

Single Skills Framework

Defence Ranges Framework Competencies

2018



Defence
Safety
Authority

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Assessment Levels

Below are the definitions to be applied for the assessment levels within the Defence Ranges Framework Competences:

Development	Has been identified as a competence you do not currently have, but need to develop.
Awareness	<p>You are able to understand the key issues and their implications for the customer. You are able to ask relevant and constructive questions on the subject, is learning the skill and when facing something new or unusual has to refer to procedures, manuals, other team members for guidance.</p> <p>You display an understanding of what effective performance looks like and demonstrates some practical application at work.</p> <p>You may stay at this level for some time, training and other development activities will help, but it is experience of applying new skills that will develop your proficiency level.</p>
Practitioner	<p>You can cope with standard problems and common situations; you are competent at day-to-day application of the skill, and able to present concepts, information and solutions. You display a detailed knowledge of the subject and are capable of providing guidance and advice to others.</p> <p>At this level you can deal with most standard problems and will only need to refer to an expert for non-standard issues and problems. You will still be using a variety of development activities to increase your experience and proficiency (e.g. training courses, reading regulatory and reference material).</p>
Expert	<p>You can cope with unusual and non-standard problems and issues, are aware of alternative options and approaches to situations, can guide or advise others in this skill and are able to look ahead and anticipate. You display extensive practical experience and applied knowledge of the subject in a wide range of work situations.</p> <p>You are seen as a role model for others and people will seek your advice. You may be involved in coaching or mentoring activities related to this skill.</p> <p>Experience in the job, as well as using the skill and other development activities will develop your proficiency level.</p>

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DEFENCE RANGES FRAMEWORK COMPETENCE - COMPOSITION

The DRFC is made up of the following competences:

- **Competence 1 – Development and application of appropriate regulation through JSP403**

This competence covers knowledge and understanding of the wider perspective of Policy Legislation.

- **Competence 2 – Range Maintenance**

This competence covers the skills needed in Range Maintenance.

- **Competence 3 – Range Inspection**

This competence covers the skills needed by Range Inspectors.

- **Competence 4 – Range Compliance and Assurance**

This competence covers the regulatory framework in range design.

LEVELS OF COMPETENCE

Each competence comprises:

- **A competence title**

e.g. 'Works safely and effectively within a Safe System of Work'

- **The competence requirements – I need to:**

e.g. 'Produce a Site Specific Risk Assessment'

- **Indicator(s) of effective performance – I demonstrate effective performance by:**

e.g. 'Producing an effective risk assessment, identifying any associated risk and implementing adequate control measures'

- **Knowledge and understanding – I have to know and understand:**

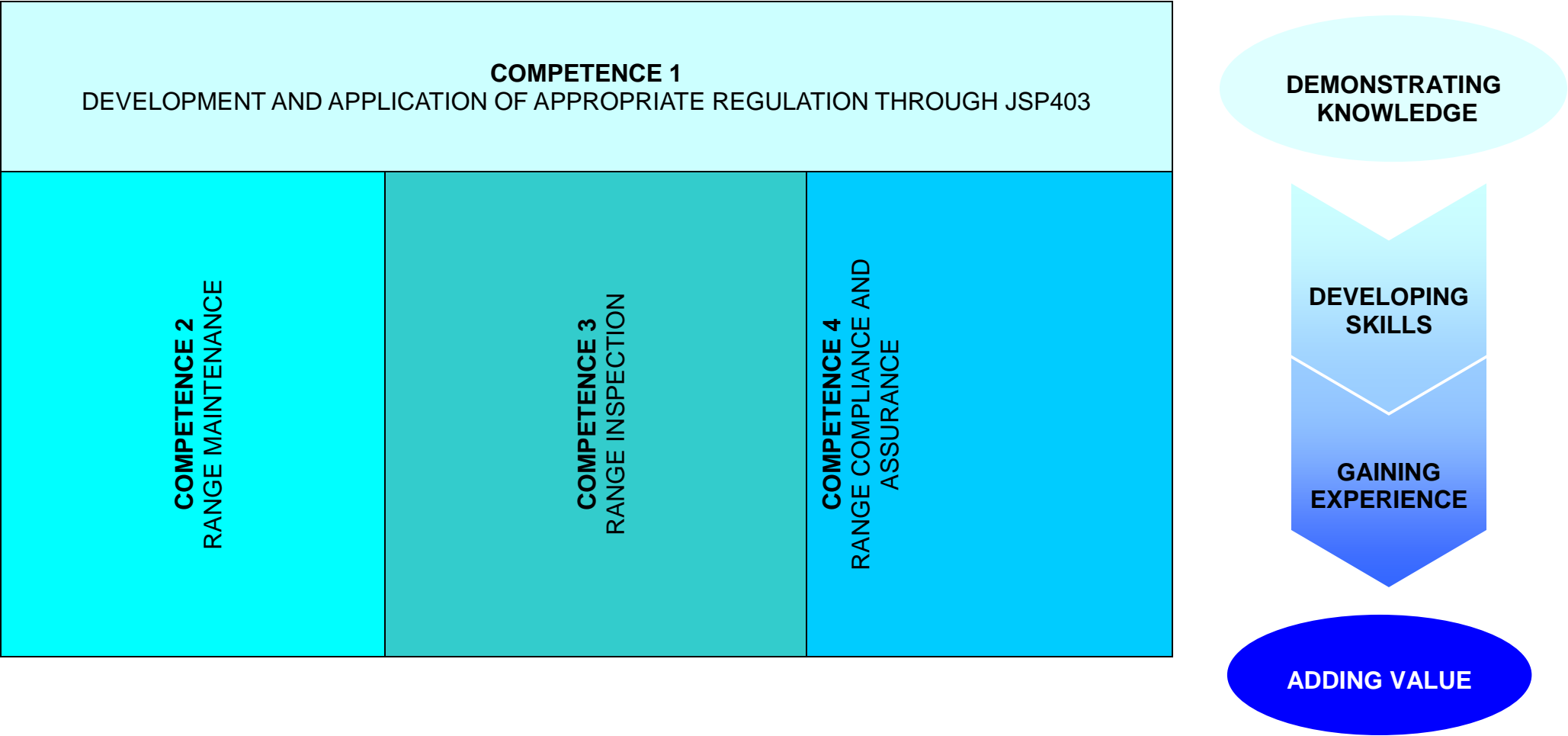
e.g. 'How to produce a Site Specific Risk Assessment identifying hazards, existing controls any acceptable risk and further additional controls'

