

# 40 Military Training for Land Systems

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## Amendment Record

Amendments will be staffed by the Health, Safety and Environmental Protection (HS&EP) team following consultation with relevant subject matter experts (SMEs) and key stakeholders.

Version No	Date	Text Affected	Authority
1.2	Oct 20	Interim update post-handover of Policy from DSA to D HS&EP.	D HS&EP
1.3	Jan 22	Updated to remove reference to maturity and bring the definition of a competent person in line with the HSE <sup>1</sup> definition of competence.	D HS&EP

## Introduction

1. This chapter sets out the Defence procedures and guidance to provide the Safe System of Training (SST) for Military Training for Land Systems. This SST shall be complied with in full for all Military Training for Land Systems. The chapter is concerned with assisting the Commander with managing the balance between the risks faced and the benefits that may accrue and indicates how the Commander should integrate risk management into their planning and estimates.

2. While the need to balance safe working practice against the Defence Training Imperative is recognised, hazardous training and RtL activities should be managed to ensure controls are in place to make certain the risks from harm remains ALARP. However, where the application of the SST is not a practical option for assessing a particular land systems military training objective the risk assessment process set out in JSP 375 Chapter 8 Risk Assessment should be followed. MOD Form 5010 is recommended for recording the risk-assessment process, but single-service substitutes may also be used.

<sup>1</sup> <https://www.hse.gov.uk/competence/what-is-competence.htm>

3. Health and safety legislation requires all activities to be conducted within a Safe System of Work (SSW). Within the military envelope there are three similar but distinct SSW which are:

- a. the standard Safe System of Work;
- b. the Operational Safe System of Work (OSSW); and
- c. the Safe System of Training.

### **Safe System of Work**

4. In order to ensure uniformity of practice and clarity of implementation, all military SSW consist of a common format which is broken down into 4 parts:

- a. Safe Persons. Those considered as a competent person, who have also been given the appropriate information, instruction, and supervision to enable them to carry out a specific activity.
- b. Safe Equipment. This is equipment brought formally into service together with the associated documentation and underpinned by a Safety Case to ensure its safe use by a competent person. Where no Safety Case exists, any equipment hazards should form part of the activity specific Risk Assessment.
- c. Safe Place. This is the space to be occupied by the military for the conduct of their activities and includes any surrounding areas together with any military or civilian population which might be affected by those activities. The Safe Place should form part of the activity specific Risk Assessment taking into account the proposed use of the space and controls put in place.
- d. Safe Practice. This covers the safe conduct of any activity and, unless conducted within the SST, should be risk assessed in detail and include any hazards arising from the use of the equipment, in the specific location, by competent persons, to ensure the Risk to Life (RtL) remains As Low as Reasonably Practicable (ALARP).

### **Operational Safe System of Work**

5. Using the generic SSW format, the OSSW ensures activities are conducted on operations by trained soldiers, at as low a risk as practicable, taking into account the operational realities. Within the OSSW, there may be risks, resulting from certain hazards within the operational environment, which have to be accepted due to limits on the controls which could be put in place to reduce the risk. Responsibility for accepting any increased level of risk lies with the Operational Theatre Commander and if required with discussion with the appropriate TLB Duty Holder in accordance with DSA01.2, Chapter 3, para 32.

### **Safe System of Training**

6. The SST takes into account that those under training are not yet competent but sets the conditions under which their training is to be conducted, ensuring they are provided with the appropriate information, instruction and supervision. This enables the military to meet the Training Imperative set by the Operational Requirement, to ensure that personnel are provided with the best possible preparation for the roles they may undertake in times of conflict, whilst maintaining risks at ALARP by ensuring those who conduct the training are competent.

7. The acceptable level of training risk is set by the appropriate Service authority who owns the training activity, in accordance with the Defence Direction on Training and Education (JSP 822) steps Analysis, Design, Delivery, Assurance and MTS; exceptionally, this may be set by the Operational Theatre Commander for training within Theatre.

