD who have duties and responsibilities for Health, Safety and Environmental Protection (HS&EP) associated with activities involving Ordnance, Munitions and Explosives (OME), Directed Energy Weapons (DEW)), Ranges, Lasers, and Major Accident Control. These Regulations should be read with reference to the following documents:
 - a. [JSP 815: Defence Safety Management System](#), which provides a framework for defence organisations' safety management systems (SMS) and contains two volumes; Volume 1: Defence SMS Framework and Volume 2: Defence SMS Direction and Guidance.
 - b. [JSP 816: Defence Environmental Management System](#), which contains two volumes; Volume 1: Defence EMS Framework and Volume 2: Defence EMS Direction and Guidance.
 - c. [Defence Safety Authority \(DSA\) 01.1 - Regulations](#), which explains how the DSA sets regulations.
 - d. [Defence Safety Authority \(DSA\) 01.2 - Assurance](#), which explains how the DSA conducts assurance.
 - e. [Defence Safety Authority \(DSA\) 01.3 - Enforcement](#), which explains how the DSA conducts enforcement against regulations.
 - f. [Defence Safety Authority \(DSA\) 01.4 - Investigations](#), which explains how the DSA conducts safety inquiries.
 - g. [Defence Safety Authority \(DSA\) 01.5 - Analysis](#), which explains how the DSA conducts analysis.
2. Further guidance is available in DSA 03.OME Defence Codes of Practice (DCOP) and Guidance Material, currently available on the [DOSR Toolset Page](#) on Defnet.

Regulatory Authority

3. These Regulations are issued under the authority of the DOSR. Through the Secretary of State for Defence (SofS) Charter and by Letter of Authority from DG DSA, the DOSR is empowered to regulate OME activity across Defence for the purposes detailed in [DSA 01.1 - Regulation](#). Details of the rules and specific DEDs can be viewed in the [Defence Legislation Support Tool \(DLST\)](#). There are:
 - a. 218 rules in UK statute which apply to the DOSR area of regulation,
 - b. 129 rules which have no identified DED,
 - c. 89 rules equate to 107 DEDS: 50 dis-applications, 35 exemptions and 22 derogations.
4. In addition to the requirement to follow these Defence Regulations, the ability of DOSR to provide effective oversight of and challenge to operational safety is contingent on TLBs and Defence Agencies recognising and discharging the expectations placed on them by the SofS for complying with statutory health, safety, and environmental protection requirements.

Citation

5. These MOD Regulations will be referred to as the Defence Ordnance, Munitions and Explosives (OME) Regulations. Defence OME Regulations define the boundaries of DOSR's authority and responsibility.

Key Principles of Regulation of OME Safety

6. Following the Haddon-Cave Review, it is recommended that the MOD promulgate and adhere to four Key Principles to help assure and ensure an effective safety regime in the future, as follows:
 - a. **Leadership**. There should be strong leadership from the very top, demanding and demonstrating by example active and constant commitment to OME safety as the overriding priority. A strong leader influences others to reach a goal and their attitudes and beliefs about OME safety drive their behaviour. This behaviour sends a powerful message to staff at all levels about how seriously they should take OME safety.
 - b. **Independence**. There should be thorough independence, and organizational separation, between those delivering Defence outputs and those maintaining standards and enforcing behaviours through the setting of regulatory and assurance goals, particularly in the setting of OME safety policy, regulation, auditing, and enforcement.
 - c. **People**. There should be much greater focus on people in the delivery of high standards of OME safety (and not just on process and paper). Whatever processes and paper requirements are in place, it is people who need to ensure that they take care, pay attention, think things through, carry out the right tasks and procedures at the right time, and exercise caution where necessary.
 - d. **Simplicity**. OME regulatory structures, processes and rules should be as simple and straightforward as possible so that everyone can understand them. Complexity is normally the enemy of Safety and the friend of Danger. A safe system therefore is generally a simple system. Consequently, these Regulations will be written in clear, simple language and be as succinct as possible.
7. The Hampton Principles, as detailed in [DSA 01.1 – Regulation](#), have further been developed to address the burden of regulation and focused on inspection and enforcement in the areas of environmental protection and health and safety.
8. In accordance with the [DSA Charter](#), DOSR operate in a manner consistent with UK good practice for regulation as presented in the [Regulators' Code](#).

Scope

9. The scope of these Regulations covers the following areas:
 - a. **Ordnance, Munitions and Explosives**. Safety and Environmental Management of OME over the Acquisition Cycle and In-Service and Operational Safety Management of OME.
 - b. **Ranges**. MOD Ranges used for training purposes or conducting Test, Evaluation, Research and Proofing (TERP) activities. The four elements covered are Safe People, a Safe Place, Safe Equipment and Safe Practice.
 - c. **Major Accident Control**. Ensuring operators of MOD establishments that are within scope of the regulations take all necessary measures to prevent major accidents involving dangerous substances and have robust plans in place to limit the

consequences to people and the environment of any major accidents which do occur.

- d. **Lasers and Directed Energy Weapons.** Ensuring that exposure to and hazards associated with directed energy are managed to be As Low as Reasonably Practicable (ALARP) and Tolerable.

Definition of OME

10. The definitions of OME are based on the agreed North Atlantic Treaty Organisation (NATO) definitions of OME, as stated within [NATOTerm](#) and its predecessor, Allied Ordnance Publication (AOP)-38: 'Glossary of Terms and Definitions on Ammunition Safety'. These are:
- a. **Ordnance.** A weapon system with its associated munitions and auxiliary material needed to fire the munition.
Examples: weapons, directed energy, small arms, barrels, launchers, delivery platforms, fire systems, etc.
- b. **Munitions.** A complete device charged with explosives, propellants, pyrotechnics, initiating composition or chemical, biological, radiological, or nuclear material, for use in military operations, including demolitions. Notes:
- i. In logistic configuration, the logistic packaging of the munition is included.
 - ii. In NATO documents, the term ammunition is synonymous with munition.
 - iii. In common usage, "munitions" (plural) may be military weapons, ammunition, and equipment.
 - iv. For use in connection with offence, or defence, or training, or non-operational purposes, including those parts of weapon systems containing explosives.
 - v. Certain suitably modified munitions may be used for training, ceremonial, or non-operational purposes.
- Examples: missile, shell, mine, demolition store, pyrotechnics, mines, bullets, explosive charges (ejector seats release), mortars, air launched weapons, free fall weapons, torpedoes etc.*
- c. **Explosives.** A substance or mixture of substances that, through chemical reaction, is capable of rapidly releasing energy. Notes:
- i. The term "explosive material" includes solid and liquid high explosives, propellants, and pyrotechnics.
 - ii. It also includes pyrotechnic substances even when they do not evolve gases.
 - iii. The term "explosive" is often used interchangeably with "explosive material" and "energetic material".
 - iv. An explosive atmosphere of gas, vapour or dust is not considered to be an explosive.
 - v. For the purposes of the OME Safety Management Policy, the definition of "Explosives" extends to novel materials designed to create an explosive effect.
- Examples: propellants, energetic material, igniter, primer, initiatory and pyrotechnics irrespective of whether they evolve gases (e.g., illuminates, smoke, delay, decoy, flare, and incendiary compositions) etc.*
- d. **Directed Energy Weapons.** Weapon systems, which produce a beam or field of electromagnetic energy, acoustic energy or atomic/subatomic particles as the

primary means to cause disruptive or damaging effects to equipment, infrastructure, or personnel.

Compliance with Defence OME Regulations

Regulation

11. The term 'Regulation' is defined in [DSA 01.1 – Regulations](#) as a “prescribed rule or authoritative direction” and are mandatory activities which have to be followed without exception, unless a waiver has been formally issued by the Regulator. The DOSR, as the Regulatory body, must be notified if a Regulated Entity considers that they cannot comply with DSA 02.OME. The DOSR waiver process is defined below.

Acceptable Means of Compliance (AMC) and Alternative Acceptable Means of Compliance (AAMC).

12. The term and concept of 'Acceptable Means of Compliance' is extrapolated in [DSA 01.1 – Regulations](#). Each Regulation has an associated AMC which represents the recognised means by which conformance with Regulatory requirements can be demonstrated. The AMC have been agreed in consultation between the Regulator and the Regulated Community through the various governance committees and are detailed in DSA 03.OME. The purpose of DCOPs is detailed in DSA 01.1 – Regulations, and detail the good practice that is expected to be followed by the regulated community to demonstrate compliance with Defence Regulations.
13. A Regulated Entity may utilise Alternative Acceptable Means of Compliance (AAMC), as described in [DSA 01.1 – Regulations](#), when evidence is produced to show (to the satisfaction of DOSR) why the AAMC is justified, necessary and appropriate in lieu of the AMC, and that the AAMC can achieve the requisite level of OME Safety.
14. For further information and to apply for AAMC, contact the DOSR Permissions Team:

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

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

Regulatory Waivers from Defence OME Regulations

Introduction

15. It is recognised that there may be occasions when the Regulated Community is unable to comply with specific Defence OME Regulations. In such circumstances, a temporary Regulatory Waiver can be requested through a waiver application to DOSR to meet or sustain operational capability. The Waiver Application process outlined below should be used, unless the situation relates to NATO Operational Planning Purposes where ALP-16 Explosives Safety and Munitions Risk Management (ESMRM) in NATO Planning, Training and Operations should be used.
16. DOSR must be satisfied that any risks associated with non-compliance have been considered fully by the appropriate Duty Holder (DH) / Accountable Person (AP) / Responsible Officer (RO) when considering whether to grant a Regulatory Waiver. For DH-Facing organisations applying for a Regulatory Waiver, endorsement is required from the relevant DH, noting that multiple DH inputs may be required.
 - a. A waiver is issued following the receipt of an application that clearly identifies the non-compliance(s), demonstrates to the satisfaction of DOSR that action has been

taken / is planned to mitigate the effects of these non-compliances and includes evidence that all appropriate Duty Holders have accepted the associated risks as ALARP and Tolerable.

- b. The issuing of the waiver does not infer any assessment by DOSR on the safety of the item.
17. Where the criteria for DOSR to grant a Regulatory Waiver cannot be met (such as when an SDH considers that a risk from a Defence activity cannot be mitigated so that it is ALARP and Tolerable), in accordance with the SofS Policy Statement on HS&EP, they are to inform the Permanent Secretary and refer the risk to SofS. The regulated entity should ensure that DOSR's input is included should they choose to take this course of action.

Requirements of a Waiver.

18. All waiver applications shall include the following material:
- a. **Justification.** A statement identifying the Regulation(s) which cannot be complied with, and why compliance is unachievable. The statement should explain the issue and the requirement for the application of a Regulatory Waiver. The details of any previous Regulatory Waivers should be included.
 - b. **Mitigation.** A 'suitable and sufficient' risk assessment outlining the risk mitigation management arrangements taken, considered, or planned to address the non-compliance. The risk assessment should be supported by a full Consequence Analysis (CA).
 - c. **Affects.** Details of all DH/AP/RO affected by non-compliance should be identified.
 - d. **Evidence.** Evidence of risk referral, including all necessary additional comments and stipulations. Supporting documentation should be annotated as references. Historical evidence should be included as support to risk mitigation plans.
 - e. **Expected Duration of Waiver.** Details of the expected length of time that the waiver is to be in place before full compliance can be achieved. Details of any 'Return to Green' plans should be included.
 - f. **Acceptance of Risk.** A statement from the relevant DH/AP/RO, who shall acknowledge their understanding and formally accept the risk detailed in the waiver request as ALARP and Tolerable.

Waiver Application Process

19. **Initial Contact with DOSR.** Applicants should contact the DOSR Permissions team as soon as a requirement for a Regulatory Waiver is identified to discuss the issue of concern, manage expectations, agree timescales and priorities for staffing of the application. Waiver applications are to be made using the DOSR Waiver Application Form available at the [Defnet DOSR Tool Set and Defence Regulations page](#). For retrospective applications, DOSR need to understand how safety is being managed whilst the Regulatory Waiver application is being processed. Once agreed, the waiver request will be allocated a reference number by DOSR which should be used in all future correspondence.
20. **Safety Assessment.** A Safety Assessment should be completed and forwarded to the appropriate Duty Holder for staffing and approval prior to it being sent to the DOSR, where there is a requirement for either a new regulatory waiver or a renewal of an existing waiver. The Safety Assessment should be produced in a clear format such as that detailed in [JSP 101 Defence Writing Guide, Part 1: Brief Template](#).