- **Related policy and guidance**

e.g. MOD Publications etc

DEFENCE RANGES FRAMEWORK COMPETENCE MODEL

The way in which the competences relate to each other can be seen in the competence model below:



COMPETENCE 1

DEVELOPMENT AND APPLICATION OF APPROPRIATE REGULATION THROUGH JSP403

[Related ESA-NOS 2.1, 2.3, 2.3A, 2.4, 2.4A, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 9.2, 13.4, 13.9, 13.10, 13.16,]

WHAT DO I NEED TO KNOW?

I need to know:	I demonstrate effective performance by:	I have to know and understand:	Knowledge	Experience
(a)	(b)	(c)	(d)	(e)
1.1 Works safely and effectively within a Safe System of Work for range staff and within the SST for Units or Service equivalent.	a. Production of a Site Specific Risk Assessment b. Produce site specific Range Standing Orders (Range SO) from the written risk assessment. c. Establish safe systems of work through the issue of standing and other orders. d. Identify when a specific risk assessment is needed. e. Identify when a specific risk assessment needs to be re-visited. f. Identify when and where Range SO require updating and direct the re-write. g. Works safely and effectively within the Range Management System and Safe System of Training.	<ul style="list-style-type: none"> Proven and demonstrated knowledge and experience of All Arms Live Firing activities within the Safe System of Training (SST). How to produce a Site Specific Risk Assessment identifying hazards, existing controls (any acceptable risk) and further additional controls. Understand the Safe Systems of work and how to implement them on Defence Ranges. How to monitor the upkeep of a range file / folder containing copies of all relevant proceedings, certificates, licenses and reports relating to authorisation, use and inspections of the range. 		
1.2 Demonstrates a knowledge and understanding of the principles of the safe operation of ranges.	a. Monitor the maintenance and good order of range facilities. b. Draw the attention of the appropriate organisation/individual to any faults or deficiencies that cannot be rectified within the resources of the Range Administering Unit (RAU).	<ul style="list-style-type: none"> How to keep a range presentable and maintaining it in a fit state for use. Monitor use compliance of SST on the use of ranges. Monitor inspection programmes including the arrangements for works maintenance inspections by the appropriate works organisation and annual inspections. 		

1.3 Demonstrates a thorough knowledge of hazards applicable to ranges and the controls required.	<p>a. Demonstrate the ability to brief authorised personnel on the safe use of range facilities.</p> <p>b. Demonstrate the ability to brief visitors on safety related matter to their visit.</p> <p>c. Demonstrate the ability to advise potential users on the types of activities and facilities best suited to their training requirements.</p> <p>d. Demonstrate the ability to check that a Danger Area (DA) trace is correct, accurate and is contained within the area allocated to the user.</p> <p>e. Demonstrates knowledge of the hazards arising from operation and use of ranges and of their effects.</p> <p>f. Produce the measure necessary to mitigate risks on ranges As Low as Reasonably Practicable.</p>	<ul style="list-style-type: none"> • How to recognize potential safety hazards. • How to construct a Weapon Danger Area Template. • How to apply a Weapon Danger Area Template. • How to construct a Range Danger Area Trace. • How environmental issues, particularly pollution and waste management can affect control and management of ranges. • How to give authorised civilians a brief depending on the nature of the duties to be conducted and the potential risks to which they might be exposed. 		
1.4 Ensures compliance with legislation, regulation, MoD policy and best practice.	<p>a. Demonstrate an understanding of Byelaws that apply on a range.</p> <p>b. Demonstrate the ability to generate/activate a Notice to Airman (NOTAM) and an Airspace Coordination Notice (ACN).</p> <p>c. Demonstrate the ability to apply the appropriate access control measures for activities and events authorised to take place on a range.</p> <p>d. Demonstrate an awareness of the measures necessary to maintain surveillance of the Range Danger Area (RDA) including all points of access.</p>	<ul style="list-style-type: none"> • How Byelaws affect access to site specific range. • How to take reasonable and affordable precautions to safeguard the public. • How to produce and distribute a NOTAM. • How to produce and distribute a CAN. • How to comply with current Legislation, Regulations and MoD Policy. 		
1.5 Contributes to effective regulation or legislation.	<p>a. Demonstrates an understanding of compliance with Health & Safety at Work Act 1974.</p> <p>b. Produce Range Safety Policy Letters (RSPL) to include changes of regulation or legislation.</p> <p>Demonstrate and understanding MoD Range Safe System of Training. Issue</p>	<ul style="list-style-type: none"> • Understand how Health & Safety affect specific range facilities and operation. • How to implement MoD Safe System of work for the safe operation of MoD Ranges. 		

