

## Chapter 4

### ROTARY WING (CREW SERVED WEAPON) ENGAGEMENTS

#### GENERAL

0401. **Aim.** The aim of this chapter is to detail the policy and principles for the safety of Rotary Wing Crew Served Weapons (RWCSW) engagements on Defence Land Ranges worldwide

0402. **Definition.** Crews served weapons are pintle mounted and fired from helicopter doors and/or ramps; they are aimed and operated by a crew member other than the flying pilots/observer/Weapons Systems Operator (navigator) in the front crew positions. Handheld weapon systems can be fired from helicopter doors and/or ramps by Special Forces (SF) personnel, SASC qualified snipers or Fleet Protection Group Royal Marine personnel (Maritime Sniper Teams) but are not classed as RWCSW.

0403. **Lead.** The Rotary Wing Air to Surface Working Group is the lead for coordinating the MOD procedures for RWCSW engagements. As the Defence Competent Authority, Joint Helicopter Command Headquarters (JHCHQ) provides the Chairman and Secretary for the Rotary Wing Air to Surface Working Group (RWASWG) which reports through the Air to Surface/Surface to Air Working Party (ASSAWP) to the Defence Land Ranges Safety Committee (DLRSC).

0404. **Competent Authority.** RWCSW are classified as Personal, Individual or Support weapons. Director Infantry (DInf) is the Defence Competent Authority for RWCSW and is the awarding body for skill at arms and range qualifications required for their use.

0405. **Range Use.** RWCSW live firing is only to take place on ranges authorized and operated in accordance with JSP 403.

#### SAFETY

0406. The safety of personnel, property and livestock is paramount and the ultimate responsibility for the airborne safe practice rests with the RCO who may also be the aircraft commander. The following practices are to be adhered to at all times:

a. **Clear Range Procedure.** Steps are to be taken, in so far as is reasonably practicable, to ensure that the Range Impact Area/Zone is clear of unauthorised personnel, livestock and traffic before firing or hazardous training commences; and that it remains clear for the duration that the hazard exists. Sentries, vedettes, radar, closed circuit television surveillance, or a combination thereof, may be used to satisfy clear range procedures. These measures are to be laid down in Range Standing Orders. Clear Range Procedure is defined in Volume IV.

b. **Ballistic Safety Traces.** Only Weapon Danger Areas (WDA)/Hazard Impact Area Traces (HIAT) recommended by the Defence Ordnance Safety Group (DOSG), approved by the Service/Agency chain of command and authorized by the relevant Integrated Project Team (IPT) in the DE&S may be used for RWCSW engagements on ranges.

- c. **Laser Safety.** Laser Safety Clearances are to be obtained by the relevant Service/Agency chain of command. Lasers are not to be employed unless a clearance is held by the range.

### RANGE CONTROL

0407. Air to surface gunnery is only to be carried out on a range with the approval of the Range Safety Officer (RSO) or the Range Safety Officer (Air Traffic Control) (RSO(ATC)). The conduct of live firing practices is the responsibility of the user unit which provides the Range Conducting Officer (RCO).

- a. **RSO.** The RSO, a member of the Range Staff, is the person who has the overall responsibility for the safe operation of a particular range and is responsible for the clear range procedure.
- b. **RSO(ATC).** The RSO(ATC) on dedicated Air Weapons Ranges (AWR) is an officer or senior NCO of the Air Traffic Control Branch who holds a minimum endorsement of TC(AWR)L. The RSO(ATC) has overall responsibility for the safe execution of a particular range detail and for the co-ordination of the practice should more than one user be on the range.
- c. **RCO.** The RCO is the qualified, current and competent person who is appointed by the Exercise Director/Commanding Officer/Head of unit or organisation to be responsible for the safe conduct of firing in accordance with the relevant Service/Agency range instructions.
- d. **DE&S/TEST.** Range control at DE&S/TEST ranges will be in accordance with the relevant Range Standing Orders and with the Trial Specification where applicable.
- e. **Sea Ranges.** Air-to-surface firing entirely over the sea, in other than designated ranges, is to be conducted in accordance with single service regulations.

0408. **Qualification.** For air-to-surface firing to take place, Gunners must be either qualified and current, or firing under the supervision of the relevant Service air to surface gunnery instructor. The following personnel are qualified to act as air-to-surface gunnery instructors on the ranges specified:

- a. **RN:** Helicopter Warfare Instructors(HWI) on RN ranges and on dedicated AWR.
- b. **Army<sup>1</sup>:** Air Door Gunner Instructor(ADGI) on all ranges.
- c. **RAF:** Air Gunnery Instructor(AGI) on dedicated AWR.

