



**Ministry
of Defence**

**JSP 403 Volume 1
Handbook of Defence Ranges Safety**

**Part 1: Regulations – Introduction, Glossary,
Abbreviations**

Foreword

1. The Ministry of Defence owns, uses or is otherwise responsible for a considerable number of MoD based firing ranges¹ throughout the United Kingdom 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 general public, if firing activities are not properly regulated and controlled.

2. The Secretary of State for Defence policy statement on Health, Safety and Environmental Protection (HS&EP)² lays down the principles on which the safe conduct of Defence activities are to be based. These include:

- a. Compliance with the Health and Safety at Work etc Act 1974 and subordinate legislation where applicable.
- b. Where specific exemptions apply, the introduction of Departmental standards which are, so far as is reasonably practicable, at least as good as those required by legislation.
- c. Balancing short term risks to Ministry of Defence personnel, military and civilian, and to the general public against meeting the operational requirement.

3. In order to implement these requirements and to ensure the safe operation, maintenance and use of our MoD ranges, a Standing Committee, the Defence Ranges Safety Committee (DRSC), has been established to introduce and oversee Range safety standards across the Ministry of Defence. It is responsible through the Defence Safety Authority (DSA) to the Permanent Under Secretary of State for all aspects of safety on Defence Ranges. A Range Safety Management System conforming to policy laid down by the Committee has been in operation for some time and is reviewed on a regular basis. Safety management takes into account 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.

4. Detailed policy and guidance for safety on Defence Ranges is given in this Joint Service Publication 403, which has been approved by the Defence Ranges Safety Committee.

JCS Baker
Director Defence Safety Authority
Defence Authority for Health Safety Protection

¹ A Range is a range where the Danger Area / Zone (DA / Z) falls wholly or partially on or over land.

² JSP 815 Defence Health, Safety and Protection and Environmental Protection, Leaflet 01.

Preface

How to use this JSP

5. This JSP sets out the range safety management system to be used which conforms to the policy set out by the Defence Ranges Safety Committee for the safe operation, maintenance and use of all MoD Ranges.
6. It applies to all MoD Ranges and any civilian or other nation Ranges which may be used by MoD personnel on duty.
7. It is designed to be used by personnel with responsibility for MoD Ranges safety employed by, or contracted to or whose use is authorised by the MoD.
8. It provides direction on Best Practice to ensure that the risks associated with MoD Ranges safety are ALARP.
9. The JSP is structured in two parts:
 - a. **Part 1** – The overarching policy which gives clear direction as to what must be followed in accordance with Legislation, Regulation and Instructions mandated by Defence or on Defence by Central Government.
 - b. **Part 2** – Direction as to the implementation of the safe operation, use and maintenance of Defence Ranges in compliance with the policy set out in Part 1 of this JSP.

Coherence with other Defence Authority Policy and Guidance

10. Where applicable, this document contains links to other relevant JSPs, some of which may be published by different Defence Authorities. Where particular dependencies exist, these other Defence Authorities have been consulted in the formulation of the policy and guidance detailed in this publication.

Related JSPs	Title
JSP375	MoD Health and Safety Handbook.
JSP418	MoD Corporate Environmental Protection Manual.
JSP390	Military Laser Safety.
JSP454	Land Systems Safety and Environmental Protection.
JSP815	Defence Health and Safety and Environmental Protection.

11. This JSP has been developed for use by Suitably Qualified and Experienced Personnel (SQEP) involved with Ranges Safety. It assumes that they will have a broad knowledge of Health and Safety Legislation. Simply following this JSP will not fulfil all your obligations arising from other legislation.

Further Advice and Feedback- Contacts

12. The sponsor of this JSP is DSA-DOSR-PRG-1. For further information on any aspect of this document, or questions not answered within the subsequent sections, or to provide feedback on the content, contact:

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Project focus	DOSR
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Authority

13. This JSP403 Version 1.1 (May 15) supersedes JSP403 Vol 1 Part 1 Version 1.0 dated Feb 15.

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Status

15. This document is maintained and made available solely electronically, all hard copies of JSP403 Part 1 or 2 are uncontrolled. The JSP will be electronically updated whenever additional or improved guidance becomes available. This JSP will be reviewed at least annually.

16. Readers are encouraged to assist in the continued update of this document by informing the DSA-DOSR-PRG-1a@mod.uk of any required changes particularly those resulting from their experiences in the development of MoD Ranges safety regimes.

17. To check the latest amendment status reference should be made to this JSP electronically within the Library section of the Defence Intranet.

Contents

Foreword	i
Preface	ii
How to use this JSP	ii
Coherence with other Defence Authority Policy and Guidance.....	ii
Further Advice and Feedback – Contacts.....	iii
Authority.....	iii
Status.....	iii
Contents	iv
Overview	1
Part 1 Structure.....	1
Generation, Publication and Maintenance of JSP403.....	2
Introduction.....	2
Methodology to be used in Maintaining and Reviewing JSP403.....	2
Review Process.....	2
Responsibilities.....	3
DSA DOSR Range Safety Notice.....	3
DSA DOSR Range Safety Policy Letters.....	3
DSA DOSR Range Advice Notes.....	4
Contents Policy, Regulation, Legislation, Responsibilities	5
Introduction.....	5
Statutes and Regulation.....	5
Application of Regulation.....	6
Access.....	6

	Safe Systems.....	8
	Risks.....	8
	Environmental Management of Ranges.....	9
	Range Safety Management System.....	10
	Legal Position of MoD Personnel.....	11
	MoD Service and Agency Responsibility.....	11
	Royal Navy.....	13
	Army.....	13
	Royal Air Force.....	14
	Defence Infrastructure Organisation.....	14
	MoD Police.....	15
	Other MoD Ranges.....	15
List of Annexes		
Annex A	JSP403 Change Proposal Form.....	A-1
Annex B	DSA DOSR Range Safety Notice Template.....	B-1
Annex C	DSA DOSR Range Safety Policy Letter Template.....	C-1
Annex D	Lexicon.....	D-1
Annex E	Acronyms and Abbreviations.....	E-1

Overview

18. Joint Services Publication (JSP) 403 is issued electronically under the overall direction of the Defence Council. It contains the Ministry of Defence regulations for the safe operation, maintenance and use of MoD Ranges³ and is a Ministry of Defence Approved Code of Practice (ACOP). Where issues of health and safety are concerned it takes into account the provisions of the Health and Safety at Work Act and other legislation.

19. JSP403 is designed to provide a comprehensive handbook covering safety on MoD Ranges. It provides legislation, regulation, policy, guidance and instructions on which the Services and Ministry of Defence civilian organisations and agencies can base the safe operation, maintenance and use of their ranges. There are currently four volumes issued and further volumes may be produced if required.

20. JSP403 contains both regulation and Best Practice measures for range safety. Throughout Volume I the use of the verbs 'shall', 'will' or 'is / are to' identifies mandatory requirements, whereas use of the verb 'should' indicate best practice. The application of best practice is to be considered mandatory unless other methods of keeping the risk of potential hazard as low as is reasonably practicable have been identified and have been authorised by the appropriate authority.

Part 1 Structure

21. JSP403 Volume I Part 1 - The overarching policy which gives clear direction as to what must be followed in accordance with Legislation, Regulation, Direction, Instructions mandated by Defence or on Defence by Central Government.

22. **JSP403 Volume 1 Part 2** - Direction as to the implementation of the safe operation, use and maintenance of Defence Ranges in compliance with the policy set out in Part 1 of this JSP.

23. **JSP403 Volume 2** covers the design and construction of ranges and deals specifically with small arms, infantry and 40mm weapon systems ranges.

24. **JSP403 Volume 3** is in two parts. Part 1 covers the firing of weapon systems from fixed wing aircraft and helicopters on to MoD Ranges. It has introduced commonality into control systems, procedures and management. It also explains the terminology used in air-to-surface engagements. Part 2 details the policy and principles for the safety of surface-to-air weapon systems firing against air or surface targets on MoD Ranges.

25. **JSP403 Volume 4** covers the design and construction of demolition ranges and explosive ordnance disposal training areas, the clearance of ordnance from ranges and training areas, the safe use of ranges and training areas for demolitions and ordnance disposal training, and the safe use of explosives and pyrotechnics for battle simulation on ranges and training areas and safety of ranges and training areas used for demolitions and ordnance disposal training and for battle simulation.

³ Range. A Range is a range where the Danger Area / Zone (DA / Z) falls wholly or partially on or over land.

Generation, Publication and Maintenance of JSP403

Introduction

26. The section details the general requirement for maintaining and reviewing JSP403.
27. Whilst it is the role of the Defence Safety Authority (DSA) Defence OME Safety Regulator (DOSR) Policy, Regulation and Guidance Section to manage JSP403 Part 1 and ensures its alignment with **JSP815**⁴, all users have a responsibility to bring the need for changes to the attention of the document sponsors.
28. Proposed changes to JSP403 may be submitted by anyone and will be reviewed by the Defence Ranges Safety Committee Working Group (DRSCWG) in accordance with its Terms of Reference (TOR). Approved changes will generally be incorporated electronically into JSP403 annually, although changes affecting safety will be incorporated electronically as soon as possible. When incorporating changes, care is to be taken to maintain coherence across JSP403.