	higher policy direction and clearance of range safety matters.			
Total score for knowledge and experience				
			÷ 4	÷ 4
Overall knowledge and experience ratings				
Total score (K + E)				
Level of Competence				
RELATED POLICY AND GUIDANCE				
DSA 01.1 Defence Policy for Health, Safety and Environmental Protection. JSP403 Vol 1 Handbook of Defence Range Safety, JSP375 MOD Health and Safety Handbook, JSP418 MoD Environmental Handbook Occupiers Liability Acts (OLA), Military Lands Acts (MLA), Armed Forces Act (AFA), Countryside Rights of Way Act (CROW), Land Reform (Scotland) Act (LR(S)A), Management of Health and Safety at Work Regulations. Control of Lead at Work Regulations. Infantry Training Vol IV, Ranges, Pamphlet No 21, Training Regulations for Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics. JSP 898. Pamphlet 21c Regulations for Cadets Training with Cadet Weapon Systems and Pyrotechnics. Range Safety Notices (RSN), Range Advice Note (RAN).				

COMPETENCE 2

RANGE MAINTENANCE

[Related ESA-NOS 2.5A, 2.7, 2.8A, 2.9A, 2.10, 2.12A, 3.13, 3.20, 9.2, 12.10, 13.1, 13.4, 13.8, 13.9, 13.15]

WHAT DO I NEED TO KNOW?

I need to know:	I demonstrate effective performance by:	I have to know and understand:	Knowledge	Experience
(a)	(b)	(c)	(d)	(e)
2.1 How to provide the maintenance and good order of range facilities.	a. Providing care and security of range equipment. b. Maintaining care and issuing of range stores. c. Correctly making up and repairing target screens and penetrable targets. d. Maintaining the bullet catcher in accordance with RAU instructions. e. Maintaining and minor repairs to the range structure, such as target pits and runs, firing points and shelters. f. Cleanliness of the range and range buildings.	<ul style="list-style-type: none"> • Fire awareness. • COSHH awareness. • How to use Hythe Target Frames. • Maintenance of Targets. • General Safety Procedures. • Range Ground Maintenance. • Risk Assessment awareness. • Use PPE. • Working at Height Awareness. • Use of Petrol Strimmer. • Waste Management. • Safe use of Pesticides. • Use of Chain Saw. • Use of Basic Tools/Plant Equipment. 		
2.2 Management of Ranges.	a. Maintaining the range booking diary and liaison with RAU regarding the range programme. b. Displaying red flags and red lamps as required by Range Orders. c. Preparing the range users' requirements. d. Instructing the range user on targets, control systems and local range procedures. e. Briefing the user on any special instructions for the range and any restrictions / limitations on movement caused by neighbouring ranges. f. Custody of Range Orders and the Range Log.	<ul style="list-style-type: none"> • Range Standing Orders. • Use of the Occurrence Log. • Range Byelaws. • Range Details. • How to hand over a range to a RCO. • Take back the range from a RCO. • Manual Handling. 		

	<p>g. Handing over and taking back the range from the user.</p> <p>h. Maintain security at the end of the day's practice.</p>			
<p>2.3 Maintenance of the MOD Form 906 / 906A Range Log.</p>	<p>a. Holding and maintaining MoD Form 906/906A in accordance with the notes on page 1.</p> <p>b. Issue a copy of the log and Range Orders to the RCO taking over the range, ensuring that the RCO has completed it correctly before firing commences.</p> <p>c. On completion of firing, checking the RCO has completed the appropriate columns.</p> <p>d. Recording all faults, damages and range incidents and reporting them to the RAU.</p> <p>e. Ensuring the following is recorded in red by the examining/inspecting officer:</p> <p style="padding-left: 40px;">(1) The details of de-leading, deep cleaning, technical examinations and other maintenance task carried out by other agencies.</p> <p style="padding-left: 40px;">(2) Range Inspections.</p> <p>f. Recording all incidents involving safety, and the running or management of the range.</p>	<ul style="list-style-type: none"> • Use of MoD Form 906 / 906A. • Use of Air Incursions Report. <p>Holding and maintaining the Log with the notes on its first page.</p>		
<p>2.4 Additional Duties – Other Ranges.</p>	<p>a. ETR Ranges. Custody, upkeep and functionality of electric target equipment.</p> <p>b. Operate, handle and check the function of electrical equipment, winches, compressed air or batteries.</p> <p>c. Preparing target veneers.</p> <p>d. Testing and changing FET mechanisms, and recording servicing.</p> <p>e. User checks and maintenance of FET mechanisms.</p>	<ul style="list-style-type: none"> • Use of ETR Console. • How to change Fixed Electronic Targetry. • How to fit Target Extension Bars. • Use of Seebach Vacuum. • Greasing and non-technical servicing of fitted range equipment. 		

