



**NATIONAL RIFLE  
ASSOCIATION**

# **RANGE CONDUCTING OFFICERS' HANDBOOK**

**April 2023  
Edition 1**





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## Record of Changes

Serial	Date of Change	Changed by / Reason	Date Changed
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2			
3			
4			
5			

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### Notes:

1. Range Conducting Officers are recommended to have their copy of this Handbook in their possession when conducting an MoD Range for their club.
2. Throughout this Handbook, to avoid unnecessary repetition of pronouns the masculine form is used. Thus 'he' should be read as 'he/she/they' and 'him' as 'him/her/they'.

## References

The rules and procedures governing the safe conduct of live firing on Ministry of Defence (MoD) ranges are contained in Pamphlet 21, Training Regulations for Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics (commonly referred to as 'Pam 21'). The conditions under which civilian shooting clubs may fire on MoD ranges are contained within Defence Safety Agency 03 Ordnance Munitions Explosives Part 3 – Defence Code of Practice Guidance Notes for Ranges (formerly JSP 403). These publications form the basis for much of the NRA Range Conducting Officer Course and relevant material is contained within this Handbook. Any RCO who wishes to learn more about the subject of MoD Ranges will find that DSA 03 OME Part 3 is freely available online. Vol 1 deals with the administration of MoD ranges and Vol 2 which covers the construction and layout of purpose-built ranges.



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## **Foreword**

This Handbook is intended to support the NRA Range Conducting Officer (RCO) Course in a form that is easy to use whilst being comprehensive. It reflects the NRA's Safe Shooting System, which addresses the fundamental principles on which all shooting conducted under the auspices of the NRA is to be based.

The NRA Range Safety Officer (RSO) Course is the foundation course as regards the implementation of range management and safe running of individual ranges. It was formulated because there was no available course that dealt with clubs and individuals running privately owned ranges. The NRA RCO course contains comprehensive information on those types of MoD ranges that are considered most likely to be used by civilian shooting clubs.

This Handbook describes MoD range danger area characteristics, descriptions, layouts and conduct, including the operation of the butts.



## INTRODUCTION

### General

1. This Handbook is provided to support the NRA RCO course and to provide a ready reference for civilian club RCOs on a MoD range. It assumes candidates have previously satisfactorily completed the NRA RSO course and meet all other attendance criteria.
2. Military ranges within the United Kingdom are managed by the Defence Infrastructure Organisation (DIO), a department within the Ministry of Defence (MoD) that is responsible for all facilities that form the Defence Estates (DE). For simplicity the ranges described within this Handbook will be referred to as MoD ranges.

### Adherence to Rules and Procedures for the Use of MoD Ranges

3. The NRA neither has, nor seeks to have, a mandate to dictate how clubs manage and conduct live firing on their own ranges, provided such is within the terms of the NRA Safe Shooting System, which itself is a condition of the club's NRA affiliation. **Use of MoD Ranges is different.** From the moment a club first applies for a Licence to use a MoD range, strict adherence to the rules and procedures governing use of those ranges is essential. This applies during the process of arranging bookings, the conduct of live firing on the range on every occasion of use, and in particular the recording and reporting of incidents and accidents.
4. Strict adherence to rules and procedures is mandatory and is a condition of the Licence under which the club is permitted to use MoD ranges. Failure to do so may have serious consequences, not only for the club concerned, but for the continued use of MoD ranges by civilian clubs in the future.

### Layout and Scope of the Handbook

5. This Handbook is structured to follow the procedures related to use of MoD Ranges in a logical and progressive sequence. It is divided into two Chapters. Chapter 1 deals with the administration processes of obtaining the Licence to use a MoD Range, the RCO qualification, and those aspects of range administration that are applicable to military ranges. Chapter 2 deals with the types of range that are most likely to be used by civilian clubs. The subject matter contained in Chapter 1 should always be referred to before referring to the section in Chapter 2 that deals with the particular type of range on which live firing will be conducted.
6. The contents of each Chapter are as follows:
  - a. **Chapter 1 – General**
    - (1) **Section 1 – Use of MoD Ranges and the NRA RCO Course.** This details the conditions under which clubs may use MoD ranges, and in particular the process of applying for the MoD Licence and the criteria a club must meet to obtain it. The NRA RCO Course is also described.
    - (2). **Section 2 – Range Orders.** There are two types of range orders that may be encountered on MoD ranges, why they are provided, and the occasions on which they are to be read. Also described are Range Byelaws and the additional documentation that will be found on MoD Ranges.
    - (3). **Section 3 – Safety Rules for Live Firing – All Ranges.** The rules relating to range and firearm safety that may be regarded as applying on all MoD ranges.
    - (4). **Section 4 – Briefings.** The RCO will be required to deliver prior to conducting live firing on MoD ranges. Guidance on how such briefings may be delivered is also provided.
    - (5). **Section 5 – Planning & Preparation.** In particular, the responsibilities of those involved and the required supporting documentation that must be produced are stated and explained.

(6). **Section 6 – Incident and Accident Reporting.** This section explains how incidents are classified and details the actions required to deal with and report them.

b. **Chapter 2 – Ranges**

(1). **Section 1 – Range Danger Areas.** Details the different types of Range Danger Area that apply to ranges likely to be used by civilian clubs.

(2). **Section 2 – The Indoor Rimfire Range.** Detailing the procedures for its management and conduct.

(3). **Section 3 – The 25 Metre Barrack Range and 1908 Design Barrack Range.** The two types of MoD 25 Metre No Danger Area Range and description of the procedures for their management and conduct.

(4). **Section 4 – The Gallery Range and Converted Gallery Range.** A brief description of the Converted Gallery Range is also included.

(a). **Section 4 A – Electronic Target Range.** Detailing the layout and the construction of an Electronic Target Range.

7. In addition, several Annexes are provided in support of the material contained in the above Chapters/Sections. See Index.

### **Range Orders**

8. The regulations and procedures contained in this Handbook are to be applied in conjunction with the Range Orders, and where applicable the Range or Area Standing Orders governing use of the particular range. ***In the event that the local orders are found to be in conflict with this Handbook then the local orders take precedence.*** In such a case clarification should be sought from Range Control or the Range Administration Authority. The NRA should then be informed of any discrepancies.

### **DSA 03. OME Part 3 & ‘Pamphlet 21’**

9. **DSA 03. OME Part 3 (Defence Code of Practice Guidance Notes for Ranges).** This publication (formerly known as JSP 403) governs the safety protocols relating to the siting, design and construction of MoD Ranges and comprises several volumes. Of particular relevance are Volume 1 Chapter 2, where MoD policy for civilian use of MoD ranges is described in detail, and various sections of Volume 2 - Ranges, each of which refers to the design and construction of a particular type of range. The relevant volumes of DSA 03. OME are available on line and also form the basis for the NRA’s in-house publications ‘*Range Managers Guide*’ and ‘*Range Design & Safety Handbook*’; both also available online.

10. **‘Pam 21’.** This is the abbreviated name for Pamphlet 21, Training Regulations for Armoured Fighting Vehicles, Infantry Weapon Systems and Pyrotechnics which the army publication that lays down the regulations governing the conduct of live firing on MoD ranges. This document is Restricted and only available to military users.

### **The NRA Safe Shooting System**

11. The MoD require all civilian organisations using military ranges to have an auditable system of training based on a specific risk assessment. In response, the NRA developed a Safe Shooting System (SSS), which has MoD approval. The agreed text is published below. The text uses some military terminology and cannot be applied strictly on a facility under the control of a civilian Range Operating Authority. Realising the fundamental importance of the SSS, the NRA has also developed a version for use in a civilian environment, the definitive version of which appears in the NRA Handbook at Section 15. The NRA SSS is based on the following elements: Safe Shooter, Safe Equipment, Safe Practice and Safe Place.

## **Safe Shooter**

12. The safe shooter has the capability to use firearms and ammunition safely and demonstrates that capability at all times on the range. The NRA probationary course, live firing elements of which are carried out under the one-to-one supervision of safe shooters, provides training that imparts the knowledge and skills on which such capability is based. The Shooter's Certification Card provides an auditable record that the responsible officer of the club, normally the Chairman, has satisfied himself at the time of certification as to the shooter's ability to use firearms (identified by their suitability for an NRA Shooting Discipline or combination of NRA Shooting Disciplines) and ammunition (suitable for the identified firearms and within range limits) safely.

## **Safe Equipment**

13. The individual shooter is responsible to his Club Chairman for ensuring that his firearm is serviceable and properly maintained, that the ammunition used results in performance within the range parameters for muzzle velocity (MV) and muzzle energy (ME), and that the combination of firearm and ammunition is safe and suitable for the circumstances in which it is being used. The NRA Rules of Shooting set out the limiting parameters for firearms to be used in each NRA Shooting Discipline.

## **Safe Practice**

14. The NRA Rules of Shooting contain detailed regulations concerning the conduct of shooting for all its Shooting Disciplines. Qualified NRA RCOs are responsible for the safe running of MoD ranges for civilian shooters. Additional RCO qualifications are required if pistols, moving targets (sporting rifle discipline), CSR events, target shotguns, muzzle loading firearms, firearm/ammunition combinations developing a ME greater than 4500 Joules or event specific courses of fire are being used on MoD ranges.

- a. A specific zeroing practice will also be required for practices where the firearm/ammunition combination develops ME greater than 4500J.
- b. In the event of an incident on military ranges involving a civilian shooter a joint MoD/NRA inquiry will take place and the club will be required to assist with the investigation. The NRA has agreed a *Procedure for the Investigation of Range Occurrences, Accidents and Incidents* with the MoD.
- c. The NRA RCO running the range for a civilian club must sign for the range on the MoD Form 906, thus certifying that he is qualified to conduct the shooting practice(s) and that he has read and will comply with the range standing orders. An RCO (HME) must annotate the MoD 906 if firearm/ammunition combinations generating ME greater than 4500 Joules will be used.

## **Safe Place**

15. A safe place is one in which the controls which are necessary to enable shooting to be conducted safely have been identified by a site specific risk assessment and directed through the Range Standing Orders. All MoD ranges have site specific Range Standing Orders which must be always complied with at all times. It is one of the responsibilities of the NRA RCO to ensure such compliance by shooters under his command. MoD ranges are maintained by the range administering authority and are subject to regular inspections.

## **Limitations**

16. In the context of live firing on ranges the NRA Safe Shooting System relies for its effectiveness on a comprehensive supporting structure comprising:

- a. Training, supervision, and periodic re-assessment of shooters.
- b. Properly planned and risk-assessed courses of fire conducted by appropriately qualified range staff.
- c. Thorough, regular inspection and maintenance of range facilities to ensure that they are safe for use.

# CHAPTER 1 – GENERAL

## SECTION 1 - USE OF MOD RANGES AND THE NRA RCO COURSE

### Introduction

**0101.** Civilian clubs affiliated to the National Rifle Association (NRA) may use ranges that are controlled by the MoD whenever the Services' requirements permit. Most management of military ranges is facilitated by Landmarc Support Services, a civilian service provider under contract to MoD; other ranges, whilst coming under MoD control, are facilitated by regional Reserve Forces & Cadets Associations.

**0102.** Clubs that are not affiliated to the NRA or one of the other MoD authorised governing bodies are not permitted to use MoD Ranges.

**0103. Prioritisation for Use.** At all times use by the Services takes priority over use by civilian clubs. The normal prioritisation order is: Pre-deployment training by regular forces, routine training by regular forces and Reserves (including MoD Police & Cadets), Police Forces Marksmanship Training, Civilian Clubs.

**0104. Licence to Use MoD Ranges.** To be eligible to use a MoD range a civilian club must possess a Licence (DIO Form 5665). This is gained by application to the Range Administration Authority (RAA) responsible for the range the club wishes to use. The Licence will state each range within the Defence Infrastructure (DIO) Region that the club is permitted to use. Should a club wish to use a range that is in a different DIO Region, a separate Licence application must be made to the DIO Region concerned.

### Eligibility for MoD Licence

**0105.** To be eligible for the grant of a Licence a civilian club must meet the following criteria:

1. Be approved by the Home Office for the calibres of all firearms (excluding shotguns of all types) they intend to use on the MoD range in question and be able to produce written confirmation of this.
2. Be affiliated to the NRA or other appropriate National Governing Body (NGB) that is responsible for their shooting discipline and be able to produce written confirmation of currency of affiliation.
3. Provide evidence of valid insurance cover to indemnify the MoD against claims for personal injury or death arising from the club's use of a range.
4. Be able to provide a RCO who holds a **current** qualification issued by the NRA or other appropriate NGB for the categories of range and firearm that are intended to be used. The RAA of the range will hold a list of all current RCOs together with their qualification expiry date and a list of all firearms, or groups of firearms by discipline for which they are qualified to conduct practices.
5. Ensure that all full members possess, and are able to produce on demand, valid documentation confirming their club membership and a valid Shooter Certification Card (SCC) for the firearm(s) in use.
6. Ensure that probationary members are supervised on a one-to-one basis when on the range by either a full member who holds a valid SCC for the firearm(s) in use and who is authorised by the Club Chairman, or by an NGB-trained and qualified instructor or coach.
7. Adhere to the agreement between the MoD and the NRA.
8. Sign the Terms and Conditions to which the Licence is subject.
9. Pay the Licence fee. **Note:** this is then payable annually on renewal of the Licence.

## Conditions of Licence

**0106.** Use of MoD-controlled ranges is conditional on the club's strict observance of the terms of the Licence to use MoD ranges and the Range Orders governing the range being used. The following should be noted:

1. The club will comply with the Range Orders that govern use of the range, in particular as regards the type and performance of the firearms and ammunition used.
2. The club will observe and apply safety precautions which are no less stringent than those required to be observed by Service users.
3. The club and its members will cooperate fully with any investigation that may result because of an incident or accident that takes place during use of a MoD range. This is likely to require the firearm and / or ammunition involved to be made available to investigators and require attendance by individuals concerned at such meetings or boards of enquiry that may be convened.

**0107.** RCOs responsible for conducting, and those responsible for authorising, live firing on MoD ranges are reminded that failure to observe and comply with the terms of the club's Licence could have serious consequences; not only for the club involved, but also for the continuance of the agreement with MoD whereby civilian clubs have access to MoD facilities.

## The NRA RCO Qualification

**0108.** All live firing by members of civilian clubs on MoD Ranges will be under the control of a RCO who holds a current qualification to conduct such activity issued by the NRA.

**0109.** Within the NRA such a qualification is obtained by satisfactory completion of the NRA RCO Course. Course-qualified NRA RCOs are authorised to conduct small-bore and full-bore practices on MoD ranges.

## Eligibility Criteria

**0110.** To be eligible for the RCO Course applicants are to meet the following *minimum* criteria:

1. Hold a current NRA RSO qualification.
2. Be familiar with the subject matter that should be contained within a typical Range Safety Brief and Practice Brief for a club range.
3. Subject to approval by the duly Authorised Club Official (confirmed by the NRA).
4. Possess basic literacy.

**0111.** The above criteria are basic requirements for this course. Instructors have authority to dismiss from a course any candidate who attends and is found not to meet these criteria.

## Aim of the NRA RCO Course

**0112.** To qualify suitable persons as civilian (NRA) Range Conducting Officers with particular attention to:

1. Ensuring full compliance with, and implementation of, proper safety procedures at all times.
2. The adoption of correct procedures on MoD ranges and the furtherance of good relations with the military authorities.



3. Establishing and maintaining control of, and taking responsibility for, live firing practices.
4. The development of common standards for range conduct and discipline.

**0113.** The NRA RCO Qualification applies to MoD ranges throughout the UK.

#### **Restrictions on Qualification**

**0114.** The RCO Course qualifies holders to conduct live firing on purpose-built ranges where firing takes place from fixed firing points at targets positioned at fixed locations. The RCO Course *does not* qualify RCOs to:

1. Conduct firing on any range where Muzzle Loading firearms are in use. **Note:** This does not preclude use of firearms chambered for metallic black powder ammunition

**0115.** Any NRA RCO wishing to conduct live firing with Muzzle Loading firearms must also pass the Muzzle Loaders Assoc. of Great Britain (MLAGB) RCO Course.

#### **Validity and Renewal of the RCO Qualification**

**0116.** The NRA RCO qualification is valid for a period of six years from date of issue. The renewal is the responsibility of the holder. The procedure is as follows:

1. Take the RCO online test and meet the following provisions:
  - a. Is a Full Member of the named Club or Association.
  - b. Holds an in date RSO qualification.
  - c. Has, during the preceding 12 months, been active as a RCO for the club on those categories of firearm for which renewal is sought.
2. On successful completion of the test, the applicant's RCO qualification will be renewed. A new RCO Card will be issued.

**0117.** Should the applicant fail to achieve the required pass mark on the online RCO test, one further attempt may be made. If the pass mark is still not achieved after the second attempt, the RCO qualification will not be renewed, and the applicant must then attend and pass the two day NRA RCO course.

**0118.** Any RCO who does not wish to renew a RCO qualification or has not maintained currency as detailed in para 0117 may at this time surrender their RCO qualification.

**0119 – 0129.** *Reserved.*

## SECTION 2 - RANGE ORDERS & DOCUMENTATION

### Types of Range Orders

**0130.** The military publications DSA OME 03 and Pamphlet 21 are concerned with range design and conduct of live firing respectively. These are overall policy publications and cannot cover every aspect, especially conduct of firing, on every range. Each range therefore has its own set of Range Orders, written to reflect the circumstances applicable to that range. Range Orders exist in two forms:

1. **Range Standing Orders.** These cover the general administration of a range complex, or a training area which incorporates a range or ranges.
2. **Range Orders.** These are specific to a particular range within a complex/training area or an isolated range. They will reflect information contained in the MoD Form 904 (Land Range Authorisation Certificate). They are sometimes referred to as '*Local Range Orders*'.

### Why Range Orders are Provided

**0131.** Range Orders are provided to ensure the following:

1. All necessary controls and precautions, as identified by the risk assessment completed by the Range Administration Authority (RAA), are in place to prevent accidents to range users, range staff or the public.
2. By implementing the Range Byelaws, where these exist, the public are put on notice that the range area is a dangerous place.
3. Maximum use is made of the range space available.
4. Guidance is given to users unfamiliar with the facilities provided.

**0132.** In this manual the term '*Range Orders*' is used to apply to either type of order according to context.

### Reading of Range Orders

**0133.** It is essential that the RCO and any other personnel concerned with planning live firing read the Range Orders ***before*** planning commences. It therefore follows that the RCO/Planning Officer are to request a copy of the Range Orders. The relevant section(s) of this handbook relating to range type and conduct are to be studied in conjunction with the Range Orders when planning live firing. The orders for a particular range can be quite varied as they must reflect the circumstance and local conditions applicable to that location. ***If the Range Orders appear to be in contradiction to this Manual the local orders take precedence.*** The NRA will need to be informed.

**0134.** In the case of a range that is used regularly it will not normally be necessary to read the Range Orders in full at every visit, however Range Orders are reviewed by the RAU on a regular basis (typically annually). When booking onto a range the RCO is responsible for confirming with the RAA/range staff that there have been no changes since the last visit.

**0135.** RAAs are required to provide a copy of their Range Orders to users and will normally supply updated Range Orders to regular users, however it is the Club's responsibility to request this.

## Range Byelaws

**0136.** Many MoD ranges employ byelaws. Their purpose is to prohibit unauthorised persons from entering land or sea Danger Areas when a range is in use, thus protecting them from the implicit danger arising therefrom. They are necessary where public access to a range area would constitute unacceptable interference with the operation of the range or pose risk to the public. They provide a legal basis for the control of access to MoD land and can supersede public rights of way, either during times when a range is in use, or permanently where necessary.

**0137.** Where byelaws exist, the following will be noted:

1. Only the military or its agents can enforce byelaws. They cannot be invoked or used by a civilian club to prohibit entry to the RDA by members of the public, i.e. the club members have no powers to detain or arrest intruders.
2. If a civilian club is using a range and providing sentries, and a military unit is also present, the above rule still applies.

**0138.** Any breach of the bylaws in either case above is to be treated as an intrusion into the RDA; firing is to cease and Range Control or the RAA is to be informed. Range staff, or military personnel if present, are authorised to enforce bylaws and can remove intruders. When this has taken place firing may resume with permission from Range Control.

## Additional Documentation

**0139.** In addition to Range Orders the RCO needs to be aware of the following additional documentation.

1. **MoD Form 904 – Land Range Authorisation Certificate.** This states various particulars relating to the range, including the range's serial number within the Defence Range Safety Committee's administration system. It also states, in the case of a small arms range, the firearms and ammunition that can be used on the range. The MoD Form 904 is typically valid for life, provided the range remains as it was originally constructed and is not modified in any way that might affect its original design criteria. An example of the MoD Form 904 is shown at Fig 1.
2. **MoD Form 905 – Land Range Safety Certificate.** This certifies that the range is safe to use as prescribed on the MoD Form 904. It is 'lifed' in that all ranges are subject to an annual independent inspection and a new Safety Certificate is issued after each inspection. An example of the MoD Form 905 is shown at Fig 2.
3. **MoD Form 906/906A – Land Range Log.** Two versions of this document exist; the MoD Form 906 is typically used for ranges that are for 'small arms' use only, the MoD Form 906A is typically used for ranges where various 'natures' of ammunition may be used; for example, a Field Firing Area where, in addition to small arms ammunition, flares, smoke grenades and other assorted ammunition natures may be used. There are however small arms ranges where the MoD Form 906A is used to allow individual recording of ammunition that falls into different calibre groups. Examples of each are shown at Fig 3 & 4 respectively. The procedure for completing entries in the MoD Form 906/906A is given below. MoD Form 906/906A have provision on the inside front cover for a plastic wallet containing the MoD Form 905, and possibly the MoD Form 904, thus providing easy access to these documents by users when signing on.

## MoD Form 906/906A – Handover / Takeover

**0140.** The RCO is to complete the pre-firing entries in the MoD Form 906/906A Range Log before firing commences and complete the final entries on conclusion of firing. The initial entry includes the date, user club, strength of firing party, time on range and the RCO's name. On conclusion of firing the RCO is to complete the remaining columns. This final entry records time off range, lanes used (by lane number), total number of rounds fired by the club (but note para 0139-c above) and any reportable incidents/accidents or range defects. By signing on (column f or g) the RCO is personally certifying that he/she is appropriately qualified to conduct that range, that the Range Orders have been read and will be complied with, and that he is satisfied that the range is in good order. By signing off (column f or g) the RCO is personally certifying that the range has been cleared of all live ammunition and litter (including spent cases), and that all reportable occurrences and defects requiring repair have been recorded. ***Responsibility for completing the Land Range Log rests with the RCO and cannot be delegated.***

**0141.** If for any reason during firing the RCO has to leave the range, or as a part of the planned activity more than one RCO is to conduct the range, firing is to cease. The outgoing RCO is to sign off at Range Control at the appropriate time and the incoming RCO is to sign on. ***No one may conduct live firing unless they have personally signed the Land Range Log.***

**0142.** It is accepted that in civilian shooting individual club members may arrive later or leave earlier than planned. By arrangement with Range Control the entry in the Land Range Log regarding the strength of the firing party may be completed as a final entry rather than when signing on.