Methodology to be used in Maintaining and Reviewing JSP403

29. Changes to JSP403 Part 1 and Part 2 will be made using systems engineering methodology to ensure traceability between the various elements of the system. When making changes to the system, the “knock-on effect” will be addressed by Sec DRSC to ensure the traceability element is maintained.
30. The Editorial Committee is a forum established by the DSA, chaired by DSA DOSR Assistant Team Leader Policy Regulation and Guidance (PRG) with appropriate membership from users and Duty Holders represented on the Defence OME Safety Regulator Stakeholder Committee (DOSRSC) and is the method for updating and maintaining JSP403.
31. Requests for changes to the documentation can be made by sending a Change Proposal Form to DSA-DOSR-PRG-1a (**see Annex A**), which is available on the MoD Intranet. The Editorial Committee will consider all Change Proposals and agree appropriate changes to JSP403 Part 1 and Part 2. Where the Defence Ranges Safety Committee Working Group (DRSCWG) considers an amendment to represent a change to regulation, it will ensure that appropriate staffing of the regulation change is undertaken.

Review Process

32. JSP403 Part 1 and Part 2 will be formally reviewed by DSA-DOSR-PRG-1a annually and proposals for amendment submitted to the DRSCWG.
33. Approved amendments, as a result of the review, are to be incorporated into JSP403 annually.

⁴ JSP815 Defence Health and Safety and Environmental Protection.

34. Amendments which result in major changes to the basic principles of JSP403 will be approved by the DRSC.

Responsibilities

35. Users of JSP403 are responsible for:
- a. Communicating JSP403 suggested improvements etc. to DSA-DOSR-PRG-1.
 - b. Supporting DSA-DOSR-PRG-1, as required, in reviewing proposed changes to the JSP403.
36. DSA DOSR Assistant TL Policy Regulation and Guidance is responsible for:
- a. Identifying changing requirements in legislation, technology, public perception etc, which may have an impact on JSP403.
 - b. Reviewing, using Competent people within MoD Ranges safety community, suggested changes to JSP403.
 - c. Ensuring that changes meet the regulatory requirements detailed in JSP403.
 - d. Ensuring that JSP403 Part 1 and Part 2 are formally reviewed annually.
37. Further guidance on the Roles and Responsibilities of the DRSC / DRSCWG / TWG are presented within JSP403 Volume 1 Part 2.

DSA DOSR Range Safety Notice

38. The aim of the DSA DOSR Range Safety Notice is to provide a swift method of circulating an update to the requirements of JSP403, prior to the issue of formal updates to JSP403.
39. **Annex B** presents the template of a DSA DOSR Range Safety Notice. The headings within the template are for guidance only and can be tailored to meet the requirements of the notice.
40. The draft of the DSA DOSR Range Safety Notice is to be circulated to DRSCWG members for comment. Following comment and agreement by Chairman DRSCWG, the DSA DOSR Range Safety Notice will be signed by Chairman DRSCWG, distributed to relevant stakeholders as appropriate. The DSA DOSR Range Safety Notices will be posted on the MoD Intranet and incorporated into JSP403 within the appropriate Volume.

DSA DOSR Range Safety Policy Letter

41. When it is necessary to issue new or revised range safety policy, regulations or Best Practice guidance in advance of the next scheduled Change / Edition to this volume of JSP403, a **Range Safety Policy Letter** (RSPL) is to be prepared by the DRSCWG at the direction of the DRSC. Each RSPL will be allocated a sequential number by the DRSC Secretariat. A RSPL requires the approval of the DRSC before it can be issued. The content of a RSPL is incorporated into JSP403,

in the next Change / Edition.

42. Each RSPL will be distributed and notified as below:
- a. It is sent on the standard DRSC distribution to the duty holders represented on the Committee for immediate cascade, through respective Service / Agency chains of command and to those RAO / RAU affected. In the of CJO ranges, the DRSC Secretariat will send it direct to PJHQ and to the HQBF in each of the Permanent Joint Operating Bases (PJOB) overseas.
 - b. It is placed on the Defence Intranet / Internet website in the same location as JSP403.
 - c. It is dispatched by the Defence Storage and Distribution Centre through the postal system to all holders of JSP403 Volume I Parts 1 and 2.
 - d. A Defence Information Notice (DIN) produced by the DRSC Secretariat notifies the distribution of the RSPL, its number and date and the subject matter.

DSA DOSR Range Advice Note

43. Range Advice Notes are issued from time to time to explain and clarify range safety or construction issues that do not directly affect the safety of a range.

Annexes:

- A. JSP403 Change Proposal Form.**
- B. DSA DOSR Range Safety Notice Template.**
- C. DSA DOSR Range Safety Policy Letter Template.**
- D. Lexicon.
- E. Acronyms and Abbreviations.

NOTE: These are **non-functional** examples. For forms to use follow:-

Defence Intranet:

<http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/HOCS/Organisations/Orgs/DSA/Pages/RangeForms.aspx>

Defence Internet:

<https://www.gov.uk/government/collections/jsp-403-handbook-of-defence-land-ranges-safety>

Policy, Legislation, Regulation, Responsibilities

Ministry of Defence Range Safety

Introduction

Whilst there is no specific statutory regulation⁵ dealing with the safe operation and use of live firing ranges, the legally binding, overarching principles of the Health and Safety at Work Act 1974, being the primary piece of legislation⁶ covering all work-related Health and Safety in the United Kingdom, are to be applied and complied with.

In the absence of statutory regulation, JSP403 has been developed as the Range Safety Management System under which the Ministry of Defence regulates all Defence Range activities and maintains and demonstrates compliance with the Health and Safety at Work Act.

Statutes and Regulations

44. There are a number of UK and European Union (EU) laws and regulations dealing with health, safety and environmental issues which have an impact on the management of range safety. The key statutes and regulations that apply to this JSP and to the formulation of policy and regulations for range safety are:

- a. Health and Safety at Work Act (H&SWA).
- b. Occupiers Liability Acts (OLA).
- c. Military Lands Act (MLA).
- d. Armed Forces Act (AFA).
- e. Countryside and Rights of Way (CROW) Act.
- f. Land Reform (Scotland) Act (LR(S)A).
- g. Environmental Protection Act (EPA).
- h. Management of Health and Safety at Work Regulations.
- i. Control of Lead at Work Regulations.
- k. Health and Safety (First Aid Regulations).
- l. Reporting of Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR).

⁵ Regulation the promulgation, monitoring, and enforcement of rules, established by primary and/or delegated legislation.

⁶ Legislation (or "statutory law") is law which has been promulgated (or "enacted") by a legislature or other governing body, or the process of making it.

- m. The Control of Substances Hazardous to Health (COSHH) Regulations.
- n. Dangerous Substances and Explosives Atmospheres Regulations.
- o. MoD Environmental Manual.
- p. UK Firearms Act 1968.

Application of Legislation

Access

45. In legal terms, the MoD is the occupier of all ranges and training areas on the MoD estate and as such, owes a duty of care to people on its ranges, training areas and those who might be affected by the MoD's actions on ranges and training areas under the law of Occupiers' Liability⁷. The MoD's duty is to take such care as is reasonable to see that the visitor / user will be safe at all times when on a range. The circumstances of each case will serve to either reduce or widen the extent of the duty. The duty of care also extends to people other than those invited or permitted to be on a range, e.g. trespassers, or a member of the public adjacent to a range, if:

- a. The MoD is aware of the danger or there are reasonable grounds to believe that it exists.
- b. The MoD knows or has reasonable grounds to believe that the other people are in the vicinity of the danger concerned or that they may come into the vicinity of the danger.
- c. The risk is one against which the MoD may reasonably be expected to offer other people some protection.

46. When assessing the risks associated with all activities on a range, the level of protection afforded by the MoD must take into account both the likelihood of injury and the seriousness of the injury. Where such risk exists the MoD has a duty to provide an appropriate level of protection. In most cases, the duty of care can be discharged by the MoD taking all reasonable steps to give warning of the danger concerned and, where necessary, to discourage persons from incurring the risk. The law of negligence provides for a duty of care applicable to the activities that take place on a range rather than to the state of the range itself, but can apply to both. Essentially, the duty of care arises if it can be established that it was reasonably foreseeable that injury or damage may be suffered as a result of the MoD's act or omission to act and that the imposition of the duty of care is just and reasonable. Personnel, civilian or military, should not be given access to a MoD range until they have received relevant health and safety information. Where access can be controlled, Commanding Officers (CO) / Managers of Range Administering Units (RAU) are to set up a local procedure to ensure that all relevant safety information is absorbed and understood before access is authorised.