21. **Submission to DOSR.** Once the assessment has been staffed and approved by the appropriate DH/AP/RO, the application for the Regulatory Waiver can be made to the DOSR Permissions Team.
22. **Initial Handling Action.** DOSR will establish if the Regulatory Waiver application contains the required information to progress the application. Key to this will be the justification and/or supporting evidence for the Regulatory Waiver.
23. **Handling Timescales.** It is expected that **from the time of receipt of all the required information** to releasing a response back to the originator should take no longer than 28 days. DOSR may determine that additional justification and/or supporting evidence is required following the submission of a Regulatory Waiver application. If so, the originator may be invited to discussions to ensure there is full understanding of the issue. If it is likely that the timescale will not be met, then the originator will be informed by the DOSR Desk Officer dealing with the application and regularly updated until the Regulatory Waiver is approved and issued or rejected. For rejections, the reasons for rejection will be included in any correspondence. In situations where the Regulated Community have should submit short-notice or large numbers of Regulatory Waiver requests, prior discussion with DOSR is highly recommended to ensure timely progression of the application(s).
24. **Approval/Rejection.** The Regulatory Waiver application will be considered and actioned at the appropriate level in the DOSR. Once completed, the DOSR response will be sent to the originator and the originator's DH/AP/RO, with details of the agreement and any caveats that should be applied. Copies of the Regulatory Waiver will be communicated or forwarded to relevant DOSR stakeholders as necessary to ensure the audit and assurance process is kept informed.
25. **Validity and Cancellation of Regulatory Waivers.** DOSR Regulatory Waivers will be valid for **the stipulated timescale in the DOSR approval response**. If a renewal is required, a renewal submission should be submitted to the DOSR a minimum of 28 days before the Regulatory Waiver expiry date. Submission of a Regulatory Waiver request does not constitute compliance or guarantee that it will be approved. Units no longer requiring an extant Regulatory Waiver should submit a cancellation request to DOSR.
26. For further information, contact the DOSR Permissions Team:

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

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

Enforcement of Defence OME Regulations

27. The DOSR, with powers delegated from SofS through DG DSA as Defence Safety Authority, is empowered through a Letter of Authority and Responsibility to enforce these regulations. Enforcement is carried out in line with processes detailed in [DSA 01.3 – Enforcement](#).

DOSR Annual Report

28. The DOSR is required to provide DG DSA with an Annual Report of the independent assurance of safety performance across Defence which contributes to DG DSA's Annual Assurance Report to SofS.

Part 1: Defence Regulations for OME Acquisition

Justification

1. DSA 02.OME Part 1 provides the OME regulatory framework, which applies throughout the whole acquisition cycle. The requirements and scope of safety responsibilities apply to OME systems operated by MOD personnel and to systems being operated at the direction of the MOD by third parties and/or its contractors. Part 1 mandates the rules, standards, processes, inputs, outputs, and independent reviews that support claims of inherent safety of OME systems. Inherent safety of OME considers the measures taken to eliminate hazards and/or to reduce risks by changing the design or operating characteristics of the OME. The assessment of inherent OME safety shall cover hazards that result from intentional and unintentional initiation of OME systems across the Manufacture to Target or Disposal Sequence (MTDS).
2. OME Acquisition safety relies on two main aspects:
 - a. Provision of evidence of compliance of the design (the OME itself or sub-components) to agreed standards,
 - b. Provision of evidence of safety assessments covering all aspects of the OME's use (storage/handling/transport and functioning) and conducted according to agreed test standards.
3. OME hazards can be classified into 4 groups:
 - a. **Intrinsic hazards:** Hazards presented by the explosive material in its quiescent state. These include, but are not limited to toxicity, composition breakdown, gas/heat generation, material incompatibility, etc.
 - b. **External and internal hazards.** External hazards originate outside the design, and internal hazards originate within the design. There are hazards which may initiate energetics within components or have an adverse effect on the firing chain. These include, but are not limited to, spurious fire commands, EMC / E³ (Electro Magnetic Compatibility / Environmental Electromagnetic Effects) emissions, temperature / drop / shock / vibration, firing chain failure, aerodynamic heating, fragment, bullet, and shaped charge jet attack etc.
 - c. **Hazardous consequences of initiation.** Hazards arising from the consequences of both partial or full initiation of the energetic/explosive components, whether intentional or unintentional. These include, but are not limited to blast, fragment, noise, toxic efflux, heat etc.
 - d. **Post launch and dynamic safety hazards.** Hazards include, but are not limited to loss of guidance control, unintended launch, ricochet, early burst, etc.
4. Responsibility for safety issues that fall outside the definition of inherent OME safety shall be managed in accordance with policy requirements in the overarching domain-specific DSA safety regulations (Maritime, Land and Air) and associated publications even if they remain the responsibility of the Accountable Person (AP).
5. Regulatory Governance is maintained through the Defence OME Safety Committee which reports to the DOSR Stakeholder Committee (DOSR SC).

Regulation Number	Regulation Title
OME 101	OME Design Requirements
OME 102	Use of Independent OME Competent Personnel for Independent Technical Evaluation
OME 103	Safety and Environmental Case(s) and Report(s)
OME 104	Manufacture to Target or Disposal Sequence (MTDS)
OME 105	Safety Risk Management
OME 106	Classification for Transport and Storage
OME 107	Explosive Material (EM) Qualification
OME 108	Initiation Systems (IS) Qualification
OME 109	Software and Programmable Hardware
OME 110	Environmental Assessment (Climatic and Mechanical)
OME 111	Environmental Assessment (Electromagnetic Environmental Effects (E3))
OME 112	OME Vulnerability (Insensitive Munitions (IM))
OME 113	OME Through-Life Capability Management (TLCM)
OME 114	Gun Barrel Proof
OME 115	Management of Safety Information
OME 116	Incident and Accident Reporting and Analysis
OME 117	OME Safety Review Panel and Assurance Statement
OME 118	Certification of Ordnance, Munitions and Explosives (OME)

OME 101: OME Design Requirements

Regulation

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.

Rationale and Provenance

2. Health, Safety, and Environmental Protection (HS&EP) requirements should be developed to sound design practice or standards, with particular emphasis on specifying those safety requirements arising from safety legislation, regulations, standards, and the MOD policy.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Evidence of compliance in accordance with the DefStan 07-085 should be provided, in the form of a Design Safety Assessment. DefStan 07-085 specifies the Design Requirements for Weapons and Associated Systems for use in procurement, and the principal requirements of the design process supporting design certification.
5. Safety and Environmental Requirements should be documented within the OME Safety and Environmental Case(s). Where production of the Safety and Environmental Case(s) are contracted out, recognition of contractual requirements should also be given.
6. Where OME is procured for UK service application that has been previously qualified by another National Authority Nation, it is acceptable for the foreign evidence to be considered to meet the intent of the MOD Regulation, particularly where the testing has been conducted to NATO STANAG requirements and the Operating Environments of the OME are comparable.
7. Requirements should be identified and recorded, in consultation with the Capability Sponsor (CS). Safety 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.

Guidance Material

8. Further guidance is available in the following publications:
 - a. Defence Standard 07-085: Design Requirements for Weapons and Associated Systems
 - b. JSP 418: Management of Environmental Protection in Defence
 - c. JSP 376: Defence Acquisition Safety Policy
 - d. Defence Standard 00-056: Safety Management Requirements for Defence Systems
 - e. Defence Standard 00-051: Environmental Management Requirements for Defence Systems
 - f. Defence Standard 00-035: Environmental Handbook for Defence Materiel

OME 102: Use of Independent OME Competent Personnel for Independent Technical Evaluation

Regulation

1. The Accountable Person shall use Independent Technical Evaluation (ITE) from demonstrably OME competent personnel to confirm that the OME conforms to UK OME safety legislation, regulation, and policy.

Rationale and Provenance

2. ITE support for OME Systems is required to assess critical safety information and evidence to provide assurance that the technical information is correct, is suitable to achieve objectives, is valid and is fit for purpose. ITE should also give oversight to the Accountable Person that the safety arguments are appropriate.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 102.
5. Evidence of engagement with a demonstrably competent independent body with the relevant OME Subject Matter Expert (SME) resources should be provided.

Guidance Material

6. Further guidance is available in the following publications:
 - a. Defence Standard 00-056: Safety Management Requirements for Defence Systems
 - b. [ASEMS: Acquisition Safety and Environmental Management System.](#)

OME 103: Safety and Environmental Case(s) and Report(s)

Regulation

1. The Accountable Person shall develop and maintain OME Safety and Environmental Case(s) and produce an OME Safety and Environmental Case Report(s) (SECR) periodically and at Key Project milestones in the MOD acquisition cycle from Outline Business Case (OBC) onwards.

Rationale and Provenance

2. The OME Safety and Environmental Case(s) provides a structured argument which demonstrates that platforms, products, and activities (including software safety and cyber security) meet and maintain Safety and Environmental Protection requirements. The safety and environmental case(s) provides a compelling, comprehensible, and valid case that an OME system is safe and environmentally sound for a given application, in a given environment.
3. SECRs provide a status report on the OME safety and environmental activities undertaken to that point and are the functional output from the body of evidence contained in the Safety and Environmental Case(s). The periodicity of producing regular SECRs arising from Safety and Environmental Case(s) reviews should be proportional to the risks associated with the system and should align with the business approvals process.
4. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

5. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 103.
6. The strategy for the creation, development, and management of the Safety and/or Environmental case(s) should be developed at the start of a project and reviewed on a regular basis. Safety and/or Environmental case(s) and associated strategy or strategies should be developed proportionate to the perceived level of safety risk and environmental impacts including system software safety and cyber security.
7. The Accountable Person should provide evidence of comprehensive and up-to date Safety and Environmental Case(s) which cover the entire Manufacture to Target or Disposal Sequence (MTDS) of the OME, in the form of a SECR.
8. The periodicity of producing SECRs shall be recorded within the Safety and Environmental Management Plan (SEMP).
9. The SECR should demonstrate OME system performance against the OME Safety and Environmental requirements specified for that system.
10. Adoption of alternative standards to those usually selected shall be justified within the Safety and Environmental Case(s).

Guidance Material

11. Further guidance is available in the following publications:
 - a. JSP 376: Defence Acquisition Safety Policy
 - b. Defence Standard 00-056: Safety Management Requirements for Defence Systems

- c. Defence Standard 00-051: Environmental Management Requirements for Defence Systems
- d. JSP 762: Weapons and Munitions Through-Life Capability Management
- e. [ASEMS: Acquisitions Safety and Environmental Management System, POEMS, POSMS.](#)

OME 104: Manufacture to Target or Disposal Sequence (MTDS)

Regulation

1. The Accountable Person shall define the MTDS of the OME.

Rationale and Provenance

2. The assessment of OME safety risks presented to MOD personnel, third parties, materiel, and the environment across the MTDS should be understood, to establish a safety and environmental management approach.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 104.

Guidance Material

5. Further guidance is available in the following publications:
 - a. JSP 762: Weapons and Munitions Through-Life Capability Management
 - b. STANAG 4297 / AOP-15: Guidance on The Assessment of the Safety and Suitability for Service of Non-Nuclear Munitions for NATO Armed Forces.

OME 105: Safety Risk Management

Regulation

1. The Accountable Person shall ensure that the OME Safety Risk is assessed throughout the designated OME Manufacture to Target or Disposal Sequence (MTDS) and managed to be ALARP and Tolerable.

Rationale and Provenance

2. There should be a seamless flow of safety information between Safety and Environmental Cases at successive levels, be it equipment, system, or platform. The Safety and Environmental Case(s) define the system, the system boundaries, and the system operating environment, with all interfaces clearly identified and effectively managed.
3. To ensure all interfaces are clearly identified and effectively managed, interfaces should be clearly established, and the requirements of the different safety policy documents understood.
4. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

5. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 105.
6. The Accountable Person should be able to provide clear evidence that is developed and reviewed through the life cycle of the OME which provides a structured argument, supported by a body of evidence providing a compelling, comprehensible, and valid case that a system is safe and environmentally sound for a given application in a given operating environment.

Guidance Material

7. Further guidance is available in the following publications:
 - a. JSP 762: Weapons and Munitions Through-Life Capability Management
 - b. Defence Standard 00-056: Safety Management Requirements for Defence Systems
 - c. Defence Standard 00-051: Environmental Management Requirements for Defence Systems
 - d. [ASEMS: Acquisitions Safety and Environmental Management System, POEMS, POSMS.](#)

OME 106: Classification for Transport and Storage

Regulation

1. All munitions and explosives must be assigned a hazard classification before they can be transported by road within Great Britain. The Accountable Person shall ensure that all military munitions and explosives are assigned a hazard classification by DOSR before they can be transported by road within Great Britain or stored within MOD establishments.

Rationale and Provenance

2. All explosives must have been assigned a classification by the Competent Authority of a Contracting Party to the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) before they are consigned for carriage by road in Great Britain.
3. An explosive assigned to Class 1 is given an appropriate UN Serial Number, hazard division and compatibility group, depending on its composition, type, and hazard.
4. The provenance for this regulation is as follows:
 - a. Delegation within [The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009](#), where the Competent Authority in relation to military explosives is the Secretary of State (S of S) for Defence. DOSR carries this function out on behalf of the S of S for Defence.

Acceptable Means of Compliance

5. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 106.
6. An application should be submitted to DOSR for consideration. When satisfied with the submission, DOSR will issue a Competent Authority Document (CAD) MOD Form 1657. The details of the validity of the CAD will be recorded on the [DOME Database](#) which can be accessed by the user community.

