

CHAPTER 1

PROVISION OF RANGES

INTRODUCTION

0101. **Aim.** The aim of this chapter is to outline the procedures for the justification, authorisation, funding, construction and site selection of Small Arms and Infantry Weapon Systems and 40mm Weapon Systems Ranges (SA and Inf WS and 40mm Ranges). General policy is given in Reference A1 (Volume I); words and terms are defined in Reference A4 (Volume IV). This chapter covers:

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RANGE GROUPING

0102. **Grouping of Ranges.** SA, Inf WS and 40 mm ranges may be, or are regarded as being, one of the following:

- a. **Permanent Training Range.** A Permanent Training Range (PTR) will be in a barracks, on a training area or on a Live Fire Tactical Training Area (LFTTA). The range can be indoor or outdoor (open), static or mobile, may require specific construction, and can be grouped to form a range complex.
- b. **Temporary Exercise Range.** A Temporary Exercise Range (TER) is one created for the duration of an exercise or for a specified period. The range will normally be located on an existing LFTTA with the TER Danger Area (DA) falling within an existing Range Danger Area (RDA) which has been authorised for the required weapons, or on land cleared for a specified use with the local authorities and made safe for firing with its own authorised DA trace defining the restricted area. Reference A1 provides guidance on the conditions under which a TER may be established.
- c. **Operational Theatre Range.** Where the operational situation permits, an Operational Theatre Range (OTR) may be established to enable personnel deployed on operational or emergency duties to test and zero their SA and to conduct training for operations. The design, construction and control of an OTR is dependent on the orders of the Range Authorising Officer (RAO) - see Reference A1 (Volume I).

PERMANENT TRAINING RANGES (PTR)

0103. **Justification.** PTRs are initiated by a Statement of Requirement (SOR) and authorised by the Defence Training Requirements Organisation (DTRO).

0104. **Authorisation.** New PTR will be built to approved MOD Type Standards or as detailed in this Volume. Type Standards are produced and held by TAS(RE). Those involved in the planning process are to co-ordinate the planning and construction of a PTR with TAS(RE).

0105. **Funding.** Items which will normally be funded and provisioned separately from the works project are:

- a. **Targetry.** Most outdoor target mechanisms (other than hand operated), support systems and consumable materials. Chapter 29 contains further details.
- b. **Communications.** The provision, installation and maintenance of approved permanent equipment for effective communications is normally the responsibility of:
 - (1) Defence Training Estate (DTE), RN/RM and RAF - the Range Administering Unit (RAU).
 - (2) Army, Reserves and Cadets - Command HQ G6 CIS.

Note: Ducting, housings and all building works, including fixed power supply for the installation, must be included as part of the works project.

0106. **Construction.** The details of the range construction, refurbishment or significant change¹ to an existing range is to be recorded on MOD Form 1057 which is replacing Army Form (AF) K1309 (see Reference A1 (Volume I)). Prior to constructing a PTR, consideration should be given to the need for services, ancillary buildings and other structures. These include:

- a. Troop shelter.
- b. Target store and workshop.
- c. Toilets.
- d. Water supply and drainage.
- e. Power supply.
- f. Security and screen fences, barriers, lookout posts, signs, notices, flagpoles and lights.
- g. Range roads and parking.
- h. Ammunition points.
- j. Communications

Note 1. A significant change is any alteration or addition to a range that changes the purpose of its original intended use or the addition, removal or replacement of any permanently fixed structure or permanent range furniture. E.g. The introduction of high elevation fire towers or urban structures onto a range to allow OBUA training. Temporary shoot through structures may be classed as targetry on LFTTAs.