⁷ Occupiers' Liability Acts 1957 and 1984

47. Following the implementation of the Countryside and Rights of Way (CROW) Act and the Land Reform (Scotland) Act (LR(S) A) special attention is to be given to Range Danger Areas (RDA) to which the public have access when the facility is not in use, and to those areas which may be entered unlawfully or unknowingly by unaccompanied children, particularly those which are close to areas of housing, schools, leisure or recreation. Where managed access is possible, this should be implemented in keeping with the Secretary of State's policy that the MoD will meet its declared presumption in favour of safe public enjoyment of the defence estate wherever this is compatible with military training, operational requirements, safety, security, conservation and the interests of our tenants.

48. All reasonable and affordable precautions to safeguard the public are to be taken. Measures should include adequately positioned warning signs which point out the existence of specific hazards such as the danger from unexploded munitions. Such signs, whilst they do not obviate duties of care imposed by any legislation, are nonetheless desirable both in civil and criminal law as evidence of the measures taken by an occupier towards meeting his legal obligations. In accordance with current MoD policy signs should primarily consist of symbols supplemented by text if necessary and should adhere to international agreements on signs to identify danger areas. Arrangements should be made to clear, as far as is reasonably practicable, all unexploded ordnance (blinds) from rights of way, highways etc., and other areas to which the public have access at the close of firing. Safety measures which are adequate for a local population may not necessarily be sufficient to protect visitors (arriving by land, sea or air) who are unfamiliar with the area. Consideration should be given to way-marking footpaths and cleared routes to ensure that the public are easily able to identify and remain on the safe route. Further information on the management and control of access to ranges for both authorised persons and the general public is in Chapters 2 and 3 of Part 2 to this JSP.

49. The making of Byelaws, under the Military Lands Act (MLA), should be considered when the User Requirement Document for a MoD Range is being discussed and staffed. Byelaws may enable legal sanctions to be taken against trespassers (for an infringement of the Byelaws). They also bring to public attention that specific dangers are present in an area. Notice boards displaying Byelaws should be positioned so that anyone entering the range area on recognised access routes would see them.

50. The AFA and Firearms Act 1968 allows civilians under the supervision of a member of the Armed Forces to have possession of Service weapons and Service ammunition on Service premises for Service purposes. Civilian visitors to Service ranges may only have possession of Service weapons and Service ammunition under the supervision of a member of the Armed Forces for a Service purpose which has been expressly authorised in writing by a CO. Such an authorisation is to specify the Service purpose, the resources and personnel allocated and the time and location of the activity. The Service purpose may include the firing of Service weapons by civilians at specific events. Civilians involved would come under Category 3 of authorised civilian as given in Chapter 3 of Part 2. They are to be fully briefed on the activity, the procedures to be followed and any risks involved, and are to sign an acknowledgement to that effect. The CO must ensure that those under command are entirely clear as to the need to rigorously enforce the prohibition of civilian access to Service weapons, ammunition and pyrotechnics without express authority.

Safe Systems

51. All personnel have a legal duty of care, to themselves and to others, and are liable to criminal or civil action if there is wilful or reckless disregard of health, safety and environmental requirements on a MoD Range. Both the providers and the users of range facilities must ensure that their activities are carried out in As Low As Reasonably Practicable (ALARP) consistent with Defence requirements. Supervision of an activity or event may be delegated but the legal responsibility for duty of care remains with the Exercise Director / Duty Holder in charge of the activity or event.

52. A Safe System on a MoD Range must comprise four essential elements to be in accord with the H&SWA. This applies whether a range is used for training purposes or whether it is conducting Test, Evaluation, Research and Proofing (TERP) activities. The four elements in both cases are safe people, a safe place, safe equipment and safe practice. On ranges used for training Service and MoD civilian personnel a Safe System of Training (SST) is to be applied. On ranges which are used for TERP purposes a Safe System of Work (SSW) is to be applied. With each of the four elements the hazards must have been assessed and the consequent controls integrated into formal procedures in order to reduce the risks to as low as reasonably practicable (ALARP). During military training the acceptance of a higher level of risk may be unavoidable due to the nature of the training imperative to meet the Operational Requirement. However, the acceptance of this higher level of risk and the reasons why must be fully documented on the risk assessment and signed off at the appropriate level.

Risk

53. To establish the safety of a range a site specific risk assessment must be carried out and recorded before the range can be first taken into use. This range safety risk assessment will describe the hazards involved and the set of control measures that must be in place to mitigate the identified risks. The risk assessment process is a prerequisite for the production of Range Standing Orders (Range SO) which will govern the operation and use of the range. The range safety risk assessment and Range SO must be reviewed annually and signed, or more frequently if there are interim changes to the hazards or the way in which a range is operated or used. Further detail on range safety risk assessment and range standing orders is in Chapter 2 of Part 2.

54. When a weapon system, munition or explosive store is used on a range, persons and materiel within the Total Energy Zone (TEZ) associated with that weapon system, munition or explosive may be exposed to risk of injury or damage. The hazard will not be uniform throughout the TEZ; it will usually be at a maximum at a point of burst or along a line of fire and will decrease sharply with distance from this point or line. The Danger Area / Zone (DA / Z) is that part of the TEZ within which the risk to persons and materiel cannot be disregarded.

55. The tolerability of risk framework developed by the Health and Safety Executive (HSE) is used when providing advice on the acceptable level of risk on a range. This framework establishes an upper and a lower level of risk. The upper level must not be exceeded unless there are exceptional circumstances whilst the lower level is the point at and below which a risk can be considered broadly acceptable. For Individual Risk of death, i.e. accidents that result in single deaths, the upper level is one in a thousand (1 in 1,000) deaths per person year, and the lower level is one in a million (1 in 1,000,000) deaths per person year. At any level between these it must be demonstrated that the benefit outweighs the risk thus making the level As Low As Reasonably Practicable (ALARP).

56. The Defence Ordnance Safety Group (DOSG) advice on the construction of a DA / Z will be based on the criteria for Individual Risk, with the probability of striking an individual set at one in a million (1 in 1,000,000) per person year. A DA / Z will only be applied for a given firing activity on a range after the risk from its application has been assessed as ALARP.

Environmental Management of Ranges

57. Environmental issues, particularly pollution and waste management, can affect the control and management of ranges. The first point of reference to ensure that activities are conducted in compliance with the law and international conventions is the MoD Environment Manual. This manual provides brief background notes on environmental issues, gives overviews of policy and legislation, provides a guide to implementation and offers sources of reference for further information.

58. Range design and construction shall as a minimum take account of the effect of lead, carbon monoxide, un-burnt propellant and noise on the immediate environment. An environmental impact assessment is to be carried out before any range is first authorised for use. On TERP ranges operated by the Dstl or by a contractor for the DE&S an assessment of the effect on the environment shall be made before each separate event or activity is undertaken. Further advice on environmental issues can be obtained from Defence Infrastructure Organisation (DIO). The Principal of DIO PTS Environmental Advisory Services is the initial point-of-contact for any enquiry regarding provision of environmental support to MoD Ranges. This focal point is able to make an 'intelligent assessment' of what is required and provide the link to an established network of specialists, thus enabling queries / requests to be directed to the most appropriate person or organisation. Contact details are: Infrastructure Professional Services, Defence Infrastructure Organisation, Kingston Road, Sutton Coldfield, West Midlands B75 7RL.

59. The principal environmental concerns on ranges are those which have a potential impact on the health, safety and well-being of range staff, range users and the general public when they have access. The main issues are lead contamination and noise. The biggest producers of lead contaminants are small arms ranges, both indoor and outdoor. The measures to deal with the former are in Chapter 30 of Volume 2 of this JSP; if an indoor range does not meet the criteria in this chapter the provisions of **JSP375** are to apply. The measures dealing with de-leading and disposal of contaminated material are in Chapter 2 of Volume 2 of this JSP. All those exposed to weapon noise on a MoD range shall wear suitable hearing protection.

Measures for the attenuation and containment of noise on indoor and enclosed ranges are addressed in Chapter 30 of Volume 2 of this JSP. Weapon generated impulse noise when measured at the boundary of an open range is not to exceed the maximum level of impulse noise permitted under the current Noise at Work Regulations. MoD policy on noise protection is contained in [JSP375](#).

60. The management of waste on ranges are to comply with the Environmental Protection Act (EPA) requirements.

Range Safety Management System

61. This volume of the JSP sets out the component parts of the range safety management system and provides detail on how they are to be applied. The individuals within Services and MoD Agencies which operate and use MoD Ranges are to undertake this in accordance with the appropriate the Duty Holding model. The appropriate empowered people from each Service or MoD Agency is required to contribute to the formulation of policy, regulations and procedures for maintaining the safety of ranges through representation on the DRSC. Corporate decisions on the policy and standards for range safety require the consensus of all those responsible for the safety of MoD Ranges. At all levels shall ensure that roles and responsibilities are defined and clearly understood and that individuals are competent to undertake the tasks required of them.