Guidance Material

7. Further guidance is available in the following publications:
 - a. [The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009](#).
8. [European agreement concerning the International Carriage of Dangerous Goods by Road \(ADR\)](#)
9. [UN Manual of Tests and Criteria](#)
 - a. [UN Model Regulations: Recommendations on the Transport of Dangerous Goods Volume I and II](#)
 - b. STANAG 4123: Determination of the Classification of Military Ammunition and Explosives.
 - c. AASTP-03: Manual of NATO Safety Principles for the Hazard Classification of Military Ammunition and Explosives
 - d. [Health and Safety Executive – Classification for transport](#)

OME 107: Explosive Materials (EM) Qualification

Regulation

1. The Accountable Person shall ensure that explosive materials used within OME have known performance, safety, and functional characteristics independent of service application.

Rationale and Provenance

2. Explosive Material Qualification provides safety and functional characteristics of the EM used in the OME. These values allow comparison within service systems, as well as provide initial data, to be compared with values obtained in production and/or in-service surveillance (ISS).
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 107.
5. Detail on the safety, performance, and functional characteristics of the explosive materials should be understood. The characteristics that need to be understood are dependent upon the intended role such as: primary explosive; booster explosive; solid or liquid propellant; main charge high explosive; and pyrotechnic. This is to enable an assessment based on the fundamental properties of the explosive materials regarding the following:
 - a. Characterise. To ensure that performance, safety, and functional characteristics are sufficiently known to enable the safety and suitability for service to be assessed by the Accountable Person.
 - b. Baseline. To obtain data about the original characteristics of the explosive materials, to enable continual evaluation of the explosive material properties. This will support safety and suitability assessments by the Accountable Person.
 - c. Predict. Obtain measurable data which can be used to predict changes that may occur throughout the life of the explosive materials.
 - d. Risk Management. To reduce the risks associated with testing the explosive materials in an OME system against a specific environment.

Guidance Material

6. Further guidance is available in the following publications:
 - a. Defence Standard 07-085: Design Requirements for Weapons and Associated Systems
 - b. STANAG 4170: Principles and Methodology for the Qualification of Explosive Materials for Military Use
 - c. AOP-07: Manual of Data Requirements and Tests for the Qualification of Explosive Materials for Military Use

OME 108: Initiation Systems (IS) Qualification

Regulation

1. The Accountable Person shall ensure that the risks associated with initiation systems for OME, including subsystems and components, are understood, documented, and managed to be ALARP and tolerable.

Rationale and Provenance

2. IS encompasses fuzing systems, ignition/launch systems, firing systems, flight termination systems and hazard mitigation devices. The initiation systems used within OME should have known performance, safety, and functional characteristics. This should provide suitable and sufficient evidence of an acceptable risk level against premature arming and inadvertent initiation of the weapon effect, propulsion/launch system, subsystems, or components throughout the lifecycle of the OME.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Qualification and compliance should be demonstrated against the latest edition of internationally recognised IS standards. A compliance case detailing the claims, arguments, and evidence to enable Independent Technical Evaluation should be provided to support qualification.
5. IS qualification testing should be conducted in accordance with the requirements of STANAG 4157: Safety, Arming and Functioning Systems (SAF Systems) Testing Requirements.
6. Electro-Explosive Devices (EED) should be characterised in accordance with STANAG 4560: Electro-Explosive Devices, Assessment and Test Methods for Characterization, as implemented in Defence Standard 59-114: Safety Principles for Electrical Circuits in Systems Incorporating Explosive Components - Assessment, Safety Margins and Trial.

Guidance Material

7. Further guidance is available in the following publications:
 - a. Defence Standard 59-114: Safety Principles for Electrical Circuits in Systems Incorporating Explosive Components - Assessment, Safety Margins and Trials
 - b. STANAG 4187 / AOP-4187: Fuzing Systems - Safety Design Requirements
 - c. STANAG 4368: Ignition Systems for Rockets and Guided Missile Motors, Safety Design Requirements
 - d. STANAG 4497 / AOP-4497: Hand-emplaced Munitions (HEM), Principles for Safe Design
 - e. STANAG 2818 / AOP-31 / AOP-32 : Demolition Materiel: Design, Testing and Assessments
 - f. STANAG 4797 / AOP-4797 : Safety Requirements for Hazard Mitigation Devices (HMD) employed to address Fast/Slow Heating threats to munitions.
 - g. STANAG 4157 / AOP-4157 / AOP-20: Safety, Arming and Functioning Systems (SAF Systems) Testing Requirements

- h. STANAG 4560 / AOP-43: Electro-Explosive Devices, Assessment and Test Methods for Characterization.

OME 109: Software and Programmable Hardware

Regulation

1. The Accountable Person shall ensure that OME software and programmable hardware is developed to a level of rigour which is commensurate to its contribution to the hazard and is managed to be ALARP and Tolerable.

Rationale and Provenance

2. To ensure potential failures and unsafe operation of OME Software and programmable hardware are reduced to an appropriate risk level.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 109.
5. The claims, arguments and evidence required to enable Independent Technical Evaluation and qualification/characterisation against Defence Standard 00-055: Requirements for Safety of Programmable Elements (PE) in Defence Systems - Requirements and Guidance, should be provided.
6. The requirements of Def Stan 00-055: Requirements for Safety of Programmable Elements (PE) in Defence Systems, should be demonstrated to be met and assessed for compliance through ITE.

Guidance Material

7. Further guidance is available in the following publications:
 - a. Defence Standard 07-085: Design Requirements for Weapons and Associated Systems
 - b. Defence Standard 00-055: Requirements for Safety of Programmable Elements (PE) in Defence Systems - Requirements and Guidance.
 - c. Defence Standard 00-056 - Part 1: Safety Management Requirements for Defence Systems
 - d. JSP 935: Software Acquisition Management for Defence Equipment

OME 110: Environmental Assessment (Climatic and Mechanical)

Regulation

1. The Accountable Person shall ensure that the risks posed to OME from mechanical and climatic stimuli are understood and managed to be ALARP and Tolerable.

Rationale and Provenance

2. It is required that the condition of OME is understood throughout the OME lifecycle so that the safety risk presented by the OME at any one time, can be appropriately assessed and managed. The safety risks presented by OME can change over their lifecycle due to natural and induced mechanical and climatic stimulus.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The response from climatic and mechanical stimuli should be characterised.

Guidance Material

5. Further guidance is available in the following publications:
 - a. STANAG 4370: Environmental Testing
 - i. AECTP-100: Environmental Guidelines for Defence Materiel
 - ii. AECTP-200: Environmental Conditions
 - iii. AECTP-230: Climatic Conditions
 - iv. AECTP-240: Mechanical Conditions
 - v. AECTP-300: Climatic Environmental Tests
 - vi. AECTP-400: Mechanical Environmental Tests
 - vii. AECTP-600: The Ten Step Method for Evaluating the Ability of Materiel to meet Extended Life Requirements and Role and Deployment Changes
 - b. STANAG 4297 / AOP-15: Guidance on The Assessment of the Safety and Suitability for Service of Non-Nuclear Munitions for NATO Armed Forces
 - c. Def Stan 00-056 - Part 1: Safety Management Requirements for Defence Systems.
 - d. STANAG 44844/AOP-4844: NATO Handbook for Munitions Health Management.

OME 111: Environmental Assessment (Electromagnetic Environmental Effects (E3))

Regulation

1. The Accountable Person shall ensure that the risks posed to OME from Electromagnetic Environmental Effects (E3) stimuli are understood and managed to be ALARP and Tolerable.

Rationale and Provenance

2. The interaction of OME with Electromagnetic Environmental Effects (E3) should be quantified, and the risks posed to MOD OME from Electromagnetic stimuli shall be managed to be ALARP and Tolerable. This shall encompass both emissions and immunity of OME.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation are detailed in the following publication:
 - a. DSA 03.OME Part 2 Chapter 8 and 24.
5. A qualification and compliance case should be provided detailing the claims, arguments, and evidence against the requirements of the latest edition of internationally recognised E3 standards such as STANAGs 4370 and 4868 (for which the UK implementations are Defence Standards 59-114 and 59-411).
6. E3 qualification testing should be in accordance with STANAG 4370 / 4868 and the relevant AECTPs listed under these STANAGs. These are:
 - a. AECTP 250: Electrical and Electromagnetic Environmental Conditions
 - b. AECTP 500: Electromagnetic Environmental Effects Tests and Verification.

Guidance Material

7. Further guidance is available in the following publications:
 - a. Defence Standard 59-114: Safety Principles for Electrical Circuits in Systems Incorporating Explosive Components - Assessment, Safety Margins and Trials
 - b. Defence Standard 59-411: Electromagnetic Compatibility
 - c. Defence Standard 07-085: Design Requirements for Weapons and Associated Systems
 - d. STANAG 1380 / AECF-02: NATO Naval Electromagnetic Radiation Hazards Manual
 - e. STANAG 4370: Environmental Testing
 - i. AECTP-100: Environmental Guidelines for Defence Materiel
 - ii. AECTP-250: Electrical and Electromagnetic Environmental Conditions
 - iii. AECTP-500: Electromagnetic Environmental Effects Tests and Verification.
 - iv. AECTP-600: The Ten Step Method for Evaluating the Ability of Materiel to meet Extended Life Requirements and Role and Deployment Changes.

OME 112: OME Vulnerability (Insensitive Munitions (IM))

Regulation

1. The Accountable Person shall ensure that the vulnerability of OME and the response to extreme but credible incidents is reduced to levels that are ALARP and Tolerable.

Rationale and Provenance

2. OME should fulfil its performance, readiness, and operational requirements on demand, whilst minimising the probability of inadvertent initiation and severity of subsequent collateral damage to weapon platforms, logistic systems, and personnel. OME safety risks should be reduced to levels that are ALARP and tolerable.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 112.
5. Final IM signature should be achieved through an assessment by the IM Assessment Panel (IMAP), which either meets the Target Signature agreed by the IM Assessment Panel (which sets out the response of the individual explosives containing components that is as good as can be expected for a munition of this nature, given the technology available), or achieves the following signature:
 - a. Fast Heating – No more severe than Type V, Burning
 - b. Slow Heating – No more severe than Type V, Burning
 - c. Bullet Impact – No more severe than Type V, Burning
 - d. Fragment Impact – No more severe than Type V, Burning
 - e. Sympathetic Reaction – No more severe than Type III, Explosion
 - f. Shaped Charge Jet Impact – No more severe than Type III, Explosion.

Guidance Material

6. Further guidance is available in the following publications:
 - a. STANAG 4439 / AOP-39: Policy for Introduction and Assessment of Insensitive Munitions (IM)
 - b. STANAG 4240 / AOP-4240: Fast Heating Test Procedures for Munitions
 - c. STANAG 4241 / AOP-4241: Bullet Impact Test Procedures for Munitions
 - d. STANAG 4382 / AOP-4382: Slow Heating Test Procedures for Munitions
 - e. STANAG 4396 / AOP-4396: Sympathetic Reaction Test Procedures for Munitions
 - f. STANAG 4496 / AOP-4496: Fragment Impact Test Procedures for Munitions
 - g. STANAG 4526 / AOP-4526: Shaped Charge Jet Impact Test Procedures for Munitions
 - h. STANAG 4297 / AOP-15: Guidance on the Assessment of the Safety and Suitability for Service of Non-Nuclear Munitions for NATO Armed Forces
 - i. STANAG 4123: Determination of the Classification of Military Ammunition and Explosives

- j. AASTP-03: Manual of NATO Safety Principles for the Hazard Classification of Military Ammunition and Explosives
- k. United Nations Manual of Tests and Criteria (ST/SG/AC.10/11)

OME 113: OME Through-Life Capability Management (TLCM)

Regulation

1. The Accountable Person shall ensure that the OME Through-Life Capability Management (TLCM) is managed across the entire CADMID/T (Concept, Assessment, Development, Manufacture, In service, Disposal/Termination) cycle, to ensure the OME system remains safe and suitable for service, environmentally sound, and delivers its intended capability within the MoD.

Rationale and Provenance

2. OME TLCM is carried out to ensure that OME items/systems achieve their intended military effects in a safe and environmentally sound manner, as per their intended design, throughout the CADMID/T cycle of the OME system. Effective Through-Life Capability Management of OME can improve efficiency, flexibility, military effectiveness, and value for money. Effective OME TLCM should produce and sustain a balanced portfolio of OME capabilities within agreed plans and delivery arrangements.
3. The provenance for this regulation is as follows:
 - a. A Defence organisation has requested, and the DSA has accepted, that an area of Defence activity is not sufficiently regulated.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 113.
5. The TLCM of the OME item/system should be managed throughout the CADMID/T cycle by Suitably Qualified and Experienced Personnel (SQEP) with appropriate OME competencies.
6. An OME Through Life Capability Management Plan (TLCMP) should be produced and followed from Outline Business Case (OBC) onwards. The OME TLCMP should select, develop, manufacture, and maintain a solution to meet the requirements of the Capability Sponsor, across the CADMID/T cycle of the OME item/system.