	<p>f. Care of the console building.</p> <p>g. Indoor Ranges. Show awareness of health risk posed by lead-in-air, lead dust, the risk of fire and explosion posed by un-burnt propellant and observe safe working practices.</p> <p>h. Operate installed ventilation equipment and carry out user servicing.</p> <p>i. Use cleaning methods and equipment detailed in JSP 403 Vol 2 Chapter 30 to prevent lead dust and unburnt propellant accumulating.</p>			
2.5 Operate and maintain Automatic Marking System / SARTS.	<p>a. Operate Automatic Marking System(AMS) / SART Procedures.</p> <p>b. Care, functionality and Calibration of AMS / SART.</p> <p>c. Show range users how to operate AMS / SART equipment.</p>	<ul style="list-style-type: none"> • How to use Individual Lane Monitor. TUF Box. • How to use Central Computer in Console. • When required, operate AMS / SART equipment. 		
2.6 Operate Specialist Targetry.	<p>a. Operate portable, cable-operated compressed air, electrical or radio controlled target equipment.</p> <p>b. Inspecting mechanisms on return for damage.</p> <p>c. Storing and charging batteries and air cylinders.</p> <p>d. Examining cable insulation and testing for continuity.</p> <p>e. Visual inspection and minor non-intrusive functional checks of winches, trolleys and tow cables.</p>	<ul style="list-style-type: none"> • Use of a generator. • Preparing equipment for use. 		
Total score for knowledge and experience				
			÷ 4	÷ 4
Overall knowledge and experience ratings				
Total score (K + E)				
Level of Competence				

RELATED POLICY AND GUIDANCE

DSA 01.1 Defence Policy for Health, Safety and Environmental Protection. JSP403 Volume 1 Handbook of Defence Ranges
Safety, Control of Lead at Work Regulations. BS 7671 Requirements for Electrical Installations. JSP375 Volume 3

COMPETENCE 3

RANGE INSPECTION

[Related ESA-NOS 2.3A, 2.4, 2.4A, 2.5A, 2.7, 2.8, 2.8A, 2.10, 2.12A, 2.13, 2.14, 4.14, 7.14, 9.2, 9.3, 13.4, 13.8, 13.9]

WHAT DO I NEED TO KNOW?

I need to know:	I demonstrate effective performance by:	I have to know and understand:	Knowledge	Experience
(a)	(b)	(c)	(d)	(e)
3.1 Demonstrates knowledge of JSP403, MoD training publications and single service documentation associated with ranges.	a. Know the procedure for siting, constructing and accepting a range b. Able to locate the criteria and specifications applicable to design and construct the range. c. Know the national and international procedures for the notification and promulgation of air and sea danger areas. d. Able to check that the written risk assessment process exists in respect of the range. e. Explain current MoD policy regarding range authorisation and use. f. Know the functions and responsibilities of range works organisation in respect of mandatory inspections of the range.	<ul style="list-style-type: none"> • Application of all direct and indirect fire weapon systems in a military environment based on previous teeth-arm service. • JSP403 Vols 1-4. • Pamphlet 21. • Other Arms and Services' equivalents of Pamphlet 21. • Aeronautical Information Distribution Unit (AIDU) procedures and arrangements for notifying Range Air Danger areas. • Currently used risk assessment formats in JSP375 and Pamphlet 21. • For Inspectors of overseas ranges. Understanding of international diplomatic and International Civil Aviation Organisation (ICAO) procedures, roles of Embassies, High Commissions, Defence Attaches and Advisers and FCO / MoD International branches.		
3.2 Able to identify, understand and explain the documentation associated with Ranges.	a. Check the application, use and management of Range Orders. b. Check the Proceedings of a Board of Officers for the range(s). c. Know the methodology for initiating and applying the MoD Form 904 – Range Authorisation Certificate. d. Know the methodology for initiating and applying the MoD Form 905 – Range Safety Certificate. e. Explain the reasons for displaying a valid MoD Form 905 at a range.	<ul style="list-style-type: none"> • Correct use of all MoD forms associated with ranges and their management / retention in accordance with JSP403. • Required contents of Range Administering Units' (RAUs') range files. • What constitutes sensible content of range orders for a given range. • Scope and content of DIO SOIs and DIO Range management. • Scope and role of DIO in Range management • Full understanding of Reserve Forces and Cadets (RFCA) Association, command structure, 		

	<p>f. Know the purpose and use of MoD Forms 906, 906A & 906B Range Log.</p> <p>g. Apply and use MoD Form 907A annual inspection.</p> <p>h. Apply and use the MoD Form 907A independent inspection forms on a range.</p> <p>i. Explain the purpose of and procedure for using and retaining the MoD Form 907 – Monthly Inspection Form (or the locally produced alternative).</p> <p>j. Explain range dispensation and approved status methodology and application.</p> <p>k. Locate and interpret the regulations that allow other services, MoD Agencies, Civil Police, Civilian clubs, etc to use the range.</p>	<p>procedures and regulations.</p> <ul style="list-style-type: none"> • System for, Role and application of ByeLaws. 		
<p>3.3 Know the requirements and responsibilities for administering MoD Ranges.</p>	<p>a. Know the responsibilities of the RAU and DIO in respect of MoD Ranges.</p> <p>b. Conduct a review of Range Orders.</p> <p>c. Check that procedures are in place for Range Orders to be made available to all RCO's on the range.</p> <p>d. Able to identify that Range Orders include all aspects of range management required by JSP403 and outlined in the MoD Form 907A series.</p> <p>e. Identify the communications requirements, internal and external, necessary to maintain the safety of the range.</p> <p>f. Know the responsibilities of Range Wardens.</p> <p>g. Able to assess whether or not the range complies with pollution control measures in JSP403.</p> <p>h. Know the requirements for accident reporting and investigation.</p>	<ul style="list-style-type: none"> • JSP403 Vols 1-4. • Pamphlet 21 and other arms and services equivalents. • JSP 375 – Pollution Control Measures. • DIO SOIs • DIO Range Inspection Guide. • LFSO 3216. • LFSO 3207. 		