### Local Documentation

**0143.** As most MoD ranges are now operated by a civilian service provider under contract there are occasions when additional documentation of a local nature may be in place. RCOs should be aware of this and be prepared to complete such paperwork at the request of the range staff on duty.

**0144 – 0150.** *Reserved.*



DRSC Range Serial No.		<b>MoD Form 904</b> (Revised Apr 15)
Type of Range		Authorising HQ Reference No.

**RANGE AUTHORISATION CERTIFICATE**

<b>Range Name</b>	<b>Range Address</b>	<b>Location (Map Sheet &amp; GR)</b>
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**Authorisation**

I authorise this Range to be used subject to the limitations imposed by its design and any restrictions stipulated in the Schedule provided that:

- a. A valid copy of the MoD Range Safety Certificate (MoD Form 905) is displayed at the Range or held by the Range Administering Unit and readily available to Range Conducting Officers before firing commences.
- b. The Range is correctly maintained and used strictly in accordance with current Range Safety Regulations, the relevant Weapon System, Ammunition and Explosives Publications, Range Standing Orders and any additional Special Instructions or Dispensations specific to the Range and / or type of Practice.
- c. Only firearms, weapon systems, ammunition and explosive stores which conform to the limitations described in the Schedule below are used on the Range.
- d. An Environmental Impact Assessment has been carried out

**This Certificate will immediately become invalid if, without my written permission, the Range is in any way modified or adapted.**

<b>Signed:</b> <div style="border: 1px solid black; height: 50px; margin-top: 5px;"></div>	<b>Name:</b> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> <b>Appointment:</b> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>	<b>Rank / Grade:</b> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div> <b>Date:</b> <div style="border: 1px solid black; height: 20px; margin-top: 5px;"></div>
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**Schedule**

**Firearms, Weapon Systems, Ammunition, and Explosive Stores which may be used on this Range including any restrictions, exclusions or limitations to firing practices.**

(For notes on completion, see overleaf.)

Fig 1 - MoD Form 904 Range Authorisation



DRSC Range Serial No.		<b>MoD Form 905</b> <small>(Revised Apr 15)</small>
Type of Range		Authorising HQ Reference No.

**RANGE SAFETY CERTIFICATE**

This Certificate should be completed only when the person signing it on behalf of the Authorising Officer is fully satisfied that:

- a. The design and use of the Range have not changed from that recorded in the current Range Authorisation Certificate (MoD Form 904) referred to below and, where applicable, the associated Proceedings of a Board of Officers for a Range (MoD Form 1057)
- b. The Range Orders govern adequately the management and use of the Range.

Name of Range:	
Location:	
Authorised by:	
MoD Form 904 Reference No:	Dated:

I Certify that the Range named in this Certificate provides a satisfactory standard of safety provided that it is correctly maintained and used strictly in accordance with current Range Safety Regulations, Technical Publications, the Range Standing Orders and any additional Special Instructions or Dispensations specific to this Range and / or type of Practice.

This Certificate is valid until:

It will immediately become invalid if at any time, without the written permission of the Range Authorising Officer, the Range is in any way modified or adapted, or used for any non-authorised practice.

Signed:	Name:	Rank / Grade:
	Appointment:	Date:

On behalf of the Range Authorising Officer.

THIS CERTIFICATE MUST BE PROMINENTLY DISPLAYED ON THE RANGE OR MADE READILY AVAILABLE FOR INSPECTION BY THE RANGE CONDUCTING OFFICER IMMEDIATELY PRIOR TO ANY LIVE FIRING PRACTICE.

Fig 2 - MoD Form 905 Range Safety Certificate









## SECTION 3 - RANGE AND FIREARM SAFETY (ALL RANGES)

### Introduction

**0151.** Each type of range described in this Handbook has its own rules and procedures, largely dictated by the specific conditions of that type of range. This section details those rules that are applicable to all ranges.

1. **General.** The governing bodies of the different shooting disciplines publish their own rules for the safe conduct of civilian shooting. The NRA Handbook Rules of Shooting and Programme (the 'Bisley Bible of the Imperial Meeting'), published annually by the NRA, is the reference book for target rifle shooting.
2. **Firearms.** These will belong either to the individual or the organisation. The owner is responsible for the safe condition of the firearm and, additionally, for complying with firearms legislation and insurance requirements.
3. **Ammunition.** This is provided either by the organisation or by the individual user and may be either factory manufactured or hand loaded ammunition. It is the firer's responsibility to ensure that the ammunition used is both safe and suitable for the firearm. The RCO must be aware of, and follow, the instructions in the Dangerous Ammunition section of the 'Bisley Bible' at Appendix 6 – Dangerous Ammunition. At all times hand-loaded ammunition must comply with the MV and ME limits of the range, as stated in the MoD Form 904 Range Authorisation Certificate which is posted at Range Control.

### Range Flags

**0152.** Red flags are used to indicate danger. Those used on ranges are as follows:

1. **Range Boundary Flags.** These are located around the range boundary to warn civilians and (in the case of a range situated within an expanse of MoD-owned land) military personnel that they are approaching a range or range danger area. Their locations will be specified in the Range Orders and, where applicable, the range byelaws. They may be supported by warning signs, notices, sentries, and manned or locked barriers. They are normally raised prior to commencement of firing and lowered on conclusion of firing. Responsibility for raising or lowering boundary flags may be the responsibility of the range staff or user unit; information on this will be found in the Range Orders. Coastal ranges may also have boundary flags mounted on buoys permanently moored out to sea, marking the extent of the danger area to shipping.
2. **Range in Use Flag.** This is raised to indicate that a particular range is in use. It is normally flown from a pole at a designated high point, e.g. the stop butt wall of a 25 Metre Range or the crest of the stop butt on a gallery range. It is lowered on conclusion of firing.
3. **Butt Flag.** A red flag is raised in the butts to indicate to the firing point that it is unsafe to load or continue to fire. In the context of civilian clubs it also means that firearms and personal kit may not be placed on the firing point. The butt flag will be displayed until all markers are under cover and the RCO has ordered it to be lowered. Once lowered, no one in the butts may leave the cover of the gallery until subsequently notified by the RCO who will then order the butt flag raised once the firing points are cleared. ***Only in an emergency will the butt flag be raised by the Butt Officer without the RCO's permission.*** Before ordering the butt flag to be raised the RCO is to ensure that all firearms have been unloaded and proved clear, and removed from the firing point along with all ammunition and personal kit. The butt flag is, wherever possible to be operated from within the cover of the markers gallery.

**0153.** There may be occasions (e.g. nature of practice, shortage of personnel) when it is impractical to operate a gallery range with a butt party. When this is the case there is no requirement for the butt flag to be used; the RCO is to accompany the firing party to and from the butts, thereby personally ensuring that no one remains in the butts before firearms are loaded and firing commences. In this circumstance it will be necessary for the RCO to appoint a responsible person to ensure security of the kit left at the firing point and that no one approaches the firing point itself.

**0154.** On some ranges the conventional butt flag has been replaced by a 4ft square red-painted board that can be mounted in the Hythe frame of a spare lane. This is more visible than a flag on a pole, especially in wet conditions or where there is little or no wind, where the flag hangs limp and is viewed against a sand-coloured background.

### **Hearing and Eye Protection**

**0155.** The wearing of suitable hearing protection is **mandatory** on MoD ranges when firing is taking place. Its use is also recommended in the butts, where the crack of bullets passing overhead at supersonic speed can cause damage to unprotected ears. Electronic hearing protection is recommended as this allows normal conversation to take place and orders to be clearly heard, whilst providing adequate protection against gunfire noise. Care should be taken when wearing headgear that the headgear does not interfere with the hearing protection acoustic seal.

**0156.** Eye protection may be mandated by Range Orders. It is highly recommended though when under-lever rifles, blow-back operated rifles or muzzle/front-loading firearms are in use. Wearing of eye protection by the butt party should also be considered.

### **Words of Command**

**0157.** The RCO is to ensure that all firers can hear his words of command. The RCO should consider the extent to which his commands can be heard in, for example, windy conditions, and should select his position at the firing point accordingly. If running an extended number of lanes, use of appropriately briefed safety supervisors to relay instructions should be considered. In extreme cases a loud hailer or PA system may be required.

**0158.** The RCO should also ensure that when giving a sequence of commands, e.g. when ending a firing detail or dealing with an emergency, firers are allowed to complete each action before being ordered to perform another. Failure to ensure this can lead to confusion with the risk of errors, especially when inexperienced firers are involved.

**0159.** The nature of civilian shooting is such that a variety of different commands, and in particular Range Commands, exist to cater for different forms of practice on different types of range.

### **Suspension of Firing – Intrusion into the Range Danger Area**

**0160.** If persons, vehicles, livestock, or shipping are seen to enter, or appear to be about to enter, the RDA, firing is to cease and where fitted, safety catches are to be applied. Subsequent action is to be ordered, as appropriate, by the RCO. Only when the RCO judges it is safe to do so are firearms to be unloaded and proved clear.



**0161.** Sentries are to be briefed by the RCO, or by Range Control where this is specified in the Range Orders, to inform the RCO or Range Control should an intrusion occur or be about to occur. Prompt action is essential and sentries are to be clearly briefed as to what means they should use and who to inform. In the event of an intrusion where it is not possible to inform Range Control the RCO is to note all details for subsequent recording in the MoD Form 906/906A.

**0162. Weather** - The RCO has discretion to stop firing on account of adverse weather conditions, e.g. strong winds, heavy rain, thunderstorm etc. This applies particularly where young or inexperienced firers are involved who may not be experienced or suitably equipped to cope. Special consideration should be given to mist and fog, as this can occlude the shooters view of the target and reduce the RCO's view of the RDA.

**0163. Aircraft** - When conducting a range within a complex or training area the RCO must be prepared to react should the Aircraft International Warning Signal be observed. This consists of a series of red and green pyrotechnic flares fired alternately, the intention of which is to warn the pilot of an aircraft that he is approaching a range. In the case of a range with a sea danger area additional signals may be made and information will be given in the Range Orders. If required by Range Orders the RCO is to appoint an individual to act as air sentry, whose duty it is to monitor the surrounding airspace and inform the RCO if an aircraft appears to be approaching the RDA. In this event the RCO is to suspend firing and firing may not recommence until the aircraft has left the RDA. The RCO is to report any intrusion by an aircraft to Range Control, together with as much information concerning the aircraft involved (type, registration number/serial number, or any notable markings/insignia, exact time of occurrence and direction of approach/departure) as can be ascertained. An incident report may be requested.

## **Supervision**

**0164.** Adequate, competent supervision is essential. The RCO is responsible for ensuring that probationary members, or members who do not hold, do not have the appropriate certification or are not in possession of a Shooter Certification Card (SCC), are individually supervised at all times when in possession of a firearm. Where required, the RCO should appoint suitably qualified/experienced individuals with the appropriate certification on their SCC to act as safety supervisors. Where the number of lanes in use is considered too many for one RCO to personally supervise, safety supervisors should be appointed to take local responsibility for a number of lanes and report directly to the RCO, thus leaving the RCO free to maintain control of the range overall.

## **Inspections**

**0165.** It is the responsibility of the RCO to ensure that inspections take place as and when required by the nature of the range activity. This can be summarised as; before firing, during firing, after firing.

**0166. Before Firing** - Prior to the commencing of firing the RCO is to conduct a thorough check to ensure:

1. No one is in possession of any unauthorised ammunition or ammunition defined by NRA as 'Dangerous' or prohibited.
2. All firers intending to shoot unsupervised are in possession of a current SCC.
3. Anyone wishing to shoot a firearm that falls within the meaning of the term 'High Muzzle Energy' is identified so that arrangements can be made for them to carry out the appropriate check-zeroing procedure.
4. Any new rifle, or new rifle / scope combination has been previously bore-sighted or collimated or actual zeroing has taken place in advance. The first shots fired should be supervised by a responsible individual appointed by the RCO.

**0167. During firing** - on a gallery range where each firer completes his practice and is replaced on that lane by another firer, the departing firer's firearm is to be inspected by one of the below and proved clear before being removed from the firing point:

1. The RCO.
2. A nominated SS or Coach.
3. A shooting partner, or during a competition a register keeper. In either case this needs to be authorised by the RCO.

**0168. After Firing** - After firing no one is to go forward of the firing point until all firearms have been inspected and proved clear, and permission to do so has been given by the RCO.

**0169.** When firearms are inspected at any time, once satisfied that a firearm is unloaded the individual carrying out the inspection should audibly confirm this by calling "*Clear*". In the case of an inspection carried out by the RCO or safety supervisor this call may be accompanied by a light tap on the firer's shoulder to ensure that firer knows the call refers to his firearm.

### **Firearm Safety**

**0170.** During all loading, unloading, stoppage and inspection drills firearms are to be held horizontally where possible, and laterally aligned within the target lane.

**0171.** Best practice dictates that before closing the bolt/action or allowing the working parts to go forward on a live round the butt should be in the shoulder and the firearm pointing in the direction of the target. This is especially important in the case of a firearm that is fitted with a bipod or is being fired with the aid of a shooting sling.

### **Firearm Malfunction**

**0172.** If a malfunction (or stoppage) cannot be resolved by carrying out the recognised drill or the firearm cannot be unloaded, the firer is to immediately inform the RCO. The firearm must remain on the firing point pointing at the target until the detail has finished and all other firers have cleared the firing point. The RCO must then arrange for the firearm to be rendered safe, utilising whatever expert resources as may be available. **Under no circumstances may a firearm that contains, or may contain, a live round be removed from the firing point and taken to the rear.** If the firearm cannot be rendered safe on the firing point, Range Control must be informed. Service armourers are not trained on civilian firearms and are not permitted to work on them. **It is the responsibility of the RCO and the owner of the firearm to arrange for an appropriately qualified or experienced individual to attend.**

### **Ammunition & Ammunition Malfunctions**

**0173.** Only ammunition the performance of which falls within the limitations stated in the Range Orders or MoD Form 904 for the range may be used. No ammunition that is prohibited under NRA rules may be used on MoD ranges (ref Bisley Bible Appendix 6 – Dangerous Ammunition).

**0174.** Any round that has previously misfired or has been involved in a stoppage is to be removed from the firing point. No attempt is to be made to re-fire it. In the case of privately-owned ammunition the round is to be returned to the owner, who is then responsible for its safe disposal. In the case of club-owned ammunition the round is to be segregated from unfired ammunition and returned to the club. The club will decide if the round should be disposed of by a competent person or returned to the supplier accompanied by a report.



## Misfires – Centrefire Ammunition

**0175.** In the event a misfire occurs (trigger pulled and loaded cartridge fails to fire), the firer **MUST NOT** open the bolt. The firearm is to remain pointing at the target and the firer is to attract the attention of the RCO. The RCO or nominated Safety Supervisor will then instruct the firer to carry out the Misfire Drill as listed in 0176.

**0176.** Throughout this entire procedure, the firearm **MUST** remain horizontal, pointing at the sand backstop in line with the firer at all times.

1. Firer to notify RCO with raised hand and verbal warning of “Misfire”.
2. Firer to maintain firearm on aim at their target for 30 seconds.
3. Firer to support firearm, ensuring they are clear of both the linear direction of the bolt and ejection port.
4. Firer to check behind and ejection port side of firearm and RCO to verify and warn any bystander to clear away from potential danger from flying fragments/bolt.
5. If possible, firearm to be canted over so ejection port is pointing towards the ground as opposed to across the firing point.
6. Firer to operate and open the bolt of firearm ensuring **NO PART OF THEIR HAND** are behind the bolt.
7. Firer to eject and ascertain if:
  - a. No cartridge present.
  - b. A cartridge struck but not fired.
  - c. No strike mark on cartridge indicating a firearm malfunction.

**0177.** If the cocking piece/striker/hammer does not appear to have gone forward, or its position cannot be ascertained with certainty, there is a risk that the firing mechanism may not have operated and still be in a ‘cocked’ condition, possibly held in that position by an obstruction in the mechanism. The action of opening the bolt may overcome this and allow the mechanism to operate and fire the round.

## Dealing with Incidents – The RCO

**0178.** Before attending to an incident on the firing point the RCO is to ensure it is safe to do so. The RCO’s first duty is to the safe operation of the range, and he must not allow himself to be distracted from that. If an incident occurs that requires supervision it may be possible to detail a safety supervisor to attend. If the incident requires the personal attention of the RCO but is not urgent, the firer involved should be instructed to wait and keep the firearm pointing at the target. When the detail in progress has finished firing and the firers cleared from the firing point the RCO may attend. If the incident requires the RCO’s immediate involvement an Emergency Stop should be initiated, and firers should be instructed to ground/bench their firearms and stand back. Only when this has taken place and the RCO is certain the range is safe is he to attend the incident.

**0179 - 01100.** *Reserved.*

## SECTION 4 - PLANNING & PREPARATION

### Introduction

**01101.** Range space and time are always at a premium, and in the case of a MoD range there are cost factors to consider. It is therefore essential that due consideration is given to the planning and preparation of live firing if safety is not to be compromised and time and money are not to be wasted. This section details the planning and preparation required prior to conducting live firing on MoD ranges.

### Responsibilities – Key Personnel

**01102.** The roles and responsibilities of the following key personnel involved in the planning process must be understood.

1. **Club Chairman.**

- a. The Club Chairman carries ultimate responsibility for the live firing exercise.
- b. He is responsible for appointing the Senior Planning Officer/Planning Officer and the Range Conducting Officer, and for ensuring they are appropriately qualified and competent to carry out their duties.

2. **Planning Officer / Senior Planning Officer.**

- a. The Planning Officer/Senior Planning Officer is responsible to the Club Chairman for the planning of the activity, invariably in association with the RCO.
- b. A routine club shoot involving one range would normally only require the appointment of a single Planning Officer.
- c. In the case of a more complex activity, for example involving a large number of firers and more than one range, at the Chairman's discretion a Senior Planning Officer may be appointed to oversee and coordinate the planning.

3. **RCO.**

- a. The RCO is responsible to the Club Chairman for the safe conduct of the range. He has absolute authority over **all** persons on the range.
- b. The RCO is not to take part in, or be given responsibility for, any other duty.
- c. The RCO should be clearly identifiable; some range authorities stipulate how this is achieved and if this is the case it should be stated in Range Orders.
- d. The RCO may not shoot or carry a firearm during his period of duty.
- e. It is often the case that the roles of RCO and Planning Officer are assumed by the same individual.

4. **Safety Supervisor.** Safety Supervisor is an individual responsible to the RCO for the safe conduct of a firer, or group of firers, within the overall plan of the activity. These responsibilities include:

- a. Being positioned to be able to observe firers' firearm handling and intervene swiftly if safety is at risk.

- b. Assisting firers who may be experiencing firearm-related difficulties as required/necessary.
  - c. Ensuring firers engage the correct target and do not cross-lane-fire.
  - d. Ensuring compliance with the RCO's orders and clarifying if necessary.
  - e. At the RCOs discretion, carrying out end-of-practice firearm inspections and confirming them clear to the RCO.
5. **Coach.** The role of a coach is to develop and improve an individual's shooting ability. Those detailed to act as coaches should be selected regarding their knowledge and experience, and their ability to communicate this to others. By virtue of experience a coach would normally be deemed competent to act as a Safety Supervisor; the reverse may not necessarily be the case.
6. **Butts Supervisor.** The Butts Supervisor (or Butts Officer) is responsible to the RCO for the safe and efficient operation of the butts. He does not need to be formally qualified in any way, however he must be an experienced individual. His prime responsibility is the safety of the butt party; he should not therefore mark a target but remain free to supervise the markers, deal with communications, and where necessary provide training and guidance to inexperienced members of the butt party.
7. **Additional Range Staff.** Dependant on circumstances the following additional range staff may be required:
- a. **Sentries.** Any requirement for sentries will be stated in Range Orders. Personnel detailed as sentries are to be mature, responsible individuals. Unless stated to the contrary in Range Orders the RCO is to ensure that sentries are briefed on their duties and provided with a means of communication with the firing point (usually radio). Where a sentry is required to observe the RDA and watch for any intrusion they are to be in possession of binoculars. On some ranges the positioning and briefing of sentries is carried out by Range Control and they are provided with a means of communication with Range Control. Range Orders will give full details.
  - b. **Telephone Orderly.** A telephone orderly will only be required if communications between butts and firing point is by means of landline telephone. This system has been largely superseded by hand-held radios, allowing direct communication between RCO and Butts Supervisor.

## Booking a Range

**01103.** Before being able to book a MoD range the club must first have been granted a Licence to use that range by the Range Administrative Authority (RAA) responsible for it. For information on this process refer to Section 1 – General.

**01104.** The procedure for booking a range can vary according to the body responsible for managing the range. Some ranges will accept bids for bookings direct to the RAA, or in some cases Range Control itself. Other ranges, in particular those managed by a RAA responsible for a district where several facilities exist, will utilise the Bids Allocation Management System (BAMS). Those responsible for making club bookings should seek advice from the RAA responsible for the range they wish to use as to how the bidding process for that range works in practice.

## Range Reconnaissance

**01105.** When intending to use a range for the first time, or when using a range after an extended period where no use has taken place, a Range Reconnaissance should be arranged. Ideally the Planning Officer and RCO (unless they are one and the same) should both be involved, and consideration may be given to including the Butts Officer.

**01106.** In the first instance the request to carry out the Range Reconnaissance should be made to the RAA or Range Control, who will agree a date and time and arrange for one of the range staff to be available. This provides the RCO/Planning Officer with an opportunity to ascertain what facilities are/are not available and to obtain as much information about the range, including the content of the Range Orders if these have not yet been read.

**01107.** A Range Reconnaissance should include the following:

1. **Range Orders.** The RCO is to insist that a copy is available for perusal, and that it is the latest on issue.
2. **MoD Forms 904 / 905.** Check the existence of the MoD Forms 904 & 905. Ensure that the Form 905 Land Range Safety Certificate is in date and on the date the range is intended to be used.
3. **MoD Form 906 Land Range Log.** Determine whether it is a MoD Form 906 or MoD Form 906A; this will dictate how the quantity of rounds fired on the day must be recorded.
4. **Shooting times.** As well as confirming range opening and closing times, check whether firing has to cease at lunch times, or there are additional restrictions on Sundays.
5. **Firearm & Ammunition Restrictions.** Look for anything unusual. Bear in mind that most range documentation is written to reflect military calibres. How does this compare with calibres used by civilians?
6. **Lane Restrictions.** Are any lanes out of use for maintenance, or likely to be on the day of use.
7. **Targetry.** Check that what you require is available. For example, do not assume that all ranges provide NRA-type targets. If you wish to use your own targets, ask if this is permitted.
8. **Flags, Lights, Notices, Sentries.** Check locations and who is responsible for putting out flags / notices; it may be the user.
9. **Air Sentry.** Is one required? If so, who is responsible?
10. **Area for Waiting Details.** Self-explanatory. Also check suitability for any concurrent activity that is planned, and for any access restrictions during firing.
11. **Locations of Toilets/Washing Facilities.** Including any restrictions on access during firing.
12. **Vehicle Access and Parking.** Check vehicle access to the butts if this will be required. Bear in mind access may be required by Emergency Services. Parking areas may be subject to restrictions depending on distances from which firing is taking place.
13. **Medical Cover Required.** Establish the location of the nearest hospital with A & E facilities; it may be necessary to transport a non-emergency injury for treatment.
14. **Walk the Range.** Check the condition of the firing points at the distances you intend to use. Check the condition of the mantlet crest (profile board), the markers gallery and condition of the

target frames (do they operate smoothly and evenly?). Are counterbalances provided or are blank target frames used?. Check the condition of the stop butt and the sand within it; is it raked to profile, is it free of excessive bullet debris?