62. The key components of the MoD Range Safety Management System are listed below and are expanded upon in other chapters of this volume:

- a. A range shall be authorised for use.
- b. A range shall have an appointed administering unit.
- c. Access to a range and its danger area shall be controlled.
- d. A range shall be inspected on a regular basis to confirm that it remains fit and safe for use.
- e. A range shall be subject to a safety oversight and audit regime.
- f. A range shall have a specific set of Range Standing Orders (Range SO) which directs its safe use and maintenance of the range and include the essential controls identified by a site specific risk and activity assessment conducted by the appropriate duty holder or his representative to ensure its safe operation.
- g. Activities on a MoD Range may only be conducted by a Competent person appointed by the appropriate duty holder as having the correct qualification, currency, experience and maturity commensurate with the SST.

63. For Service units outside the United Kingdom (UK) MoD policy is that the same standards of safety for ranges are to be imposed, subject to Host Nation legislation and instructions issued by overseas Commands.

As a general principle, standards adopted in overseas theatres shall not be less stringent than those applying in the UK and the safest of the two shall be applied.

Legal Position of MoD Personnel

64. Although the Crown is exempt from prosecution, the H&SWA allows for prosecution of individuals 'in the public service of the Crown'. The Health and Safety Executive (HSE), who are the regulatory body for the Act and its subsidiary legislation, may censure Crown bodies in respect of offences which would have led to prosecution had they occurred in the private sector and may institute issue Crown Notice. The MoD has agreed to comply with such notices. The procedure would be for the HSE to issue a Crown Notice of formal censure after consultation with the Health and Safety Executive, Crown, Fire and Police National Interest Group (HSE CFP NIG), who would inform the MoD Safety Regulator and the TLB where the offence occurred.

65. Although the H&SWA places statutory duties on individuals both as employers and employees, HSE has undertaken not to prosecute individual Crown servants in substitution for their departments. HSE also recognise that HM Forces have power to deal with disciplinary charges against their members. Only in very exceptional circumstances would a criminal prosecution be instituted against Crown servant under the H&SWA. HSE considers that procedures for controlling and managing live firing activities on MoD Ranges are a MoD responsibility, and, exceptionally, if HSE feels that such activities should be halted, it may raise the matter to the DRSC for subsequent consideration through the appropriate command chain.

66. The Corporate Manslaughter and Corporate Homicide Act 2007 introduces a new crime of corporate manslaughter, or corporate homicide in Scotland, from April 2008. The Act does not introduce new duties, and such a crime could only be committed by corporate bodies; individuals cannot be held liable in their own right for a charge of corporate manslaughter. The Act, and the introduction of the new crime, highlight the importance of effective safety management.

MoD, Service and Agency Responsibilities

67. Defence Safety Authority (DSA) regulate safety and environmental protection for those conducting Defence activity as detailed in the Secretary of State's Policy Statement. It does this by implementing MoD regulatory regimes in all safety domains outside aviation, producing Departmental policy for the safety and environmental protection and providing high level assurance on whether Defence is meeting statutory and internal regulatory requirements. The DSA produces the Annual Safety Protection Assurance Report on the application of safety protection implementation and performance across Defence.

68. Defence Ordnance Munitions Explosives Safety Regulator (DOSR) provide safety and assurance Policy and Regulation of OME activities covering, ordnance, explosives use and major accident control regulations. The DOSR consist of two sections, Policy Regulation and Guidance, and Assurance.

69. **Defence OME Stakeholders Committee.** The purpose of the Defence Ordnance Munitions Safety Stakeholders Committee (DOSRSC) is to provide a consultative forum where senior stakeholders can consider high level OME S&EP performance matters, express their views on the regulatory regime, comment on proposed policy changes and be informed about emerging legislation / regulations and the outcome of regulatory activities.

70. **Defence Ranges Safety Committee.** The Defence Ranges Safety Committee (DRSC) is a standing committee of the MoD and reports through the Defence Safety Authority (DSA) to the Secretary of State. DSA DOSR Team Leader is the Chairman of the DRSC. The DRSC acts as the MoD focus for the safety of MoD Ranges, gives direction on the management and maintenance of the safety of MoD Ranges and monitors annual and independent range inspections. The DRSC sponsors and oversees the production of JSP403 Handbook of Defence Ranges Safety together with the necessary forms and other documents which provide the detailed instructions and guidance for all concerned with safety of MoD Ranges within the United Kingdom (UK) and abroad used by MoD personnel. The DRSC composition and terms of reference are at Part 2, Chapter 1, Annex A. The committee is served by a permanent Secretary (DSA-DOSR-PRG-1) located within DSA.

71. **Defence Ranges Safety Committee Working Group.** The Defence Ranges Safety Committee Working Group (DRSCWG) is a sub-committee of the DRSC chaired by Assistant Team Leader DSA DOSR PRG. The DRSCWG undertakes detailed review of specific safety considerations on behalf of the DRSC and is tasked by and reports directly to the Chairman DRSC. The composition, terms of reference of the DRSCWG are at Part 2, Chapter 1, Annex C. The committee is served by a permanent Secretary (DSA-DOSR-PRG-1a) located within DSA.

72. **Technical Working Group.** The Technical Working Group (TWG) is a sub-committee of the DRSCWG with specific responsibilities for the physical aspects of the safe design and construction of small arms, infantry and 40mm weapon systems ranges which are dealt with in Volume II of this JSP. The TWG is chaired by the SO1 Training Safety DIO SD Training who reports directly to the Chairman DRSCWG. The composition and terms of reference of the TWG are at Part 2, Chapter 1 Annex D.

73. **Defence LASER Safety Committee.** The Defence LASER Safety Committee (DLSC) is the authority for all users of LASERS by the MoD, by the military and on MoD property. The committee provides assurance to the Defence OME Safety Regulator Stakeholders Committee (DOSRSC) on all aspects of military LASER safety within the MoD. Further details on the use of LASERS on MoD Ranges are contained in **JSP390**⁸. The committee is served by a permanent Secretary (DSA-DOSR-PRG-1a) located within DSA.

74. **The Defence Ordnance Safety Group.** The Defence Ordnance Safety Group (DOSG) comprises a number of Technical Divisions. Staff of the Weapons Systems Division of the DOSG are responsible for giving formal advice, when

⁸ JSP 390 Military Laser Safety.

tasked, on the safety of weapon systems, Unmanned Aerial Vehicles (UAV) and Guided Weapons (GW). When deviation from standard Weapon Danger Area (WDA) criteria is considered necessary, formal written assessment and advice may be requested. Such advice is promulgated to Service / Agency users and to the Project Teams (PT) in the Defence Equipment and Support (DE&S) organisation who have responsibility for the safety of weapon systems and ammunition natures. If the advice is accepted, it is incorporated into the appropriate publications, range orders and instructions. Formal advice forms the background to JSP403 volumes, and for the production of range Type Standards and drawings. The DOSG Inspector Explosives (IE) Team includes Independent Range Safety Inspectors who are directed towards specialist ranges at non-Service establishments and also includes staff who advise on LASER safety systems.

75. **Inspectors Explosives (IE).** Under delegated authority from their relevant TLB, Inspectors Explosives (IE) for each of the Services and the DE&S are responsible for advising on the interpretation and application of **JSP482**⁹ and for the licensing and operation of disposal sites and burning grounds.

76. **Defence Science and Technology Laboratory.** The Programme Manager, Chemical, Biological, And Radiological Defence at Defence Science and Technology Laboratory (Dstl), Porton Down is responsible for providing formal advice to the Services on range safety policy where chemical, biological and radiological training is concerned.

77. **Defence Equipment and Support.** The MoD Test, Evaluation, Research and Proof Ranges (TERP) operated by a contractor under the Long Term Partnering Agreement (LTPA) are Defence Equipment and Support (DE&S) assets. The DE&S, through the Trials, Evaluation Services and Targets (TEST) PT, is responsible for the implementation of range safety policy and standards in respect of these ranges.

Royal Navy

78. **Second Sea Lord / Chief of Naval Personnel and Training.** Second Sea Lord / Chief of Naval Personnel & training (2SL / CNP&T) is responsible for formulation of safety policy for all Royal Navy (RN), Royal Marine (RM), Royal Naval Reserves (RNR) and Sea Cadet Corps (SCC) ranges.

79. **Delegation.** The exercise of responsibility for management, control and licensing of ranges is delegated by 2SL / CNP&T to Flag Officer Sea Training / Assistant Chief of Naval Staff (Training) (FOST / ACNS(T)).

Army

80. **Army Command.** Under single Army TLB arrangements CGS delegates the authority for the management of SHEF matters direct to CLF, Comd JHC and COS LF (the subordinate HLB holders). This delegation is discharged under the *command* of CLF and it is CLF who is responsible for the formulation of safety policy for all Army ranges.

81. **Army Environmental and Safety Working Group.** The Army Environmental and Safety Working Group (AESWG) is chaired by COS LF as defacto CGS's COS.

⁹ MoD Explosive Regulations.

The AESWG is the committee responsible for, amongst other responsibilities, formulating Army policy on training safety and giving direction on safety matters referred to it.