3.4 Locate, interpret and verify compliance with MoD policy and procedures for effective control of ranges and access onto them.	<p>a. Know the principles for planning and controlling Live Firing Tactical Training (LFTT).</p> <p>b. Verify the procedure that ensures only authorised or qualified personnel are handed control of the range.</p> <p>c. Explain how MoD Form 906, 906A and 906B is used to control the range.</p> <p>d. Know the purpose and scope of the MoD range safety inspection system.</p> <p>e. Know the purpose and scope of monthly inspections.</p> <p>f. Know the purpose and scope of annual inspections.</p> <p>g. Know the purpose and scope of independent inspections.</p> <p>h. Locate and interpret MoD policy for controlling access to MoD Ranges.</p> <p>i. Locate and interpret MoD policy, standards and best practice guidance on signs, notices, fencing, flags, lights and access points.</p> <p>j. Determine and verify the requirements for signs, notices, fencing, flags, lights and access points on the range.</p> <p>k. Explain the safety information required on range maps.</p>	<ul style="list-style-type: none"> • See 4.3 Column (c) below. • System for, Role and application of ByeLaws. 		
3.5 Able to locate, interpret and verify design and construction requirements and determine the need for and adequacy of maintenance.	<p>a. Able to check that constructed components conform to approved design.</p> <p>b. Know the responsibilities for maintenance work, its frequency and standards.</p> <p>c. Know where to find design, construction and maintenance criteria for the range.</p> <p>d. Know how to measure compliance with criteria for NDA and LDA ranges.</p> <p>e. Able to check that maintenance work is timely and satisfactory.</p> <p>f. Know the pollution control measures required for the range and how they should be applied.</p>	<ul style="list-style-type: none"> • JSP403 Vol 2. • Pamphlet 21 and other arms and services equivalents. • DIO SOIs. • DIO works Inspection Guide. • JSP 375 – Pollution Control measures. 		

Total score for knowledge and experience		
	÷ 4	÷ 4
Overall knowledge and experience ratings		
Total score (K + E)		
Level of Competence		
RELATED POLICY AND GUIDANCE		
JSP403 Vol 2, Pamphlet No 21, DIO SOI, DIO Works Inspection Guide, JSP375- Pollution Control Measures		

COMPETENCE 4

RANGE COMPLIANCE AND ASSURANCE

[Related ESA-NOS 1.3, 1.4, 1.5, 1.10, 1.11, 1.13, 2.1, 2.3, 2.23A, 2.4, 2.4A, 2.6,2.7, 2.8, 2.9, 2.9A, 9.1, 9.3, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.8, 13.8.1, 13.9.2, 13.9, 13.10, 13.10.2]

WHAT DO I NEED TO KNOW?

I need to know:	I demonstrate effective performance by:	I have to know and understand:	Knowledge	Experience
(a)	(b)	(c)	(d)	(e)
4.1 Key references relating to ranges.	a. Knowledge of JS 403 Vol 2 and Pam 21, OSP, Pam 4, Pam 19 Range Orders.	<ul style="list-style-type: none"> How and why ranges are designed and constructed the way they are. 		
4.2 Key references relating to ranges and UK legislation in all aspects of SST & SSW.	a. Describing how each reference influences range safety. b. Provide comment on the development of JSP403 Vol 2 in terms of accuracy.	<ul style="list-style-type: none"> Detailed understanding of JSP403 Vol 2 and how other references influence range safety. Impact of Construction (Design & Management) Regulations CDM. 		
4.3 UK and International range safety policies.	a. Production of UK range safety standards including international range safety best practices where applicable.	<ul style="list-style-type: none"> UK standards for all aspects of range design in terms of structure, environmental and ballistic performance. STANAG 2401, ARSP 1 Vol 1 & 2. 		
4.4 The basic Safe System for Ranges or Service equivalent.	a. Describe in outline: <ol style="list-style-type: none"> (1) Safe Place (2) Safe People (3) Safe Practice (4) Safe Equipment 	<ul style="list-style-type: none"> The influence each has on range safety and safe ranges. 		

4.5 Responsibilities within the MoD for the delivery of the Safe System.	a. Describing where responsibilities lies across the MoD TLBs.	<ul style="list-style-type: none"> DEC, PT, SME, Lead Arm, Lead Service. 		
4.6 Safe Place- Assessing Risk and advising RAO/DDH & RAU.	a. Understanding the implications of non compliance and describing implications.	<ul style="list-style-type: none"> MoD Policy on what makes and fit for purpose, deterministic and probabilistic risk, societal risk. Relevant building, structure and infrastructure standards. 		
4.7 Safe Place – interpreting compliance data and advising RAO/DDH & RAU.	a. Producing compliance data against range design use and providing clear technical reports on solutions to non compliance	<ul style="list-style-type: none"> Primary compliance factors for each range type. 		
4.8 Role of organisations that effect range safety.	a. Be aware of: <ul style="list-style-type: none"> (1) Ministerial responsibilities (2) DSA (3) DEC (4) DE&S (PT) 	<ul style="list-style-type: none"> Understand how these bodies impact ranges. 		
4.9 Role of other organisations that effect range safety.	a. DRSC b. DRSCWG c. TWG d. DSA e. RSIT f. RAO/DDH g. RAU h. CESO i. SMO	<ul style="list-style-type: none"> Explain the function of each. 		