15. **Range Orientation.** From which direction does the sun shine? In the winter months the sun can be low in the sky, making it difficult to distinguish the target through the sights if firing into it.

16. **Indoor Range.** Inspect the lighting and ventilation systems and how they are switched on/off. Check the condition of the target bench and any mechanical target apparatus provided. Is there adequate room for waiting details within the building? Any downrange access points must be secured from the inside and fitted with a (usually audible) means of warning if they are opened. Can the firing point area be secured to prevent unexpected intrusion from outside?

17. **Communications.** Between firing points and butts and to/from sentries. Does the range have a landline? If so, note the number.

18. **General Condition.** Is the range tidy and well maintained? Look for evidence of earlier misuse that has not been repaired.

**01108.** The above list is not exhaustive. Reading the Range Orders and local paperwork on the wall of Range Control can identify subjects about which you may wish to know more. If you are fortunate enough to be hosted on your reconnaissance by a range warden who knows the range well, question him for local information that may be of value.

## **Medical Cover**

**01109.** The level of medical cover required on a MoD range should be stated in the Range Orders. It is the user's responsibility to ensure adequate medical cover is provided and clubs must therefore make appropriate arrangements.

**01110.** In the absence of specific instructions otherwise, the following should be ensured:

1. **First Aid.** A responsible person trained in first aid is to be present whilst shooting is in progress. That person must be equipped with a suitable First Aid kit which must comply with current Health & Safety (First Aid) requirements. Such kits are readily available from major chemists and St John Ambulance. A second first aid kit is to be located in the butts. **The RCO is not to be designated as the first aider.**

2. **Emergency Services.** The procedure for summoning the emergency services (ambulance / paramedic) can vary according to the location of the range. For example, in the case of an isolated range it is likely to be the responsibility of the user. In the case of a range within a complex, or a range that is located within a training area or other military establishment, it is more likely to be the responsibility of Range Control. This is to ensure that an ambulance is met by a responsible person and taken to the casualty. Information on the procedure for summoning the emergency services will be contained in the Range Orders and the RCO is to ensure that he is aware of this.

3. **Local Hospital.** In the case of a non-emergency injury there may be a requirement to transport an individual to hospital for examination or minor treatment. The RCO should ensure he knows the location and telephone number of the nearest hospital with A&E facilities and have a written pre-planned route. Any available vehicle may be used.

4. **Emergency Vehicle.** If Range Orders or local circumstances require an emergency vehicle to be designated, the vehicle chosen is to be appropriate to the circumstances.

**01111.** Should it be necessary to convey a non-emergency casualty, or accompany a major emergency casualty to hospital, the RCO is to delegate a responsible person to do so. **Under no circumstances is the RCO to leave the range until the range has been handed back to Range Control and all necessary reporting and investigative action has been completed.**

#### **Range Safety Document / Range Action & Safety Plan**

**01112.** All live firing that takes place on a MoD range is to be supported by a Range Safety Document (RSD) or Range Action & Safety Plan (RASP) as stipulated by the RAA. This shows that those responsible for planning the live firing have discharged their responsibilities in such areas as ensuring that important roles are given to suitably qualified or experienced individuals, adequate briefings are prepared, and appropriate procedures are in place in the event of an emergency.

**01113.** In preparing a RSD / RASP the Planning Officer / RCO should take into account the nature of the practices it is intended to fire and the competence and experience of those taking part. Such factors will assist them in ensuring that adequate safety staff are available.

**01114.** It should be noted that up to three signatures may be required. The Planning Officer and the RCO must both sign (unless they are the same person), and the Senior Planning Officer or Club Chairman then signs to the effect that he is comfortable that the activity will be conducted in accordance with the Range Orders and laid down NRA procedures.

**01115.** The RSD / RASP must usually be submitted to the RAA at least fifteen working days, but not more than six weeks, in advance of the planned shoot. On the day of the shoot, should any changes to the RASP / RSD be required a copy of the RSD / RASP may be annotated accordingly and handed to Range Control.

**01116.** The RCO is to have a signed, up-to-date copy of the RSD/RASP in his possession when supervising the shoot. In the event of an incident or accident the RCO will be required to produce it on request of the investigating authority. Failure to be able to do so will attract censure.

**01117. RSD or RASP** - In order to determine whether a RSD or a RASP is required, advice should be sought from the RAA. In most cases a RSD will suffice, however some RAAs require users to submit a RASP due to the complexity of the range facilities at that particular location. The complexity of the planned practice will also have a bearing on which document is required. For example, a meeting involving many firers and range staff, possibly taking place on more than one range, is likely to require a RASP to cover the event, with individual RSDs being required for each range to be used.

**01118.** Generic RSD / RASPs are provided at Annexes E & F to this Handbook respectively. Current MS Word templates are also available on the NRA website and hard copies may be obtained from the NRA Training Dept. These examples are not to be used as they stand; they must be adapted to consider the nature of the planned activity and the range on which it is taking place.

**01119 - 01130** Reserved



## SECTION 5 – BRIEFINGS

### Introduction

**01131.** This Section details the briefings that may be required prior to conducting live firing on MoD Ranges and the information that should be contained therein. Guidance on when each briefing may be required and how briefings should be delivered is also provided.

### Why Briefings are Necessary

**01132.** Comprehensive briefings will do much to reduce the risk of accidents. To ensure that firers and range staff understand all relevant aspects of Range Orders and safety precautions they are to be briefed by the RCO. The requirement for this briefing is clearly stated in the RSD or RASP that is prepared to support any live firing on a MoD range. This section addresses the requirement to brief a party of civilian firers taking part in live firing on MoD ranges. It is intended as a guide and must not be regarded as definitive or exclusive; when preparing a briefing local Range Orders must always be consulted as it is here that range-specific information will be found.

**01133.** The level of briefing may vary according to the nature of the activity and the level of experience of the firers. For example; the briefing given to a large group of firers within the context of a shooting competition, or where novice firers are present, would of necessity be more detailed than that required for a group of experienced firers on a range with which they are familiar.

**01134.** The order in which the briefings are given may vary according to the circumstances.

### Staff Briefings

**01135.** The nature of the event will dictate what staff are required. Where a number of dedicated staff are involved a 'general' staff briefing may be given, preferably prior to the event. The following is a guide:

1. Description of the practices to be fired, sequence of events, detail organisation and butt party changeovers.
2. Signal to stop firing (from Range Control).
3. Importance of ensuring correct wearing of hearing protection, and eye protection where appropriate.
4. Actions on:
  - a. Signal to stop firing or Emergency Stop.
  - b. Outbreak of fire.
  - c. Observing a dangerous practice.
  - d. Intrusion into the Range Danger Area.
  - e. Appearance of the Butt Flag during firing.
  - f. Responsibility of everyone to remain alert at all times and call "**Stop! Stop! Stop!**" if a breach of safety occurs or may be about to occur.

**01136.** Additional staff should also be briefed. If sentries are required the Range Orders must be checked to determine who is responsible for this; the RCO or Range Control. If the activity is taking place on a gallery range the Butts Officer and markers must also be briefed, as must an Air Sentry if one is required. Information on this is given below.

### **Safety Supervisor/Coach Briefing**

**01137.** The briefing given to Safety Supervisors and Coaches is additional to the 'Staff Briefing' described above and should cover the following:

1. Ensure they are positioned so as to be able to observe firers' firearm handling and intervene swiftly if safety is at risk.
2. Assisting a firer who may be experiencing firearm-related difficulties as necessary.
3. Ensuring firers engage the correct target and do not cross-lane-fire.
4. Ensuring compliance with the RCO's orders; clarify if necessary.
5. Ensuring familiarity with the procedure for end-of-practice inspection. Confirm rules relating to breech flag/bolt as necessary.

### **Firer Briefings**

**01138.** As with the Staff Briefing, the complexity of the event and level of experience of the firers will determine the amount of information required. The following is a guide:

1. **Admin.** Irrespective of the activity taking place the following **MUST** be covered:
  - a. Ensure all have suitable hearing protection, and eye protection if required.
  - b. Ensure all have SCC (arrangements for individual supervision must be made for those not in possession of a SCC).
  - c. Ask if anyone intends to shoot a rifle that is/might be classified as High Muzzle Energy.
  - d. Area for waiting details.
  - e. Advise who is IC First Aid and location of First Aid Kit(s).
  - f. Ask if anyone is intending to fire a new rifle or new rifle/scope combination for the first time. Arrangements should be made to confirm either bore-sighting/collimating or actual zeroing has taken place in advance, and the first shots fired should be supervised by a responsible individual appointed by the RCO.
2. **Range Layout.** Where given this may cover the locations and meanings of the range in use and Butt Flags, route to butts, location of toilets.
3. **Safety Briefing.** The following **MUST** be covered:
  - a. Introduce yourself as RCO.
  - b. Any restrictions on access or movement on the range that may be imposed by Range Orders or presence of other users on that range or adjacent ranges.

- c. No one to place firearms or personal kit on the firing point until permission given by the RCO.
- d. Any specific rules to be observed regarding carriage of firearms onto and off the firing point.
- e. Pointing of firearms when on firing point.
- f. Action on hearing **“Stop! Stop! Stop!”** or the signal to ‘Check fire’ given from Range Control:
  - (1). Observing the appearance of the Butt Flag during firing.
  - (2). Observing an intrusion into the danger area.
  - (3). The occurrence of a misfire, or a firearm malfunction that cannot be cleared.
- g. No deliberate cross-lane firing.
- h. Rules relating to aiming practice/dry firing.
- i. End-of-Practice procedure; how each firer advises firing completed and requests inspection of firearm.
- j. No operation of firearm mechanisms behind firing point.

**4. Practice Briefing.** This would only be required if the activity involved a specific course of fire. A Practice Briefing should cover the following:

- a. The nature of each phase, the order of firing and at which target.
- b. The number of rounds per phase.
- c. Target exposures and timings where applicable.
- d. The Fire Control Order to be used for each phase.
- e. Scoring information if applicable.

#### **Butt Officer Briefing**

**01139.** The RCO is to brief the Butts Officer on:

- 1. Raise the Range in Use and Butt Flags; ensure the butt flag can be raised quickly in an emergency.
- 2. Check communications as required.
- 3. Check the condition of the target frames; report any unserviceability to the RCO.
- 4. Ensure all targets are provided with patch-out kits, marking, value panels as required.
- 5. Brief the butts party on safety and duties.

6. Close down procedure, including requirement to report damage or unserviceable equipment.

**01140.** The RCO is also to ensure that the Butt Officer is briefed on the actions to take in the event of an emergency occurring in the butts or a loss of communications.

### **Butt Party Briefing**

**01141.** The briefing given to the butt party should concentrate on safety, but may also address the target marking procedure if necessary.

1. **Safety.**
  - a. No one is to leave the butts without permission from the Butt Officer.
  - b. Remain under the mantlet when firing is taking place.
  - c. Do not look up at the targets during firing due to risk of eye injury from flying wood splinters/target debris.
  - d. Control targets at upper and lower limits of travel to minimise risk of a target rebound resulting in detached pulley wires.
  - e. Advisability of wearing hearing protection.
  - f. Emergency procedure. e.g. accident or loss of communications.
2. **Procedure.**
  - a. When shooting commences watch the impact area of the stop butt for strike on your lane, then lower the target immediately for inspection.
  - b. The procedure for indicating fall of shot and shot value.
  - c. Any other relevant information.

### **Written Briefings**

**01142.** The NRA's preferred system is to issue a written briefing in advance, and to confirm or amend this as necessary by a verbal briefing on arrival at the range.

**01143.** A written briefing would certainly be required for a major event; for example a competition involving a large number of personnel, or an event where firing is to take place on more than one range. A written briefing would not normally be necessary for a club-level shoot involving experienced firers on a range that is used on a regular basis, however it is recommended.

**01144.** An example of a written briefing is at Annex A.

### **Delivery of a Verbal Briefing**

**01145.** The way in which briefings are delivered will have a significant bearing on their effectiveness. The guiding principles are that the recipients must be able to hear what is being said, the briefings must be clear and concise but must include all relevant information; and the person giving the briefing must command attention. If necessary, a check of understanding may also be included. The following is a guide:

1. Assemble the party in a hollow square or semi-circle, according to numbers.
2. Be authoritative. Command attention by personality and tone of voice rather than by volume. Project your voice rather than shout.
3. Keep the briefing as short as possible, commensurate with covering all necessary information.
4. Follow a logical sequence.
5. Use an aide memoire. This will assist in following the logical sequence and should ensure that nothing is missed. In the case of the Safety Brief, the RSD/RASP should contain all relevant information and may serve as a guide. An aide memoire is best prepared in advance, however it must incorporate provision for additional information to be included where this may be required.
6. Do not read from the aide memoire/RSD/RASP. Continue to command attention by maintaining eye contact with the party or individuals (staff briefings). Use the aide memoire, etc. as a prompt only.
7. Give an opportunity to invite questions. If desired, pose questions, allow time for thought, then nominate who you wish to answer.

## Summary

**01146.** Irrespective of the nature of the briefing given, its importance cannot be overemphasised, especially in the case of the Safety Briefs delivered to firers and to the butts party. It is here that the essential rules and procedures relating to the safe conduct of the range overall are conveyed to both firers and range staff, and it is also the occasion on which the RCO establishes his authority from the outset. The same is true of the safety briefing given to members of the butts party, especially if they are inexperienced and are carrying out this role for the first time.

**01147 – 01150** *Reserved.*

## SECTION 6 – FIREARM INCIDENT & ACCIDENT REPORTING PROCEDURE

### Introduction

**01151.** A Firearm or Ammunition Incident may be defined as any untoward occurrence arising from the use, or misuse of firearms and/or ammunition. (**Reference NRA Handbook 'Bisley Bible' Para 109**)

**01152.** It is essential that any incidents or accidents occurring on MoD ranges are recorded and reported to the appropriate military authorities and to the NRA. This is done in the first instance via Range Control or the RAA as appropriate. The requirement to report such occurrences to the military authorities, and to cooperate fully with any subsequent investigation, forms part of the Licence under which the club is permitted to use MoD ranges.

### Classification of Incidents

**01153.** Within the military there exists a comprehensive system for classification of incidents, together with a number of secondary classifications that provide supporting indication of cause. The system is as follows, however the wording has in places been amended slightly to take into account its application to civilian firearms and ammunition:

1. **Defect.** Any fault in the make up or marking, or damage to the physical state of a firearm or ammunition or its packaging. In the case of ammunition, in a civilian context this would most likely be confined to commercially-produced ammunition.
2. **Performance Failure.** The failure of a round of ammunition to function as intended when struck. In the case of small-arms ammunition the best example of this is a misfire.
3. **Accident.** Any unintended event or sequence of events that results in death or injury to a person(s) and/or damage to equipment or property, military or civilian.

**01154.** The following definitions refer to specific types of occurrence that may constitute an incident in their own right or could have contributed to an accident:

1. **Hangfire.** In the case of small-arms ammunition a hangfire is a round that does not immediately fire when struck, but does so after a delay.
2. **Breech Explosion.** The uncontrolled initiation of a round in the breech of a firearm when struck. The round may have been fully chambered, partially chambered or not chambered.
3. **Cook-off.** The uncontrolled initiation of a round caused by excessive heat.
4. **Error of Drill.** In a civilian firearm context this would be regarded as not in accordance with the user manual (where such exists); or more likely, in accordance with recognised 'good practice'. Two examples:
  - a. Failure to check that the chamber of a firearm is clear after carrying out a stoppage drill and before closing the bolt/action.
  - b. Failure to remove the magazine of a firearm prior to operating the bolt/action when carrying out an unload or stoppage drill, resulting in a round being inadvertently chambered and fired
5. **Negligent Discharge.** The definition of a Negligent Discharge and the actions that are to be carried out in the event that one takes place are addressed at para 01158.



**01155.** Prompt and detailed investigation of an accident or incident is essential. It is the duty of everyone involved, and a condition of the MoD Licence, to cooperate with whatever subsequent investigation takes place. This will help establish the cause and may prevent a recurrence. RCOs are to ensure that they are fully conversant with the procedure for dealing with ammunition incidents on MoD ranges.

**01156.** All accidents occurring on MoD ranges may result in an investigation by the appropriate military authorities and possibly delegated to the NRA. In the case of a death or serious injury the civil police will also be involved.

#### **Immediate Action to be Taken Following an Accident**

**01157.** In the event of an accident involving a firearm and ammunition any person involved with the activity *must and should* shout “*Stop, Stop, Stop*” in such a manner that it is clearly heard by everyone else in proximity. Once that command is given all firing is to cease and all personnel are to freeze and await further instructions. It is then the responsibility of the RCO to ensure the following actions are taken:

Ser.	Action	Remarks
1.	On “ <i>Stop, Stop, Stop</i> ”	All firing/movement is to cease, personnel are to await further instructions from Range Staff.
2.	Render First Aid, Get Additional Medical Help (if req’d)	Implement the Medical Emergency Plan as per the RASP/RSD If attendance by the emergency services is required this should be initiated. Refer to Range Orders for direction on how this is done (see Note 1).
3.	Ensure Firearm Safety and Preserve Evidence	Do not attempt to unload, render safe, strip or clean any firearm involved in the accident <b>unless not doing so would constitute risk to personnel</b> . Do not alter any sight setting or remove any ammunition from the scene. If necessary, move personnel to safety.
4.	Inform and Seek Advice	How this is done can vary from range to range. The necessary information will be contained in the Range Orders. It is the RCOs responsibility to ensure the correct procedure is followed. Range Control will arrange to advise the appropriate military authorities and will provide additional guidance.
5.	Inform other Agencies	The NRA must be informed as soon as possible. The club Secretary and Chairman should also be advised
6.	Begin Preliminary Investigation (Use specimen report form at Annex C)	First cordon off the area. The following should be recorded:  1. Date, time, place. 2. Details of the injured personnel. 3. Details of the firearm involved (model, calibre, serial no. and any other relevant information). 4. Names of witnesses. If possible, record where they were positioned at the time of the accident and the direction they were facing. 5. Orders given immediately prior to the accident.  6. Was the firearm and ammunition concerned being handled correctly?

7.	Evidence	<p>Any fragments, fired cases, etc. are to be left where they fell as evidence for the investigation.</p> <p>If a camera or mobile phone is available, arrange for photographs of the scene to be taken.</p> <p>Alternatively, make a sketch of the scene noting positions of all evidence and the locations of witnesses. Use arrows to indicate the direction they were facing.</p>
8.	Witnesses	If possible, witnesses should be segregated and not allowed to discuss the accident. They should be asked to produce and sign a written statement.
9.	Completion of MoD Form 906/906A – Land Range Log	It is the responsibility of the RCO to ensure that full details of the accident are recorded in the Land Range Log. Range Control or the appropriate military authority will give guidance on how such information should be recorded.

#### **Notes;**

1. **Summoning the Emergency Services (ES).** Responsibility for this can vary according to the location. In the case of an isolated range, in particular one where range staff may not be guaranteed to remain on scene during the period of usage, the user will be responsible. In the case of a range complex the procedure is often that Range Control will contact the ES, and arrange for them to be met by a responsible person and brought to the scene. Whichever procedure applies, details will be found in the Range Orders and should form part of the Emergency Procedure contained in the RSD/RASP.

2. **If there is any doubt as to whether the occurrence should be reported as an Incident or Accident it should be reported in the first instance as an Accident.** It is preferable to do this and later be able to downgrade the report than to report as an Incident, and then have to upgrade to an Accident.

#### **Negligent Discharge**

**01158.** A Negligent discharge is defined as:

1. A shot fired, whether in a safe direction or not, prior to permission to fire being given or after the order to stop firing.
2. Any shot fired in an unsafe direction.

**01159.** A negligent discharge may occur on or off the firing point.

**01160. Negligent Discharge Resulting in an Accident.** The RCO is to follow the procedure for responding to an accident as given at para 01157.

**01161. Negligent Discharge – Action by RCO.** The RCO is to take the following actions:

1. **Negligent Discharge Occurring on the Firing Point – No Injury Involved.**

- a. Order **“Stop, Stop, Stop.”**. The command should be delivered in a firm manner, but preferably without shouting.
- b. Require the firer to immediately ground/bench his firearm and stand back from the firing point.
- c. When it is in all respects safe to do so, investigate the circumstances of the discharge.
- d. Determine if there was a breach of safety; for example was the firearm pointing in a safe or unsafe direction?

2. **Negligent Discharge Occurring Away from the Firing Point.** The RCO is to follow the procedure detailed in para 01161 a, (1) – (3) above. Any negligent discharge occurring away from the firing point represents a breach of safety as the firearm is almost certain to have been pointing in an unsafe direction and the round fired may have travelled beyond the perimeter of the range or range danger area. Range Control is to be informed immediately and they will advise on further action.

**01162.** A firer who has committed a Negligent Discharge of any kind is to be dismissed from the firing point and take no further part in the activity. Further action may be taken at the discretion of the RCO, however no individual who has committed a Negligent Discharge which may be subject to an investigation is to be permitted to leave the range without the express permission of Range Control.

### **Reporting of Incidents & Accidents**

**01163.** Any reportable incident or accident that takes place on a MoD range is to be reported in the first instance to Range Control and an entry made in the MoD Form 906/906A. Range Control will decide if additional reporting is required and will provide guidance in this regard.

**01164.** If a written report is required, for example in the case of a serious incident or an accident, a suitable format is given at Annex C to the RCO Handbook. This may be used as the basis of a report completed at the time or as a template for a report completed later. The written report is to be submitted to the RAA responsible for the range on which the incident took place and a copy is to be sent to the NRA in accordance with paras 01165 & 01166.

### **Informing the NRA**

**01165.** The NRA is to be informed of any accident or reportable incident (i.e. any occurrence where the military authorities and/or civilian police were notified) occurring on a MoD range without delay. As most civilian shooting on MoD ranges takes place at weekends this should be in the first instance to the NRA Range Office who will inform the Secretary General of the NRA. If that is not possible, notification is to take place as early as possible on the next working day.

**01166.** The initial (verbal) notification is to be followed up as soon as possible by a written report. This is to include a copy of the Incident/Accident Report compiled at the time of the occurrence and submitted to the RAA, and details of any subsequent actions taken. It is to be sent to the Secretary General of the NRA by the fastest possible means.

### **Further Reporting Action**

**01167.** The RCO must determine if the circumstances warrant any form of sanction or indicate a requirement for remedial training. If so, the matter should be reported to the Secretary of the firer’s club or association. Such a report is to be in writing and the initiating RCO should keep a copy of the report.