Guidance Material

7. Further guidance is available in the following publications:
 - a. JSP 762: Weapons and Munitions Through-Life Capability Management
 - b. Knowledge in Defence (KiD) web tool
 - c. JSP 901: Technical Governance and Assurance of Capability.
 - d. STANAG 2953/AOP-02: Identification of Ammunition.
 - e. STANAG 4170/AOP-07: Manual of Data Requirements for the Qualification of Explosive Materials for Military Use.
 - f. STANAG 4297/AOP-15: Guidance on the Assessment of the Safety and Suitability for Service of Non-Nuclear Munitions for NATO Armed Forces.
 - g. AOP-38: Specialist Glossary of Terms and Definitions on Ammunition Safety.
 - h. STANAG 4315/AOP-46: The Scientific Basis for the Whole Life Assessment of Munitions
 - i. STANAG 4620/AOP-48: Explosives, Nitrocellulose-Based Propellants, Stability Test Procedures and Requirements using Stabilizer Depletion.

- j. STANAG 4675/AOP-62: In-Service Surveillance of Munitions General Guidance.
- k. STANAG 4675/AOP-63: In-Service Surveillance of Munitions Sampling and Test Procedures
- l. STANAG 4675/AOP-64: In-Service Surveillance of Munitions Condition Monitoring of Energetic Materials.
- m. STANAG 44844/AOP-4844: NATO Handbook for Munitions Health Management.

OME 114: Gun Barrel Proof

Regulation

1. The Accountable Person shall ensure that any gun barrel made for use under the control of Secretary of State for Defence shall undergo proof.

Rationale and Provenance

2. Proof is the compulsory testing of every firearm to ensure its safety before it is used. It includes all explosive operated small arms, whether for present use or future invention adapted for the discharge of shot, bullet, or other projectile. It includes pistols, revolvers, shotguns, rifles, cattle killers, line throwers, signal pistols and alarm guns. Reproof is the similar testing of a firearm that may have fallen below standard because of alteration.
3. The provenance for this regulation is as follows:
 - a. Disapplication for Articles under the control of Secretary of State for Defence within the [Gun Barrel Proof Acts of 1868, 1950, 1978 and SI 1996/1576](#). Articles are instead proofed in accordance with Defence Standard 05-101: Proof of Ordnance, Munitions, Armour, and Explosives.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 114.
5. Evidence of Compliance with Defence Standard 05-101 Part 1 – Proof of Ordnance, Munitions, Armour and Explosives and NATO Manuals of Proof and Inspection Procedures (MOPI) should be provided.
6. Proof of articles under the control of S of S of Defence should be proofed by a recognised proof house, or by QinetiQ under the Long-Term Partnership Agreement (LTPA). APs are required to review proof test results provided by test houses and provide permission to QQ to apply the MOD proof stamp.

Guidance Material

7. Further guidance is available in the following publications:
 - a. Defence Standard 05-101, Part 1: Proof of Ordnance, Munitions, Armour, and Explosives
 - b. NATO Manuals of Proof and Inspection Procedures (MOPI)

OME 115: Management of Health, Safety, and Environmental Protection (HS&EP) Information

Regulation

1. The Accountable Person shall manage the identification, obtaining, updating, configuration control and review of health, safety, and environmental protection (HS&EP) related documents and information.

Rationale and Provenance

2. To ensure that HS&EP related information can be made available to all relevant Duty Holders / Users without delay.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 115.
5. There should be evidence of the update, configuration control and review of safety documents and information being managed via the safety management system (SMS) and the environmental management system (EMS), for example:
 - a. documents, records, and data are coherent, complete, and up to date,
 - b. evidence is consistent, compatible and to an equivalent standard and quality across the acquisition cycle,
 - c. HS&EP related information being made visible to all relevant Duty Holders without delay, and
 - d. obsolete documentation is retained for future reference.

Guidance Material

6. Further guidance is available in the following publications:
 - a. Defence Standard 00-056: Safety Management Requirements for Defence Systems
 - b. Defence Standard 00-051: Environmental Management Requirements for Defence Systems
 - c. [ASEMS: Acquisition Safety and Environmental Management System.](#)

OME 116: Incident and Accident Reporting and Analysis

Regulation

1. The Accountable Person shall ensure that all OME related Incidents and Accidents, including all near misses, are reported to the Munitions Incident Database (MID) Cell, in addition to any other MOD/TLB accident/incident/near miss reporting requirements, and trend analysis around incidents and accidents be carried out, and acted upon.

Rationale and Provenance

2. The MID Cell should have sight of every incident to achieve a global view of incidents and to search for trends that may not be evident to a single PT/DT or Front-Line Command (FLC). The reporting of incidents to the MID Cell enables the administration of a comprehensive database of all OME related incidents. Reports are to be submitted to the AP and FLC with details of investigations, findings and recommendations pertaining to the OME system.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 116.
5. There should be visibility of all OME incidents, with evidence of a robust tri-service reporting, recording and corrective action / measure system, with a centralised database managed by the MID Cell within DE&S Weapons Engineering.
6. The MID Cell is required to advise all Accountable Persons and DOSR of any critical OME incidents and any significant OME incident trends.
7. An annual report giving an overview of major OME accidents and incidents, and evidence of developing trends should be produced at the end of each calendar year and forwarded to all Accountable Persons and DOSR.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: In-Service and Operational Safety Management of OME: Chapter 25.

OME 117: OME Safety Review Panel and Assurance Statement

Regulation

1. The Accountable Person shall ensure that Second Levels of Defence Assurance (2LOD, previously known as Second Party Assurance, 2PA) of OME safety shall be through the independent peer review of documentary evidence undertaken by an OME Safety Review Panel (OSRP).

Rationale and Provenance

2. The Accountable Person should establish a robust Independent Review Body (IRB) for inherent OME safety as a component of the MOD's assurance regime. The OSRP has the authority to provide assurance through the issue of OSRP Assurance Statement (OAS) for projects, based on OME Safety Submissions presented to it.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The Acceptable Means of Compliance for this regulation is detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 117.
5. DE&S Head of Engineering Assurance Weapons (HEAW) should maintain a robust Independent Review Body (IRB) for inherent OME safety as a component of the MOD's assurance regime.
6. The OSRP should independently undertake a proportionate review of the evidence underpinning the arguments contained in the OME Safety Submission. If the submission is deemed acceptable, they will:
 - a. Endorse or reject the OME Review Level Category assigned by the AP,
 - b. Conduct an independent peer review by the OSRP Panel of the documentary evidence in the form of an OME Safety Submission from the PT/DT.
 - c. Provide assurance through endorsement of the OME Safety Submission in the form of an OSRP Assurance Statement (OAS).
7. The outcome of a successful review will be endorsement of the OME Safety Submission, in the form of an OAS, which is signed by the OSRP Chair on behalf of WOC Hd Eng. The Panel may decide that Caveats / Provisos / Limitations are appropriate, the OSRP Chair will ensure that they are clearly identified as part of the OAS.
8. At various key stages throughout the Acquisition Cycle, the DT should request second party assurance of the OME system by presenting an OME Safety Submission which is proportional to the risks to the OSRP. Typically, it should be presented at the following key milestones:
 - a. Demonstration: OME system demonstration, testing compliance with capability and safety requirements by manufacturer/supplier, etc.
 - b. User Trials: Trials and testing conducted by the user to confirm OME system meets requirements or trial to gather evidence to support the system safety or operational capability, etc.
 - c. Entry to Service: Including OME Systems transferred into MOD ownership but held at non-MOD facility, delivery to MOD facility, training personnel, and declared in-

service and available for operational deployment. (Demonstrate that complete System is Safe and Suitable for Service (S3) within defined limits and necessary support elements, including Disposal Strategy, are in place to sustain Safe Operation through life).

- d. OAS Expiry, In-Service Design Changes and Changes in Use: Before the OME Review date is reached, any technical changes that affect the inherent safety of the OME System and where the User decides to change the capability of the system not included in the current scope of the OAS.
- e. Withdrawal from Service: Includes storage, handling, and transport to disposal only, if not already included in the current OAS. (Once the OME are fully disposed, the OME Safety Submission can be archived).

Guidance Material

9. Further guidance is available in the following publications:
 - a. [OSRP Handbook](#)
 - b. [ASEMS: Acquisition Safety and Environmental Management System.](#)

OME 118: Certification of Ordnance, Munitions and Explosives (OME)

Regulation

1. The Accountable Person shall ensure that the conformity of new Defence OME and Major Changes to either the Configuration, Role, or Environment (CRE) of legacy OME, is attested against the requirements of Part 1 of these Regulations, prior to their introduction into Service.

Rationale and Provenance

2. To demonstrate that a Defence OME entering service complies with applicable Defence Regulations and to provide confidence that it meets Essential Safety Requirements which align broadly with the Health and Safety Executive (HSE) safety requirements listed in Explosives Regulations 2014. These requirements are demonstrable through relevant evidence / test results / certificates etc and comprise the following Regulations:
 - a. a. DSA 02.OME (101): OME Design Requirements
 - b. b. DSA 02.OME (106): Classification for Transport and Storage
 - c. c. DSA 02.OME (107): Explosive Material (EM) Qualification
 - d. d. DSA 02.OME (108): Initiation Systems (IS) Qualification
 - e. e. DSA 02.OME (109): Software and Programmable Hardware
 - f. f. DSA 02.OME (110): Environmental Assessment (Climatic and Mechanical)
 - g. g. DSA 02.OME (111): Environmental Assessment (Electromagnetic Environmental Effects (E3))
 - h. h. DSA 02.OME (112): OME Vulnerability (Insensitive Munitions (IM))
 - i. i. DSA 02.OME (114): Gun Barrel Proof
3. The certification process ensures that there is early engagement with the Regulator, a mutual understanding and agreement on the route to compliance, by ensuring there is coherence in the three stages of assurance. This allows a more consistent approach and closer alignment to other schemes currently operated for Civil Explosives under ER2014 and in the MOD for maritime and aviation certification. Certification should enable early recognition of safety standards by those setting requirements and/or contract specifications, and by potential designers/manufacturers /sellers of the OME products, such that safety is designed-in from the start and maintained throughout the lifecycle of the OME.
4. Independent Technical Evaluation (ITE) support for OME Systems is required to assess critical safety information and evidence to provide assurance that the technical information is correct, is suitable to achieve objectives, is valid and is fit for purpose. ITE should also give oversight to the Accountable Person that the safety arguments are appropriate.
5. The provenance for this regulation is as follows:
 - a. Disapplication for Articles under the control of Secretary of State for Defence within [The Explosives Regulations 2014](#) Regulations 39, 40, 42.

Acceptable Means of Compliance

6. The Acceptable Means of Compliance for this regulation are detailed in the following publication:
 - a. DSA 03.OME Part 1: DCOP 118.
7. The MOD Project/Delivery Team Accountable Person responsible for the new UK OME being introduced into Service, or responsible for Major Changes (where there is an

appreciable effect on OME Safety) to the Configuration, Role, or Environment (CRE) of in-service OME, should ensure that the OME is attested and certified in accordance with the Defence OME Certification Process (DOMECP), which comprises the following 5 phases:

- a. Phase 1 - Definition and agreement of the working methods with the Applicant
 - b. Phase 2 - Technical familiarisation and establishment of the initial Certification Basis
 - c. Phase 3 - Agreement of the Certification Programme and Level of Involvement
 - d. Phase 4 - Compliance Determination
 - e. Phase 5 - Final Report and Certification
8. The two essential features demonstrating compliance with the DOMECP are:
- a. MOD Form 2306 - Declaration of OME Compliance (DORC). The Accountable Person (AP) for the OME product shall be responsible for completing a Declaration of OME Compliance (DORC) wherein they formally declare the compliance of an OME product with the requirements of DSA 02.OME: Defence OME Regulations, Part 1 and defined safety and environmental standards.
 - b. MOD Form 2307 – Certificate of OME Compliance (CORC). For certain high-hazard OME, the Accountable Person (AP) shall obtain an independent assessment of conformity from the Defence OME Certification Board (DOMECPB) and the Accountable Person (AP)'s DORC shall form part of the application exposition. The criteria for which OME this affects is explained in more detail in the DSA 03.OME Defence Code of Practice (DCOP) 118.
9. The holder of any certificates issued will be the appropriate Accountable Person (AP) for the OME. Following initial certification, the holder will be responsible for maintaining the continued through-life Safety and Suitability for Service (S3) data of the OME: in all cases, the holder must be a crown servant.
10. Confirmation of the existence of a valid UK Certificate should be an essential pre-requisite for introduction into Service of the OME and for informing integration activities onto MOD Platforms and requirements by platform regulators.

Guidance Material

11. There is currently no additional guidance material.

Part 2: Defence Regulations for In-Service and Operational Safety Management of OME

Justification

1. This section provides the regulatory framework for the in-service and operational management of OME during planning, training exercises and operations. It covers in-service logistics storage, processing, transportation and handling, operational safety management and logistic disposal of ammunition across the life-cycle safety management of OME.
2. Regulatory Governance is maintained through the Defence OME Safety Committee which reports to the DOSR Stakeholder Committee (DOSR SC).