82. **Capability Directors.** All the Army's Capability Directors (Cap Dirs) are represented at the AESWG. The Cap Dirs are the Army's standard setters in respect of practices, procedures and training policy for all Army capability. Cap Dirs are responsible to the Chairman of the AESWG for giving advice on:

- a. Safety policy applicable to weapon systems for which their Cap Dir is the principal users or sponsors.
- b. Safety and technical efficiency of the procedures conducted by the Army on all ranges world-wide.

Royal Air Force

83. **Chief of the Air Staff (CAS).** Chief of the Air Staff (CAS), as the Senior Duty Holder (SDH), is responsible for the formulation of safety policy on all Royal Air Force (RAF) controlled Small Arms, Air Weapons, EOD and Air Cadet Ranges. The safety, administration and authorisation of (RAF) controlled ranges is delegated to the appropriate 2* Operational Duty Holder (ODH).

84. **Delegation.** The safety, administration and authorisation of (RAF) controlled ranges is delegated to the appropriate 2* Operational Duty Holders (ODH) as follows:

- a. Air Weapon Ranges - Air Officer Commanding No1 Group (AOC 1Gp).
- b. Small Arms and EOD Ranges - Air Officer Commanding No 38 Group (AOC 38 Gp).

85. **Air Cadet Organisation.** Comdt Air Cadets is appointed as the RAO for the Air Cadet Organisation (ACO) and is responsible to Air Officer Commanding 22 Gp (AOC 22Gp) for the formulation of policy for the safety, administration, authorisation and conduct of live firing practices on ACO controlled ranges.

86. **HQ Air Cadets.** For ATC Ranges, ACOS A3 / 5 and ACOS A4 exercise control as stipulated above. Responsibility for ensuring compliance with the range conducting, design and administration regulations is vested in HQ Air Cadets (HQ AC). Authorisation of ranges used by the ATC is carried out by the Commandant Air Cadets.

Defence Infrastructure Organisation

87. **Defence Infrastructure Organisation.** The Chief Executive (CE) of DIO is responsible for the management and control of Ranges which are included in the Defence Infrastructure Organisation (DIO).

MoD Police

88. **Assistant Chief Constable Central Operations.** The Assistant Chief Constable Central Operation ACC (CO) is responsible for the formulation of safety policy and authorisation for use of all MDP ranges and other ranges used primarily by MDP.

89. **Chief Firearms Instructor.** The Chief Firearms Instructor (CFI) is responsible to ACC (CO) for the management and control of MDP ranges and other ranges used Primarily by MDP. The CFI MDP also exercises responsibility for the safety of authorised MDP live firing practices conducted on these ranges.

Other MoD Ranges

90. **General.** There are certain other MoD ranges of a specialist nature which are operated principally by the Dstl, DSG and by a contractor for the DE&S organisation. There are also a small number of MoD ranges located on academic establishments such as the Defence Academy (DA) at Shrivenham which provide test facilities. All such specialist MoD ranges are to apply the range management principles and system specified in this volume of JSP403.

91. **Responsibilities.** The Chief Executive (CE) / Head of the MoD organisation or in the case of DA the Commandant, through the appropriate management line or Head of Department, may pass to his nominated representative at each site the exercise of responsibility for the safety of all firings carried out at the site. The nominated representative must ensure that all range activities are carried out safely, and that safe systems of work are created through the issue of standing and other orders, based on risk assessments. See Part 2 Chapter 8 for further detail on MoD Test, Evaluation, Research and Proof (TERP) ranges.

Annex A: JSP403 Change Proposal Form

DSA-DOSR Change Ref No: (To be completed by DSA-DOSR-PRG-1a on receipt)	
Part 1: for completion by the person raising the comment	
JSP403 Reference:	
Paragraph:	
Issue:	
Recommendation:	
Advantages:	Disadvantages:
Proposed text:	
Originator:	
Date:	
Please save this form then e-mail it to: DSA-DOSR-PRG1a@mod.uk Or by post: Secretary Defence Ranges Safety Committee, Hazel, #H109, MoD Abbey Wood North, Bristol, BS34 8JH.	
Part 2: for completion by the Defence Ranges Safety Committee Working Group	
Approved by DRSCWG: Yes / No	
Reason for Approval / Non-Approval:	
Chairman:	
Date:	
Part 3: for completion by the JSP Editorial Committee	
Feedback to Originator of action taken:	
DSA-DOSR-PRG-1a:	
Date:	

Note: These are **non-functional** examples. For forms to use follow:-
<http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/HOCS/Organisations/Orgs/DSEA/Pages/RangeForms.aspx>

Annex B: DSA DOSR Range Safety Notice Template



**Defence
Safety
Authority**

Technical Author Post Title

Defence OME Safety Regulator
Defence Safety Authority
Policy, Regulation and Guidance
Hazel # H109 MoD Abbey Wood North
BRISTOL, BS34 8JH

Telephone: } **Technical Author Contact Details**
e-mail:

DSA/DOSR Ref: **XXXXX**

DSA DOSR RANGE SAFETY NOTICE JSP403/ **<insert number>/(<insert year>**

<insert subject title>	
Who should read this:	
Category:	For example, Regulations, COP or Guidance
Cancellation date:	Enter cancellation date or when it may be superseded e.g. Amdt to JSP
Point of contact:	Technical Author or Chapter Custodian as appropriate

Reference(s):

A. **Insert relevant references**

Attachments:

Annex A. **Insert relevant attachment**

1. Purpose

1.1 The purpose of the DSA DOSR Range Safety Notices are to provide a swift method of circulating an update to the regulations, requirements and / or guidance of Joint Service Publication (JSP) **???**, prior to the issue of formal updates.

1.2 This DSA DOSR Range Safety Notice JSPXXX/XX)/XX has been issued

2. Aim

3. Background

4. Policy

5. Action required

Prepared: **Technical Author Name and Post Details**

Date:

Authorised: **Chairman DRSCWG**

Date:

Note: These are **non-functional** examples. For forms to use follow:-

<http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/HOCS/Organisations/Orgs/DSEA/Pages/RangeForms.aspx>

Annex C: DSA DOSR Range Safety Policy Letter Template



**Defence
Safety
Authority**

Technical Author Post Title

Defence OME Safety Regulator
Policy, Regulation and Guidance
Defence Safety Authority
Hazel #H019 MoD Abbey Wood North
BRISTOL, BS34 8JH

Telephone: **Technical Author Contact Details**
e-mail:

DSA/DOSR Ref: **XXXXXX**

DSA DOSR RANGE SAFETY POLICY LETTER **???**/ **<insert number>**/(**<insert year>**)

<insert subject title>	
Who should read this:	
Category:	For example, Regulations, COP or Guidance
Cancellation date:	Enter cancellation date or when it may be superseded e.g. Amdt to JSP
Point of contact:	Technical Author or Chapter Custodian as appropriate

Reference(s):

A. **Insert relevant references**

Attachments:

Annex A. **Insert relevant attachment**

1 Purpose

1.1 The purpose of the DSA DOSR Range Safety Policy Letter are to provide a swift method of circulating an update to the regulations, requirements and/or guidance of Joint Service Publication (JSP) **???**, prior to the issue of formal updates.

1.2 This DSA DOSR Range Policy Letter JSPXXX/XX)/XX has been issued

2 Aim

3 Background

4 Policy

5 Action required

Prepared: **Technical Author Name and Post Details**

Date:

Authorised: **Chairman DRSC**

Date:

Note: These are **non-functional** examples. For forms to use follow:-

<http://defenceintranet.diif.r.mil.uk/Organisations/Orgs/HOCS/Organisations/Orgs/DSEA/Pages/RangeForms.aspx>

Annex D: Lexicon

Definitions

- The definitions used in JSP403 Parts 1 and 2 are presented below. Where the source of the definition is blank, the term is defined in the context of JSP403.

Term	Definition	Source
Accident	A “training” accident is an unintended event or sequence of events that cause death, injury, environmental damage or material damage during the course of, or as a result of any activity by MoD personnel or public on private property or non MoD personnel on MoD property with or without authorisation, MoD personnel on public or private property.	Def Stan 00-56 ¹⁰ . Issue 4d.0
Air Danger Area	An Air Danger Area (ADA) is the airspace which has been notified as such within which activities dangerous to the flight of aircraft may take place at such times as may be notified.	
Air Danger Height	The Air Danger Height (ADH) is the maximum height above ground level at which a hazard may exist. (also see the definition of Control Zone). Note: An ADH is measured in feet above ground level. Altitude is measured in feet above Mean Sea Level (MSL).	
Air Weapons Range	A Range the principal use of which is for firing or launching fixed wing or rotary wing mounted weapons from the air to the surface.	
Approval	Approval is the formal act of authorisation, usually in document form, by the responsible authority that the product meets the stated requirement and is suitable for Service / MoD Agency use, with or without limitations. Note: DRSC Approval is required for the inclusion of any material in JSP403 and is documented in the appropriate Minutes of the DRSC Meeting which endorsed its inclusion.	
Approved Range	A range which varies from the design and build criteria specified for its type in JSP403 or the appropriate Single Service publication. Where the resultant risk is assessed not to exceed the level authorised for a Compliant Range of the same type and formally approved by the DRSCWG.	
ALARP	As Low As Reasonably Practicable. A risk is ALARP when it has been demonstrated that the cost of any further Risk Reduction, where the cost includes the loss of defence capability as well as financial or other resource costs, is grossly disproportionate to the benefit obtained from that Risk Reduction.	Def Stan 00-56 ¹¹ Issue 4.0

¹⁰ DefStan 00-56 Safety Management Requirements for Defence Systems.

