

PRACTITIONER GUIDE

MOD Firing Ranges - Works Inspection Guides

Number: PG 02/08

Property Directorate Sponsor: Robin Cawthorne	Date of issue: 18 th June 2008
Who Should Read this: CEStOs, Top Level Budget Holders, Defence Estates Advisors, Estate Managers, Facilities Managers and Property Managers/Site Estate Representatives Property Management Works Services (including the legacy work of EWCs/WSMs). Any other person who is responsible for the maintenance of MOD firing ranges on the defence and Volunteer Estate.	
When it takes effect: Immediately	When it is due to expire: 31 st Dec 2013

This policy has been Equality and Diversity Impact Assessed in accordance with the Department's Equality and Diversity Impact Assessment Tool.

Document Aim: The aim of this Practitioner Guide is to provide those whose duty it is to inspect the works elements of ranges, with specific guidance that will help meet this requirement.

1. Scope

1.1. The local works or Maintenance Management Organisation (MMO) both in UK and overseas is required by JSP 403 to carry out a works inspection of all UK MOD range facilities. These range works inspections supplement those carried out by the annual and independent range inspectors. The inspections will not necessarily consider constructional, electrical or mechanical problems unless of course the defect is obvious. The range works inspection should include the following:

- a. All range structures.
- b. Boundary signs and flag poles.
- c. Ground conditions including slope stability.
- d. Any HSAW and CLAW issues.
- e. Infrastructure, drainage, power, roads, plant and equipment etc. JSP 403 Vol 1 Chap 7 Para 0707 gives details of equipment which is not included in the range inspection.

2. Policy

2.1. Each range facility is to be identified as an asset, linked to any associated buildings i.e. Range facilities include buildings, walls, earth or sand banks or bunds, trenches, retaining walls, towers, test facilities, unloading bays, any range with a structure of any nature. With the exception of ancillary buildings beyond the ballistic envelope, all range structures are to

be fully inspected at least every two years until the range is permanently closed. This minimum frequency of inspection will be dependent upon the rate of attrition of any of the structures and increased if deemed necessary. Where an inspector becomes familiar with specific ranges the depth of inspection should be tailored to target areas where high attrition occurs.

- 2.2. Works inspectors need not be range specialists but familiarity with the respective roles and responsibilities set out in JSP 403 Vol.1,, respective layouts and terms illustrated in JSP 403 Vol.2 and this guide is essential.
- 2.3. Where possible, works inspections should be co-ordinated with the annual independent inspection. In all cases, access onto range facilities must be pre booked with the range allocating authority.
- 2.4. On completion of an inspection works inspectors are to sign the inspection check list and certificate providing a copy for the Range Administration Unit range file. **Prior to leaving the range the works inspector is to make the appropriate entry and sign the range log MOD Form 906/906A.**

3. **Safety.**

- 3.1. There are strict procedures in JSP 403, Vol 1 Chap 4 or the control of access to most ranges. Where possible works inspectors should arrange to be accompanied by the range warden/ Range Administration Unit during the inspection for the following reasons;
 - a. To ensure personal safety.
 - b. So that targets and other equipment can be operated if necessary.
 - c. For 1st hand reports on the range facilities.
 - d. Local knowledge, particularly of any inspection recommendations, changes in staff and their responsibilities such as replacement of anti splash timber and stability of defence structure slopes and
 - e. also to discuss issues during the inspection.
- 3.2. When inspecting live firing facilities inspectors must ensure that they are briefed by the Range Authority or range staff prior to carrying out any inspection. It is possible that live firing may be taking place on adjacent ranges on a range complex; therefore inspectors must comply fully with safety instructions given by the range staff
- 3.3. On Field Firing Areas (FFA) there will be the possibility of unexploded ordnance in certain areas. These will be highlighted in the brief provided by the range staff. If no mention of unexploded ordnance is made on Field Firing Ranges, it should be raised as a question as to whether there is a perceived risk
- 3.4. Inspections of bullet traps and ventilation systems within indoor, tube and test ranges may expose inspectors to significant levels of lead dust and unburnt propellant. Inspections in such areas should only be undertaken when wearing appropriate personal protective clothing and equipment.
- 3.5. No mobile phone or other personal electrical equipment is to be switched on within 5m of any electrically initiated weapon system, munitions or explosive store on the range.