Regulation Number	Regulation Title
OME 201	Appointment of TLB Inspectors of Explosives
OME 202	MOD Explosives Licensing Authorities
OME 203	Holders of a Licence for MOD Explosives Facilities
OME 204	Explosives Licensing in MOD Ports and Harbour Areas
OME 205	Deployment of MOD Explosives Overseas
OME 206	Separation Distances
OME 207	Safeguarding of MOD Explosives Capability
OME 208	Security Controls
OME 209	Record Keeping (reserved)
OME 210	Free from Explosives Certification
OME 211	Discarding and Disposal of Explosives

OME 201: Appointment of TLB Inspectors of Explosives

Regulation

1. Each TLB/Defence Agency (DA) that has a requirement to undertake explosives activities shall appoint an Inspector of Explosives (IE) to permission the activity.

Rationale and Provenance

2. Each TLB/DA has a responsibility to assess and manage the risks arising from their explosives activities and to ensure that adequate resources are provided to implement the controls required to safely manage the explosives activity.
3. IEs will issue MOD explosives licences under the authority of these Regulations on behalf of the DOSR/Chief Inspector of Explosives (MOD) (CIE (MOD)) including having direct right of access to DOSR/CIE (MOD) to resolve issues of appeal or challenge.
4. IEs will also provide essential Second Levels of Defence Assurance (2LOD, previously known as Second Party Assurance, 2PA) oversight and assurance to their TLB Heads.
5. The provenance for this regulation is as follows:
 - a. Disapplication for manufacture or storage of explosives at any site under the control of Secretary of State for Defence as specified in Regulations 3(9) and 3(10) of [The Explosives Regulations 2014](#), (Regulations 12-14, Regulations 16-18, Regulation 20, Regulation 23, Regulation 27, Regulation 29).

Acceptable Means of Compliance

6. TLBs should either recruit a competent crown servant to be the IE whose individual Terms of Reference will detail the responsibilities with regards to issuing explosives licences and 2PA reporting requirements or agree for the provision of explosives licensing support from another TLB/DA which has appointed a competent person as their IE. Such agreement is to be documented through an agreement between the TLBs/DAs concerned.

Guidance Material

7. Further guidance is available in the following publications:
 - a. DSA 03.OME Part 2: Chapter 1.

OME 202: MOD Explosives Licensing Authorities

Regulation

1. Every MOD Licensing Authority who issues an Explosives Licence to an MOD operated explosives facility must ensure that the relevant Separation Distances (Quantity Distances (QD)) mandated in these Regulations are met in full or a combination of QDs and other safety measures which are designed to an equivalent standard of safety as QDs.
2. The MOD Licensing Authority shall ensure that all other pre-requisites are in place before issuing a licence.

Rationale and Provenance

3. The MOD issues licences internally for MOD operated explosives facilities. These licences are only issued by competent individuals who are employed as Inspector of Explosives (IE) within their TLB and have had their competence endorsed by Letter from DOSR/CIE (MOD).
4. For the purposes of this regulation “relevant licensing authority” shall mean either CIE (MOD) or the TLB IE.
5. The provenance for this regulation is as follows:
 - a. Disapplication for manufacture or storage of explosives at any site under the control of Secretary of State for Defence as specified in Regulations 3(9) and 3(10) of [The Explosives Regulations 2014](#), (Regulations 12-14, Regulations 16-18, Regulation 20, Regulation 23, Regulation 27, Regulation 29).

Acceptable Means of Compliance

6. Depending on the level and means of compliance the issuing of an appropriate explosives licence by the appropriate Licensing Authority, will be one of the following:
 - a. Standard Licence. A Standard Licence is required for situations where all the requirements of DCOP 202 have been met in full, issued by TLB IE.
 - b. Variation Licence. A Variation Licence is required when DCOP 202 is not being met. However, an equivalent/necessary level of safety is being met by the implementation of other safety measures. This is issued by TLB IE after review by DOSR using the process detailed in DSA 03.OME Part 2.
 - c. Waiver Supported Licence. A Waiver Supported Licence is required when DCOP 202 is not being met and an equivalent level of safety cannot be demonstrated. This is issued by the TLB IE only after a waiver has been issued by DOSR using the process detailed in DSA 03.OME Part 2 Chapter 1.
7. There should also be evidence that the following prerequisites for issuing of a licence are in place:
 - a. Buildings and traverses are to be an approved design, or an assessment has been made to establish Potential Explosion Site (PES) type.
 - b. Electrical installations are to the required standard.
 - c. LPS is installed (where required).
 - d. New Buildings are commissioned iaw ESTC Standard 6.
 - e. MOD owned facilities have been accepted by the Defence Fire and Rescue Service (DFRS).
 - f. For non-MOD facilities the appropriate local civilian authority must be informed that a licence is being issued.

- g. All Buildings have been assessed in accordance with JSP 440 by security services.
- h. An Effective Safety Management System is in place.
- i. A suitably competent organisation is to operate the SMS.
- j. Appropriate Separation Distances can be applied.
- k. No potentially hazardous circumstances exist that may preclude the issuing of a licence.

Guidance Material

- 8. Further guidance is available in the following publications:
 - a. DSA 03.OME Part 2: Chapters 5,6,7,8,10,11 and 12.

OME 203: Holders of a Licence for MOD Explosives Facilities

Regulation

1. No person shall allow any explosives to be stored, processed, or handled within any MOD controlled facility unless the appropriate MOD Licensing Authority has issued a licence permitting such activity and there is full compliance with any mandatory operating conditions of that licence.
2. The Licensee shall apply to the appropriate MOD Licensing Authority for a MOD Explosives Licence for any Potential Explosion Site (PES). A PES is any stock of explosives, however or wherever stored (building, stack, Aircraft Arming Area, DAC Pan, vehicle, railway wagon, berth, transit shed etc), the explosion of which will affect an Exposed Site (ES).
3. The Licensee shall report any situation that could invalidate the licence to the MOD Licensing Authority.
4. The Licensee shall apply to renew the licence.

Rationale and Provenance

5. To provide assurance that MOD explosives facilities are fit for purpose to permit storage, handling, or processing of explosives and that they meet all the necessary operating conditions and mandatory separation distances to exposed sites.
6. The provenance for this regulation is as follows:
 - a. Disapplication for manufacture or storage of explosives at any site under the control of Secretary of State for Defence as specified in Regulations 3(9) and 3(10) of [The Explosives Regulations 2014](#), (Regulations 12-14, Regulations 16-18, Regulation 20, Regulation 23, Regulation 27, Regulation 29).
- 7.

Acceptable Means of Compliance

8. There should be evidence of a MOD Explosives Licence, issued by the appropriate IE, and any supporting waivers, issued by CIE (MOD), which permits the activity and evidence that the prerequisites for obtaining the licence are inspected and maintained to the required standards.

Guidance Material

9. Further guidance is available in the following publications:
 - a. DSA 02.OME Regulation 201.
 - b. DSA 03.OME Pt. 2: Chap 5, Chap 6, Chap 7, Chap 8, Chap 12, Chap 13, Chap 15, Chap 16, Chap 20.
 - c. ESTC Standard 6 Part 1 and Part 2.

OME 204: Explosives Licensing in MOD Ports and Harbour Areas

Regulation

1. No person shall allow any explosives to be carried or handled within any of His Majesty's Naval Bases (HMNB) or other MOD harbour areas, or load or unload any explosives, unless the appropriate MOD Licensing Authority has issued a licence permitting such activity and there is full compliance with any mandatory operating conditions of that licence.

Rationale and Provenance

2. This is a legal requirement of [The Dangerous Goods in Harbour Areas Regulations 2016 \(DG HAR 2016\)](#). Part 5, Explosives. A licence is also required to load or unload explosives from the coast of Great Britain or in territorial waters. HSE normally issues explosives licences for civil operated ports but for harbour areas regulated by ONR, ONR licenses the harbour area. Under the dis-application below, MOD Inspectors of Explosives (IE), authorised by DOSR, issue the explosives licence for HMNBs and MOD harbour areas (e.g., DM Jetties).
3. **MOD Dis-application.** Under Regulation 14, Application, para (2) (e) it states that Regulations 15 to 19 of [DG HAR 2016](#) do not apply to explosives under the control of the Secretary of State for Defence, or a visiting force or headquarters, complying with a scheme approved by that Secretary of State which provides for safe storage, carriage and handling; and prescribes separation distances or separation distances in combination with other safety measures as necessary. This Defence Regulation therefore is the basis of the MOD Scheme.
4. **Foreign Warships.** Similarly, Regulations 15 to 19 of [DG HAR 2016](#) do not apply to "Foreign Warships". Therefore, it is also incumbent upon the MOD to have suitable and sufficient arrangements in place to assess and manage the potential risks presented by any visiting Foreign Warships to protect against risk to life of UK personnel. Those arrangements are included in the MOD Scheme through the AMC below.
5. Definitions for the purposes of this Regulation:
 - a. **Harbour Area.** The definition of "harbour area" is contained within [DG HAR 2016](#), Regulation 2, Interpretation.
 - b. **Visiting Forces.** The legal basis for Visiting Forces in the UK is primarily the [Visiting Forces Act 1952](#) which incorporates the NATO Status of Forces Agreement of 1951 (SOFA) into UK law. From the UK's perspective, it applies equally to visiting forces in the UK and to British forces based in NATO countries. More specifically, US munitions in the UK are governed by a UK/US Memorandum of Agreement dated October 1997, entitled "The Import, Export, Transportation, Safety, Security, Storage and Disposal of US Explosives and Weapons in the UK and the Approval, Use and Safety of Ground Ranges".
 - c. **Warship.** The definition of a "Warship" is taken from the United Nations Convention on the Law of the Sea (UNCLOS). For the purposes of this Convention, "warship" means a ship belonging to the armed forces of a State bearing the external marks distinguishing such ships of its nationality, under the command of an officer duly commissioned by the government of the State and whose name appears in the appropriate service list or its equivalent and manned by a crew which is under regular armed forces discipline.

Acceptable Means of Compliance

6. One of the following should be in place for explosives under the control of the Secretary of State for Defence, or a visiting force or headquarters and, as far as is reasonably practicable, for visiting Foreign Warships:
 - a. **Handling, involving Loading or Unloading.** A MOD Explosives Licence issued by the appropriate MOD Licensing Authority. This includes Small Quantity Top Up (SQTU) Licences for restricted NEQ limits or Duty Holder acceptance of risk.
 - b. **Other Handling Activity.** DMR Regulations and DCOPs apply which will define the conditions when handling aboard is permitted to allow for specific maintenance activities and other mandatory checks to be carried out. In all other instances, or if in any doubt, a MOD Explosives Licence may be required, and further advice should be sought from the appropriate IE and/or DMR/DOSR before conducting the activity.
 - c. **Carrying.** DMR process for Warships in Harbour (WiH) certification applies for vessels carrying <100,000kg NEQ in the quiescent (undisturbed) state (excluding the permitted activity above). In all other instances that are not covered by a WiH assessment a MOD Explosives Licence may be required and further advice should be sought from the appropriate IE and/or DMR/DOSR.

Guidance Material

7. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: Chap 10, Sect 4.
 - b. DSA 03.OME Pt. 2: Chap 26.

OME 205: Deployment of MOD explosives to non-MOD locations (In the UK and overseas)

Regulation

1. Prior to any deployment of MOD explosives to non-MOD locations in the UK or overseas, a safety review shall be carried out of the facilities available at the host location, and any other location(s) transited through on route, where the MOD explosives are handled or stored.

Rationale and Provenance

2. The SofS Policy Statement on HS&EP in Defence directs that, 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 it is reasonably practicable to do so.
3. The authority of Defence Regulators derives from the DSA Charter issued by SofS and extends wherever Defence activities are conducted, including overseas (in which case the Regulator must consider whether the national legal requirements of the Host State have been complied with).
4. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

5. A safety review is to be carried out by a competent person on behalf of the appropriate TLB IE who is to produce a documented report.
6. Defence Regulations and UK legislation are to be compared with the Host Nation's (HN) requirements and the more stringent standards are to be applied.
7. There should be evidence of compliance with the applicable parts of these Regulations, involving MOD DH acceptance of risk where necessary.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: Chap 11.
 - b. ALP-16: Explosives Safety and Munitions Risk Management (ESMRM) in NATO Planning Training and Operations (For use when on NATO multinational ops and the explosives safety requirements of AASTP-1 or AASTP-5 as applicable, cannot be met).

OME 206: Separation Distances

Regulation

1. The Licensee shall ensure that the relevant separation distances are maintained at all times.
2. The Licensee shall report any instances where separation distances cannot be maintained to the appropriate Licensing Authority.

Rationale and Provenance

3. In most cases a separation distance must be maintained between the explosives building and neighbouring inhabited buildings. This is to keep risks to those living or working in the area to an acceptable level. Other separation distances provide protection against simultaneous propagation between adjacent facilities and protection to public traffic routes and vulnerable facilities or locations.
4. The provenance for this regulation is as follows:
 - a. Disapplication for manufacture or storage of explosives at any site under the control of Secretary of State for Defence as specified in Regulations 3(9) and 3(10) of [The Explosives Regulations 2014](#), (Regulation 27).