¹¹ DefStan 00-56 Safety Management Requirements for Defence Systems.

Assurance	Adequate confidence and evidence, through due process, that safety requirements have been met.	Def Stan 00-56. Issue 4.0
Authorise	Formally approve the issue of a document reflecting the individual's responsibility for such issue.	
Blind	Ordnance which has been primed, fused, armed, initiated or otherwise prepared for action, and which has been dropped, fired, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel or material and remains un-initiated either by malfunction or design, or for any other cause. Note: The term 'Blind' can be used by pilots of fixed wing aircraft to indicate that they are unable to see something, but it is not used in the context of firing from the air on to Ranges.	
Certification	Certification is a signed statement by a qualified person that the product wholly or partially meets or complies with the approved specification(s). Note: The specification may include a requirement for national legislation prior to certification.	
Clear Range Procedure	A procedure approved by the Range Administering Unit and implemented the user unit to ensure that the Range Danger Area is clear of unauthorised persons before firing commences and that it remains clear throughout the time firing is in progress. The procedure includes provision for the timely cessation of firing before it poses a risk of hazard to an intruder in the Range Danger Area.	
Cleared Area	An area that has been physically and systematically processed by a demining organization to ensure the removal and/or destruction of all mine and unexploded ordnance and pyrotechnics hazards to a specified depth. Notes: (1) IMAS 09.10 specifies the quality assurance system (i.e. the organization, procedures and responsibilities) necessary to determine that land has been cleared by the demining organization in accordance with its contractual obligations. (2) Cleared areas may include land cleared during the technical survey process, including boundary lanes and cleared lanes.	
Closed Impact Area/Zone	A Closed Impact Area is that part of an impact area, known or thought to contain unexploded munitions (blinds), where access is prohibited to all persons except those involved in its clearance.	
Compliant Range	A range which meets the design and build criteria specified for its type in JSP403 or the appropriate Single Service publication.	
Contractors or Partners	TLBs routinely engage contractors and partners to undertake a wide range of defence activities. Contractors and partners are to be Competent to	

	undertake the activities required safely, and the employing Commanding Officer or manager is to ensure that this is the case. The Commanding Officer or Manager is to ensure that sufficient information is provided to contractors / partners to enable them to conduct activities safely and that they do so. The Commanding Officer or manager is to designate a competent person from his organisation to have responsibility for co-ordinating HS&EP aspects of each contract or agreement. If there are exemptions from legislation that are relevant to the Contractor's or partner's defence activities, then Defence Regulations may apply. The employing Commanding Officer or manager is to ensure that this is expressed in the contract or agreement and that relevant Defence Regulators are empowered through the contract or agreement to regulate the Contractor's or partner's activities.	
Contractor Operated Range	A range owned by the MoD and operated by a civilian commercial organisation under licence, contract or partnership arrangements with the MoD. The criteria to be met in operating the range are laid down by the MoD in the licence, contract, protocol or other instruction drawn up with the contractor. A contractor operated range is to be controlled and operated in accordance with the range management principles stipulated in JSP 403.	
Controlled Impact Area/Zone	A Controlled Impact Area is an area known or thought to contain unexploded munitions (blinds). After firing has ceased and designated routes through the area have been cleared of any blinds, controlled access is permitted.	
MoD Codes of Practice (COPs)	Guidance which supplements the policy and provides guidance on compliance with the policy. Non-compliance does not constitute a breach of the policy, but MoD COPs are used as evidence of failure to do all that was reasonably practicable to comply with the policy.	Adapted HSWA 1974
Danger	Danger is a circumstance under which harm may occur.	
Danger Area / Zone	The Danger Area/Zone (DA/Z) is the space in which there may be a hazard which could result in harm to personnel, equipment or property. Note: The space is defined as weapon or range specific ie: Weapon DA/Z (WDA) or Range DA/Z (RDA).	
Defence Regulators	Defence Regulators are to provide regulation of HS&EP for defence activities within a specific domain. They are empowered by SofS by charter (DGMAA) or via delegations from PUS and D DSA (DSA Regulators). Defence Regulators are to operate regimes that are aligned, where reasonably practicable, with statutory equivalents or near	

	equivalents in order to produce outcomes that are so far as practicable at least as good as those required by UK legislation. Since most relevant (exempt) defence activities have serious consequences, should there be a failure, Defence Regulators typically license a permit certain activities.	
Duty Holder	Employers, managers and employees all have duties under S&EP legislation; additionally it is appropriate in Defence to identify individual post-holders as Duty Holders (DHs) to provide specific focus on S&EP management. DHs have a personal duty of care for personnel under their command or management, for those who, by virtue of their temporary involvement in activities, come within a DH's area of responsibility (AoR) and for the public who may be affected by their activities. DHs are accountable ¹² for the safety of activities in their AoR and for ensuring that risks are reduced So Far As Is Reasonably Practicable (SFAIRP). In the execution of their specific responsibilities, DHs are accountable to SofS, via their superior DH chain. DHs are nominated at three levels in each TLB or TFA.	JSP815 ¹³
Senior Duty Holder	Senior Duty Holder (SDH). PUS appoints the TLB Holder or TFA Chief Executive as the SDH for activities in his TLB. An SDH is personally responsible for ensuring that resources are adequate to conduct activities safely, that effective management arrangements are implemented and that personnel (in particular DHs) under his command / management are suitably qualified, experienced, trained and equipped. SDHs have right of access to PUS.	JSP815
Operational Duty Holder	Operational Duty Holder (ODH). An SDH appoints ODHs (at typically 2 star level) for specific activities or groups of activities in his AoR. An ODH is personally responsible for ensuring that resources are adequate to conduct activities safely, that effective management arrangements are implemented and that personnel (in particular DHs) under his command / management are suitably qualified, experienced, trained and equipped. An ODH typically oversees all defence lines of development (e.g. approved equipment / materiel, trained and competent staff) that contribute to activities and he may own the safety case for a significant defence activity in his AoR, being personally satisfied that risk has been reduced SFAIRP. An ODH is accountable and has right of	JSP815

¹² Legal responsibility rests with SofS.

¹³ JSP815 Defence Health and Safety and Environmental Protection.

	access to his appointing SDH.	
Delivery Duty Holder	Delivery Duty Holder (DDH). An ODH appoints DDHs for specific activities in his AoR. A DDH is personally responsible for ensuring that resources are adequate to conduct activities safely, that effective management arrangements are implemented and that personnel under his command / management are suitably qualified, experienced, trained and equipped. A DDH may own the safety case for his defence activity, being personally satisfied that risk has been reduced SFAIRP. By virtue of his position in the command / management chain and his proximity, the DDH supervises the defence activity being conducted. A DDH is accountable and has right of access to his appointing ODH.	JSP815
Danger Area/Zone	A Danger Area/Zone (DA/Z) is a space permanently designated within which specified weapons and explosives which are launched or detonated such that (the resulting fragments, debris, components and ricochet) will be contained.	
Demolitions Conducting Officer	The officer or senior NCO qualified as either a Demolitions Safety Officer (DSO) or a Battle Noise Safety Supervisor (BNSS), as appropriate, appointed as Competent to plan, conduct and supervise all practices and training involving the use of explosives, simulators or accessories.	
Dispensation Range	A range which varies from design and build criteria specified for its type in JSP 403, or the appropriate single service publication, that results in a level of risk which exceeds that currently accepted for a Compliant Range of the same type, requires dispensation. The dispensation can only be provided by the 2* General Officer Commanding within whose Area of responsibility the range falls. This can only be granted for a period of 12 months	
Exercise Director	The person who directs that a particular training exercise or practice is to be carried out and who appoints officers to plan and conduct the activity. The Exercise Director cannot be the person appointed to plan or conduct the training but ensures those appointed are Competent and that the plan meets the requirements of the aim of the exercise and that exercising troops are competent to undertake the training.	
Incident	An unintended event with the capacity to cause harm.	Def Stan 00-56. Issue 4.0
Training Incident	An incident is any unplanned occurrence which does not fall within the definition of training accident.	
Range	A range is a range where the Danger Area / Zone (DA/Z) falls wholly or partially on or over land.	