4. **Range Category & Elements To Be Inspected**

- 4.1. A full list of terms and definitions is provided in JSP 403 Vol.4. In broad terms ranges are split into the following categories;
 - a. Indoor No Danger Area (NDA) ranges.

- b. Outdoor NDA ranges (Standard or Non standard).
- c. Limited and full danger area constructed ranges.
- d. Field Firing Areas (FFA).
- e. Specialist and urban ranges.
- f. Small arms test and proofing ranges.

4.2. Under each category there will be different elements to inspect. Common to all ranges is the requirement to control access with the provision of safety signs, flags and lights for night firing (see JSP 403 Vol 2). Command range staff will determine the extent of signing and method of controlling access. The MMO will be involved in the installation and maintenance of these elements.

4.3. Specific elements for each range type are described in the following ANNEXES. It is impossible to itemise every aspect of range structures that require the attention of works inspections. The following details should be used as a guide only and inspectors should use their expertise to ensure that all important elements have been identified and inspected.

5. Proceedings of a Board of Officers for a Land Range MOD Form 1057 (Previously AFK 1309)

5.1. MOD ranges are authorised for use based on the detail provided on the MOD Form 1057 or AFK 1309. Each range layout and structure is described in some detail on the MOD Form 1057 or in the case of older ranges that have not been significantly changed, on the AFK 1309. Those carrying out works inspections should familiarise themselves with the detail on these forms prior to inspecting each range.

6. General Matters Associated With All Ranges

6.1. Ground conditions.

a. **Field Firing Areas.** On the open field firing areas troops are expected to operate across natural ground that may include dense scrub, woodlands, marsh and open downs. Areas of deep water, fast flowing rivers, steep drops should be identified under normal Risk Assessment processes and suitable control measures put in place.

b. **Constructed ranges.** Where ranges are constructed for basic training it is necessary to eliminate as far as possible trip hazards where troops are expected to move with loaded weapons. Range floors are normally grassed areas and these need to be maintained by regular grass cutting in the growing season to enable recovery of any dropped live rounds and empty cases.

c. **Anti tank target ranges and impact areas.** On open or controlled impact areas (areas where blinds have been cleared) the scrub is to be controlled to minimise the risk of fire.

6.2. **Control of Access.** All range danger area perimeter signs and flags are to be maintained with any overhanging shrub or trees cleared to ensure these signs remain visible at all times. Gates and barriers should be maintained in good working order. Where fences are provided to keep the public and trespassers out of the danger area such fences are to be regularly checked and maintained. Actual frequency will depend on local conditions such as the level reported incursions.

6.3. **Materials used.** JSP 403 Vol.2 provides details of specific materials for use in the areas where bullets are expected to impact. The JSP specifies the use of solid engineering brick on barrack range back walls. Hollow bricks or hollow concrete blocks are not to be used on any range where bullets are expected to be fired. The specification for sand and granulated rubber used in bullet traps is to be adhered to is provided in JSP 403 Vol.2 Chapter 2.

6.4. **Stability of earth or sand structures.** The annual and independent range inspectors may not identify potential collapse situations where steep sand banks are provided such as those used as stop butts on gallery ranges. Works inspectors are to take particular note of all sand slopes to ensure any retaining walls or boards are sound in order to retain the correct profile. Works inspectors should also be aware that weather patterns in UK have changed and the effect of torrential rain on sand slopes can be catastrophic. In areas where shot is expected, any slope stabilisation works should be cleared by TAS(RE) before funds are committed.



7. **Feedback.**

7.1. Should inspectors find regular works issues missed off any of the check lists in this guide please pass feedback to ;

OC(TAS(RE)
 HQ DTE
 Blenheim Hall
 Imber Rd
 Warminster BA12 ODJ
 Email: frank.compton251@land.mod.uk

8. **Works Inspection Guides**

8.1. The following Works Inspection Guides are attached as annexes to this PG

Annex A	<u>Barrack</u>
Annex B	<u>Gallery Range & Converted Gallery Range</u>
Annex C	<u>Electric Target Range</u>
Annex D	<u>Mechanised Moving Target Trainer Range</u>
Annex E	<u>Indoor</u>
Annex F	<u>Tubes</u>
Annex G	<u>Test</u>
Annex H	<u>Grenade</u>
Annex I	<u>Close Quarter Battle (Urban)</u>
Annex J	<u>Baffle</u>
Annex K	<u>Unloading Bay</u>
Annex L	<u>General</u>
Annex M	<u>Demolition Areas</u>