Acceptable Means of Compliance

5. There should be evidence that the licensee is proactively managing the separation distances stipulated in the explosives licence to ensure they are being maintained at all times.

Guidance Material

6. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: Chap 10

OME 207: Safeguarding of MOD Explosives Capability

Regulation

1. The HoE shall produce a Registered or Unregistered Safeguarding Plan:
 - a. Registered: Where part of the Safeguarding area falls outside the MOD boundary and the Safeguarding Plan is registered with the DIO.
 - b. Unregistered: Where the Safeguarding area lies entirely within the MOD boundary, thereby only blighting MOD property, so does not require registering with the DIO.
2. The DIO shall lodge the Safeguarding Plan with the appropriate civilian authority.
3. The HoE is to regularly inspect the safeguarding area.
4. The HoE shall update the Safeguarding Plan when any changes or variance to their licences occur.

Rationale and Provenance

5. To ensure that MOD explosives, and other essential defence installations, are not compromised by civil encroachment of private or public development within the prescribed quantity distances, maps limiting such development are lodged by the Defence Infrastructure Organisation (DIO), via the Office of the Deputy Prime Minister (ODPM) and Department of Transport, Local Government and the Regions (DTLR), in England, the Scottish Executive in Scotland, and the Welsh Assembly in Wales, with the Local Planning Authority (LPA). This process is known as Explosives Safeguarding.
6. The provenance for this regulation is as follows:
 - a. A Defence organisation has requested, and the DSA has accepted, that an area of Defence activity is not sufficiently regulated.

Acceptable Means of Compliance

7. The HOE should be able to provide evidence of proactive safeguarding to maintain the validity of their explosives' licences.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: Chap 22

OME 208: Security Controls

Regulation

1. The Licensee shall assess the security requirements and record the result.
2. The Licensee shall implement the required security requirements.
3. The Licensee shall ensure these security requirements are maintained.

Rationale and Provenance

4. Military explosives have the potential to be misused and that misuse can cause both harm to people, the damage or destruction of property and infrastructure, and disruption to defence capability and wider daily life. In addition, inadequate controls can result in unauthorised people having access to facilities where military explosives are manufactured, stored, kept, or used which can increase the likelihood of a fire or explosion occurring through inappropriate actions or behaviours.
5. The provenance for this regulation is as follows:
 - a. A Defence organisation has requested, and the DSA has accepted, that an area of Defence activity is not sufficiently regulated.

Acceptable Means of Compliance

6. There should be clear evidence of compliance with JSP 440: Defence Manual of Security.

Guidance Material

7. Further guidance is available in the following publications:
 - a. JSP 440: Defence Manual of Security.

OME 209: Record Keeping (reserved)

Regulation

Rationale and Provenance

Acceptable Means of Compliance

Guidance Material

OME 210: Free from Explosives (FFE) Inspection

Regulation

1. Prior to transfer, change of ownership, or change of status, of any item that has previously contained, stored, processed, or carried OME, the item shall be thoroughly inspected by a competent person to confirm that it is either completely Free from Explosives (FFE) or whether any potential explosive hazard may remain.
2. The findings of the inspection shall be communicated in writing to all parties receiving or controlling the item.

Rationale and Provenance

3. Items that have contained, stored, processed, or carried OME may present a residual explosive hazard. The term "Item" includes but is not limited to; packages which have contained explosives, arisings from the firing, proofing, breakdown, or disposal of ammunition/explosives; souvenirs/displays including museums, training aids, platforms and other equipment expected to use or hold munitions; equipment used to process explosives and subsequently in need of maintenance or repair and buildings and ground.
4. Within this regulation the term "Free from Explosives" means "Free from explosives to such an extent that the item does not present an explosives hazard irrespective of any potential future threats, e.g., heat, impact, etc". Note: With modern analytical instruments having detection levels of ppm or less, clarification of the meaning of the term "Free from Explosives" is required.
5. To establish what, if any, residual explosives hazard remains the item shall be inspected as far as reasonably practicable. The finding of the inspection is to be communicated to relevant parties. This will permit them to complete a suitable and sufficient risk assessment for the activity they plan to undertake.
6. This regulation captures the whole range of items held by MOD with differing levels of complexity. It is expected that it will be reasonably practicable for a competent person to certify an item FFE by a careful visual examination, for example, standard ammunition boxes. Alternatively, there are items that may require special tools or equipment to complete a sufficient inspection to allow the item to be declared FFE.
7. There are also instances where it may not be reasonably practicable to determine if an item is FFE, due to design or complexity of the item.
8. The findings of any inspection shall be communicated in writing to all parties receiving or controlling the item.
9. The same regime should also be used to ensure the absence of other secondary hazardous substances which may be associated with the Munitions, e.g., White and Red Phosphorus and CS.
10. The provenance for this regulation is as follows:
 - a. A Defence organisation has requested, and the DSA has accepted, that an area of Defence activity is not sufficiently regulated.

Acceptable Means of Compliance

11. Provision of the relevant information. Where an inspection is sufficient to Certify an item Free from Explosives:

- a. A signed Certified Free from Explosives (CFFE) Certificate, MOD Form 2257, informing all relevant parties that the item no longer presents an explosives hazard. The completed certificate is to be secured to, or placed in, the item.
12. Or where it is not reasonably practicable to undertake a sufficient inspection to certify an item FFE:
 - a. A signed “Declaration of Potential Explosives Hazard statement” MOD Form 2306 detailing any credible potential explosives hazard that may remain. The completed declaration is to be secured to, or placed in, the item.
13. In instances where it is not reasonably practicable to secure to, or place the documentation in or on the item, evidence must be available that an inspection has been conducted and relevant parties informed.
14. Violations to the above regulation are to be considered “Munition Incidents” and be reported in accordance with DSA 03 OME, Part 2, Chapter 25, “Munitions Incidents Investigation and Reporting”.

Guidance Material

15. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: Chap 27 “Free from Explosives Inspections and Reporting”.

OME 211: Discarding and Disposal of Explosives

Regulation

1. All explosives, and explosive contaminated items, shall be discarded and disposed of safely.
2. All disposal activity should be by the most environmentally sympathetic way, that is reasonably possible.

Rationale and Provenance

3. One of the main causes of accidents in the explosives industry is the disposal of explosives waste. Disposal of explosives includes their destruction, or rendering them permanently explosively inert, or their safe and legal transfer to another competent person.
4. The risks associated with disposal of explosives waste means that incidents often lead to injuries or fatalities.
5. Accidents can be avoided by ensuring there is a better appreciation of the properties and behaviour of explosives under certain conditions. For example, explosives earmarked for destruction may be unusually unstable due to deterioration. Anyone disposing of explosives should also be aware that they have duties to do so in a way that is not harmful to the environment.
6. The provenance for this regulation is as follows:
 - a. A Defence organisation has requested, and the DSA has accepted, that an area of Defence activity is not sufficiently regulated.

Acceptable Means of Compliance

7. There should be clear evidence that the activity is being managed and carried out by competent individuals who should draw-up suitable and sufficient risk assessments, properly considered systems of work and ensure appropriate safety precautions and environmental protection controls are put in place.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 2: Chap 10, Sect 9.
 - b. [ASEMS: Acquisition Safety and Environmental Management System.](#)

Part 3: Defence Regulations for Ranges

Justification

1. The Ministry of Defence owns, uses or is otherwise responsible for a considerable number of MOD based firing ranges throughout the UK and abroad. Whether these are used by military or by civilian personnel, safety is of paramount importance. There is always potential for a serious accident to range users, to those who operate or maintain ranges and to the public, if firing activities are not properly regulated and controlled.
2. These Regulations and associated guidance consider all aspects of the provisions, use, maintenance, and inspection of MOD Ranges, for which there is no appropriate statute or equivalent civil practice with which to compare.
3. The 4 elements covered are Safe People, a Safe Place, Safe Equipment and Safe Practice.
4. Regulatory Governance is maintained through the Defence Ranges Safety Committee (DRSC) which reports to the DOSR Stakeholder Committee (DOSR SC).

Regulation Number	Regulation Title
RANGES 301	Design and Construction of MOD Ranges
RANGES 302	Foreign Designed Ranges
RANGES 303	Authorisation to Operate a MOD Range
RANGES 304	Range Safety Certificate
RANGES 305	Range Standing Orders
RANGES 306	Control of Access
RANGES 307	Safety of Untrained Personnel
RANGES 308	Safe Handling of Weapons
RANGES 309	Medical Cover
RANGES 310	Incident, Near Miss and Accident Reporting
RANGES 311	Non-Service Pattern Light Weapons
RANGES 312	Approved Targets
RANGES 313	Field Craft Training Areas

RANGES 301: Design and Construction of MOD Ranges

Regulation

1. All MOD Ranges shall be designed, constructed, and maintained according to MOD Standards and supported by a valid MOD Form 1057 – Record of Range Proceedings Certificate.

Rationale and Provenance

2. MOD Standards ensure that MOD Ranges are designed, constructed, and maintained safely. This Regulation forms an essential component of the Safe Place element of the MOD Safety and Environmental Management System for Ranges.
3. MOD Standards can also be applied to provide assurance that foreign designed ranges are suitable and help identify areas of non-compliance.
4. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

5. Evidence of compliance with MOD Standards should be documented on a Record of Range Proceedings Certificate (MOD Form 1057).

Guidance Material

6. Further guidance is available in the following publications:
 - a. DSA 03.OME Part 3: Vol 1, Part 2, Chap 7, Para 119.
 - b. DSA 03.OME Part 3: Vol 2.

RANGES 302: Foreign Designed Ranges

Regulation

1. All foreign designed ranges, whether in the UK or overseas, which are controlled or used by MOD personnel, shall be correctly authorised for use.

Rationale and Provenance

2. Before conducting activity on a Range which has not been built to MOD standards there should be confirmation that the range is at least as safe as an equivalent MOD designed range.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. There should be clear documentary evidence that the Range has been assessed against MOD standards to ensure it is safe and authorised for use.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Part 3: Vol 2.Vol 1, Part 1

RANGES 303: Authorisation to Operate a MOD Range

Regulation

1. The authorised person who operates a MOD Range shall ensure that a valid MOD Form 904 – Range Authorisation Certificate has been issued by the Regulator prior to the use of the range.

Rationale and Provenance

2. Range Certification provides confirmation of Independent 3rd Party Regulatory Assurance to the SofS and testifies the extent to which the requirements of the MOD Regulations have been complied with. Any deviation from meeting the specific regulatory safety requirements could have significant safety implications.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. A valid MOD Form 904 – Authorisation for Use Certificate for bringing a MOD range into use on a permanent basis issued by DSA DOSR.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Part 3: Vol 1, Part 1, Chap 61.
 - b. DSA 03.OME Part 3: Vol 1, Part 2, Chap 35

RANGES 304: Range Safety Certificate

Regulation

1. Any person who operates a MOD Range shall ensure that a valid MOD Form 905 – Range Safety Certificate has been issued by the RAU prior to the use of the range.

Rationale and Provenance

2. Range Safety Certification details the equipment and calibre of weapons that are permitted to be used on the range.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Evidence of a valid MOD Form 905 – Range Safety Certificate.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Part 3: Vol 1, Part 2, Chap 5.
 - b. DSA 03.OME Part 3: Vol 1, Part 2, Chap 5, Annex B.

RANGES 305: Range Standing Orders

Regulation

1. Each MOD Range Operator shall produce clear Range Standing Orders which cover the use and operation of each MOD Range.

Rationale and Provenance

2. Range Standing Orders are a set of orders derived from a Site-Specific Risk Assessment which specify the control measures and procedures for the safe operation and use of the Range and shall be read by users before planning any OME activity.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Evidence of a set of orders specific to each Range.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Vol 1, Part 1, Chap 53.

RANGES 306: Control of Access

Regulation

1. All measures necessary shall be applied to control access to MOD Ranges.

Rationale and Provenance

2. The purpose of controlling access to MOD Ranges is to reduce the potential risk of injury or death from the hazards associated with OME activities.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Evidence that the public are protected from hazards by all means which are reasonably practicable including:
 - a. identification of the areas where the hazards exist.
 - b. warning the public that the hazards exist.
 - c. ensuring that the Range Danger Area (RDA) remains clear of the public.
 - d. ensuring that the RDA remains clear of intruders or making provisions for the timely cessation of the hazardous activity before the activity poses a risk to an intruder.
 - e. permitting the practice to take place.
 - f. at the end of a practice ensuring as far as reasonably practicable that the RDA or appropriate part of the RDA is no longer hazardous; and
 - g. permitting limited or public access.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Vol 1, Part 1, Para 52.

RANGES 307: Safety of Untrained Personnel

Regulation

1. Untrained personnel using MOD Ranges shall be appropriately supervised and authorised prior to the use of Service Weapons and Service ammunition on MOD property.