**01168.** Should the individual to whom the report was addressed fail to respond, or the action taken as a result not, in the opinion of the RCO initiating the report, be appropriate or adequate, the RCO is to refer the matter to the Secretary General of the NRA. As a matter of courtesy the individual to whom the original report was sent should be informed, also in writing.

### **Temporary Suspension of Range Staff**

**01169.** Following an accident or reportable incident on their range, an RCO is not to supervise live firing until cleared to do so as part of the investigation. The only exception to this is an occurrence that clearly has no range management-related implications; for example a catastrophic failure of a firearm on the firing point.

**01170.** Where there is, or may be, a range management-related implication, only when the results of the preliminary investigation are made known can a decision be made regarding further action. Possible options are:

1. If it is deemed that the RSO/RCO did not in any way contribute to the accident the qualification may be reinstated.
2. Where there is any doubt the temporary suspension is to remain in force until such time as the results of the formal investigation become known, or when it becomes clear during this investigation that temporary suspension would no longer be appropriate.

**01171.** Where re-training is deemed necessary the nature of that training will depend on the circumstances. When whatever re-training was deemed necessary has been completed to the satisfaction of the NRA, at the discretion of the Secretary General of the NRA, the qualification may be reinstated.

**01172. Shooter Certification.** Any individual involved in an accident or serious incident, including one where the technical safety of a firearm is concerned, is to have their Shooter Certification Card suspended pending the results of the investigation. In the first instance suspension is the responsibility of the individual's club/association Secretary, who is to immediately inform the NRA Membership Department. If retraining is deemed necessary guidance is to be sought from the NRA Training Dept. Once this has been carried out to the satisfaction of the club/association Chairman and the NRA, the Shooter Certification Card may be reinstated and the NRA Membership and Training Depts. informed.

**01173.** Where the nature of the occurrence results in a club deciding to permanently revoke an individual's Shooter Certification the NRA Membership Dept is to be informed, together with full details of the circumstances.

**01174. Incident involving civilian shooters.** Any incident that takes place on a MoD range is likely to arouse media attention. Any such incident is to be immediately reported to the military authorities or Range Control. The NRA needs to be notified as soon as possible.

**01175 – 01200** *Reserved.*

## CHAPTER 2 – RANGES

### SECTION 1 – RANGE DANGER AREAS

#### Introduction

**0201.** Live firing by civilian shooting clubs on MoD ranges is normally restricted to purpose built ranges and must be supervised by a RCO who holds the NRA RCO qualification. No live firing can be guaranteed completely safe, however an adequate level of safety is achieved by:

1. Properly defined and applied danger area limits.
2. Proper control by the RCO conducting the live firing and the Safety Supervisors.
3. Integrity on the part of the firers who have been properly trained in the safe handling of their firearms.
4. Design aspects of the range, its construction, maintenance and routine inspections.

#### Terms & Definitions

**0202. Range Danger Area (RDA).** An RDA is defined as:

*“Those areas of land and water together with a specified volume of air above within which danger to life, limb and property may be expected to occur, arising from the initiation of specified ammunition, ordnance and explosive natures.”*

**Note:** *This definition applies to all ranges, not only those on which small arms ammunition will be fired or are likely to be used by civilian clubs.*

**0203. RDA Template.** The RDA for a purpose built range is based on a technical scale drawing, called a ‘template’, which describes the boundary or prescribed risk from firing firearms on a specified line of fire or bearing on a range built to an approved type drawing. The RDA template is invariably firearm/ammunition specific. The design of the RDA template is based on the assumption that the range is regularly inspected and maintained, and that users observe high standards when conducting live firing.

**0204. Miliradian (abbrv. ‘Mil’).** The unit of angular measurement used on **military ranges** is one mil which equates to an arc of one metre at 1000 metres (or 1 mm at 1 m). The circumference of a circle comprises 6400 mils (or 0.05625 of a degree). One degree equals approximately 17.78 mils.

**0205. Cone of Fire (CoF).** Shots fired from a firearm do not all follow precisely the same trajectory. The cone of fire represents the distribution of shots within a vertical and lateral margin of error. The cone of fire caters for an acceptable level of aimer error and firearm tolerances to which an additional safety factor has been applied.

**0206. Line of Fire.** The line of fire is the path the bullet will follow from the muzzle of the firearm to the target and is used in range design.

**0207. Line of Sight.** This is a straight line from the firer’s eye, passing through the sights to the point of aim on the target. If a firearm is fitted with an optical sight it is possible that the firer may be able to observe the target through the sights though the line of fire may be obstructed.



**0208. Quadrant Elevation (QE).** This is the angle, measured from the horizontal, by which the muzzle of a firearm is elevated. Purpose-built ranges are designed and constructed based on an assumption that the QE of firearms will not exceed 70 mils (a little under 4 deg.). For this reason, during all loading, unloading, stoppage and inspection drills firearms are to be held horizontally where possible, and laterally aligned within the target lane. (the '*70 mils Rule*').

**0209. Classification of Ranges.** MoD ranges of the type used by civilian clubs are classified according to their Danger Area characteristics.

#### **No Danger Area (NDA) Ranges**

**0210.** The design of this type of range eliminates the requirement for a danger area beyond the range structure. The bullet catcher, stop butt wall and retaining walls are constructed to ensure all fired rounds are contained within the range construction. It must be appreciated that any deviation from the specified conduct procedures or any deterioration in the standard of range maintenance may render the range unsafe for use. This design features:

1. The stop butt wall.
2. The bullet catcher and face profile.
3. Flank or retaining walls.
4. On indoor ranges or similar, a roof or the complete containment of the range within an enclosed structure.

**0211.** The following types of range may be classed as NDA ranges:

1. Indoor Range / Indoor Rimfire Range.
2. 25 Metre Barrack Range.
3. 1908 Design Barrack Range.
4. Tube Range.

**0212.** As the NDA status is conditional on the construction of the range and the standard of discipline of the firers any deterioration in either may render the range unsafe for use.

#### **Limited Danger Area Ranges (LDA)**

**0213.** This type of range is an open range designed and built so as to capture direct shot and ensure any resultant ricochet remains within the Range Danger Area. This is achieved by a combination of limiting elevation and inclusion of range structures to capture shot and or minimise ricochet, enabling the danger area to be further reduced:

1. The stop butt and bullet catcher composition and face profile (slope).
2. The mantlet height and forward face profile (slope).
3. Raised firing points and target line.
4. Soft cladding on hard surfaces that might otherwise be exposed to bullet strike.

**0214.** The raising of firing points and target line creates a 'hollow-ground' effect between the firing points and the bullet catcher. This raises the cone of fire away from the range floor, reducing the risk of ground ricochets which are the main source of rounds that leave the range area.

**0215.** It is accepted that some rounds may leave the range, either from direct fire or ricochet. The size and shape of the Range Danger Area is intended to ensure that such rounds are contained within a controlled area. It therefore follows that any deterioration in the standard of maintenance and range discipline can render the range unsafe.

**0216.** The following are classified as LDA Ranges:

1. The Gallery Range (GR).
2. The Converted Gallery Range (CGR).

**0217.** An illustration of the Range Danger Area for a Gallery Range is at **Fig 5**.

### **Quadrant Elevation**

**0218.** It is known that a modern full bore bottle necked rifle round when fired at an angle of approximately 600 mils (about 34 deg.) can travel as far as 4000 metres (a little under 2.5 miles). The Danger Area on a typical LDA range extends only 1830 metres beyond the target line. Thus the maximum distance available, measured from the 600 yd firing point, is 2400 metres; and the minimum, measured from the 100 yd firing point, is 1930 metres. For this reason it is essential that no round is fired at a QE greater than 70 mils (a little under 4 deg.).

**0219.** The reduced danger area of the Limited Danger Area Range is based on certain assumptions in respect of conduct. These are:

1. All firing takes place parallel to the range axis. Deliberate cross lane firing is not normally permitted.
2. No round is fired at a QE greater than 70 mils. To ensure this, RCOs are to ensure that during all loading, unloading, stoppage and inspection drills firearms are held horizontally where possible, and laterally aligned within the target lane.

### **The 200 Mil Rule**

**0220.** Civilian shooters cannot apply the 200 Mil Rule on MoD Land Ranges. This restriction does not apply to the NSC at Bisley (please see appropriate regulations in the Bisley Bible).

**0221.** An illustration of the 200 Mil Rule is at **Fig.6**.

### **Full Danger Area Ranges (FDA)**

**0222.** A FDA range is an open range where the hazard is limited by the quadrant elevation of the delivery system and the skill of the firer.

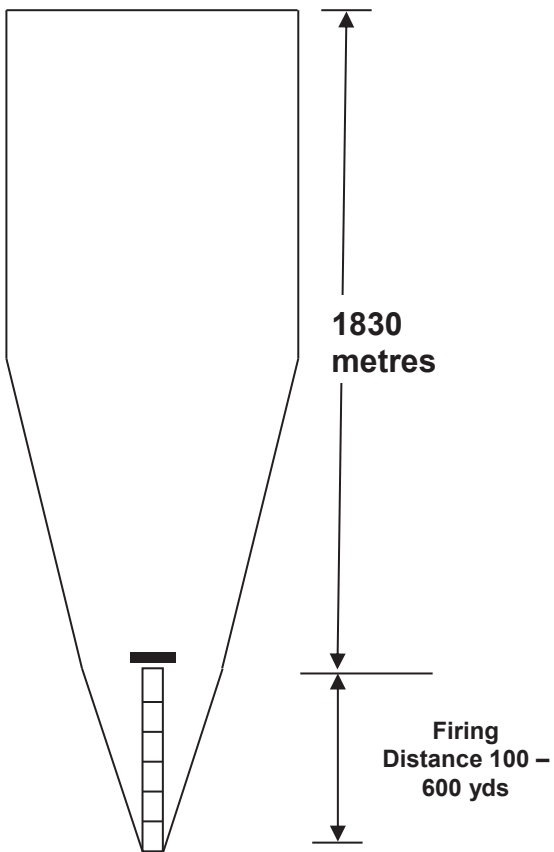
1. The Electric Target Range (ETR).

**0223.** The RDA applied to this range is considerably longer and wider, and of a different shape to that for a typical LDA range. This is due to the following factors:

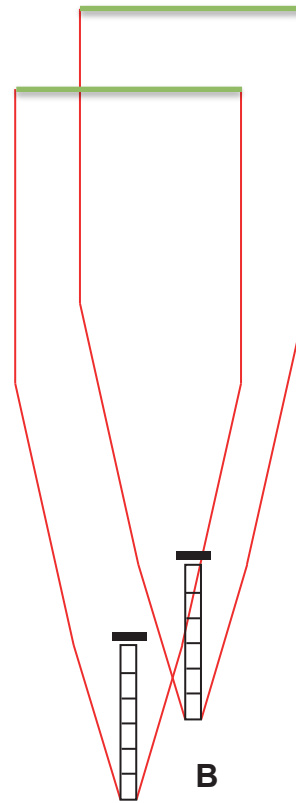
1. There is likely to be no stop butt or mantlet to capture rounds in free flight. (Note. Some ranges do have a stop butt, however this is usually due to topographical circumstance rather than range design).
2. As targets on the ETR are situated at or near ground level, a higher incident of long ranging ricochets can be expected to travel up to 2900 metres.

**0224.** On FDA ranges the QE is restricted to 150 mil, however this is still substantially less than the theoretical maximum range of the ammunition typically used on these ranges.

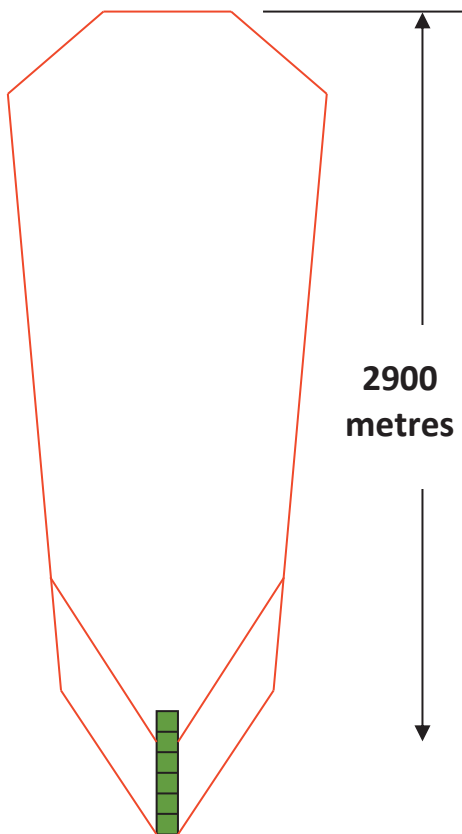
**0225 – 0240.** *Reserved.*



**Fig 5 - Range Danger Area Template-  
Limited Danger Area Range**



**A**  
**Fig 6 - The 200 Mil Rule**



**Fig 7 - Range Danger Area Template – Full  
Danger Area Range**



**Fig 8 - Firearm Danger Area Template –  
Field Firing Area**

## SECTION 2 – THE INDOOR RIMFIRE RANGE

### Introduction

**0241.** This section describes the Indoor Rimfire Range typically found on military establishments and details the safety rules applicable to its conduct. It should be read in conjunction with Section 4 of Chapter 1, and Section 1 of this Chapter.

**0242. RDA.** These ranges are classified as ‘No Danger Area’ ranges in that the design of the range is intended to ensure that all fired rounds, including ricochets, are contained within the range structure. Any deterioration in the standard of range maintenance, or range conduct or discipline, may invalidate this classification.

### Description

**0243.** Indoor Rimfire Ranges built on military establishments are intended to provide all-weather training facilities for day and night firing. The design is intended to ensure complete containment of all fired rounds within the range, coupled with elimination of backslash and ricochet hazards to persons within the range.

### Actions Prior to Firing

**0244.** The RCO is to read the Range Orders, a copy of which should be displayed in the range, and complete the pre-firing sections of the MoD Form 906.

**0245.** The RCO is to inspect the range with particular attention to:

1. **Range in Use Indication.**
  - a. This will be a red light over the access door or a notice thereon.
2. **Firing Point.**
  - a. Ensure that the boards covering the fire trench positions, if installed, are in good condition.
3. **Target Bench.**
  - a. Ensure the slots provided for mounting fixed targets are in good condition and any installed mechanical target mechanism is serviceable.
4. **Anti-Splash Curtain.**
  - a. The anti-splash curtain comprises several overlapping sheets of Linatex. This is a rubber-based material designed to allow a bullet to pass through and then close up to contain backslash.
  - b. Ensure that the area of the curtain behind each target is not excessively holed; the steel plate behind the screen must not be exposed.



- c. If sacrificial panels of material are installed at the principal impact points the combined thickness at no place must exceed two layers. A thickness greater than two can result in bullet rebound.
- 5. **Bullet Catcher.**
  - a. The steel plate must not be exposed.
- 6. **Ventilation System.**
  - a. Ensure it is serviceable and that the direction of flow is from the firing point to the target area.
  - b. The ventilation system is to be switched on at least 20 minutes before firing commences and allowed to run a minimum of 30 minutes after firing.
- 7. **Lighting.**
  - a. Ensure the lighting system is serviceable and that the target lighting is adequate and balanced; poor lighting on one side at the target area can cause aiming error, especially with iron sights.
- 8. **Security of access.**
  - a. Ensure any door that gives access to the range forward of the firing point is secured from the inside and ideally fitted with some form of alarm that warns if it is opened. If an alarm of this type is fitted then this is the responsibility of the MoD.
  - b. Ensure that the access door to the firing point can be secured from the inside but cannot be locked or bolted from the outside. This is of particular importance where the range is within a building to which access is uncontrolled.
- 9. **Waiting Area.**
  - a. Some ranges are provided with bench seating to the rear, others may have an adjacent room. If the former, ensure ear protection is worn by waiting details.

**0246.** If any damage or deterioration in maintenance is found that in the opinion of the RCO renders the range unsafe, the range is not to be used. It is to be noted in the MoD Form 906 and the RCO is to sign off. If the damage is of a less serious nature and indicates possible previous misuse this should be noted in the Land Range Log as having been identified before signing on.

**0247.** The RCO is to complete the pre-firing sections of the MoD Form 906 prior to firing.

## Restrictions

**0248.** Full bore bottle necked rifle ammunition is **NOT** under any circumstances to be fired on indoor ranges (unless specified in Range Orders). Bullet catchers are not designed to stop anything greater than is stated on the MoD Form 904 Range Authorisation Certificate and in the Range Orders. If used, penetration of the rear wall could occur and personnel on the range could be in danger of injury from backslash or ricochet.

**0249.** 0.22in tracer ammunition is **NOT** to be fired on indoor ranges due to risk of fire.

**0250.** Air guns are **NOT** to be fired against Linatex curtains due to the danger of pellet rebound (but see para 0257-b below).

## Conduct

**0251.** Only the RCO, safety Supervisors, coaches and firers are allowed on the firing point. Waiting details are to be in the rear seating area or adjacent room.

**0252.** No one is to go forward of the firing point towards the targets until all firearms have been unloaded and inspected, and permission to go forward has been given by the RCO. Before giving permission the RCO is to ensure that the firing point is clear of personnel.

**0253.** When personnel move forward to the targets the RCO is to remain at the firing point and ensure no one handles firearms whilst personnel are downrange.

**0254. Target Spacing.** Targets are to be mounted in the slots or frames provided. This will ensure that targets are correctly positioned for centre height and axis of fire, as indicated by markings on the range side walls and floor respectively.

**0255. Ammunition.** Only ammunition the performance of which is within the limitations stated on the MoD Form 904 and in the Range Orders is to be fired. This will typically be a maximum muzzle velocity of 520 m/sec (1700 ft/sec) and muzzle energy of 645J (476 ft/lbs) unless the range has been modified to accept more powerful ammunition. If this is the case it will be clearly stated on the MoD Form 904 and in Range Orders.

## Firearm Safety

**0256.** The following firearms are permitted:

1. **0.22in rimfire rifles/gallery rifles/pistols.** Subject to ammunition restrictions above.
2. **Air Rifles & Pistols (0.177 or 0.22in).** If any form of air gun is to be used a separate pellet stop is to be put in place or the anti-splash curtain is to be covered by a heavy-duty blanket or soft board to prevent risk of injury to personnel from pellet rebound.

**0257.** The minimum spacing between firers is to be:

1. **Rifle:** 1.0 metre.
2. **Pistol/Gallery Rifle:** 1.8 metres. If movable screens are positioned between firers this can be reduced to 1.25 metres.

**0258.** During all loading, unloading, stoppage and inspection drills firearms are to be held horizontally where possible, and laterally aligned within the target lane.

**0259. 0.22in Bolt Action Rifles.** Whenever these are not in use the bolt is to be open or removed. In the case of a single-shot rifle of any type, before attempting to close the bolt each round is to be hand-fed into the chamber until resistance is felt. Failure to do this could result in the rim of the round being struck by the extractor with sufficient force to fire the round prematurely and risk injury to the firer or others nearby.

**0260. Misfires.** Accidents have occurred as a result of re-firing 0.22in rimfire rounds that have previously misfired. The rim is liable to become damaged, either by being previously struck by the firing pin or during extraction and if fired, the case may burst and cause injury to the firer or others nearby. To prevent this any round that misfires or proves difficult to extract is not to be reloaded but set aside for subsequent disposal by the ammunition owner.

**0261. Bulged Barrels.** Instances have occurred where due to a manufacturing failure no propellant is placed into the cartridge case of a 0.22in rimfire round. If such a round is fired the pressure generated by the primer alone can have sufficient force to push the bullet a short distance up the barrel. If that bullet is then struck by the next round the sudden increase in pressure can result in a bulged barrel. To minimise the risk of this occurring, the bores of 0.22in rifles are to be inspected:

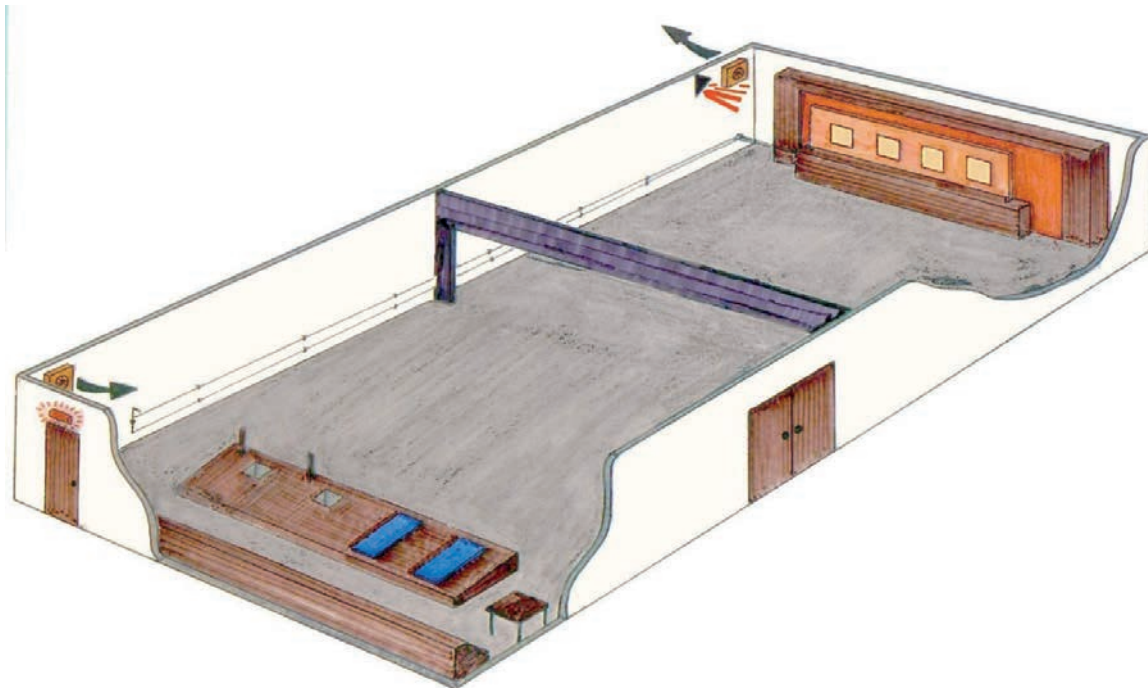
1. Before and on conclusion of firing.
2. Whenever the noise made by the explosion of the charge is noticeably different than normal.
3. Whenever the bullet does not appear to have reached the target.

#### **Actions after Firing**

**0262.** On completion of firing the RCO is to:

1. Ensure the firing point and surrounding area are cleared of all fired cases and no live rounds are present.
2. Inspect the range for any damage that may have occurred during firing.
3. Ensure that all firers' personal kit has been removed.
4. Ensure that all lighting is switched off and that the ventilation system has been allowed to run for 30 minutes.
5. Complete the post-firing sections of the MoD Form 906.

**0263 - 02100.** *Reserved.*



**Fig 9 - MoD Indoor Rimfire Range**

## SECTION 3 – THE 25 METRE BARRACK RANGE & 1908 DESIGN BARRACK RANGE

### Introduction

**02101.** This section describes the 25 Metre Barrack Range and 1908 Design Barrack Range, and details the safety rules applicable to their conduct. It should be read in conjunction with Section 4 of Chapter 1 and Section 1 of this Chapter.