0409. **Currency.** Gunners are not to fire unless they are deemed current in accordance with individual Service regulations, are undergoing initial training or are regaining currency under supervision of a suitably qualified Air to Surface gunnery instructor. T&E operations are to be in accordance with the Trial Specification.

### PREPARATION AND SUPERVISION

---

<sup>1</sup> This includes members of the RM who have completed an appropriate course of training with the Army.

ROTARY WING (CREW SERVED WEAPON)  
ENGAGEMENTS

JSP 403 Volume 3  
Edition 1 Change 3

0410. The RCO will be responsible for the planning, preparation, briefing, safe conduct and supervision of air to surface live firing practices.

0411. The RCO will ensure that:

- a. A suitable range is identified, booked and liaison established.
- b. The RSO/RSO(ATC) has access to the relevant WDA/HIAT.
- c. The WDA/HIAT has been applied to the satisfaction of the Range Staff for that range.
- d. The firer has completed all appropriate training and is under the supervision of a Safety Supervisor.
- e. A full safety brief is given to all those who will be on the range during the firing period.
- f. A detailed range brief and air gunnery exercise safety brief is conducted. As a minimum, these briefs should include the following points:

- Weapon Safety
- Laser Safety
- Communications
- Voice Procedures
- Range clearance
- Maximum height & speed of aircraft.
- Circuit Patterns/Profile
- Movement box and firing line identification
- Dry/Live/Hot Runs
- Arcs & Arc markers
- Refuelling location
- Loading
- Arming
- Firing
- Targets
- Stop actions
- Actions on - Weapons Misfires/Stoppages
- Limitations
- Emergencies
- Debrief and Reports
- Accident/Incident Procedures

- g. An armourer and/or AT is to be either present or available in accordance with

regulations applicable to the weapon type.

0412. The following conditions apply to all air to surface RWCSW live firing on to ranges:

- a. Weapon safety catches are to be kept in the SAFE position until the aircraft is in such a position that any deliberate or accidental firing would result in all rounds impacting in the RDA.
- b. The weapon is not to be selected to LIVE until a clearance has been given by the RCO or RSO(ATC).
- c. Weapons may not be fired until the correct target has been positively identified and confirmed by the firer and Safety Supervisor.
- d. Safety catches are to be applied after each weapon event.
- e. It is the responsibility of the aircraft Commander to ensure that the maximum height and speed stipulated for the WDA are not exceeded.

0413. **Laser.** Non-eye safe lasers are to be treated as live weapons since direct, diffuse, wet target and specular laser reflections can be dangerous. Further details are in Chapter 2 and in Volume I, Chapter 9 of this JSP.

### COMMUNICATIONS AND CONTROL

0414. **Radio.** Radio calls are to be in accordance with Reference S. Definitions of standard terminology used on ranges are given in Annex A to Chapter 7. Calls may be classified as mandatory or advisory.

- a. **Mandatory Radio Calls.** The following occurrences are to be requested or reported:
  - (1) Joining the range – requested by aircraft Commander.
  - (2) Clearance to join – given by RCO or RSO(ATC).
  - (3) Clearance to use the laser – given by RCO or RSO(ATC).
  - (4) Clearance to live fire – given by RCO or RSO(ATC).
  - (5) Stopping of live firing – given by RCO or RSO(ATC).
  - (6) Confirmation that the weapons are unloaded and cleared by inspection – given by Safety Supervisor.
  - (7) Passing of essential traffic information and precautionary warnings – given by RCO or RSO(ATC).
- b. **Advisory Radio Calls.** It is only advisory that the following information is transmitted:
  - (1) Aircraft position on the range – given by aircraft Commander.
  - (2) Weapon scores – given by RCO or RSO(ATC).

### **LOSS OF COMMUNICATION**

0415. **Loss of Communication.** In the event of loss of communications the following actions are to take place:

- a. The gunner is to cease firing.
- b. The Safety Supervisor is to ensure that all weapons are unloaded and cleared by inspection, with the weapon pointed in a safe direction at all times.
- c. The practice is to be terminated and the RCO informed at the earliest opportunity.

### **ARMAMENT ANOMALOUS OCCURRENCES**

0417. In the event of an armament or laser anomalous occurrence, including a negligent discharge, the following actions are to be implemented:

- a. Ascertain the status of the weapon and if unsafe, place the weapon in a safe condition. If this is not possible or doubt exists about status, ensure the weapon remains pointed in a safe direction.
- b. Report nature of malfunction and weapon status to the RCO and RSO/RSO(ATC).
- c. Land at pre-nominated landing point and shut down.
- d. Brief armourer/AT and verbally handover weapon.
- e. Submit Initial Report in accordance with Range SO, if required.

**Intentional blank page**