Rationale and Provenance

2. The appropriate authorisation ensures that those responsible for the control and management of MOD Ranges safeguard, as far as reasonably practicable, untrained MOD or non-MOD personnel who are authorised to enter MOD Ranges.
3. The [Armed Forces Act 1996](#) states that a person under the supervision of a member of the Armed Forces may, without holding a certificate or obtaining the authority of the Secretary of State under Section 5 of the [Firearms Act 1968](#) have in their possession a firearm and ammunition on service premises.
4. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

5. Evidence that untrained personnel are under the supervision of a member of the armed forces who is on duty and competent to provide such supervision and that the specific activity is authorised.

Guidance Material

6. Further guidance is available in the following publications:
 - a. Dismounted Close Combat, Pamphlet 21, Training Regulations for Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics.
 - b. Royal Artillery Manual Volume V1, Pamphlet 51, Regulations for Planning, Control, Conduct and Safety for Firing Practices.
 - c. Military Engineering Volume II Field Engineering, Pamphlet No 4A, Battle Noise Simulation
 - d. Military Engineering Volume II Field Engineering, Pamphlet No 4, Demolitions
 - e. Helicopter Training Volume III Ranges, Pamphlet No. 300 Edition 3, Regulations for the Safe Planning, Conduct and Supervision of Firing (Helicopter Weapons)

RANGES 308: Safe Handling of Weapons

Regulation

1. All personnel handling weapons on MOD Ranges shall be formally trained and tested within the qualifying period in accordance with Service Manuals.

Rationale and Provenance

2. All personnel should have the experience and competency to handle, operate and fire weapons in a safe manner on MOD Ranges.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. There should be evidence that all personnel meet the mandatory criteria for the use of AFV, Infantry Weapon Systems and Pyrotechnics as follows:
 - a. **Formally Trained.** Trained by a qualified and competent Skill at Arms (SAA) / Gunnery Instructor, in accordance with the appropriate Service Training Publication.
 - b. **Formally Tested.** Passed Weapon Handling Test (WHT), conducted by a SAA instructor who is current with the weapon system, within the qualifying period.
 - c. **Live Firing Tested.** Passed the weapon live firing test within the required qualifying period. Results must be recorded.
 - d. **Training Progression.** Having followed the progression of training prescribed within the Commanders Guide in Operational Shooting Policy; and
 - e. **Practical Understanding.** Having been suitably briefed on the requirements and constraints of the exercise or range practice.

Guidance Material

5. Further guidance is available in the following publications:
 - a. Dismounted Close Combat, Pamphlet 21, Training Regulations for Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics.
 - b. Close Combat – Ranges Operational Shooting Policy Volume 1 – Personal Weapons 2022.
 - c. Helicopter Training Volume III Ranges, Pamphlet No. 300 Edition 3, Regulations for the Safe Planning, Conduct and Supervision of Firing (Helicopter Weapons)

RANGES 309: Medical Cover

Regulation

1. The appropriate level of medical cover shall be in place according to the scale of OME activity to be conducted on MOD Ranges.

Rationale and Provenance

2. It is the responsibility of the Senior Planning Officer to appoint a Planning Officer and a Range or Exercise Conducting Officer (RCO/ECO) and to ensure that they are given guidance of the required medical and emergency plan.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. The RCO/ECO should ensure that they comply with the minimum medical requirement table prescribed in Chapter 2 of Pamphlet 21 and provide that:
5. Written instructions that confirm that the user unit is fully conversant with the medical emergency procedures and have robust communications.
6. Written instructions that are countersigned by the Senior Planning Officer providing assurance that the Planning Officer has been appropriately supervised.
7. For all LFTT activity the RAU conducts a gross error check to ensure a safe place.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Vol 1, Part 2, Chap 1, Annex G.
 - b. Dismounted Close Combat, Pamphlet 21, Training Regulations for Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics.
 - c. Royal Artillery Manual Volume V1, Pamphlet 51, Regulations for Planning, Control, Conduct and Safety for Firing Practices.
 - d. Military Engineering Volume II Field Engineering, Pamphlet No 4A, Battle Noise Simulation
 - e. Military Engineering Volume II Field Engineering, Pamphlet No 4, Demolitions
 - f. Helicopter Training Volume III Ranges, Pamphlet No. 300 Edition 3, Regulations for the Safe Planning, Conduct and Supervision of Firing (Helicopter Weapons)

RANGES 310: Incident, Near Miss and Accident Reporting

Regulation

1. All incidents, near misses and accidents as a result of MOD Range activities and practices, including those involving Military Lasers shall be reported.

Rationale and Provenance

2. To ensure that an appropriate investigation takes place and that lessons can be learned from any unplanned incident or accident on a range, resulting from live firing activity.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Evidence that any Incident, Near Miss or Accident involving injury or death, damage or loss of a weapon system/platform, damage to range infrastructure or any impact on environmental protection has been reported and followed-up to ensure lessons can be learned to prevent re-occurrence.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Vol 1, Part 2, Chap 1.
 - b. DSA 03.OME Vol 1, Part 2, Chap 5.
 - c. DSA 03.OME Vol 1, Part 2, Chap 7 Annex B

RANGES 311: Non-Service Pattern Light Weapons (NSPLW)

Regulation

1. The use of NSPLW on MOD Ranges shall be authorised and approved as safe to use in accordance with Service Manuals.

Rationale and Provenance

2. There are occasions when MOD personnel may be required to fire NSPLW. For reasons of time, quantities deployed, cost or operational requirements it is not always practical for these weapons to be subjected to the full series of tests normally conducted.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Evidence that the pre-firing assessment procedure has been followed before MOD personnel are authorised to fire the NSPLW.

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Vol 1, Part 2.
 - b. DSA 03.OME Part 1: Defence Code of Practice (DCOP) and Guidance Notes for OME Acquisition: Chapter 9 Annex H

RANGES 312: Approved Targets

Regulation

1. Only approved targets shall be used on MOD Ranges.

Rationale and Provenance

2. The use of the approved targets is essential to the safety of a fixed range as the type, position and size of the targets are principal considerations in range design. Line of Sight (LoS) Quadrant Elevation (QE) and ricochet determine range geometry, which may be adversely affected if unapproved targets are used on MOD ranges.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Approved targets for all Target Mechanisms and Support Systems, including Fixed Target Mechanisms and accessories.

Guidance Material

1. Further guidance is available in the following publications:
 - a. DSA 03.OME Vol 2

RANGES 313: Fieldcraft Training Area (FTA)

Regulation

1. All FTAs (formerly known as Dry Training Areas) shall have in place the necessary requirement from the list below (appropriate to FTA category) before any training involving Munitions and Explosives is undertaken:
 - a. An FTA shall be registered with the OME Regulator.
 - b. An FTA shall have a nominated Administering Unit (AU).
 - c. A Site-Specific Risk Assessment (RA) is to be undertaken.
 - d. Site-Specific Standing Orders (SO) are in place for the FTA.
 - e. The use of the FTA shall be pre-booked and recorded.
 - f. Appropriate control measures and signage shall be put in place for the duration of the training.
 - g. Provision to clear the FTA of all OME as reasonably practical and leave it in a safe condition after use as prescribed in SOs.
 - h. Procedures for Disposal are to be in place.

Category	Descriptor
Category 1	An FTA where: <ol style="list-style-type: none"> a. Blank / MRTS / ammunition / pyrotechnics are used. b. OME (including BATSIM) that will require disposal charge action should it fail to function.
Category 2	An FTA where: <ul style="list-style-type: none"> • Blank / MRTS / ammunition / pyrotechnics are used. • OME that will NOT require disposal charge action should it fail to function
Category 3	A permanent FTA where no OME is used: <ul style="list-style-type: none"> • Non-OME activities are conducted and listed within the schedule of MOD Form 1925.

Rationale and Provenance

2. Training undertaken on these areas can be hazardous and presents risks to both military personnel and to the public, where the public can, at other times have uncontrolled access.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Proof that the FTA is recorded in the DOSR register.
5. A suitable and sufficient RA is available.
6. FTA SOs are available.
7. An Exercise Action Safety Plan (EASP) is to be written by the exercising unit. AUs are responsible for conducting a gross error check on each EASP.
8. Confirmation that the FTA has been pre-booked and approved for use.
9. Appropriate control measures signage is deployed that warns the public of the training activities and potential hazards.

10. It is demonstrated that time is given to sweep the FTA of OME, and clean-up as required.
11. All OME activity is to be recorded using MOD Form.

Guidance Material

12. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 3: DCOP 313.

Part 4: Major Accident Control Regulations (MACR)

Justification

1. [The Control of Major Accident Hazards Regulations 2015](#) (COMAH) and [The Control of Major Accident Hazards Regulations \(Northern Ireland\) 2015](#) implement much of the Seveso III Directive (2012/18/EU) in Great Britain and Northern Ireland. The purpose of the COMAH Regulations is to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any accidents which do occur.
2. However, COMAH Regulations do not apply to MOD Establishments and therefore, Commanding Officers (CO) and Heads of Establishments (HOE) [referred to as 'Operators' throughout these Regulations] on MOD Establishments where the threshold quantities of dangerous substances identified in the Regulations are kept or used, shall observe the following Defence MACR.
3. These Regulations apply to all Lower Tier Establishments (LTE) and Upper Tier Establishments (UTE) as defined in COMAH.
4. Regulatory Governance is maintained through the Major Accident Control Safety Committee (MAC SC) which reports to the DOSR Stakeholder Committee (DOSR SC). Additionally, a MOD Competent Authority Chaired by the 2* DSA Director Operations and Assurance and comprising DOSR, the Defence Fuels and Gases Safety Regulator (DFGSR), the Defence Fire Safety Regulator (DFSR) and the Defence Environmental Protection Regulator (DEPR) works in partnership with stakeholders to improve major accident hazard management and raise standards across the MOD.

Regulation Number	Regulation Title
MACR 401	General Duties of Operators
MACR 402	Notification of Holdings
MACR 403	Major Accident Prevention Policy (MAPP)
MACR 404	Safety Report (SR)
MACR 405	Environmental Risk Assessment (ERA)
MACR 406	Emergency Plans
MACR 407	Provision of Information to the Public
MACR 408	Domino Effects and Domino Groups

MACR 401: General Duties of Operators

Regulation

1. Every operator shall take all measures necessary to prevent major accidents and limit their consequence to human health and the environment.
2. Every operator shall demonstrate to the competent authority that they have taken all measures necessary as specified in these Regulations.
3. Every operator shall provide the Major Accident Control Regulations (MACR) Assurance Team with such assistance as is necessary to enable the competent authority to perform its functions under these Regulations.

Rationale and Provenance

4. These are general duties on all operators and underpin these Regulations. They set a high standard that applies to all MOD establishments.
5. 'All measures necessary' includes measures for mitigating the consequences of major accidents. This includes planning for emergencies and remedial measures for restoration of the environment in the event of a major accident.
6. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

7. Each MOD establishment operator should liaise directly with DOSR to agree the arrangements for their establishment:
 - a. All measures necessary are in place for each separate credible major accident scenario.
 - b. DOSR considers all measures necessary to be in place when:
 - i. the risks are demonstrated to either Broadly Acceptable or ALARP; and
 - ii. that demonstration has been accepted and verified.
 - c. Provide DOSR with documents on request and facilitate on-site visits as required by DOSR MACR inspectors.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 401

MACR 402: Notification of Holdings

Regulation

1. Every operator shall provide DOSR with the required notification of holdings of qualifying hazardous material (see DSA 03.OME Part 4 DCOP 402a Annex E) and additionally shall notify the MACR Assurance team of a significant increase or decrease in the quantities of notifiable substances. Notification is also required if the form or nature of the dangerous substance's changes significantly.
2. Every Operator shall provide details to the MACR Assurance team of major changes to site personnel and organisational structure.
3. If an establishment has yet to be constructed and, when operational, will become subject to MACR, the operator shall send notification to the MACR Assurance Team.

Rationale and Provenance

4. Notification of holdings is essential to enable DOSR to identify the qualifying threshold for MOD establishments. This Rationale and Provenance applies to major changes in holdings.
5. Provision of changes to site personnel or organisational change is key to providing assurance that MACR competence is maintained.
6. The Operator is to provide details of proposed or ongoing Construction of a MACR site to facilitate engagement with DOSR to assist and advise during the planning and construction process.
7. Notifications will be used by the MACR Assurance Team to plan their assessment and inspection programmes and ensure the operator complies with their duties under these Regulations.
8. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

9. The operator should provide evidence notifying DOSR of the quantity of dangerous substances at its establishment (including significant changes) where they will equal or exceed the thresholds in DCOP 402a.
10. The Operator should provide details of changes to site personnel and organisational change to DOSR as a matter of normal routine. DCOP 402b refers.
11. The operator should provide details of planned or ongoing construction of a MACR site to DOSR. DCOP 402c refers.

Guidance Material

12. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 402

MACR 403: Major Accident Prevention Policy (MAPP)

Regulation

1. Every operator shall produce and maintain an up-to-date Major Accident Prevention Policy (MAPP).
2. The MAPP shall demonstrate that major accident hazards and possible major accident scenarios have been identified and that the necessary measures have been taken to prevent such accidents and to limit the consequences to human health and the environment.
3. The MAPP shall demonstrate that adequate safety and reliability have been considered in the design, construction, operation and maintenance of any installation, storage facility, equipment and infrastructure connected to its operation which are linked to major accident hazards inside the establishment.
4. The MAPP shall demonstrate that internal emergency plans have been drawn up and that appropriate information has been supplied to enable external emergency plans to be drawn up (Upper Tier Sites (UTE) only).