**02102.** These ranges are similar in general layout, however the design and construction of each differs considerably. Each type of range is therefore described individually.

**02103.** The conduct procedures are also similar and are therefore described together, with differences identified where applicable.

### Range Danger Area

**02104.** The 1908 Design Barrack Range is a NDA range if provided with a canopy over the bullet catcher. If no canopy is fitted it becomes a LDA range and a 100 metre radius danger area is imposed from the end of each flank wall around the rear of the stop butt wall. When the range is in use this area and any building within it is to be clear of personnel. Range Orders will state if any warning flags, notices or sentries are to be in place.

**02105.** The 25 Metre Barrack Range design incorporates a recessed bullet catcher. All ranges of this type are classified as NDA ranges.

**02106.** On either range any deterioration in the standard of range maintenance, or range conduct or discipline, may invalidate the NDA classification.

### The 1908 Design Barrack Range

**02107.** The 1908 Design Barrack Range is constructed as follows:

- 1. Stop Butt Wall.** This is of brick construction and incorporates wings that are angled inwards towards the range area. This ensures that any bullet striking them will do so at as near to 90 deg. as possible, thus reducing risk of a ricochet. Stop butt walls on many of these ranges have been raised in height by approximately one metre and this is often apparent from the different colouring of the bricks used. Two stepped side walls are provided to the front of the stop butt wall to contain the bullet catcher.
- 2. Bullet Catcher.** This is a bank of sand positioned against the front of the stop butt wall within the side walls. In the 1970s most ranges were provided with a canopy over the bullet catcher, designed to prevent 'pop-overs' of bullets or bullet debris. This was constructed by increasing the height of the forward part of the side walls and installing a roof between them to form a canopy. A central supporting column may also be provided. The forward edge of each flank wall and the supporting column are provided with white markings to indicate the target centre height. The internal surface of each flank wall and the rear wall are marked with a white line to indicate the profile with which the bullet catcher material is to correspond. On some ranges the material in the bullet catcher has been changed from sand to granulated rubber.
- 3. Target Line.** On most ranges static targets or target frames are mounted in slots affixed to the bottom support of the bullet catcher. Many ranges also feature a mechanical turning target



apparatus consisting of a steel frame in which are fixed a number of target slots, connected to a pulley system which runs to an operating lever adjacent to the 25 metre firing point. The turning target mechanism may be set into a shallow trench or protected by thick timber.

4. **Range Floor.** The area forward of the firing point is excavated to form a downward slope towards the targets at the end of which is a mantlet rising to ground level. The downward slope reduces the angle of bullet strike and thus the departure angle of a ground ricochet; the mantlet is intended to capture low shots and ground ricochets. The excavated section contains firing points at 20m, 15m and 10m.

5. **Main Firing Point.** The main firing point is at 25 metres. It is usually a gravel bed contained within a wooden frame set into the ground. Fire trenches and kneeling-supported posts may be installed. On some ranges the main firing point is provided with a shelter.

6. **Troop Shelter.** Where provided this will typically be located a short distance to the rear of the main firing point.

7. **Target Store.** This may be positioned behind the stop butt wall or at some other location outside the firing area.

**02108.** As originally built, these ranges had a raised firing point at 30 yds. Following a review of safety angles on ranges some years ago this firing point was no longer deemed safe and was closed. On many ranges this firing point has been removed, however *if it remains in situ under no circumstances is it to be used.*

### The 25 Metre Barrack Range

**02109.** This range is of more modern design and began to appear in the late 1970s. It features:

1. **Stop Butt Wall.** This is higher than that of the 1908 Design range and of concrete construction faced with thick timber to reduce risk of ricochets.

2. **Bullet Catcher.** The bullet catcher is recessed into the stop butt wall and contains the bullet catcher material, which may be sand or granulated rubber. As with the 1908 Design Range the internal walls are marked with white lines to indicate the material profile.

3. **Flank Walls.** These commence almost at the height of the stop butt wall and reduce in height to approximately 2 metres, after which they extend along the full length of the range. On many ranges the wall, or in some cases a fence, continues behind the main firing point and is provided with an access gate.

4. **Target Line.** This consists of a substantial vertical timber structure into which different types of target frame or mounting may be fixed. A mechanical turning target apparatus is usually provided. Fig 13 illustrates the target presentation options available: Left; witness screen for zeroing and representative targets. Right; full-size Fig 11 targets mounted in turning target apparatus.

5. **Range Floor.** This is flat and accommodates firing points at 20m, 15m and 10m.

6. **Main Firing Point.** This is at 25 metres and is a gravel bed within a wooden frame. Fire trenches and kneeling-supported posts are provided.

7. **Target Store.** This may be positioned outside one of the flank walls or at another location outside the range area.

## Actions Prior to Firing

**02110.** The RCO is to read the Range Orders, a copy of which should be displayed on the range, and complete the pre-firing sections of the Land Range Log.

**02111.** The RCO is to inspect the range with particular attention to:

1. **Firing Points.** Ensure that the boards covering the fire trench positions, if installed, are in good condition.
2. **Stop Butt Wall.** On a 1908 Design Barrack Range look for evidence of bullet strike to the stop butt wall, including the flanks. Any such damage is to be recorded in the MoD Form 906 prior to firing. On a 25 Metre Barrack Range the timber facing of the stop butt wall can make such damage difficult to detect.
3. **Bullet Catcher.** Check that the material in the bullet catcher is stacked to the correct profile as indicated by the white lines, and that the sand is free of ricochet inducing material.
4. **Firing Area.** Check that the area between the main firing point and the stop butt wall and within the firing lanes is free of any ricochet inducing material.

**02122.** The RCO is to complete the pre-firing sections of the MoD Form 906 prior to firing. If any damage or deterioration in maintenance is found that in the opinion of the RCO renders the range unsafe the range is not to be used. It is to be noted in the MoD Form 906 and the RCO is to sign off. If the damage is of a less serious nature or indicates possible previous misuse this should be noted in the Land Range Log *before* signing on.

**02113.** Ensure that the Range in Use flag is displayed as required by Range Orders.

## Restrictions

**02114.** The following restrictions apply:

1. **Ammunition.** Only ammunition the performance of which is within the limitations stated on the MoD Form 904 and in the Range Orders is to be fired.
2. **Hard Targets.** Under no circumstances are steel plates or any other form of hard target to be used.
3. **Air guns.** Air rifles and pistols are not to be used.

## Firearm Safety

**02115.** During all loading, unloading, stoppage and inspection drills firearms are to be held horizontally where possible, and laterally aligned within the target lane.

## Conduct

**02116.** Only the RCO, safety supervisors/coaches and firers are allowed on the firing point. Waiting details are to be in the troop shelter or designated area outside the confines of the range.

**02117.** The maximum number of firers is:

1. **1908 Design Barrack Range:**
  - a. Rifle – 4 (1 metre separation distance).
  - b. Gallery rifle/pistol dictated by minimum separation distance of 1.8 metres.
2. **25 Metre Barrack Range:**
  - a. All Firearms – 6.

**02118.** Firing of pistol/gallery rifle is permitted from the standing and kneeling positions at all distances. Firing from the prone position may only take place from 25m.

**02119.** Targets are to be positioned so that centres are aligned with the datum marks provided as follows:

1. **1908 Design Barrack Range:** In the slots provided to the front of the bullet catcher or in the mechanical apparatus. Aiming marks of outer flank targets are to be a minimum of 1.65m from either end of the bullet catcher.
2. **25 Metre Barrack Range:** In the target frame or apparatus provided.

**02120.** Due to the danger of backsplash the minimum distance for firing 0.22in rimfire and pistol-calibre firearms is 10m. Centrefire rifles may only be fired from 25m.

**02121.** No one is to go forward of the firing point towards the targets until all firearms have been unloaded and inspected, and permission to go forward has been given by the RCO. Before giving permission the RCO is to ensure that the firing point is clear of personnel.

**02122.** When personnel move forward to the targets the RCO is to remain at the firing point and ensure that no one approaches the firing point or handles firearms whilst personnel are downrange.

**02123.** All movement is to be via the paths provided. On the 1908 Design Range firers are not to ascend the mantlet unless steps are installed.

**02124.** During firing the face profile of the bullet catcher must be maintained at all times. Concentrated fire can displace the sand around the main areas of impact, and in extreme cases can cause 'tunnelling'. If this occurs firing is to cease and Range Control informed. A comment must be recorded in the Form 906 when signing off.

### **Actions after Firing**

**02125.** On completion of firing the RCO is to:

1. Ensure the firing point and surroundings are cleared of all fired cases and no live rounds are present.
2. Inspect the range for any damage that may have occurred during firing.
3. Ensure that all firers' personal kit has been removed.

4. Complete the post-firing sections of the MoD Form 906.

02126 – 02130. *Reserved.*



Fig 10 - 1908 Design Barrack Range.

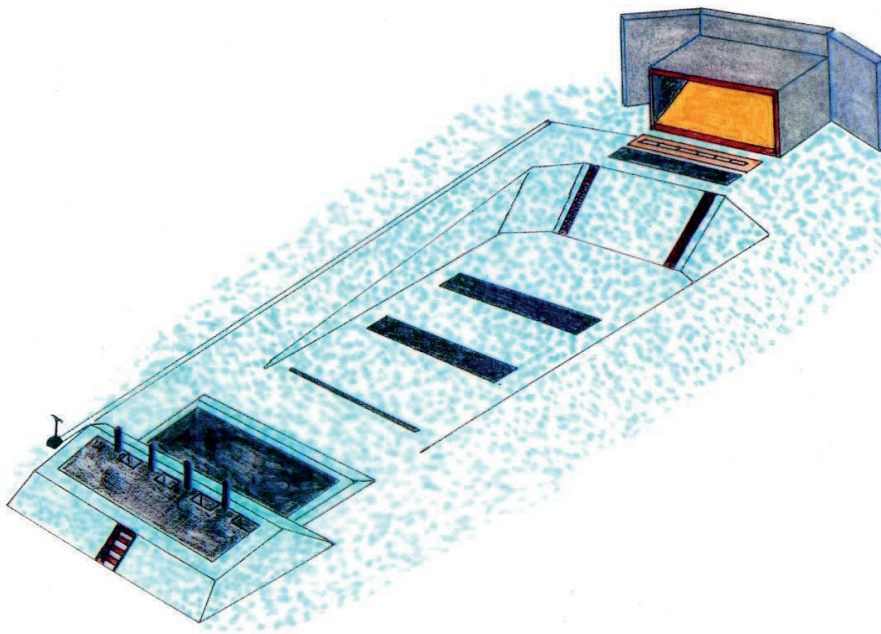


Fig 11 - 1908 Design Barrack Range - oblique view.





Fig 12 - 25 Metre Barrack Range.

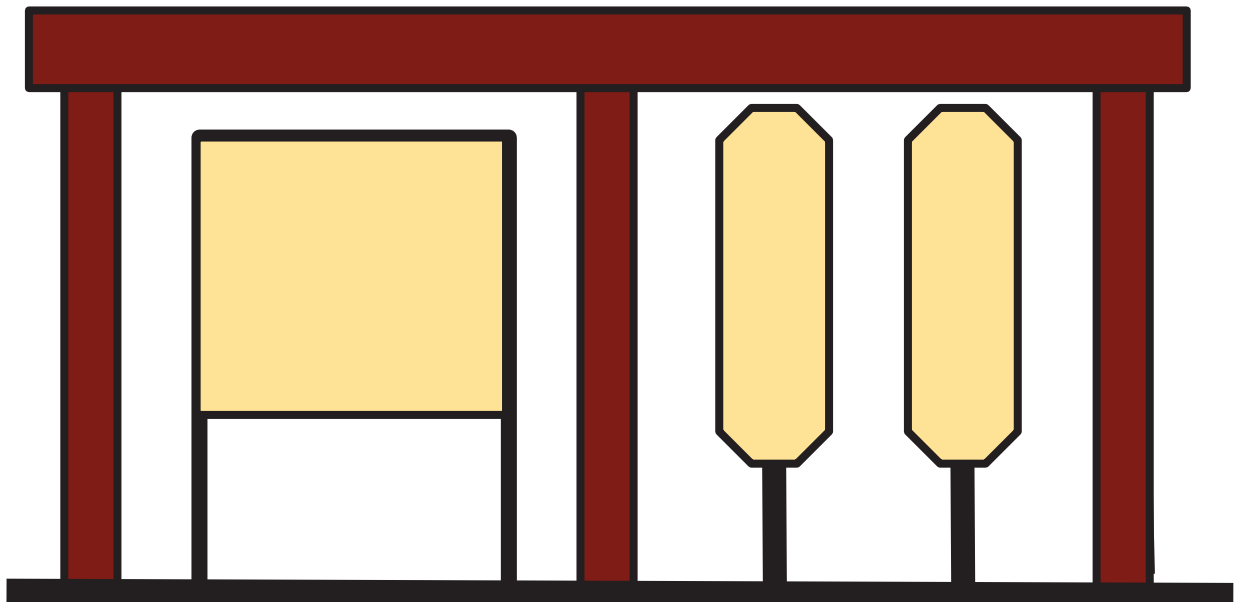


Fig 13 - 25 Metre Barrack Range - target options.



## SECTION 4 – THE GALLERY RANGE & CONVERTED GALLERY RANGE

### Introduction

**02131.** This section describes the construction and layout of the Gallery Range and details the safety rules and procedures that govern conduct of the Gallery Range and Converted Gallery Range in 'manual' mode. This section should be read in conjunction with Section 3 of Chapter 1 and Section 1 of this Chapter.

**02132.** The layout of the Converted Gallery Range and the modifications made during the conversion are also described.

### Range Danger Area

**02133.** The Gallery Range and Converted Gallery Range are classified as Limited Danger Area Ranges. This means that the Danger Area provided is reduced in size compared to the performance of the ammunition approved for use on it. Any deterioration in maintenance or standard of range discipline can render the Danger Area inadequate.

### Layout and Description

**02134.** The layout of a typical gallery range is shown at Fig. 14. Construction features are as follows:

- 1. Stop Butt.** This is a raised mound of earth, approximately 8 metres in height, with a flat top 4-5 metres in width, which extends for several metres beyond the flanks of the firing area. The front face of the stop butt contains the bullet catcher, normally filled with sand though on some ranges this has been replaced by granulated rubber. The face of the stop butt should be maintained at an angle no greater than 34 deg. (approximately 600 mils) to prevent material slippage. The bullet catcher may feature wooden framed 'shooting in boxes' corresponding to each lane and the material within may be sand or granulated rubber. The Range in Use flag is commonly positioned at one end of the crest of the stop butt.
- 2. Mantlet.** This is a mound of earth in front of, and some distance from, the stop butt, behind which are the marker's gallery and target line. The mantlet is typically 1.8 metres in height with an upper surface which should slope slightly down and away from the crest to minimise risk of ricochets. Set into the crest is a wooden profile board running the full width of the mantlet; the purpose of this board is to ensure that the crest is maintained to the correct height (see Fig. 15). Numbered boards are typically positioned at the front base of the mantlet corresponding to the firing lanes and targets.
- 3. Firing Points.** These are slightly raised mounds that run the full width of the firing area at each designated firing distance, typically 100 to 600 metres in increments of 100 metres. Where longer and shorter ranges are encountered, details will be given in the Range Orders. Each lane is numbered, usually from left to right, and indicated by a marked peg, usually to the left of the lane. On MoD ranges the firing points at 100 - 300 are divided into individual gravel-covered bays, each incorporating a fire trench and a removable kneeling-supported post (see Fig. 16). The remaining firing points are grass-covered. The height of each firing point above the range floor progressively increases the further each is from the target line.

**02135.** The height of the firing points and the targets above the range floor creates a hollow-ground effect between them. This raises the cone of fire away from the range floor, ensuring that the flight of the bullet is well above the ground at all distances, reducing the incidence of ground ricochets.

## **Targets**

**02136.** Paper targets are used, pasted onto plywood, hessian or corrugated plastic backings secured to wood frames. The frames are in turn mounted into steel assemblies, known as 'Hythe Target Frames' that are installed in a shallow concrete trench set into the floor of the markers gallery. Each frame is provided with two carriages, one on each side, connected by wires passing over pulley wheels at each end of the top of the frame, thus allowing the carriages to move up and down in opposition. Carriages will accept 4 ft and 6 ft targets and are provided with holes to enable single targets mounted on poles to be fixed in position. On some ranges the pulley system has been replaced by a counterbalanced cantilever mechanism.

## **The Converted Gallery Range**

**02137.** The Converted Gallery Range (CGR) is a gallery range that has been provided with an electric target facility. To enable the 'Converted' range to retain its original LDA status the electric targets are installed in the top of an extended mantlet, two per lane, rather than being positioned at different distances from the firing point, as is the case with the Electronic Target Range (ETR).

**02138.** The electric targets are controlled from a console building, usually positioned behind and to one side of the 300 yd firing point.

**02139.** To enable the full CGR to be used in 'manual' mode the original Hythe target frames are usually left in place.

**02140.** Firing distances on a CGR are usually in yards, however ranges do exist where distances are in metres. This is generally the case where it was desired to build a range with an electric target facility at a location where the larger Danger Area required for a full ETR could not be accommodated, and the range was therefore newly-built to CGR-specification. In other cases the range floor of the existing gallery range was re-laid during conversion.

**02141.** The layout of a typical CGR is shown at Fig. 17.

## **Range Opening Procedure**

**02142.** On arrival at the range the RCO is to report to Range Control, read the Range Orders, complete the Land Range Log (MoD Form 906) and carry out Clear Range Procedure, as directed in Range Orders.

## **Clear Range Procedure**

**02143.** Clear Range Procedure is carried out in conjunction with Range Control to ensure that the Range Danger Area is clear of unauthorised personnel or other forms of intrusion before live firing may commence, and that it remains clear during firing. The process by which it is carried out can vary according to the range and will be detailed in Range Orders.

**02144.** On some ranges initial clearance to fire is given by Range Control and it is then the RCO's responsibility to monitor the danger area, using sentries/lookouts where necessary to detect any intrusion. On other ranges, notably those managed by Landmarc where a Training Area Operative (TAO) attends to hand over/take back the range, the process can be different. The TAO contacts the Regional Operations Room to confirm he is on duty and then hands the telephone to the RCO. The RCO confirms his identity and that of the unit/club, and that he is appropriately qualified to sign for the range and is in possession of a RSD/RASP covering the planned activity. The person in charge of the Control Room then gives permission for firing to commence. It is then the responsibility of the RCO to ensure the danger area is clear before firing commences and remains so during firing.

**02145.** Sentries/lookouts detailed to monitor the Danger Area are to have a means of communication with the RCO/Range Control and are to be briefed in their duties, as specified in Range Orders.

**02146.** In the case of an intrusion into the RDA firing is to cease and Range Control is to be informed. Firing may not recommence until the nature of intrusion is no longer present or has been removed by an authorised official.

### **Inspecting the Range**

**02147.** The RCO is to inspect the range to ensure that it is serviceable and safe to use as follows:

1. Check the condition of the firing points. If necessary, rake the covering gravel to a level profile if fire trenches are provided with covering boards, ensure these are securely in place.
2. Check the condition of the mantlet; in particular the crest and profile board.
3. Check the condition of the stop butt; in particular the state and profile of the material in the bullet catcher.
4. Inspect the target frames. These should be checked for smooth operation.
5. Test any installed communications that will be used.

**02148.** The range is unsafe to use if:

1. There are any ricochet-inducing objects or exposed surfaces between the intended firing point(s) and the stop butt.
2. Installed communications are found to be unserviceable unless alternative means can be established.

**02149.** It is often the case that the RCO must complete the pre-firing section of the Land Range Log (MoD Form 906) before inspecting the range. If the subsequent inspection reveals anything that in the RCO's opinion renders the range unsafe to use he is to return to Range Control and report the matter before signing off.

**02150.** If anything of a minor nature is noted that does not in his opinion render the range unsafe for use this is to be noted and reported to Range Control, both verbally and by an entry in the Land Range Log (MoD Form 906), after firing is concluded and the range is being handed back.

## **Conduct – Firing Point**

**02151.** Only the RCO, Safety Supervisors/coaches, firers, and in competition shooting the register keepers, are allowed on the firing point. All waiting details and other personnel are to be well to the rear in a designated area.

**02152.** The RCO is to ensure that all range staff and members of the firing party have been briefed as required.

**02153.** No firearms or personal kit may be placed on the firing point until the RCO gives permission.

**02154.** During all loading, unloading, stoppage and inspection drills firearms are to be held horizontally where possible, and laterally aligned within the target lane.

**02155.** It is a condition of the size and shape of the reduced RDA that firing is confined within designated target lanes parallel to the range axis; no deliberate cross-lane firing is normally permitted. Provided this rule is applied, unless expressly prohibited by Range Orders it may be possible to position more than one firer in a lane, sharing a target; however this should normally be restricted to a maximum of two firers. If in doubt, seek guidance from Range Control.

## **Conduct – Butts**

**01256.** On arrival in the butts the Butt Officer is to raise the Butt Flag and Range in Use Flag and check communications with the firing point, and with sentries/Range Control if required. The following should then take place:

1. Brief the butt party on safety and their duties. In particular, remind the markers to watch the impact area behind their target for strike before lowering the target for marking.
2. Set up targets, issue butts stores and carry out any necessary preliminary administration.
3. When setting up is completed, ensure all the butt party are under cover in the gallery and contact the RCO to advise the butts is ready.
4. On the order of the RCO, lower the butt flag and raise targets. Advise the markers that firing is about to commence.
5. Supervise the markers throughout the practice.

## **Communications**

**02157.** For safety reasons communications must exist between the firing point and the butts, and with lookouts/sentries. In the event of any communications failure firing is to cease. Subsequent action will depend on the circumstances:

1. **Firing Point to Butt.** Firearms are to be unloaded and proved clear, and the firing point is to be cleared. The RCO is to dispatch a runner with instructions to report to the butts and ascertain what has happened. If radios are being used, the runner should carry a spare radio or replacement battery. Under no circumstances is the RCO to leave the firing point.
2. **Butts to Firing Point.** If the Butts Officer is unable to contact the firing point he is to order the butt flag to be raised and targets to be lowered or put at half-mast as appropriate, and is to await

contact from the firing point. Under no circumstances is anyone to leave the cover of the butts until contact is established.

3. **Lookouts/Sentries.** Range Orders should specify the nature of communications required between lookouts/sentries. In the event of a failure of communications it is essential that the RCO is informed immediately. Firing is then to cease and may not resume until contact has been re-established. Lookout/sentry positions are normally provided with red flags and these should be lowered. Lookouts/sentries should be contacted by, or required to make contact with, the RCO/butts on a regular basis. The RCO should also monitor the visibility of lookout/sentry flags.

### Telephone/Radio Messages

**02158.** To ensure clear, unambiguous routine communications between firing point and butts use of the NRA system of coded messages is strongly recommended. This system was devised for competition shooting at Bisley, however there are several messages that can be applied to routine club shooting that is not of a competitive nature. The Bisley Message Code System is reproduced in full at Annex B to this Handbook.