4.10 Role of other Government and National bodies that affect ranges.	a. Legislation. b. HSE. c. Environmental Agency. d. Byelaws	<ul style="list-style-type: none"> Understand the implications and how they influence ranges. 		
4.11 Ballistic Principles that affect the safety of a range.	a. Demonstrate a clear understanding of: (1) ME / MV. (2) Trajectory. (3) Line of Fire. (4) Cone of Fire. (5) Penetration. (6) Ricochet. (7) Backsplash	<ul style="list-style-type: none"> How each element can influence the safety of a range and how to resolve compliance issues. 		
4.12 Types of ranges and how they are used and compliance.	a. Identify and determine compliance of: (1) Indoor Types (2) Tube (3) Barrack (4) NDA (5) LDA (6) ETR (7) IBSR (8) MMTR (9) Grenade/Grenade Launcher (10) FIBUA (11) LFTTA (12) Shoot Houses	<ul style="list-style-type: none"> Understand how and why each range type is fit for purpose. 		
4.13 Survey Techniques Total Station and GPS.	a. Use each type of survey equipment with confidence.	<ul style="list-style-type: none"> Understand the principles and the importance of demonstrating confidence in data collected. 		
4.14 Collect and store range survey data.	a. Undertake detailed survey of each range type, store data accurately for retrieval.	<ul style="list-style-type: none"> Know for each type of survey what data is needed. Compliance requirements. Templating. WDALab. 		

4.15 Convert and prepare data for AutoCAD.	a. Use specialist survey software. b. To convert survey data for use in AUTOCAD.	<ul style="list-style-type: none"> Understand how data is collected. Converted and used. 		
4.16 Map overlay production and development.	a. Prepare and develop map overlay information.	<ul style="list-style-type: none"> Understand how paper and digital mapping is developed and produced. Know what information is required to be over-layed and why. 		
4.17 Liaison with map agencies.	a. Maintain clear links with land. Sea and air agencies.	<ul style="list-style-type: none"> Understand how other agencies impact on MoD mapping. 		
4.18 Use paper and digital mapping.	a. Read and interpret paper and digital mapping products, add into AutoCAD using geo-referencing process.	<ul style="list-style-type: none"> Know and understand grid references. Longitude and Latitude. Map projection systems. 		
4.19 CAD Software user.	a. Use AutoCAD to produce accurate technical drawings using survey data and geo-referencing mapping to it.	<ul style="list-style-type: none"> Know and understand AutoCAD products. 		
4.20 CAD Advance user.	a. Develop unit capability with data handling and CAD capability.	<ul style="list-style-type: none"> Current versions and capability of CAD software. 		
Total score for knowledge and experience				
			÷ 4	÷ 4
Overall knowledge and experience ratings				
Total score (K + E)				
Level of Competence				
RELATED POLICY AND GUIDANCE				

DSA 01.1 Defence Policy for Health, Safety and Environmental Protection. JSP403 Vol 1 Handbook of Defence Range Safety, JSP 403 Vol 2, JSP375 MoD Health and Safety Handbook, JSP 418 MoD Environmental Handbook Occupiers Liability Acts (OLA), Military Lands Acts (MLA), Armed Forces Act (AFA), Countryside Rights of Way Act (CROW), Land Reform (Scotland) Act (LR(S)A), Management of Health and Safety at Work Regulations. Control of Lead at Work Regulations. Infantry Training Vol IV, Ranges, Pamphlet No 21, Regulations for Training with Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics. JSP898. Construction (Design and Management) Regulations.

USING THE DEFENCE RANGES FRAMEWORK COMPETENCE

The DRFC has been designed to help you identify which skills you already possess, where you need to develop skills and at which level in order to progress.

The Core Competences have four levels of assessment. These enable you to record the level of proficiency that you have and enable line managers to specify the required level of proficiency for a post. The four levels are:

Level 0	Has been identified as a competence you do not currently have, but need to develop.
Level I	Displays understanding of what effective performance looks like. Demonstrates some practical application at work.
Level II	Displays detailed knowledge and understanding and is capable of providing advice/guidance to others. Demonstrates practical application in a range of work situations.
Level III	Displays extensive knowledge and understanding and is seen as a role model for others. Demonstrates consistent practical application in a wide range of work situations.

THE KNOWLEDGE AND EXPERIENCE SELF-ASSESSMENT MATRIX

The Knowledge and Experience Self-Assessment Matrix has been developed to enable you to assess your level of proficiency against the functional competences articulated in the **Defence Ranges Framework Competence**. It introduces an element of objectivity into what can be a very subjective process; by measuring your current skills against a set of pre-determined criteria you will be better placed to identify where your functional development needs lie.

USING THE KNOWLEDGE AND EXPERIENCE SELF-ASSESSMENT MATRIX

You can use the Knowledge and Experience Self-Assessment Matrix to assess your level of proficiency against all of the functional competences articulated in the **Defence Ranges Framework Competence** or against those specified by your Line Manager in your Post Profile.