0107. Environmental Issues.

a. **Environmental Planning Issues.** When selecting the site for a range, the visual and acoustic effects on the environment and the general public, as well as any measures to reduce those effects, are to be assessed. This is particularly important for sites in or near National Parks; areas used for public leisure and inhabited areas. DIO are to be consulted at an early stage to ascertain whether the area chosen for a PTR is a conservation designated area or a heritage site, and whether there may be planning authority sensitivities which require consultation with statutory Bodies. Advice on noise can be obtained from the Area Health Safety and Environmental Groups for the Royal Navy/Royal Marines (RN/RM), the Division or Formation Environmental Health Officer (EHO), the Environmental Noise Officer (ENO) Royal Air Force (RAF) Health Monitoring Team (HMT) and the Central Budgets Security, Safety and Business Continuity - Safety, Health and Environment (CBSSBC-SHE) as applicable.

b. **Environmental Health Issues.** For each new and existing range the following issues are to be considered. Lead and Carbon Monoxide issues are covered in more detail in Chapter 30.

(1) **Lead.** Lead contamination down range on open ranges where the majority of rounds are not captured by a stop butt. This will involve the retention of MOD Form 906 records to maintain record of the number and type of ammunition fired.

(2) **Carbon monoxide.** Indoor ranges including tube ranges without controlled ventilation, all indoor test ranges and enclosed firing point ranges should consider the presence of carbon monoxide.

(3) **Noise.** Covered by the use of hearing protection as set out in Reference B and in Chapter 31.

0108. **Byelaws.** In the UK, DIO (Land Management Services) is to be consulted on the need for byelaws to prohibit unauthorised persons entering sea, land and air DA, to protect members of the public from the hazards arising from the military use of the range and to prevent public interference with the operation of the range.

0109. **Boards of Officers.** Detailed requirements and instructions for Siting Boards and Range Acceptance Boards are contained in Reference A1 (Volume I Chapter 6).

0110. **Provision Procedures.** The procedures for providing a new range are outlined for range staff, RAO and RAU in Annex A to this Chapter. Provision of new ranges on the DTE are authorised and funded through the Defence Training Requirements Organisation (DTRO).

TEMPORARY EXERCISE RANGES (TER)

0111. **Introduction.** The policy for establishing a TER is contained in Reference A1. Temporary Exercise Ranges are usually contained partially or wholly within LFTTA. Live fire training structures constructed for the exercise are to follow guidance provided in this JSP and in Reference B (Pamphlet 21). The requirements of an LFTTA are set out in Chapter 19 and in Reference B (Pamphlet 21).

0112. **Authorisation**

a. **Existing LFTTA.** When a TER is set up within an existing LFTTA so that the whole of the range and the associated RDA or Weapon DA (WDA) are contained within its boundary, no additional authorisation is required for its construction or use for authorised SA, ammunition and practices.

b. **New Sites.** When the requirement is for a TER where RDA or WDA is not wholly within an existing LFTTA, specific instructions for the construction and use of the range are to be included in the exercise instructions after a risk assessment. The exercise reconnaissance should provide sufficient data for detailed design and safety advice to be provided to the appropriate One Star or above HQ. Advice for each TER can, where appropriate, be provided by TAS(RE). When doubt exists about topography, structures or the exact location of the range or the associated RDA, TAS(RE) should, under normal circumstances, carry out an engineering survey and where necessary Small Arms School Corps (SASC) and Defence Ordnance Safety Group (DOSG) advice should be sought. Environmental issues will also have to be addressed (see paragraph 0107). The appropriate RAO responsible for the exercise is required to authorise firing practices in accordance with Reference A (Volume 1) Chapter 6.

OPERATIONAL THEATRE RANGES (OTR)

0113. **Requirement.** The policy for establishing an OTR is contained in Reference A1. It is often necessary for troops deployed on operations or emergency duties to zero and test SA and other weapon systems, and to train. The situation is not predictable but it is most likely that units will require a 'No Danger Area' (NDA) range. There may also be a requirement to train as a unit which could involve firing on an LFTTA. The responsibility for authorising range use on operations and emergency tours lies with the One Star Theatre Comdr. In many cases ranges set up by foreign armies can be used, but these need to be checked against British criteria.