### Sequence of Events

**02159.** A typical sequence of events for a 'Target Rifle'-type practice would be as follows:

1. The RCO contacts the Butts Officer to ascertain if all is ready then orders the butt flag lowered. The RCO orders the first firers onto the firing point, once firers have settled into position the RCO orders the Butts Officer to raise targets. (*e.g. "All targets - Message 1"*).
2. The RCO gives permission to load, make ready and commence firing, e.g. "When your target appears, you made load and carry on".
3. As each firer completes his practice he attracts the RCO's attention. The RCO/Safety Supervisor inspects that firer's firearm, proves it clear and gives permission for the firer to leave the firing point. At the RCO's discretion this inspection may be carried out by a shooting partner or register keeper.

Note, the NRA Safety rules apply as a minimum.

4. If necessary, the RCO contacts the butts to have that target lowered and patched out (*e.g. "Target such & such - Message 10"*).
5. The RCO orders the next waiting firer onto the vacant lane. Permission for that firer to load, make ready and commence firing when the target appears may be given at this time.
6. The process of clearing each firer from the firing point as they finish and replacing them with a new firer continues until firing is completed or has ceased temporarily, for example to change the butt party.

**02160.** Should it be necessary to run each firing detail separately: for example in the case of a 'timed' or 'team' practice or where safety supervisors are unavailable, the RCO may order a group of firers onto the firing point together. As each firer completes his practice he attracts the RCO's attention. The RCO/Safety Supervisor inspects that firer's firearm, proves it clear and gives permission for the firer to leave the firing point. At the RCO's discretion this inspection may be carried out by a shooting partner or register keeper. The RCO will then contact the butts and order all targets to be lowered, scored if necessary, patched out and raised (*Message 12*). Whilst this is taking place the next detail will be brought onto the firing point and instructed to prepare.

### **Butt Party/Firing Point Changeover**

**02161.** If there is a requirement to change the butt party or fire from a different distance the procedure is as follows:

1. Ensure the firing point is clear of all personnel, firearms and personal kit.
2. Contact the butts, explain what is about to take place and order the Butt Flag to be raised.
3. In the case of a butt party changeover, only when the Butt Flag has been raised may permission be given for the butt party to leave the butts.

**02162.** When moving between firing points no one is to move onto the new firing point until the RCO has given permission to do so. This is especially important when falling back, and firers are approaching a firing point from in front.

### **Range Close-down Procedure**

**02163.** On conclusion of firing the following is to take place:

1. **The Butts.** The Butts Officer is to ensure that:
  - a. All targets are patched and put away.
  - b. All butts stores are collected and put away or returned to Range Control.
  - c. Litter is to be swept up or collected.
  - d. All club and personal kit is removed.
  - e. The Butt Flag and Range in Use Flag are lowered and put away or returned to Range Control.
2. **The Firing Point.** The RCO is to inspect the firing point and area used by waiting details to ensure that no live rounds or empty cases are present, and all club and firers' personal kit has been removed.

**02164.** When the RCO is satisfied that the range has been completely cleared and returned to a clean and tidy condition he is to return to Range Control and complete the post-firing entries in the Land Range Log (MoD Form 906).

**02165 – 02175.** *Reserved.*



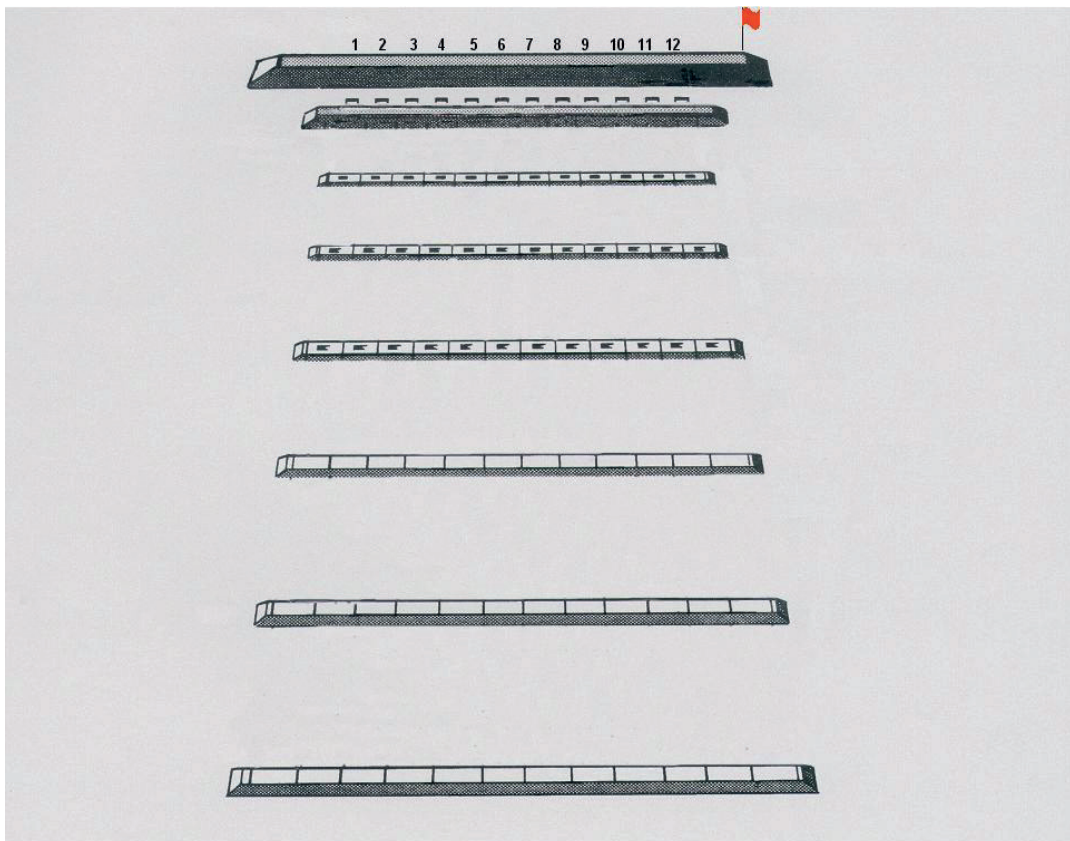


Fig 14 – A typical Gallery Range.

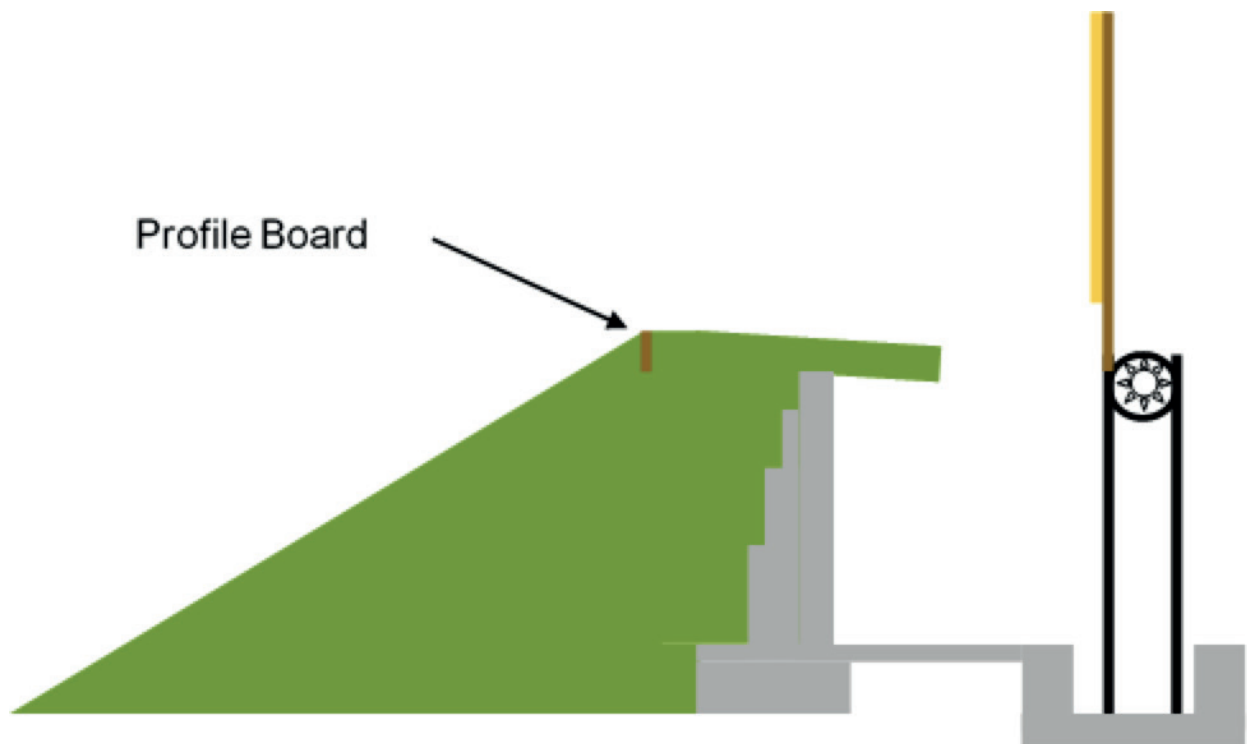


Fig 15 - Section through Mantlet showing Profile Board.

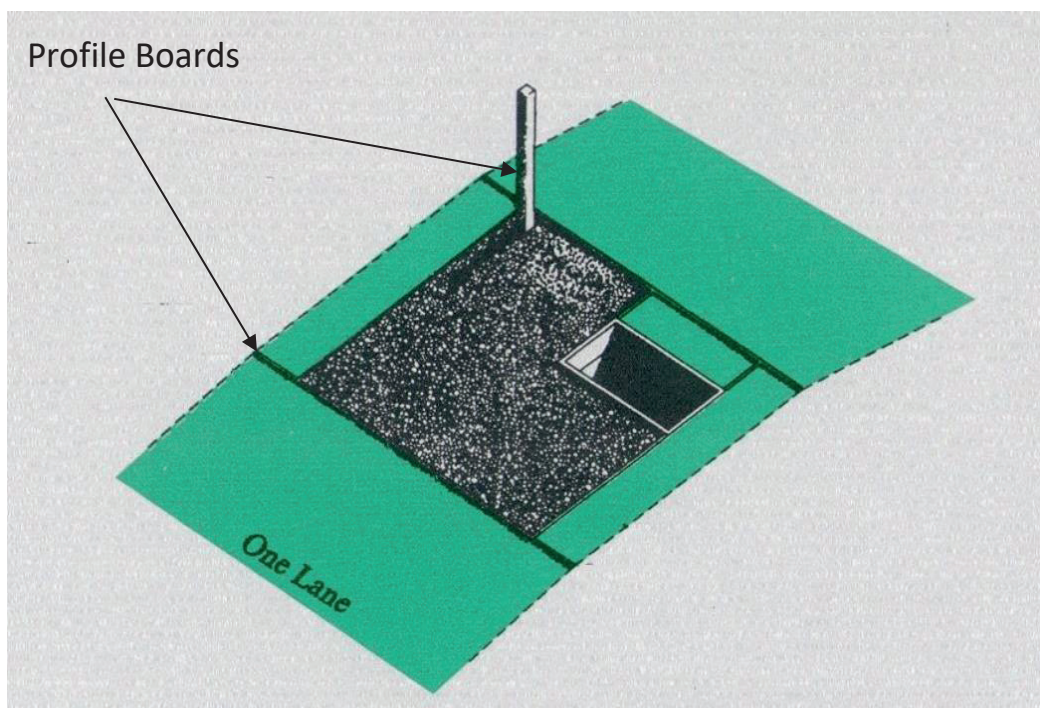


Fig 16 – Firing Point layout – 100-300 yd/m.

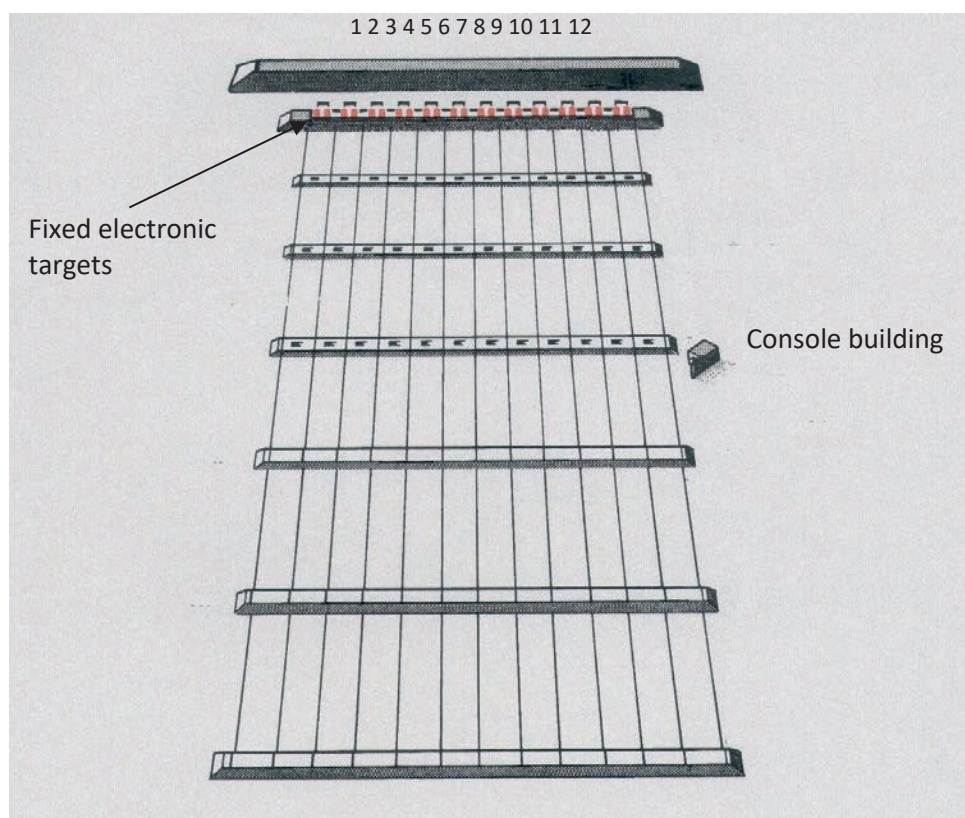


Fig 17 – The Converted Gallery Range.

## **SECTION 4 A – Electronic Target Range**

### **Electronic Target Range (ETR) Introduction**

**02176.** The ETR range is a Full Danger Area range (2900m) and therefore there is no requirement for a stop butt. Range designed with a QE of <150mils has RDA of 2900m. Mantlets used to protect Fixed Electronic Targets (FET). Height 300mm – 500mm high.

**02177.** All targets must be visible to the firer when in prone, however, no part of the mechanism must be visible when standing. Mantlets may be single or run the width of the range. The targets are positioned centrally at 100m and 300m and off set 2m left at 200m to aid visibility see Fig 18. Marker poles are used to identify lanes.

**02178.** Prior to starting the range the targets may be placed up to allow identification of respective lanes. This will minimise the danger of cross lane firing. Movement forward of the firing point may be permitted, however range orders must be consulted. If allowed, firers may advance to 25m beyond the 100m target line (125m forward from the firing point). No firing may take place beyond this point as the WDA is calculated from this point. The maximum permitted QE is 150 mils, therefore, firing must only be from recognised firing points, at correctly positioned targets.

### **ETR Console**

**02179.** The position of the console may be different on certain ranges. However, most are in the centre 8m behind the main 300m firing point. On new ranges, it may be positioned on one flank or at the rear of the range.

**02180.** Ammunition is not to be taken into the Console building.

**02181.** Only authorised trained range staff may operate the target systems within the console.

**02182.** The 'range in use' red flag is hoisted on the pole provided above the console building. This flag is located furthest from the console door and is to remain hoisted whilst firing is in progress at any distance.

### **ETR Console Control of Practices from 400 to 600 metres.**

**02183.** When firing is to take place from the firing points behind the console building, a second flag is required to be used as the 'butt' flag. This flag is located just outside the console door and must be operated from cover.

**02184.** If firing is going to take place from 400 to 600 metres the console building should be controlled by the RCO in the same manner as the Butts are controlled on a Gallery Range. On orders from the RCO the console party are to lower the console building butt flag and remain under cover.

**02185.** Except in an emergency the console building butt flag is only to be raised on orders from the RCO. Communication to the console building is by means of telephone/radio

### **Firing Point**

**02186.** The main 300m firing point of a standard range has 12 firing lanes, each of which are provided with a fire trench, firing post and a surfaced area. The firing points are made of natural materials whenever possible, however, due to weather conditions 10mm rounded gravel or rubber may be used. Some ranges may not have trenches due to problems with the water table.

**02187.** The 400 to 600m firing points are typically grassed earth banks high enough for the prone firer to see the whole target at all three target distances.

#### **ETR Procedures**

**02188.** The range will be routinely inspected and serviced, however before signing the 906 the RCO should check the range for serviceability and cleanliness. Check all lanes are functioning and that the target layout is as requested and carry out a rehearsal of target exposures and timings. Test the PA system and other communications.

#### **Before Firing**

**02189.** The RCO is to ensure that all firers can hear his words of command. A loudhailer or PA system is to be used.

**02190.** Firers are to be told their lane/target number and details of the practice including number of rounds to be fired.

**02191.** All firearms handling is to be carried out with the firearm parallel to the ground and pointing down the range.

**02192.** Cross lane firing is not permitted.

**02193.** RCOs are to read local RSOs for rules.

**02194.** The RCO is **NOT** to conduct the practice from inside the console building.

**02195 – 02200.** *Reserved.*



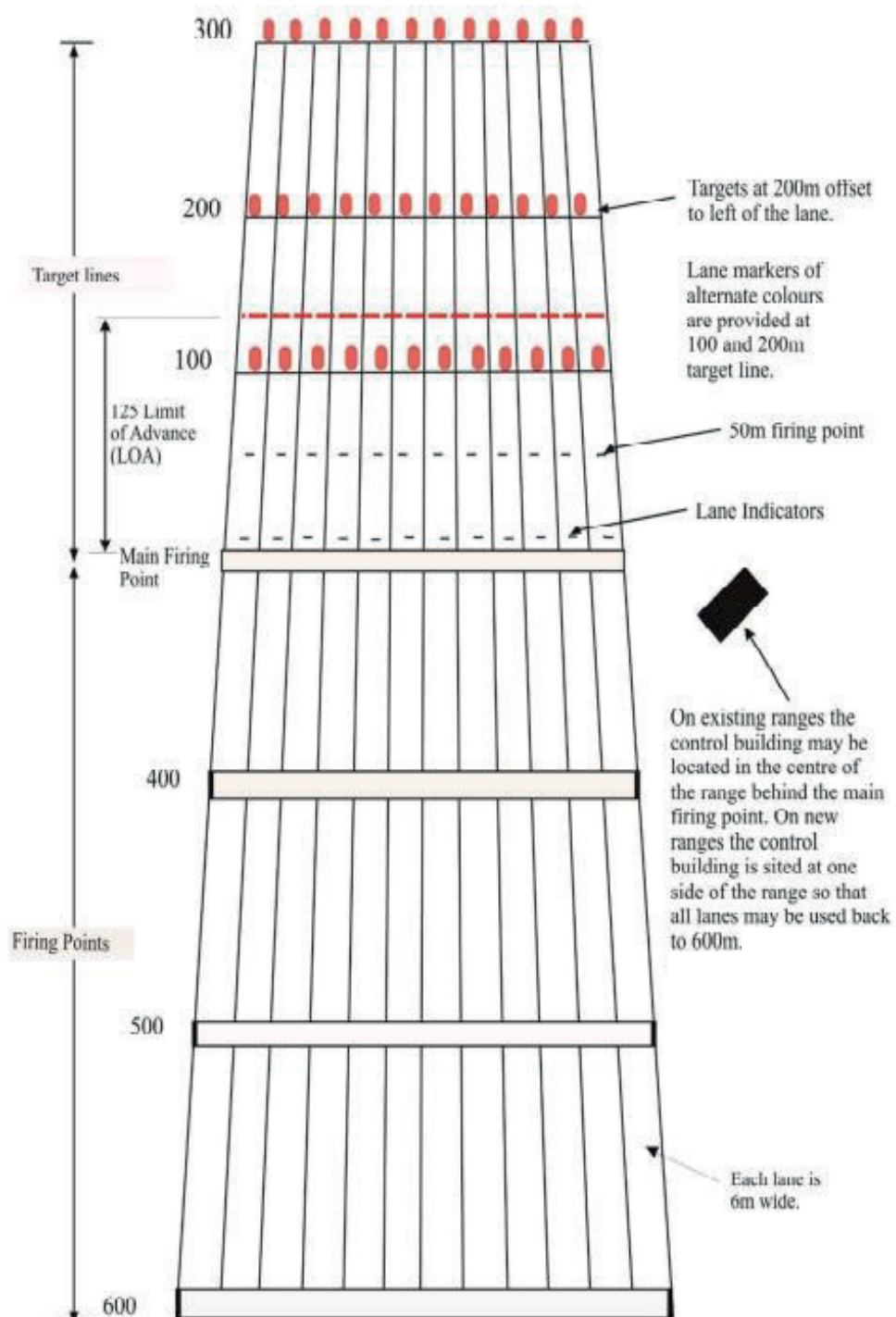


Fig 18 – Electronic Target Range.

## Example of a Written Range Briefing

Ref.

Date.

### HAMILTON CUP COMPETITION

#### 1. GENERAL.

- a. The club has booked Outer Bogworthy No 2 Range this coming Saturday to fire the Hamilton Cup club competition.
- b. 20 club members are expected to attend. Firing is planned to commence at 09:30, so will everyone aim to arrive by 08:45. Entrance to the range is via the Outer Bogworthy Training Area main gate.
- c. On arrival kit may be unloaded at the 300 yd firing point as we will be firing from that distance first. Vehicles are then to be moved to the car park adjacent to the 500yd firing point as the 300 yd FP car park will closed when firing is taking place from 500 yd.
- d. Tim, Fred & Rob, please meet me at Range Control at 0830 to book on and collect kit.
- e. Jamie Newboy, our probationer, will be attending for his third visit. Tim is bringing a club rifle and ammunition, and one of those acting as a Safety Supervisor will be detailed to supervise him when he shoots.

#### 2. ALLOCATION OF DUTIES.

- a. Duties are allocated as follows:

- |      |                    |   |          |
|------|--------------------|---|----------|
| (1). | RCOs               | am: Me  | pm:Tim.  |
| (2). | Butt Officers      | am: Fred                                      | pm: Rob. |
| (3). | Safety Supervisors | TBN from members waiting to fire.             |          |
| (4). | Sentries           | TBN from members waiting to fire (500X only). |          |
| (5). | First Aid          | Sue Jenkins.                                  |          |
| (6). | Catering           | Judy & Clare.                                 |          |

#### 3. THE HAMILTON CUP.

- a. The Hamilton Cup comprises 2 sighters and 10 to count at 300yds and 500yds (total 24rds). On arrival those participating in the Comp will be squadded into four details of up to 5 firers. Details 1 & 2 will fire in the morning, with Details 3 & 4 providing Butt Markers. After lunch Details 3 & 4 will fire, with Details 1 & 2 providing Butt Markers.



- b. Score cards will be provided by Tim and will be issued to each firer immediately prior to them firing. After firing hand your score card to the RCO.
- c. Firing points 1-6 have been booked. Lanes 1-5 will be used with Lane 6 being rigged as a spare.