The self-assessment can be undertaken at any time however, **as a minimum** you should undertake the self-assessment at the following times:

- At the beginning of the reporting year;
- To support the Development Review at the half-year point;
- When applying for a new post.

THE KNOWLEDGE AND EXPERIENCE SELF-ASSESSMENT MATRIX - COMPETENCE INDICATOR SCORING MATRIX

The degree of proficiency is defined by general descriptions of knowledge and experience evaluated against a **scale of 0 – 6**.

SCORE	KNOWLEDGE
0	None.
1	Has an awareness of the competence.
2	Has a basic understanding of the competence.
3	Has a satisfactory understanding of the competence.
4	Has a broad understanding of the competence and can explain it to others.
5	Has a good understanding of the competence and can supervise others in its application.
6	Has a comprehensive understanding of all aspects of the competence and is recognised as the 'go to' person in this area.

SCORE	EXPERIENCE
0	None.
1	Has used the competence under guidance.
2	Has used the competence independently in routine situations.
3	Has used the competence independently in a range of situations and is starting to advise and guide others.
4	Has used the competence independently in a range of situations and routinely advises and guides others.
5	Has guided and facilitated others in practising this competence in a wide range of situations.
6	Has guided and facilitated others in all aspects of this competence in a number of highly complex situations and is recognised as the 'go to' person in this area.

A defined range of scores for each competence, based on the assessment of knowledge and experience against this scale, for each **Level of Competence**, 0-I-II-III, has been determined and is shown in the table below:

SCORING RANGES FOR LEVELS OF COMPETENCE

K 0 With E 0	Overall Score (K+E) 0	Level 0 Has been identified as a competence you do not currently have, but need to develop.
K 1-3 with E 0-2	Overall Score (K+E) 1 - 5	Level I Displays understanding of what effective performance looks like. Demonstrates some practical application at work.
K 3-5 with E 2-5	Overall Score (K+E) 5 - 10	Level II Displays detailed knowledge and understanding and is capable of providing advice/guidance to others. Demonstrates practical application in a range of work situations.
K 5-6 with E 5-6	Overall Score (K+E) 10 - 12	Level III Displays extensive knowledge and understanding and is seen as role model for others. Demonstrates consistent practical application in a wide range of work situations.

Knowledge and experience requirements become deeper (from knowing the facts to developing the ability to apply them in the workplace) and broader (in terms of complexity of the situation or across a range of posts in different business units) as you progress from Level 0 to Level III.

The table below shows the relationship between the scores required in a particular competence and the **Level of Competence** used within the **Defence Ranges Safety Framework Competence**.

OVERALL SCORE												
0	1	2	3	4	5	6	7	8	9	10	11	12
Level 0												
	Level I											
					Level II							
										Level III		

COMPLETING THE KNOWLEDGE AND EXPERIENCE SELF-ASSESSMENT MATRIX

Each competence is comprised of one or more broad elements referred to as '**Requirements**'; these are designated 1.1, 1.2, etc.

1. Familiarise yourself with the competences as detailed in the **Defence Ranges Framework Competence**.
2. Familiarise yourself with the scoring criteria as detailed in the Competence Indicator Scoring Matrix.
3. Go to the first competence to be assessed.
4. For each requirement of the competence (2.1, 2.2 etc), assess yourself for both knowledge and experience on a scale of 0 – 6, using the Competence Indicator Scoring Matrix. Record your score in the appropriate column (K and E).
5. Once you have assessed all competence elements, you should add up the scores in each column and enter the totals in the appropriate column (K and E).
6. Calculate your **overall knowledge and experience ratings** by dividing the total scores by the number of competence elements (see worked example overleaf). Your results may not always be a whole number – if this is the case they must be **rounded down** - e.g. **3.4** is rounded down to **3** and **7.9** is rounded down to **7**. Enter these scores in the appropriate box.
7. Referring to the **Scoring Ranges for Levels of Competence** table, determine the Level of Competence to which your score equates. If your score falls within cross-over areas between Levels of Competence, your Line Manager should exercise their discretion in deciding which Level best reflects your status.
8. Repeat this process for each competence area to be assessed.

Once you have completed the assessment, you will have a clear picture of your score (in terms of knowledge and experience), and your overall proficiency rating for each competence in terms of the DRFC.

In order to identify where further development is required, you will be able to drill down into the detail for each competence, looking at your score for each separate requirement, thus making it possible to identify the gaps in your knowledge and experience for each competence. This will provide useful information for discussion with your Line Manager at personal development reviews for agreeing challenging opportunities in the workplace, training requirements or continuing professional development

WORKED EXAMPLE FOR COMPETENCE 4 – RANGE DESIGN COMPLIANCE AND ASSURANCE

COMPETENCE 4

RANGE COMPLIANCE AND ASSURANCE

[Related ESA-NOS 1.3, 1.4, 1.5, 1.10, 1.11, 1.13, 2.1, 2.3, 2.3A, 2.4, 2.4A, 2.6, 2.7, 2.8, 2.9A, 9.1, 9.3, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.8, 13.8.1, 13.9.2, 13.9, 13.10, 13.10.1, 13.10.02]

WHAT DO I NEED TO KNOW?