0114. **Construction.** Whenever possible full TER procedures are to be followed (see paragraphs 0111 - 0112). Proper siting and construction are essential to the safe operation of an NDA range and RE support is desirable from the outset. Where possible a full survey of the area should be conducted before the range is constructed and/or authorised. The findings and recommendations of any survey are to be sent to the authorising HQ as expert advice. The proposed range design should, where possible, be in accordance with the relevant chapter of this Volume. When the requirement is for a LFTTA, the range can be identified from a map study although a physical check by the most accurate and appropriate means must be carried out to ensure that map details are correct. The One Star Theatre Comd has to authorise all ranges with or without full authorisation procedures. (see Reference A1 (Volume I)).

SEA AND AIR DANGER AREAS

0115. TAS(RE) provide the extent of land ranges sea dangers areas. This information is promulgated through the Fleet Operating Orders to the Hydrographic Office (HO) for entry onto the HO database and eventually onto maritime charts. Refer also to Reference A1 (Volume 1)

WORKS PROJECTS & REFURBISHMENTS

0116. **Range Safety Criteria Check.** Before funds are committed to any new range, major refurbishment or alteration of an existing range, plans and details should be passed to TAS to confirm that the proposal complies with current range safety criteria. Routine maintenance need not be referred to TAS(RE) unless the works organisation has safety or suitability concerns. Any new build and major alteration to range ballistic structures are to be undertaken by Approved Range Contractors. A list of experienced Range Contractors is available from TAS(RE). See DIO Policy Instruction Number PI 10/10.

FACILITIES MANAGEMENT

0117. **Compliance to Current Legislation.** All ranges are subject to a biannual works inspection as set out in Reference A1. The Range Administrating Unit (RAU) are to ensure that the local works inspection of ranges include all regulatory checks and where necessary checks by Authorised Personnel.

SUSTAINABLE DEVELOPMENT

0118. **Sustainable Range Development and Use.** Range development must first provide safe effective operational training facilities and second, ensure that the effect on range structures and the environment is minimised. Designers are to specify low maintenance solutions and where possible, lead bullet debris is to be captured for recycling.

CHAPTER 1 ANNEX A

PROCUREMENT OF A NEW RANGE – RANGE & TRAINING STAFF GUIDE

This check list highlights particular issues related to ranges. Full details are provided in the DIO Integrated Project Guide (Link below)

http://www.aof.dii.r.mil.uk/aofcontent/tactical/sd/content/sd_tools.htm?zoom_highlight=IPG

SER	Stages	Action	Appointment/ Branch
	Project Identification and Initiation		
1	Need for new range identified a. Training objectives/type of training b. Predicted usage & user units c. Range type, capacity & targetry d. Land area & DA requirements		Establishment, Service HQ
2	Identify site options a. User unit locations b. Available range locations c. Professional & technical appraisal d. Initial survey e. Local Planning Authority (LPA) restrictions f. Timescale requirement g. Targetry	Siting Board (JSP 403 Vol 1)	RAO RAU TAS(RE) Regional DIO- LMS/DTE
3	Siting Board a. Confirm site options b. Confirm & set priority		RAO RAU TAS(RE) Regional DIO- LMS/DTE
4	Assess rough order cost (ROC) including targetry		Service HQ
	Project Definition		
5	Project brief		Service HQ Regional DIO/DTE
6	Preliminary & detailed design, & technical approvals.		Regional DIO/DTE TAS(RE) Consultant
	Construction		
7	Consultation, planning, site meetings		Regional DIO/DTE
8	Confirm technical approvals		Regional DIO/DTE TAS(RE)
9	Acceptance & Range Boards	Board of Officers	Service HQ RAO RAU Regional DIO/DTE
10	Issue MOD Forms 904 & 905	JSP 403 Vol 1	RAO