LASER	A LASER is a device that generates an intense beam of coherent monochromatic radiation in the infra-red, visible or ultraviolet region of the electromagnetic spectrum, by stimulated emission of photons from an excited source.	The Concise Oxford Dictionary
Live Firing Tactical Training	The infantry term for the final stage of training the battle shot which brings together and practises tactical groups under realistic operational shooting conditions at levels set by the chain of command.	
Live Firing Tactical Training Area	An area of ground contained within a range danger area boundary that is used for live firing tactical training	
Munition	A complete device, (e.g. missile, shell, mine, demolition store etc.) charged with explosives, propellants, pyrotechnics, initiating compositions or nuclear, biological or chemical material, for use in connection with offence, or defence, or training, or non-operational purposes, including those parts of weapon systems containing explosives.	AOP-38.
May	A course of action permissible by the policy.	Adapted ISO / IEC Directives Part 2.
Shall	An external regulatory requirement.	Adapted ISO / IEC Directives Part 2.
Near Miss	An occurrence, or potential occurrence, involving an explosive, or an occurrence potentially involving an explosive, which could have caused: Damage to the explosives. Damage to, or contamination of, military or civilian equipment. Property or the environment. Injury to, or illness of, military personnel, MoD civilian personnel or members of the public. Threat to the structural integrity of, or to cause damage to, military or civilian equipment, property or the environment.	JSP482.
Ordnance	The sub-system of “a weapon system (with its associated munitions and auxiliary materiel) needed to fire munitions”.	AOP-38
Overseas Authority	Notwithstanding the position of state immunity under customary international law, many host nations have HS&EP authorities with expectations (which may be expressed in written agreements) in respect of UK defence activities conducted in their jurisdiction. A commanding officer or manager is to engage with such authorities, recognise international (eg. coalition partners) and national sensitivities and is to respond to expectations. Defence Regulators are empowered to regulate UK defence activities overseas, and they co-operate and collaborate with overseas authorities, if present and where appropriate, adjusting their regulatory regimes as	

	necessary	
Planning Officer	The Planning Officer is the Competent person who is appointed by the Exercise Director to be responsible for the exercise including the definition of any firing area, arcs of fire, permitted ammunition natures, target siting, safe location of all weapon firing positions and the production of a written instruction, including safety trace, after a risk assessment.	
Principle Warfare Officer	The officer responsible to the Captain of a Ship for the planning and safe conduct of Naval guided weapon and gunnery practices and for ensuring that all internal and external safety requirements are satisfied before, during and on completion of all practice firings.	
Range (Zone)	<p>The range is a space reserved, authorised and normally equipped for hazardous firing (weapon/laser). The following types of Indoor and Open (Outdoor) ranges are defined:</p> <p>Indoor Range. An Indoor Range is one which is fully enclosed in a building or other structure.</p> <p>Open Range. An Open Range is one which is exposed to the natural effects of light, wind and weather. The range may be completely open or contained partially by a structure.</p> <p>No Danger Area Range. A No Danger Area (NDA) Range is a range where for all practical purposes the design precludes risk of injury to persons or damage to property beyond the range floor caused by shot, direct or ricochet, fired in accordance with authorised procedures and aimed within the bounds of accepted aimer error.</p> <p>Limited Danger Area Range. A Limited Danger Area (LDA) Range is an open range which is designed to ensure that no direct and correctly aimed shot fired within the bounds of acceptable aimer error will go beyond the range floor which ricochet is expected to create a hazard over a wider limited danger area. This is contained within the overall RDA to be applied.</p> <p>Full Danger Area Range. A Full Danger Area (FDA) Range is an open range where hazard is only limited by the elevation of the delivery system and the skill of the firer.</p>	AAP 6
Range Allocating Authority	The Range Allocating Authority (RAA) is the headquarters, unit or establishment which allocates a range or group of ranges. The RAA usually has control of the real estate and can be the Range	

	Administering Unit as well.	
Range Authorising Officer	The Range Authorising Officer (RAO) is the officer responsible for personally certifying on the MoD Form 904 the weapon systems, munitions and explosive stores which can be used on the range, and for setting any limitations or restrictions on their use.	
Range Administering Unit	The Range Administering Unit (RAU) is the unit or establishment tasked with the presentation of a Safe Place and the CO of the RAU is responsible for the production and upkeep of Range Standing Orders. The CO of the RAU is accountable to the Range Authorising Officer.	
Range Conducting Officer	The Competent person who is appointed by the Exercise Director / Commanding Officer / Head of unit or organisation to be responsible for the safe conduct of firing in accordance with the relevant Service instructions.	
Range Control	Range Control is the term used to describe the focal point on a range or range complex whose staff are responsible for safe range management on behalf of the Range Administering Unit (RAU) and/or the Range Authorising Officer (RAO).	
Range Liaison Officer	The Range Liaison Officer (RLO) is the Competent person on the Range Staff of the Range Administering Unit (RAU) who is responsible to the CO /Manager of the RAU for liaison with user units/organisations. He may also hold the appointment of Range Officer, Range Manager and/or Range Safety Officer. Notes: In the RAF this function is carried out by the Unit Ranges Specialist Officer (URSO).	
Range Safety Officer / Training Safety Officer	The Range Safety Officer is the Competent person on the range staff of the Range Administering Unit who is responsible to the Commanding Officer / Manager of the Range Administering Unit for the day to day safe operation of a particular live firing area or range complex and for range clearance. Notes: Responsibility for the safe conduct of individual practices lies with the Range Conducting Officer or Trial Conducting Officer and not the Range Safety Officer. However, the latter does have the authority of the Commanding Officer / Manager of the Range Administering Unit to stop or challenge an apparent unsafe practice.	
Range Officer	The Range Officer is the person appointed by the Commanding Officer/Manager of the Range Administering Unit, or in the case of the DIO SD Training in conjunction with the Landmarc Support Services Area Manager, for the daily management and operation of the range. He may also hold the appointment of Range Liaison Officer and / or	

	Range Safety Officer.	
Range Safety Dispensation	A range safety dispensation for a firing practice or for a particular range or use of OME is a written authorisation, at 2 Star level or 1 Star Theatre Commander (maximum 28 days), to permit a practice and / or use of a range when it does not meet currently prescribed safety criteria and live firing regulations.	JSP454
Range Standing Orders	The 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. The Range Standing Orders (Range SO) are binding on all persons authorised to be on the range. They are written and maintained by the Range Administering Unit. For Test, Evaluation, Research and Proof (TERP) ranges they can be written and maintained by a contractor operating the ranges as long as they are approved by the representative of the Range Authorising Officer.	
Risk	Combination of the likelihood of harm and the Severity of that harm.	Def Stan 00-56 ¹⁴ . Issue 4.0
Risk Analysis	Systematic use of available information to describe the hazards in an accident sequence associated with a system, and Estimate risk.	Adapted IEC 51 ¹⁵
Risk Assessment	Systematic process of Risk Analysis and determination by relevant stakeholders that risks may be accepted or mitigation agreed after Risk Evaluation.	
Risk Management	The systematic application of management policies, procedures and practices to the tasks of Hazard Identification, Hazard Analysis, Risk Estimation, Risk and ALARP Evaluation, Risk Reduction and Risk Acceptance.	Def Stan 00-56. Issue 4.0
Safety	Safety relates to the freedom from risks that are harmful to a person, or groups of persons, either local to the hazard, nationally or even throughout the world. It is implied that for the consequences of an event to be defined as a hazard, i.e. a potential for causing harm, there is some risk to the human population and therefore safety could not be guaranteed, even if the risk is accepted when judged against some criterion of acceptability.	
Safety Supervisor	The competent person with the appropriate current qualification / authorisation appointed to be responsible for the safe supervision of firing as directed by the Range Conducting Officer / Trials Conducting Officer in accordance with relevant Service / Agency instructions and Range Standing Orders.	

¹⁴ DefStan 00-56 Safety Management Requirements for Defence Systems.

¹⁵ ISO / IEC Guide 51:1999 Edition 2, Safety aspects - Guidelines for their inclusion in standards

Senior Planning Officer	The Senior Planning Officer is the qualified, current and competent person appointed by the Exercise Director to co-ordinate the overall plan whenever there is more than one Planning Officer involved and whenever Joint and/or Combined live firing is to take place on a range.	
Safety Management	The application of organisational and management principles in order to achieve safety with high confidence.	Def Stan 00-56. Issue 4.0
Safety and Environmental Management Plan	A document that defines the strategy for addressing safety and the environment, and documents the Safety and Environmental Management System for a specific project.	Adapted Def Stan 00-56 ¹⁶ Issue 4.0
Safety and Environmental Management System	The organisational structure, processes, procedures and methodologies that enable the direction and control of the activities necessary to meet safety and environmental requirements and policy objectives.	Adapted Def Stan 00-56. Issue 4.0
Shall	Indicates a requirement strictly to be followed in order to conform to the policy and from which no deviation is allowed.	Adapted ISO / IEC Directives Part 2.
Should	Among several possibilities one is recommended as particularly suitable, without excluding others or that a certain course of action is preferred but not necessarily required.	Adapted ISO / IEC Directives Part 2.
Subject Matter Expert	Person who has specific knowledge or expertise in a defined area.	POSMS .
Temporary Exercise Range	A Temporary Exercise Range (TER) is a temporary range taken into use for a limited period of time for a particular training purpose. A TER is normally set up on a piece of land not previously used for live firing. The use of a TER requires a site and practice specific risk assessment to ensure all elements of the SST are in place. If used more than three times in a one year or once a year for more than three years the TER should be formally taken into service by the DRSC.	
Trial Conducting Officer	The Competent person responsible for the safe preparation and conduct of all trials and firings carried out on a range under his / her control in accordance with a Trials Specification.	
Type Standard	A document containing the technical elements of a design brief for a range and detailing the ballistic and functional requirements to be incorporated in the design.	
Total Energy Area/Zone	The Total Energy Area / Zone (TEA / Z) is the maximum two or three dimensional space around a firing point within which all weapon system effects are contained.	
Third party	A person or persons who are not classed as Ministry of Defence personnel e.g. Contractors, General	

¹⁶ DefStan 00-56 Safety Management Requirements for Defence Systems.