#### 4. **BRIEFINGS.**

##### a. **General.**

- (1). Ensure you have ear protection and your Shooter Certification Cards.
- (2). Toilets at the 300yd car park are out of bounds when firing from 500yds.
- (3). Toilets in the butts are out of bounds whenever firing is taking place.
- (4). All movement to and from the butts is to be via the range road to the left of the range.
- (5). The mantlet is out of bounds.

##### b. **Firers.**

- (1). No rifles or personal kit to be placed on the firing point until the RCO gives permission.
- (2). No loading or firing is to take place until the RCO has received clearance to fire from Range Control and gives permission.
- (3). During all loading, unloading, stoppage and inspection drills firearms are to be held horizontally where possible, and laterally aligned within the target lane. Under no circumstances is a loaded rifle to be elevated greater than 70 mils from the horizontal.
- (4). If you suspect a misfire keep your rifle pointing at the target and attract the attention of the RCO. Do not attempt to unload until at least 30 seconds has elapsed and only do so under the RCO's or Safety Supervisor's supervision.
- (5). If you hear the command **"Stop! Stop! Stop!"** cease firing immediately, keep your rifle pointing at the target and await the RCO's instructions.
- (6). You may only fire on the target bearing your lane number. There is to be no cross-lane firing.
- (7). When you have finished your practice, ensure the rifle is unloaded and raise your hand. When your rifle has been inspected insert the breech flag, collect your empty cases and kit and leave the firing point.
- (8). Aiming practice or dry firing may only take place on the firing point with the RCO's permission.

c. **Safety Supervisors.** Safety supervisors will be provided from the detail waiting to fire. If you are nominated as a safety supervisor:

- (1). Ensure you are positioned so as to be able to observe your firers firearm handling and intervene swiftly if safety is at risk.
- (2). Assist a firer who may be experiencing firearm-related difficulties.
- (3). Ensure your firer engages the correct target and does not cross-lane-fire.
- (4). Ensure compliance with the RCO's orders; clarify if necessary.
- (5). When your firer has finished firing inspect their rifle to ensure it is clear and signal this the RCO when required.
- (6). When your firer leaves the firing point ensure they remove all empty cases and personal kit.

d. **Butt Officers.** On arrival in the Butts the first Butt Officer is to:

- (1). Establish and test comms with FP.
- (2). Raise the Range-in-Use and Butt Flags.
- (3). Check the condition of the target frames allocated (report any problems to me immediately, please).
- (4). Rig lanes 1-5 with 300 targets, position 500 targets adjacent to Lane 6. All lanes are to be rigged with blank targets/counterbalances in the rear frames.
- (5). Ensure all lanes are provided with patch-out kits, value panels and spotting discs/clips (small discs @ 300, large discs @ 500).
- (6). When setting up completed advise me by radio.

e. **Butt Parties.** On arrival of each butt party the Butt Officer on duty is to brief them as follows:

- (1). No one is to leave the butts without the express permission of the Butt Officer.
- (2). Remain under cover of the mantlet when firing is taking place.
- (3). Do not look up at targets during firing (risk of eye injury due to splinters). Watch the Stop Butt for strike, then lower the target.
- (4). Control target frames at upper and lower limits of travel to minimise risk of target rebound or cables leaving pulley wheels.
- (5). Advisability of wearing ear protection.
- (6). Emergency procedure; first aid kit, use of telephone/radio, raising of Butt Flag/half-mast targets.

(7). Ensure all are familiar with target marking and scoring procedures.

f. **Sentries.** Sentries are required when firing from 500. These will be provided from the detail waiting to fire/having fired and will be briefed by the Range Warden.

5. **SEQUENCE OF EVENTS.**

a. The anticipated sequence of events is at Annex A.

***Signed***

**RCO**

## HAMILTON CUP COMPETITION

## OUTER BOGWORTHY No 2 RANGE – SATURDAY (date)

## SEQUENCE OF EVENTS

Time	Activity	Remarks
08:30	John, Tim, Fred & Rob meet at Range Control.	Inspect range, sign on, collect stores
08:45	All assemble on No 2 Range 300X Car Park for briefing.	RCOs safety & staff briefings
09:00	Details 1 & 2 to 300X FP. Details 3 & 4 to Butts.	Butt Officer to set up Butts & brief butt party & Rig 300X tgts Lanes 1-5
09:30	Detail 1 fires at 300X. Detail 2 provides Safety Supervisors.	
10:00	Detail 2 fires at 300X. Detail 1 provides Safety Supervisors.	
10:30	Details 1 & 2 move back to 500X	Butt Officer Rig 500X tgts
10:50	Detail 1 fires at 500X. Detail 2 provides Safety Supervisors & sentries.	Lanes 1-5
11:20	Detail 2 fires at 500X. Detail 1 provides Safety Supervisors & sentries.	Lanes 1-5
11:50	Break for lunch and changeover.	All assemble at 300X car park.
12:45	Details 1 & 2 to Butts	Butt Officer to brief butt party & Rig 300X tgts Lanes 1-5
13:00	Detail 3 fires at 300X. Detail 4 provides Safety Supervisors.	
13:30	Detail 4 fires at 300X. Detail 3 provides Safety Supervisors.	
14:00	Details 3 & 4 move back to 500X.	Butt Officer rig 500X tgts
14:20	Detail 3 fires at 500X. Detail 4 provides Safety Supervisors & sentries.	
14:40	Detail 4 fires at 500X. Detail 3 provides Safety Supervisors & sentries.	
15:10	Conclusion of firing	Close down range.
15:30	John & Tim to Range Control	Return stores, sign off.
15:45	All assemble on 500X Car Park for debrief and results	
16:00	Depart	

## NRA RADIO / TELEPHONE CODE MESSAGES

### Message Meaning.

0. Raise sighting targets.
1. Firing about to commence.
2. No spotting disc visible.
3. Spotting disc unmistakably disagrees with signalled value. Check that the spotting disc shows the last shot and that the panel signals its correct value.\* The Butt Officer is to view the target before passing message.
4. A shot has been fired but no signal has been made. Examine the target carefully and signal the shot if found, or a miss\*.
5. Firer has challenged for a higher value for his shot. Examine the whole target and signal the correct value\*.
6. It is suspected that there is a second shot on the target. Inspect the target for a second shot. If found, mark and signal both shots. If not, leave spotting disc in original hole\*.
7. A miss has been signalled but firer has challenged for a hit. Re-examine the target carefully and signal the shot if found, or a miss\*.
8. The spotting disc appears not to have moved. Butt Officer is to consult marker and confirm spotting disc is in latest hole. If successive shots have been very close to each other advise the RO accordingly\*.
9. Marking/shooting appears to be unduly slow. Butt Supervisor/Range Officer to check and correct as necessary.
10. Stand Easy. Half-mast target.
11. Blow-off shots are about to be fired. Ensure that all targets are fully lowered until Message 1 is given.
12. Stand Easy. Lower target, patch out and put target back up.
13. Radio the number of hits as score board figures are not clear.
14. Firer has challenged his score. Re-examine target and show the correct number and value of shots\*.

\*Confirm result to firing point by radio/telephone.

## INCIDENT / ACCIDENT - FIREARM / AMMUNITION REPORT FORM

**PLEASE READ NOTES BELOW BEFORE COMPLETING THIS FORM.**

**Note 1.**

When completing this form please delete as appropriate.

**Note 2.**

Category of Incident/Accident to which this form refers.

### COMPLETE PARTS AS LISTED BELOW

1. Firearm burst	"A" and "B"
2. Firearm cannot be unloaded.	"A" and "B"
3. Other malfunction of firearm	"A" and "B"
4. Signs of pressure, primers bursting, difficulty loading/unloading	"A" and "B"
5. Shot(s) fired beyond the danger area	"A" and "B"
6. Shot(s) causing injury/death, damage within the danger area	"A" and "B"
7. Shot(s) fired outside permitted hours	"A" and "B"
8. Dangerous behaviour by firer or other person(s)	"A" and "B"
9. Firearm/ammunition handling on/off the range	"A" and "C"
10. Loss or theft of firearm(s) and/or ammunition	"A" and "D"

**Note 3**

**Situations.**

- a. In any situation where death or injury has occurred and it is necessary to notify the Police, with the exception of making the situation safe and any necessary attention to injured person(s), the scene of the Incident/Accident must be preserved intact and the locations of relevant persons established, witnesses secured and statements taken. Once this has been done, all persons present must be assembled in a safe place. On no account may firearm, ammunition, equipment or fragments associated with the Incident/Accident be touched or moved.



- b. If the Incident/Accident falls into Categories 1 to 4 in Note 2. above, fired and unfired samples of the ammunition in use at the time must be retained/made available for inspection.
- c. If the danger area is likely to be compromised by, for example, a loaded firearm pointing in a dangerous direction, the firearm must be aligned with its target.
- d. If butt markers are in the butts and cannot leave by a safe route, they must remain under cover of the butts until their exit route is safe.

**IMPORTANT.** It is essential that Range Conducting Officers are at all times aware of the conditions laid down in Note 3 above, so that in the event of an Incident/Accident occurring, the correct locations of persons, equipment, etc. may be entered on the “PLAN OF THE SCENE” at the end of Part B.

**Note 4.**

**The Range Log.** On military ranges, when completing the Land Range Log MOD Form 906/906A at the end of the event, all reportable incidents/accidents must be recorded in the log. Also, any damage to or deterioration of the range structure, equipment or targets must be reported.

**Note 5.**

**Sanctions.** If at any time it is necessary to dismiss a Firer from the range the RCO must send a report to inform the Firer’s Club/Association (Secretary General, NRA if applicable). The report should give details of the event and the Club/Association’s details. Sanctions may be imposed as a result of the report.

PLEASE COMPLETE THE FOLLOWING.

**PART A. THE EVENT. TO BE COMPLETED FOR ALL CATEGORIES.**

Category number(s) (See Note 2 above)		
1. Name of body organising the Event		
2. Description of Event		
3. Date of Incident/Accident		
4. Time of Incident/Accident		
5. Name and address of location of Incident/Accident		
6. Name of range, building or area within location.		
7. Was the event authorised and legally conducted? (If "No", give details below)	Yes / No *	
8. Weather at time of incident.		
a. Rain	Dry / light / heavy *	
b. Light	Good / poor *	
c. Wind	Gale / High / Low *	
9. Was any photographic evidence taken? (Please enclose if "Yes")	Yes / No *	
10. Name of RCO or person in charge		
11. Signature of RCO or person in charge		
12. Date Report Submitted		

**PART B. INCIDENT/ACCIDENT ON A FIRING RANGE.**

1. Name(s) of primary person(s) who initiated the Incident/Accident	
2. Name(s) of others	
a. Involved	
b. Injured	
c. Killed	
d. Witness 1	
Name	
Signature	
Address	
e. Witness 2	
Name	
Signature	
Address	
3. Firearm details	
Make	
Type	
4. Name of owner of firearm	
5. Serial number of firearm	
6. FAC Seen	Yes / No *
Issuing Authority	

FAC Number		
7. Description of ammunition used		
a. Commercial / hand loaded.*		
b. Calibre and type		
c. Manufacturer / maker		
d. Any other relevant details		
8. Communication. Was range communication intact and functioning? (If "No", give details below)		Yes / No *
9. First aid. Was a First Aid kit available at the scene? (If "No", give location of nearest first aid kit below)		Yes / No *
If "No", give location of nearest first aid kit		
Name of person administering First Aid		
10. RCO's words of command immediately prior to the Incident/Accident		
11. Did the Incident/Accident occur before/after the order to start firing?		Before / After *
12. Suggested primary cause of Incident/Accident		
a. Dangerous behaviour	Yes / No *	
b. Ammunition defect	Yes / No *	
c. Firearm defect	Yes / No *	
d. Other (Specify)		

e. Was the firearm being used correctly? (If "No", give details below)		Yes / No *
13. Full description of the event		
14. Actions taken following the event		
a. Range Warden/Controller informed	Yes / No *	
	At time:	
b. Emergency services called	Yes / No *	
	At time:	
c. Police informed	Yes / No *	
	At time:	
d. Firer warned but permitted to continue firing	Yes / No *	
e. Firer dismissed from the firing point	Yes / No *	
f. Firer dismissed from the range (see Note 6.)	Yes / No *	
15. Action taken in respect of those injured / killed including contact details		
16. Details of property damaged		
a. Name of Owner of damaged property		
b. Description of damaged property		
c. Damage sustained by the property		
17. Actions taken following the event		

a. Was the firearm and magazine (if fitted) unloaded, open and safe?		Yes / No *			
b. Was a breech flag fitted or bolt/action removed?		Yes / No *			
c. If still loaded, was the firearm pointed at its own target?		Yes / No *			
18. Sketch plan of the scene					
Show the positions of all those present, the firearm(s), equipment and fragments etc.					
Notes on the sketch	a. Insert total length and width of the scene in metres on the plan				
	b. If on a firing range indicate the axis of the range with an arrow and the word "AXIS", the direction of the targets and the lane numbers				
	c. Insert the positions of the firer and other relevant persons, with names, the firearm, equipment and fragments, and all other important features				
Plan of the Incident/Accident.					
Dimensions		Length	m	Width	m
Drawn by		Name			
		Signature			



**PART C. INCIDENTS INVOLVING FIREARMS OR AMMUNITION.**

**FIREARM / AMMUNITION HANDLING ON / OFF THE RANGE.**

**GENERAL**

**Names and addresses of all *other* persons involved (see Part A, para 9)**

Name 1	
Address 1	
Name 2	
Address 2	
Name 3	
Address 3	

**Names and addresses of witnesses**

Witness 1	
Address 1	
Witness 2	
Address 2	

**Police details**

Name and collar number of Police Officer if any:	
--	--

### Details of the Incident/Accident

1. Personal Injury		Yes/No*
General Description		
2. Fire/Explosion		Yes/No*
General Description		
3. Damage to property		Yes/No*
General Description		
4. Other (Specify)		
General Description		
5. Weight of Item handled if in excess of 25 kg		
6. Were there any signs displayed in the area of Incident/Accident?		
a. No Smoking		Yes/No*
b. Hearing Protection		Yes/No*
c. Protective Clothing (Specify below)		Yes/No*
d. Other (Specify below)		Yes/No*
7. Your authority to handle Firearms/ammunition		
a. FAC Number		
Issuing Authority		
b. Other		

8. Detailed description of event in para B 1 to 4 above
9. Exceptional hazardous conditions noted at the scene (e.g. slippery floor, rubbish lying around, broken hand rails, flammable materials, hazardous electrical systems, etc.)
10. Apparent damage sustained by firearms/ammunition
11. Apparent consequential damage at the scene

**PART D. LOSS OR THEFT OF FIREARM/AMMUNITION - ARTICLE(S) LOST**

1. Description	
2. Make	
3. Quantity	
4. Serial Number	
5. Distinguishing marks/features	
6. Accessories fitted. (sights, sling, scope, bipod etc.)	
7. Container/case/box	
8. Name of Owner	
9. F.A.C. which refers	

a. Name		
b. Number		
c. Issuing Authority		
10. Reporting		
a. When loss/theft discovered	Date	Time
b. When loss/theft reported	Date	Time
c. When was article last seen	Date	Time
d. Where was article last seen		
e. Loss/theft reported to	Name	
Address		
f. Police Officer in charge	Name	
	Number	
g. Police Area		
Incident number		
11. The Event		
a. LOSS/THEFT FROM A BUILDING OR OTHER PLACE. Full description of the event, with details of damage to property, forced/broken locks/windows etc. where appropriate		

b. LOSS/THEFT FROM A MOTOR VEHICLE		
A. Owner of vehicle		
B. Type of vehicle		
C. Registration number		
D. Location of article in vehicle prior to loss/theft		
E. Would the article have been visible in the vehicle?	Yes/No*	
F. Was the vehicle locked?	Yes/No*	
G. Was the vehicle equipped with an activated alarm?	Yes/No*	
H. Full description of event:		

*Please continue on separate sheet(s) if necessary.*

### SPECIMEN RANGE SAFETY DOCUMENT (RSD)

<b>Outline</b>	<b>Name of Club:</b>	<b>Name of Range:</b>	<b>Date of Shoot:</b>
<b>Safe Person(s)</b> (qualifications are required to be listed)	<b>Club Secretary:</b>	<b>Contact Tel No:</b>	
	<b>Range Conducting Officer:</b>		
	<b>Safety Supervisor:</b>	<b>Safety Supervisor:</b>	
	<b>Butts Officer:</b>		
<b>Safe Place</b>	<b>Name of Range:</b>	<b>Date Range Orders Read:</b>	
	<b>Date of Range Recce:</b>	<b>Name of Person Conducting Recce:</b>	
<b>Medical Procedure</b>	<b>First Aid Point Location:</b>	<b>Safety Vehicle Location:</b>	
	<b>Nearest Hospital with A &amp; E inc Tel No:</b>		
	<b>Immediate Action:</b>	<b>Additional Medical Points:</b>	
	1. All firing is to <b>STOP</b> , and club members are to apply safety catches and await further instructions. 2. The RCO and medic will move to the scene. 3. Immediate first aid will be administered. 4. Depending on severity the Major or Minor plan is to be followed.		
	<b>Minor Injury</b>	<b>Major Injury</b>	
<b>Administer first aid if required</b> <b>Record details of injury/incident</b>	1. RCO or responsible officer to inform medical emergency services via the 999 system. 2. Arrange RV point for ambulance providing map ref if required. 3. Range Control to be informed 4. Preserve the scene 5. Inform MoD via below Reporting numbers		
<b>Reporting Accidents</b>	<b>Def AIB Land (Ops):</b> 030 679 86587		
	<b>AINC:</b> 030 6770 3661	<b>ATO Support:</b> 01235 51 +Ext	



<b>Safe Equipment</b>	All firearms and ammunition that are being fired comply with range muzzle energy limits <b>YES/NO</b>		
<b>Safe Practice</b>	The NRA safe system of training is in place <b>YES/NO*</b> If No, then a 2* dispensation is required along with RASP.		
<b>Range Conduct (Range Team)</b>	<b>Range Team Briefing must include:</b>  1. The actions on “ <b>Stop, Stop, Stop</b> ”, the incursion of personnel, livestock and vehicles/aircraft in the danger area. 2. The actions on a training incident or accident occurring (medical plan). 3. That they <b>must</b> intervene if a breach of safety is about to occur. 4. No cross-lane firing. 5. Stay alert at all times. 6. Scoring system and change around procedure explained if required. 7. Hearing protection on firing point mandatory.	<b>Additional Safety Points:</b>	
<b>Arrival of Members</b>	1. <b>Normal Safety Precautions (NSPs)</b> taken by all firers (physical check of firearms, magazines, sights etc), check PPE (serviceable hearing protection) 2. All firers have in date Shooter Certification Card (SCC) (YES/NO)		
	<b>Safety Brief:</b>  1. The actions on “ <b>Stop, Stop, Stop</b> ”, the incursion of personnel, livestock and vehicles/aircraft in the danger area. 2. The actions on a incident or accident occurring (medical plan). 3. Actions on stoppage. 4. Identification of targets when required 5. Hearing protection. 6. Scoring of competitions if required. 7. Range layout explained if required. 8. Ammunition limits emphasised.	<b>Additional Safety Points:</b>	
<b>Range Conduct:</b>	<b>Detail 1:</b>	<b>Detail 2:</b>	<b>Detail 3:</b>
<b>On completion of Shoot:</b>	<b>Detail:</b>  Unload firearms and prove clear to RCO/Supervisor Collect brass	<b>Range:</b>  Ensure range in condition and secure Sign 906/906A	
<b>RCO:</b>	<b>Name:</b>	<b>Sign:</b>	
<b>Secretary or delegate</b>	<b>Name:</b>	<b>Sign:</b>	
As Club Secretary / person delegated to run the shoot on this date, I am content that this form and the associated planning and conduct have been / will be conducted in accordance with Range Standing Orders, the NRA RCO Handbook and JSP 403.			

### RANGE ACTION & SAFETY PLAN TEMPLATE

Club Address	
Telephone	
E-mail	
Reference	Club File Reference

**1. References:**

- a. Annual Club Calendar of Events.
- b. Landmarc Booking Ref No: .....
- c. NRA Handbook (insert according to LF Practices).
- d. Range Standing Orders (insert range).
- e. NRA RCO Handbook

**RANGE ACTION SAFETY PLAN, (RASP) FOR LIVE FIRING (LF) AT (insert range) ON (insert date)**

**2. General.** This RASP has been produced to support Club conduct of LF in accordance with Ref B, C and D (insert relevant LF practices or competitions as required). It will be conducted on (insert date) at (insert range). The Course of Fire will include one or more of the following activities:

- a. Zeroing of firearms at (insert distance).
- b. Practices (or insert match or refer to NRA Handbook) at (insert distances).

**3. Aim.** The aim of this RASP is to:

- a. Detail the duties and responsibilities of the range staff.
- b. Detail rehearsal requirements for the day, if applicable.
- c. Detail points and subjects to be covered in the safety brief.

**4. Safe Persons.** The following personnel are nominated to fill the appointments listed:

	Appointment	Name	Qualifications	Remarks
1.	Club Chairman		None	
2.	Senior Planning Officer		NRA RCO	
3.	RCO		NRA RCO	
4.	Safety Supervisors		NRA RSO/RCO	
5.	Butts Supervisor		Club RO/ RSO/RCO	
6.	Sentries/Telephone Orderly		None	
7.	Medical		First Aid at Work	First Aid Pack

5. **RCO.** The RCO is responsible for overseeing the organisation of all aspects of LF (insert range activity) in accordance with the rules contained in Ref E, as well as the rules contained in Ref D. In particular he/she is to check the condition of the:

- a. Target mechanisms and targetry.
- b. Firing Points.
- c. Communication system between Butts and Firing Point.
- d. Range in Use and Butts Flag.
- e. Stop Butt and mantlet.

6. **Safety Supervisors.** The Safety Supervisors are to supervise and offer guidance to firers as required. They are responsible for the safe conduct of firing as directed by the RCO and in accordance with the rules contained in Ref E, and Range Standing Orders. In particular they are to:

- a. Ensure safe handling of firearms on the firing point at all times.
- b. Ensure correct targets are engaged – no cross lane shooting.
- c. Intervene if a breach of safety is about to occur.
- d. Stay alert at all times.

7. **Butts Supervisor.** The Butts Supervisor is responsible for the conduct of the Butts in accordance with the rules contained in Ref E and the instructions from the RCO. In particular he/she is to ensure that:

- a. Communications with the RCO are tested immediately on arrival in the butts, including any contact with sentries.
- b. Targets are presented at correct times, and in the correct manner in accordance with Ref C.
- c. Markers are instructed to remain under cover of the Markers' Gallery at all times, and are not to leave the Butts without permission.
- d. All markers have serviceable hearing protection.

8. **Telephone Orderly.** If applicable, the telephone orderly will be posted by the RCO at (insert location). He/she is to carry out the tasks as directed by the RCO. In particular the RCO is to ensure that if a check fire is ordered from range control, the RCO is to be informed immediately.