Rationale and Provenance

5. The MAPP is a key document. Its purpose is to provide a statement of the senior management's commitment to achieving high standards of major accident control measures.
6. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

7. The Major Accident Prevention Policy (MAPP) is a document which:
 - a. is designed to ensure a high level of protection of human health and the environment.
 - b. is proportionate to the major accident hazards.
 - c. sets out the operator's overall aims and principles of action.
 - d. sets out the role and responsibility of management, and its commitment towards continuously improving the control of major accident hazards.
8. For Lower Tier MACR establishments it is a standalone document but for Upper Tier MACR establishments the MAPP may be included in the Safety Report rather than as a separate document. The MAPP is to be made available for inspection on request.

Guidance Material

9. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 403

MACR 404: Safety Report (SR)

Regulation

1. All operators of Upper Tier Establishments shall prepare and maintain an up-to-date Safety Report (SR).
2. The Safety Report shall contain details of Establishment Holdings, Emergency Response Organisation, Installations and the Risk Assessments for safe management, Major Accident Scenario's, Emergency Plans, Environmental Information, Safety Management System (SMS) and Environmental Management System (EMS) monitoring arrangements and Public Information Zone (PIZ).

Rationale and Provenance

3. The SR demonstrates that a Major Accident Prevention Policy (MAPP) and a Safety Management System (SMS) for implementing it, have been put into effect.
4. It demonstrates that the major accident hazards and possible major accident scenarios in relation to the establishment have been identified. That necessary measures have been taken to prevent such accidents and to limit their consequences for human health and the environment.
5. That adequate safety and reliability factors have been considered in the design, construction, operation and maintenance of any installation, storage facility, equipment and infrastructure connected with the establishment's operation.
6. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

7. Operators should be able to produce an SR, showing all measures necessary have been taken to prevent major accidents and to limit the consequences to people (including the public) and the environment of any that do occur.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 404
 - b. COMAH 2015 Safety Report Assessment Manual (SRAM)
 - c. <https://www.hse.gov.uk/comah/ca-guides.htm>

MACR 405: Environmental Risk Assessment (ERA)

Regulation

1. Every operator shall prepare and maintain an up-to-date Environmental Risk Assessment (ERA).
2. An Establishment shall demonstrate procedures for identifying the potential of a Major Accident, with consideration given to any subsequent emergency response. The necessary measures for preventing, or mitigating, any associated environmental impacts shall be detailed.

Rationale and Provenance

3. The ERA is required to ensure that operators have considered and are aware of the potential environmental consequences of their operations.
4. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

5. Operators should provide an effective, comprehensive, and up-to-date ERA, which focuses on the prevention of avoidable harmful environmental impacts.

Guidance Material

6. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 405

MACR 406: Emergency Plans

Regulation

1. MACR Establishments shall produce the required Emergency Plan(s).
2. Emergency Plans shall meet the required objectives.
3. Emergency Plans shall be reviewed and tested at appropriate intervals.
4. Operators of Upper Tier Establishments shall provide their local authority with the necessary information*, to enable them to formulate their off-site Emergency Plan.
5. Internal/External Emergency Plans shall be put into effect without delay if:
 - a. a major accident occurs; or
 - b. an uncontrolled event occurs which, by its nature, could reasonably be expected to lead to a major accident.

* Overseas, approval for this information to be shared with a foreign authority, taking account of any security implications, shall be sought from the appropriate authorities within Defence.

Rationale and Provenance

6. This regulation requires MACR Establishments to ensure that the consequences of a major accident are minimised through the provision of effective on-site emergency planning and response arrangements and where necessary, dovetailing with the off-site emergency plans prepared by the local authorities under COMAH or civil contingencies legislation.
7. Local authorities play a key role by preparing, reviewing, revising, and testing off-site emergency plans for dealing with the off-site consequences of major accidents at Upper Tier Establishments.
8. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

9. All MACR Upper Tier Establishments will have both on-site and off-site Emergency Plans; Lower Tier Establishments will have an on-site Emergency Plan.
10. Operators should provide documentary evidence that the following four objectives have been met by their Emergency Plans:
 - a. Containing and controlling incidents to minimise the effects and limit damage to human health and the environment.
 - b. Implementing the measures necessary to protect human health and the environment from the effects of Major Accidents (MAs).
 - c. Communicating the necessary information to the public, LA, and the emergency services.
 - d. Providing for the remediation of the environment should an MA occur.
11. Operators should provide documentary evidence that the plans have been reviewed and tested.

Guidance Material

12. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 406

MACR 407: Provision of Information to the Public

Regulation

1. Every operator shall ensure the provision of information to the public is available, timely and up to date.
2. An operator of an Upper Tier Establishment shall provide information to anyone in an area likely to be affected by a major accident within the Public Information Zone (PIZ).

Rationale and Provenance

3. This Regulation is to ensure that residents within the PIZ are aware of the actions to be taken in the event of a major accident at the operator's establishment.
4. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

5. Operators should provide evidence of how they achieve and maintain the provision of information to the public.
6. This information should be in accordance with the Public Sector Bodies (Websites and Mobile Applications) (No. 2) Accessibility Regulations 2018.

Guidance Material

7. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 407
 - b. COMAH 2015 Public Information Search
 - c. <https://notifications.hse.gov.uk/COMAH2015/Search.aspx>

MACR 408: Domino Effects and Domino Groups

Regulation

1. Every operator shall identify domino groups and the potential risks and consequential effects.
2. Every Operator shall consider domino groups and potential risks during the concept, design, build and commissioning of new facilities or the refurbishment of existing facilities that increase the capacity for the storage of dangerous substances and articles.

Rationale and Provenance

3. Some establishments may be designated as being part of a 'domino group' – establishments where the likelihood or consequences of a major accident may be increased because of the location and proximity of other establishments and the dangerous substances present there.
4. These establishments need special consideration in terms of emergency planning and the testing of the off-site response. The operators in the group should co-operate with each other in supplying any relevant information to the local authority.
5. The provenance for this regulation is as follows:
 - a. Disapplication for Establishments under the control of Secretary of State for Defence within [The Control of Major Accident Hazards Regulations 2015](#).

Acceptable Means of Compliance

6. Operators should provide evidence that they have considered the possibility of another MACR or Control of Major Accident Hazards (COMAH) establishment being sufficiently close as to be a domino establishment.
7. Details should be included in the Safety Report or MAPP as applicable.

Guidance Material

8. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 4: DCOP 408
 - b. DSA 02.OME Regulation 406: Emergency Plans

Part 5: Military Lasers and Directed Energy Weapons (DEW)

Justification

1. The [Control of Artificial Optical Radiation at Work Regulations \(CAOR\) 2010](#) sets requirements for protection of employees from laser radiation. The [Health and Safety at Work etc. Act 1974](#) requires that employers and employees fulfil their 'duty of care' under Sections 2 and 7 of this Act and that employers comply with Regulation 3 of [The Management of Health and Safety at Work Regulations 1999](#) by conducting, recording, and reporting risk assessments.
2. The main hazard when using lasers is the beam of non-ionising radiation which can deliver large amounts of energy over a small area, and over long distances. To allow for the safe use of lasers, personnel shall be prevented from exposure to levels of laser radiation which could cause injury.
3. The MOD has a general approach of adopting best practice from industry and meeting or exceeding UK health and safety standards. The purpose of these Regulations is to ensure that exposure to laser radiation is kept As Low as Reasonably Practicable (ALARP).
4. Directed Energy Weapons (DEW) are new technologies which use directed electromagnetic energy, including laser, microwaves, and particle beams. DOSR are in the process of reviewing and up-issuing regulations and guidance material to ensure appropriate regulation of Directed Energy Weapons.
5. Regulatory Governance is maintained through the Defence OME Safety Committee which reports to the DOSR Stakeholder Committee (DOSR SC).

Regulation Number	Regulation Title
Lasers 501	Military Laser Safety Certification during Procurement Process
Lasers 502	Military Laser System Safety Assessment for Service and Training Use
Lasers 503	Military Laser System Through Life Safety Management

Lasers 501: Military Laser Safety Certification during Procurement Process

Regulation

1. All military laser systems and activities shall be certified to state clearly any constraints placed on the firing of the laser and highlight the known hazards arising from use of the laser system.

Rationale and Provenance

2. The MOD has a duty of care to ensure the safety of unprotected persons who may be in the vicinity of the laser firing, this extends to training and operations. Therefore, all laser systems shall have a Military Laser System Safety Assessment Certificate (MLSSAC) before they can be used in training and / or service. A MLSSAC will be required to meet OME Safety Review Panel (OSRP) approval if the OME system contains a laser.
3. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

4. Following procurement of the Laser system evidence of the following, is applicable before they can be used in service or during training.
 - a. Military Laser System Safety Assessment Certificate (MOD Form 2237)
 - b. Issued by Military Laser Safety Team, which will be maintained on the Laser Certificate Database on the DOSR [DOME Database](#).

Guidance Material

5. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 5: DCOP 501.

Lasers 502: Military Laser System Safety Assessment for Service and Training Use

Regulation

1. All laser systems shall have a Military Laser System Safety Assessment Certificate (MLSSAC) before they can be used in training and/or in service unless exemption criteria are met.
2. If required, laser systems shall have a valid Military Laser Range Safety Clearance Certificate (MLRSCC) if carrying out a standard activity.
3. All laser systems shall have a valid Military Laser Trial Safety Clearance Certificate (MLTSCC) if carrying out a unique activity (such as a trial).
4. A unit Laser Safety Officer (LSO) is to be appointed by the Commanding Officer (CO) or Head of Establishment (HoE) to co-ordinate laser safety in any ship, unit, station, or establishment where Class 3R, 3B or 4 lasers are in use.

Rationale and Provenance

5. Military Laser System Safety Assessment Certification provides confirmation of Independent 3rd Party Regulatory Assurance to the SofS and testifies the extent to which the requirements of the MOD Regulations have been complied with.
6. Any deviation from meeting the specific regulatory safety requirements could have significant safety implications to platforms, personnel, and other MOD assets.
7. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

8. Evidence of the following is applicable before they can be used in service or at training.
 - a. Military Laser System Safety Assessment Certificate (MOD Form 2237)
 - b. Military Laser Trial Safety Clearance Certificate (MOD Form 2238A)
 - c. Military Laser Range Safety Clearance Certificate (MOD Form 2238B)
9. Issued by Military Laser Safety Team, which will be maintained on the Laser Certificate Database on the DOSR [DOME Database](#).

Guidance Material

10. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 5: DCOP 502

Lasers 503: Military Laser System Through Life Safety Management

Regulation

1. All military lasers shall be procured following normal DE&S methods or local procedures. Military lasers shall be certified as per Regulation 501.
2. All military laser systems shall be stored safely.
3. Those undertaking duties and roles involving Lasers shall be competent and Suitably Qualified and Experienced Personnel (SQEP).
4. All Military Laser System Safety Assessment Certificates (MLSSAC) shall include details of requirements for PPE. PPE shall be used if the hazard cannot be mitigated to reduce the risk from exposure to harmful laser radiation.
5. All Military Laser Systems shall be disposed of in a manner which assures that safety and environmental risks are broadly acceptable or ALARP.
6. All military laser systems shall be tested & maintained throughout their lifecycle in accordance with agreed procedures.

Rationale and Provenance

7. To ensure the safe operation through life of military laser systems and activities as well as to ensure that risks to the health and safety of persons from such systems or activity are As Low as Reasonably Practicable (ALARP).
8. The provenance for this regulation is as follows:
 - a. For activities that are considered as high risk, Defence organisations have decided that the legislation does not provide enough regulation for specific military activities.

Acceptable Means of Compliance

9. **Procurement:** Evidence that process has been followed, such as risk assessment, hazard log and/or Laser Safety Paper (LSP) for the Laser system. Evidence of MLSSAC or exemption if appropriate.
10. **Storage:** All military laser systems are stored in accordance with local rules and procedures. Class 3B and Class 4 lasers are treated as weapons and stored accordingly.
11. **Personnel:** That all personnel are Suitably Qualified and Experienced Personnel (SQEP) through both appropriate training and competence.
12. **PPE:** If required, suitable and sufficient PPE specific to the laser system in use, has been provided to appropriate personnel that reduces any risk from exposure to harmful laser radiation.
13. **Disposal:** All military laser systems are disposed of in accordance with existing disposal procedures which assures that safety and environmental risks are ALARP.
14. **Test & Maintenance:** All military laser systems are tested & maintained in accordance with agreed procedures.

Guidance Material

15. Further guidance is available in the following publications:
 - a. DSA 03.OME Pt. 5: DCOP 503,
 - b. Knowledge in Defence (KiD) web tool and Guide to Engineering Activities and Reviews (GEAR).