	Public, etc.	
Tolerable	A risk is Tolerable when it is at a level that is judged acceptable by an appropriate DH.	Adapted Def Stan 00-56 ¹⁷ Issue 4.0
Unacceptable	A level of risk that remains unacceptable.	Def Stan 00-56. Issue 4.0
Weapon System	An aggregate of an ordnance system, including any associated munitions launching system, together with sufficient munitions and ancillary equipment necessary to test, aim, launch and guide those munitions as applicable.	Adapted AAP-6 ¹⁸ .

¹⁷ DefStan 00-56 Safety Management Requirements for Defence Systems.

¹⁸ Allied Administrative Publication No 6 (AAP-6), NATO Glossary of Terms and Definitions.

Annex E: Acronyms and Abbreviations

The acronyms and abbreviations contained in JSP403 Parts 1 and 2 are presented below.

Acronyms	Definitions
ACF	Army Cadet Force
ACOP	Approved Code of Practice
ACPO	Association of Chief Police Officers
AER	Ammunition and Explosives Regulations
AESWG	Army Environmental and Safety Working Group
AFB	Air Force Board
AGL	Above Ground Level
ALARP	As Low As Reasonably Practicable
AOC	Air Officer Commanding
AOSP	Army Operational Shooting Policy
ASSAWP	Air- to-Surface Surface to Air Working Party
AOCinC	Air Officer Commander in Chief
ARA	Army Rifle Association
AT	Ammunition Technician
ATO	Ammunition Technician Officer
BDS	British Deer Society
BPEO	Best Practicable Environmental Option
BRT	Byelaws Review Team
BSI	British Standards Institute
BLB	Basic Level Budget
CA	Competent Authority
CAA	Civil Aviation Authority
CCF	Combined Cadet Force
CCMDP	Chief Constable Ministry of Defence Police
CDM	Chief of Defence Materiel
CE	Chief Executive
CE/DIO	Chief Executive of Defence Infrastructure Organisation
CESO	Chief Environmental Safety Officer
CIE(MoD)	Chief Inspector of Explosives (Ministry of Defence)
CJO	Chief Joint Operations
CNH	Commander in Chief Naval Home Command
CO	Commanding Officer
COO	Chief Operating Officer
COP	Code Of Practice
COSH	Control of Substances Hazardous to Health
CPSA	Clay Pigeon Shooting Association
DA	Delegated Authority
DB	Defence Board
DCbt	Director Combat
DDH	Delivery Duty Holder
DDM	Defence Deer Management
Def Stan	Defence Standard
DE&S	Defence Equipment and Support
DH	Duty Holder
DIN	Defence Information and Notice
DIO	Defence Infrastructure Organisation
DIO Ops	Defence Infrastructure Organisation Operations

Acronyms	Definitions
DRFC	Defence Ranges Framework Competences
DLSC	Defence LASER Safety Committee
DRSC	Defence Ranges Safety Committee
DRSC WG	Defence Ranges Safety Committee Working Group
DODABSWP	Demolitions, Ordnance Disposal and Battle Simulation Working Group
DOSG	Defence Ordnance Safety Group
DOSR	Defence Ordnance, Munitions, Explosives Safety Regulator
DOSRSC	Defence Ordnance, Munitions, Explosives Safety Regulator Stakeholder Committee
DSA	Defence Safety Authority
D DSA	Director Defence Safety Authority
DSA RSIT	Defence Safety Authority Range Safety Inspectorate Team
DSG	Defence Support Group
Dstl	Defence Science and Technology Laboratory
EA	Environmental Agency
eHIATs	Electronic Manual of Hazard Impact Area Traces
EOC	Explosive Ordnance Clearance
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Act
ESA	Explosives Substances and Articles
ESIT	Explosives Safety Inspection Team
EU	European Union
EWC	Establishment Works Consultant
FO	Flag Officer
FOSNNI	Flag Officer Scotland, Northern England and Northern Ireland
FW	Fixed Wing
GSTP	General Service Training Publications
GW	Guided Weapon
HE	High Explosives
HD NV Div	Head of Department Noise and Vibration Division
HIATs	Hazard Impact Area Traces
HOE	Head of Establishment
HOS	Head of Site
HQ Air	Headquarters Air Command
HQ STC	Headquarters Strike Command
HSC	Health and Safety Commission
HSE	Health and Safety Executive
HS&EP	Health and Safety and Environmental Protection
HSW	Health and Safety at Work
HSW Act	Health and Safety at Work Act 1974
IE	Inspectors of Explosives
IPSC	International Practical Shooting Confederation
IRSI	Independent Range Safety Inspector
ITT	Indoor Training Theatre
JSP	Joint Service Publication
LAIT	Land Accident Prevention and Investigation Team
LFMT	Live Firing Marksmanship Training
LFTT	Live Firing Tactical Training
LFTTA	Live Firing Tactical Training Area
LTAR	Land Training Areas and Ranges
MAA	Military Aviation Authority
MD	Managing Director

Acronyms	Definitions
MDP	Ministry of Defence Police
MID	Munitions Incidents Database
MIL-STD	Military Standard
MLSRP	Military Laser Safety Review Panel
MoD	Ministry of Defence
MoD COP	MoD Codes of Practice
NGB	National Governing Body
NIPS	Northern Ireland Prison Service
NIPSC	Northern Ireland Practical Shooting Confederation
NMO	Non MoD Organisations
NOS	National Occupation Standards
NRA	National Rifle Association
NSRA	National Small-bore Rifle Association
NSPLW	Non Service Pattern Light Weapons
OIC	Officer in Charge
OHSB	Occupational Health & Safety Board
OME	Ordnance, Munitions and Explosives
OSRP	OME Safety Review Panel
OTR	Operational Training Range
OTT	Operational Training Theatre
PAU	Practice Authorising Officer
PJHQ	Permanent Joint Headquarters
PJOB	Permanent Joint Operating Base
PPE	Personal Protective Equipment
PRG	Policy, Regulation and Guidance
PT	Project Team
PTL	Project Team Leader
PUS	Permanent Under Secretary
RAA	Range Allocating Authority
RAF	Royal Air Force
RAF ESIT	Royal Air Force Explosives Safety Inspection Team
RAO	Range Authorising Officer
RAU	Range Administering Unit
Range SO	Range Standing Orders
RCO	Range Conducting Officer
RDA	Range Danger Area
RFCA	Reserve Forces and Cadets Association
RIDDOR	Report of Injuries Diseases and Dangerous Occurrences Regulations
RN	Royal Navy
RN EOD	Royal Navy Explosives Ordnance Disposal
RNRSO	Royal Navy Range Safety Officer
RO	Range Officer
RSN	Range Safety Notice
RSO	Range Safety Officer
RSO ATC	Range Safety Officer (Air Traffic Control)
RSPL	Range Safety Policy Letter
SA	Small Arms
SASC	Small Arms School Corps
SART	Small Arms Ranges Target System
SDH	Senior Duty Holder
SHE	Safety, Health and Environment
SLA	Service Level Agreement

Acronyms	Definitions
SME	Subject Matter Expert
SMP	Safety Management Procedure
SSS	Safe System of Shooting
SST	Safe System of Training
SSW	Safe System of Work
SofS	Secretary of State
SOTR	Statement of Trained Requirements
SQEP	Suitably Qualified and Experienced Person
SRD	Systems Requirement Document
STANAG	NATO Standardization Agreement
STSO	Senior Training Safety Officer
T&E	Test and Evaluation
TAS	Training Advisory Section
TCO	Trial Conducting Officer
TER	Temporary Exercise Range
TERP	Test, Evaluation, Research and Proof
TEST RM	TEST Range Manager
TEST RPO	TEST Resident Project Officer
TLB	Top Level Budget
TLFTT	Transitional Live Firing Tactical Training
TOPL	Training over Private Land
TOR	Terms of Reference
TSM	Trials Safety Manager
TSO	Training Safety Officer
TWG	Technical Working Group
UOR	Urgent Operational Requirement
URD	User Requirements Document
UK DAUG	United Kingdom Danger Area User Group
UKPSA	United Kingdom Practical Shooting Association
UAS	Unmanned Aircraft System
UAV	Unmanned Aerial Vehicle
UAVS	Unmanned Aerial Vehicle System
UCAV	Unmanned Combat Aerial Vehicle
WDA / Z	Weapon Danger Area / Zone
WDALab	Weapon Danger Area Laboratory