Competence elements		K	E
4.1	Key references relating to ranges.	3	3
4.2	Key references relating to ranges and UK legislation in all aspects of SST & SSW	3	3
4.3	UK International ranges safety policies.	4	3
4.4	The basic Safe System for Ranges or Service equivalent	3	3
Total score for knowledge and experience		13	12
		÷4	÷4
Overall knowledge and experience ratings		3.25	3
Total score (K + E)		6.25	
Level of Competence		Level II	

FRAMEWORK COMPETENCE ALIGNMENT TABLE

The Functional Alignment table below provides an easy summary of the Defence Ranges Framework Competence Levels of Competence. It also provides an indication of the type of training and experience which may be relevant to each Level of Competence and details of the external vocational and professional qualifications that you might like to consider in terms of your development. None of the detail in the table is mandatory, however, staff are encouraged to avail themselves of the training necessary to close any identified skills gaps and to consider whether opting to pursue external qualifications will enable them to meet their longer term career or personal development needs.

Level	Meaning	Method of Assessment	Experience and training which may provide an indicator of competence		Qualifications
			Training	Experience	
0	Has been identified as a competence you do not currently have, but need to develop.				
I	Displays understanding of what effective performance looks like. Demonstrates some practical application at work.	Defence Ranges Framework Competence		Has used the competence under guidance. Has used the competence independently in routine situations.	
II	Displays detailed knowledge and understanding and is capable of providing advice/guidance to others. Demonstrates practical application in a range of work situations.	Defence Ranges Safety Competence Framework		Has used the competence independently in routine situations. Has used the competence independently in a range of situations and is starting to advise and guide others. Has used the competence independently in a range of situations and routinely advises and guides others. Has guided and facilitated others in practising this competence in a wide range of situations.	

III	Displays extensive knowledge and understanding and is seen as a role model for others. Demonstrates consistent practical application in a wide range of work situations.	Defence Ranges Safety Competence Framework		<p>Has guided and facilitated others in practising this competence in a wide range of situations.</p> <p>Has guided and facilitated others in all aspects of this competence in a number of highly complex situations and is recognised as the 'go to' person in this area.</p>	
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ESA EVIDENCE COMMON PROCEDURES

SCOPE OF THIS GUIDANCE

The guidance that follows in this document is intended to amplify the requirements described by the National Occupational Standards in Explosive Substances and Articles (ESA) by explaining what types of evidence may be used to prove competence. This guidance is not intended to be prescriptive – candidates may be able to provide alternate forms of evidence that attest to their competence other than those listed. Evidence of competence in achieving the criteria provided by replication is only acceptable by exception and may be used only where indicated.

The contexts should normally be evidenced through the performance of the candidates work. Knowledge evidence is acceptable only where indicated. This booklet describes the evidence requirements that are common to all standards in the suite of Explosive Substances and Articles National Occupational Standards.

SAFETY MANAGEMENT AND RISK MANAGEMENT SYSTEMS

Many standards contain the terminology *safety management systems and risk management systems*. These terms are intended to be applied as follows:

- *Safety management systems* refer to the ongoing management of activities. It relates to the internal factors i.e. the organisation's safe system of work.
- *Risk management systems* refers to the planning of an activity. It relates to external and internal factors and the wider aspects of risk.

WIDELY APPLICABLE GENERIC EVIDENCE

Candidates working at each level are likely to hold a particular level of authority that should not be exceeded. The definitions of the candidates authority are likely to be described in documents such as job or role descriptions and licences to practise. Other useful documents such as induction and training records, extracts of appraisals reports and certificates of competence may also contribute to the evidence that attest to the candidates competence.

ABBREVIATIONS USED IN THE DRFC

ACOP	Approved Code of Practice	MLAGB	Muzzle Loaders Association Great Britain
ALARP	As Low As Reasonably Practicable	MoD	Ministry of Defence
ARA	Army Rifle Association	NDA	No Danger Area
AMS	Automatic Marking System	NOS	National Occupational Standard
CO	Commanding Officer	NOTAM	Notice to Airman
COSHH	Control of Substances Hazardous to Health	NRA	National Rifle Association
DIO	Defence Infrastructure Organisation	OTR	Operational Training Theatre
DRSC	Defence Range Safety Committee	PPE	Personal Protective Equipment
DRFC	Defence Range Framework Competences	PROM	Property Manager
DSA	Defence Safety Authority	PUS	Permanent Under Secretary
DIO	Defence Infrastructure Organisation	RAA	Range Allocating Authority
ESA	Explosives Substances & Articles	RAF	Royal Air Force
ETR	Electronic Target Range	RAU	Range Administering Unit
FDA	Full Danger Area	RAO	Range Authorising Officer
HIAT	Hazard Impact Area Trace	RCO	Range Conducting Officer
HQ LAND	Head Quarters Land Command	RO	Range Officer
HQ	Headquarters	RSIT	Range Safety Inspection Team
HSE	Health and Safety Executive	RSO	Range Safety Officer
HSW	Health and Safety at Work	SOR	Statement of Requirement
H & S	Health and Safety	SST	Safe System of Training
IRSI	Independent Range Safety Inspectors	SSW	Safe System of Work
ITT	Indoor Training Theatre	TCO	Trials Conducting Officer
ISW	Infantry Support Weapon	TERP	Test Evaluation, Research and Proof
LFMT	Live Firing Marksmanship Training	TSM	Trial Safety Manager
LTAR	Land Training Areas & Ranges (Officer)	WDA	Weapon Danger Area
LUMAT	Limitations in the Use of Missiles and Ammunition at Training	WS	Weapon System