9. **Barrier Sentry.** The sentry will be posted by the RCO at the location of the barrier when firing at (insert distance) and beyond. The sentry is to carry out the tasks as directed by the RCO, in particular once firers move back to (insert distance) ensure no-one enters the range without permission of the RCO.

10. **Safe Place.**

1. Name of the Range	
2. I (insert full name) read the Range Orders on (date)	
3. *Date of the range Recce	
4. *Name of the person conducting the range Recce	
5. *I (insert full name) am entirely familiar with this range and its facilities and therefore do not require to conduct a detailed Recce. I made contact with the Range Operative (enter name) by telephone on (enter date)	

\*Delete as applicable.

**Note:** Reconnaissance is a vital part of the planning process. The RCO is to consult with the Range Operative and, thereafter, reconnoitre the range to establish what facilities and targetry are available and what, if any, restrictions are in place.

11. **Medical Plan.** This medical plan is in accordance with Ref E and Range Standing Orders. The level of medical cover and action taken following an accident will be dictated by the Range Authority, but it must be to the minimum requirement stipulated within Ref E and Range Standing Orders.

12. The nominated First Aider is responsible for ensuring that the medical cover required is in accordance with Ref E. He/she is to ensure the contents of the First Aid pack are correct and medical supplies are in date. In the event of a casualty the following plan will be implemented:

a. **Immediate Action (IA).**

(1). All firing is to cease immediately. Firers are to apply safety catches, where applicable, and await further instructions from the RCO.

b. **Minor Casualty.** After the IA, the following plan will be carried out:

(1). The First Aider will assess the casualty and if necessary, administer First Aid.

(2). The RCO and First Aider will determine any further actions.

c. **Major Casualty.** After the IA, the following plan will be carried out:

(1). Emergency services must be contacted using 999 and Range Control informed at once.

(2). The nearest hospital equipped to deal with serious trauma is (insert hospital and post code).

(3). The postcode for (insert ranges) is (insert post code).

(4). Depending on the severity of the casualty and advice received from Range Control / Duty Liaison Officer, the casualty will be moved by vehicle direct to the following location: Civilian ambulance RV at location: (insert location/What3Words)

- d. After the casualty has been evacuated the RCO will continue the accident procedure from Ref E and Range Standing Orders.

13. **Reporting of Live Firing Incidents or Accidents.** Should any live firing incident or accident occur the RCO is responsible for implementing the procedure outlined in Ref E (The Land Incident Report). It is also the responsibility of the RCO to ensure the procedure is understood by all other members of the range staff.

14. **Changes/Amendments to the Activity Plan.** In the event of any changes to the activity, the RCO is authorised to amend the plan. The changes, together with the reasons, are to be recorded and signed by the RCO. If a new RCO is to take over the range, they must have been part of the planning process, e.g. the recce and/or given a detailed handover of the range, by the original RCO.

15. **Action at the Range.** On arrival at the range the RCO will carry out the following:

- a. Book in at Range Control via the Range Operative at (insert name of range) and ensure the MOD Form 906/906A is completed and signed.
- b. Obtain clearance to fire from Range Control (and see paragraph 26).

16. **Safe Firearms and Equipment.** All firearms and ammunition natures that will be fired are permitted in accordance with the MOD Form 904 held for (insert range and complex).

17. **Safe Practice.** Activity Risk Assessment. The NRA Safe Shooter System is implemented.

18. **Briefings.** Personal Protection Equipment (PPE). Check for serviceable PPE and hearing protection. Only mention PPE relevant to the shoot being conducted.

19. Ensure sentries are briefed and in position.

20. The RCO is to issue a verbal brief to all staff covering all points in paragraphs 7, 8 and 14 prior to firing. These additional points are to be included:

- a. The general outline and sequence of events.
- b. Safety rules particular to the range.

21. Additional points pertinent to the safety supervisors must be covered as follows:

- a. Handling drills, safety rules and characteristics of the firearms being supervised.
- b. Permitted states of readiness.
- c. Details of the practice.
- d. The importance of wearing serviceable hearing protection.

22. **Rehearsals.** If deemed necessary, a rehearsal, attended by all members of the range staff, is to be conducted, to include use of targetry and any requirements identified at the range recce.

23. **The Conduct.** Arrival of the firers. The following sequence of events is to be followed:

- a. NSPs. A physical check of firearm chamber.

- b. SCCs. A physical check of all Shooter Certification Cards (SCCs) for the type of firearm to be used for the shoot.
- c. Personal Protection Equipment (PPE). Check for serviceable PPE and hearing protection.
- d. Only mention PPE relevant to the shoot being conducted.
- e. Additional Firearm Safety Checks i.e. barrel checks for firearms with removable/replaceable barrels.
- f. Details. Firers will be placed into details by the RCO as per the relevant practice.
- g. Safety Brief. The Safety Brief to firers must cover the following:
  - (1). Signal to stop firing - "Stop, Stop, Stop." Action on receipt of the signal to stop firing, apply your safety catch (where applicable), stop firing immediately and await further instructions from the RCO.
  - (2). Refer to the Medical Plan at paragraph 14 for minor and major casualties.
  - (3). The importance of wearing serviceable ear defence.
- h. Range Area Layout. It is essential that firers are aware of the various locations on the range; this is for both practicality and safety reasons:
  - (1). Waiting areas.
  - (2). Toilets.
  - (3). Route to Butts.
  - (4). Location of any other range users.
- i. Revision. Revision relevant to live firing:
  - (1). Identify strength and direction of wind and where to aim.
- j. Introduction to the Club Live Firing Practice:
  - (1). Reason.
  - (2). Incentive.
  - (3). Aim.
- k. Scoring System/Standards. The standards and scoring systems are to be explained.
- l. Ammunition Requirements. The ammunition requirement is to be explained.
- m. Range Clearance. The RCO is to obtain clearance from Range Control prior to firing commencing.



24. **Completion of each Detail.** On completion of each detail the following procedure is to be followed:

- a. All firers must show their rifle (body, action and chamber) as clear to their safety supervisor or the RCO before leaving the Firing Point in accordance with Ref E.
- b. Debrief (to include scores achieved if applicable).
- c. All unused ammunition and empty cases to be removed from the Firing Point.

25. **Completion of the last Detail.** On completion of the last detail, the RCO is to:

- a. Remove all firearms, ammunition, and any other equipment from the range.
- b. Remove all targets from frames and return to the range store.
- c. Check area for cleanliness.
- d. RCO to complete and sign MOD Form 906/906A.

Your Signature	Counter signature
Your Name	Name
For Club Chairman	Senior Planning Officer

**Annex(es):**

- A. Conducting notes if needed.

Distribution:

Action:

Info:

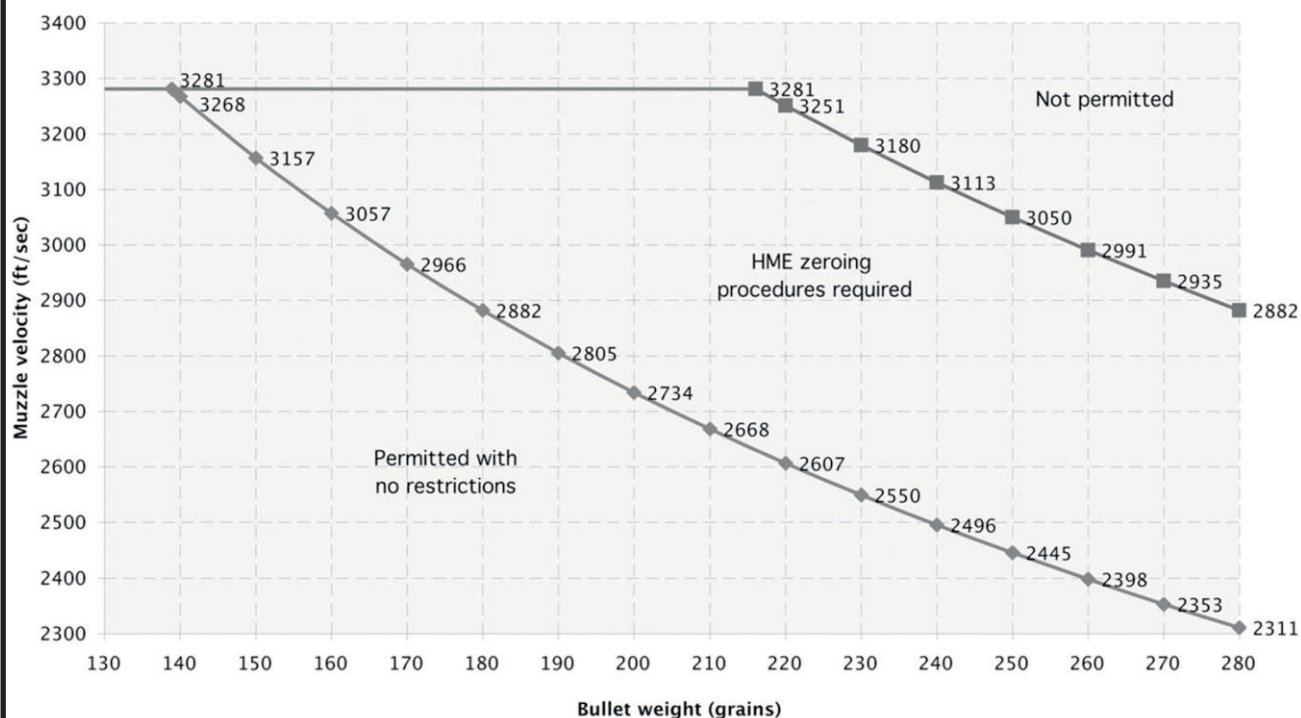
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## HIGH MUZZLE ENERGY PROCEDURES

1. The National Rifle Association (NRA) and MoD approved procedures below must be used on MoD ranges when civilians are shooting on constructed ranges with firearm/ammunition combinations where muzzle energy (ME) exceeds 4500 Joules. Note that:
  - a. No firearm with a muzzle energy exceeding 7000J may be used on a constructed MoD range.
  - b. HME procedures do not apply on No Danger Area (NDA) ranges, but the range limitations must be checked to ensure that the developed MV and ME lie within permitted values.
  - c. The zeroing procedures below must be carried out: on an NDA range or a range with a stop butt that is immediately behind the target and that meets Gallery Range criteria; exceptionally, for large calibre historic or hunting rifles being used at distances of 200 metres or less only, into the zeroing butt at 100 yd on the British Sporting Rifle Club layout at Bisley.
2. The Chairman of the appropriate Club must give authorisation in writing before a shooter may use a firearm / ammunition combination generating over 4500J muzzle energy. Such authorisation will normally be given through the Shooter Certification process.
3. The shooter is to check zero using the procedure described below under the supervision of an RCO who holds the NRA RCO (HME) qualification (except when checking zero on the Zero Range at Bisley, which is a NDA Range and on which supervision by an RCO (HME) is not required), as the first activity of any range session. If HME fire will be carried out from distances in excess of 200 metres, then the full procedure below is to be carried out. If HME fire will take place only from 200 metres or less, then only paras a, c, d, e and f apply:
  - a. The RCO (HME) is to record in the MoD Form 906/906A, Land Range Log, when a firearm / ammunition combination is being used which generates muzzle energy greater than 4500J.
  - b. Before shooting at any distance greater than 200 metres, the shooter is to demonstrate that the firearm is correctly zeroed by firing a 3-shot group which must fall within the box of the issued NRA/MoD approved target at 200 metres or, at Bisley only, within the box of the appropriate HME zero card used on the Zero Range. The RCO is to confirm that the zeroing target being used is correct for the firearm / ammunition combination and for the planned subsequent activity.
  - c. The target is to be attached such that the target centre line is set on the target screen centre line both vertically and horizontally.
  - d. The shooter is to clarify to the RCO (HME) the rifle type and technique to be used to ensure a hit with the first shot.
  - e. Because of the increased risk of splashback with high energy bullets the butt marker is to wear safety glasses in addition to hearing protection.
  - f. The RCO will appoint a person to observe the initial fall of shot until the initial strike on the target screen is identified:
    - (1). If a strike off the target screen is clearly identified the shooter may adjust and fire again.

- (2). If no strike is identified the shooter is to cease fire until the firearm has been re-collimated or bore-sighted to the RCO (HME)'s satisfaction.
- g. Rounds on target may be adjusted but only the 3 final rounds are to be counted for the group, one of which may include the final adjusting round.
- h. All 3 rounds of the final group must be within the box before the shooter may move to a different distance.
- i. The butt marker is to identify clearly and mark those shots which were used as sighting shots and which are not to be included in the qualifying group.
- j. After qualification the target is to be completed and signed by the shooter and the RCO (HME) and retained by the Club for 12 months.
4. Direction is provided on the NRA / MoD approved target for sight adjustment for different distances subject to achieving a successful group.
5. The zeroing procedure is to be carried out on each day the shooter wishes to shoot unless the zeroing is for an official competition or training course where firing is carried out on consecutive days, when the procedure may be considered valid for the duration of the competition or course.
6. Once zeroed using the procedure in paragraph 3 above, the shooter may shoot under the direction of a qualified NRA RCO who need not have the HME qualification. If, in any practice, the first shot from an HME firearm misses the intended target, the firer may only continue if one of the following applies (derived from a reduced version of the exemptions in NRA rules for such an occurrence in competition - as at 31 Mar 18, NRA para 120):
- a. The shot was seen to strike the stop butt, or was registered by an electronic scoring system.
- b. The firer identifies and rectifies a fault or error (e.g. left instead of right wind allowance) that would reasonably account for the miss.
- c. There is reasonable evidence (e.g. an unexplained shot on the next target) that the firer has cross-fired.
- d. There is reasonable evidence (e.g. based on the advice of other firers) that the wind allowance applied was such as to account for the miss
7. **HME at 200 metres or less.** Since the allowable cone of fire for deliberate supported fire is contained within the stop butt of a gallery range at 200 metres or less, all that is required to ensure capture of bullets in the stop butt is that the firer confirms that the firearm is correctly set and then fires a deliberate correctly aimed shot on such a range. Para 1(c) of the HME procedure defines the ranges that may be used. Provided that the impact of that shot is registered, whether by eye, by a strike on the target or by an electronic scoring system, the firer may then continue. The process to achieve that is set out at paragraph 3. Note that this procedure does not require use of a special target.
8. The firer may engage the target intended for the subsequent practice from the start, provided that it enables hits to be registered and meets the requirement regarding placing on the target screen. Note also that initial zeroing at any distance less than 200 metres is, by implication, valid for any subsequent distance up to 200 metres, other than the special case of BSRC.

## Allowable limits for muzzle velocity and bullet weight



## NRA 200 YDS/MTRS HME ZEROING TARGET FOR USE WITH RIFLES CAPABLE OF DIRECT (PoA) SETTING OF ELEVATION FOR 200. THE FINAL 3 SHOT GROUP MUST FALL WITHIN THE BLACK AIMING MARK/SCORING AREA

Annex B to  
Brief for RCOs(HME)  
dated 10 March 2015

NRA 200 Yard / Metre HME Zeroing Target for use with Firearms capable of direct setting of elevation for 200. Final group must fall within black aiming mark.

Name \_\_\_\_\_ Club \_\_\_\_\_

Rifle Serial No \_\_\_\_\_ Numeric elevation reading \_\_\_\_\_

Ammunition: Cal \_\_\_\_\_ Bullet Wt \_\_\_\_\_ Load \_\_\_\_\_

Date \_\_\_\_\_ Firer Sig \_\_\_\_\_ RCO Sig \_\_\_\_\_

**THREE-PIECE HME ZERO TARGET FOR DISTANCES GREATER THAN 200 YDS/MTRS, FOR USE WITH RIFLES SET UP FOR LONG RANGE SHOOTING (cannot zero point of aim at 200)**

HME Zeroing Target  
(three A4 sheets)

Grouping Rectangle.  
*The final three shot group must fall within this box.*

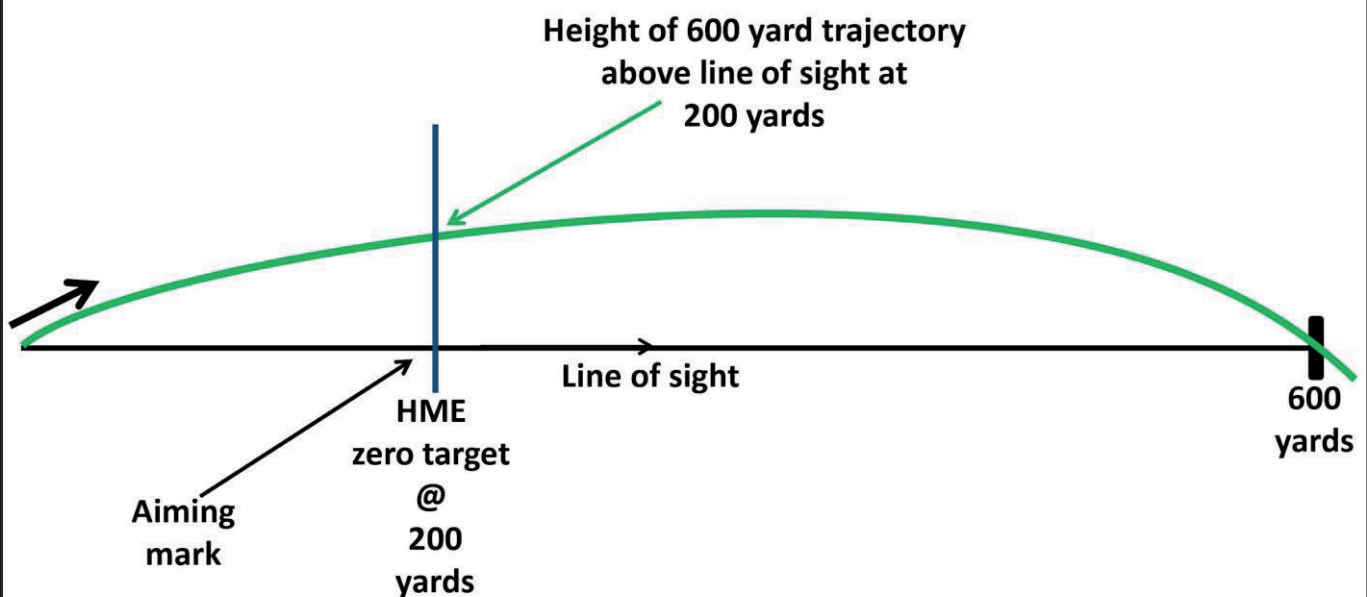
Aiming Mark

Blank Screen Target

The scoring box must be as central as possible on the target screen to allow the largest margin for error. The match rifle version may have to be slightly higher to accommodate the aiming mark at the bottom of the screen.

Mantlet

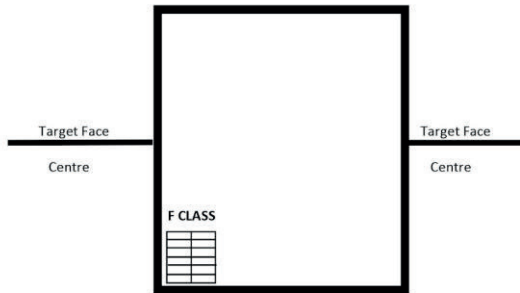
**THE THREE-PIECE HME ZERO TARGET**



*Not to scale*

**NRA 200 YRD/MTR THREE-PIECE HME ZEROING TARGET**  
**FOR USE WITH RIFLES SET UP FOR LONG RANGE, NOT**  
**CAPABLE OF DIRECT (PoA) SETTING OF ELEVATION**

The position of the scoring box varies on  
the blank target for F Class (flatter trajectory)  
or match rifle (steeper trajectory).

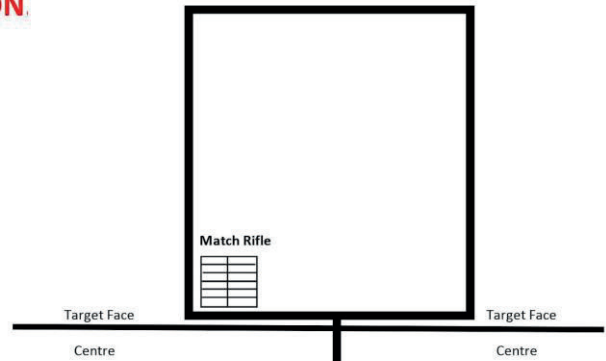


**F Class Rifle**

NRA 200 yard Zero Target  
For 600 yards elevation:  
telescope sights only.

Name:.....  
Signature:.....  
Club:.....  
Rifle calibre:.....  
Rifle Ser No.....  
Ammunition (bullet wt load)  
.....

Date:.....  
RCO .....  
RCO Signature.....



**Match Rifle**

NRA 200 yard Zero Target  
For 600 yards elevation:  
telescope sights only.

Name:.....  
Signature:.....  
Club:.....  
Rifle calibre:.....  
Rifle Ser No.....  
Ammunition (bullet wt load)  
.....

Date:.....  
RCO .....  
RCO Signature.....



## ***Notes***

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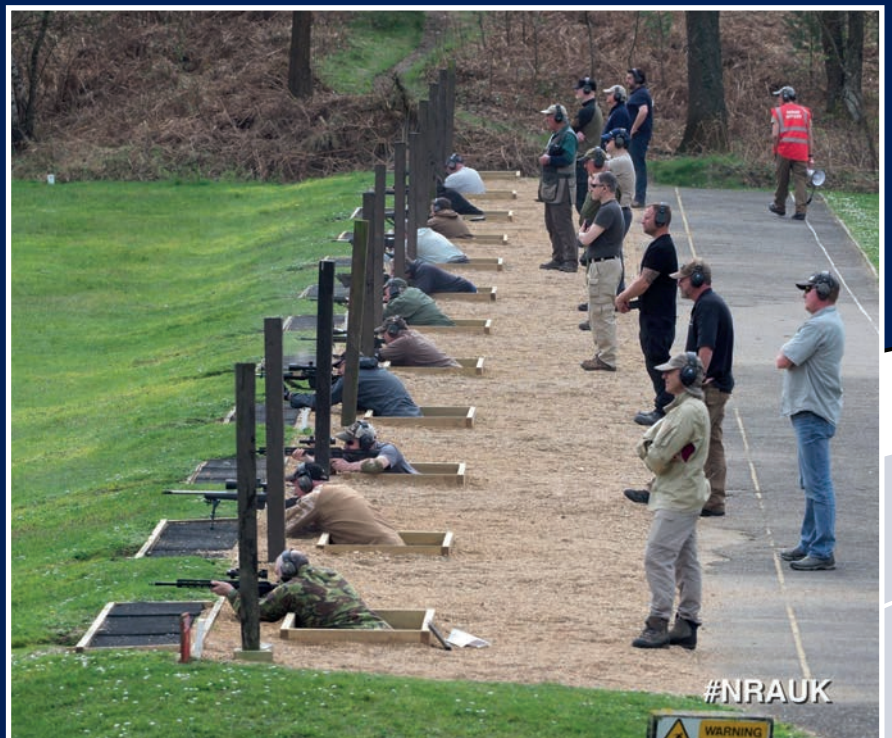
## ***Notes***



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RCO Handbook V1



# **NATIONAL RIFLE ASSOCIATION**

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