## Definitions

8. Land Systems - Any system designed for and operated in the Land Domain.
9. Safety Case - A structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that a system is safe for a given application in a given operating environment.
10. Military - Within this chapter the word 'military' covers all the Services including Regular, Reserve and Cadet Forces participating in any military activity.
11. Hazard - Is the actual or potential condition that can cause injury, both immediate and delayed, illness or death of personnel or damage or loss of equipment or property.
12. Severity - Is the degree of injury, numbers of personnel affected, property damage, or other factors that could occur as a result of a hazard being realised.
13. Risk - Is the probability of exposure to injury, loss or damage to equipment from a hazard. This chapter is concerned with the risk of accidents occurring during any military activity, including but not limited to, operations, training including adventurous training, aid to the civil power and all other official duties directed by the Chain of Command. The risk, essentially Force Protection, is owned by the appropriate Duty Holder and managed under their direction.
14. Tactical Risk - Is the risk associated with hazards that exist due to the presence of the enemy on the battlefield. The appropriate Operational Commander alone determines how and where they are willing to take tactical risk.
15. Residual Risk - Is the level of risk remaining after controls have been applied.
16. Controls - Are actions taken to eliminate hazards or reduce their risk.
17. Operational Requirement - This defines the standards to be demonstrated during the conduct of operations.
18. Training Imperative - This defines the standards to be achieved and demonstrated during training and preparation of personnel and equipment prior to deployment to enable them to operate within the operational environment.
19. Competent person - A person who has the training, skills, experience and knowledge necessary to perform a task safely and is able to apply them. Other factors, such as attitude and physical ability, can also affect someone's competence.

## Roles and Responsibilities

### Commanders

20. In order for a RtL training activity to proceed, Commanders shall have written agreement from the appropriate authority (e.g. Duty Holder, Regulatory Authority). Commanders have a non-delegable responsibility for ensuring that activities are conducted in accordance with Service instructions, regulations, Defence Codes of Practice (DCOPs), directives and policy while taking due regard to any risks to personnel. The mechanisms for discharging this duty may be delegated and assistance and support obtained, but legal responsibility remains with Defence through its Chain of Command.
21. Commanders who direct training/operations shall ensure that:
- a. such training and operational activity takes place in a manner that is as safe as is reasonably practicable, in accordance with current Service instructions, DCOP, policy, regulations and directives.
  - b. Service instructions, DCOP, policy, regulations and directives applicable to the training activities are complied with in full and are communicated to those conducting the training, as well as those undergoing training.
  - c. the SSW applies to every activity, including all activity undertaken on operations. If the particular activity is not already covered by an existing SSW, an activity specific risk assessment covering all areas of the SSW should be undertaken and any control measures required should be implemented.
  - d. those being trained are informed of the hazards they will face during the training.
  - e. when, as a result of a risk assessment, the residual risk cannot be adequately controlled within the SSW and the activity is deemed necessary to maintain operational effectiveness, the Commander should obtain approval from the appropriate authority for the activity to take place.
  - f. if a Commander wishes to deviate from Service instructions, DCOP, policy, regulations and directives, particularly if it involves live fire training, and the activity is deemed necessary to maintain operational effectiveness, the Commander shall obtain acceptance of the risk from the appropriate authority for the activity to continue.
  - g. Commanders **must** carry out an appropriate risk assessment. It **must** identify the hazards associated with achieving the training objectives, prior to any activity, regardless of it being a single activity, exercise, range or operational commitment. The risk assessment is to be classed as a live document. Commanders **must** consider the effects of any changes to activities, before and particularly during activities, before implementing any change. The five-step risk assessment process as set out in chapter 8 of JSP 375 Volume 1 should be followed.
22. Commanders having the appropriate authority shall study the submissions made by their subordinate Commanders for activities carrying significant risk and if it is considered not to be adequately controlled, modify the directed training requirement to reduce the risk.

23. If the Defence imperative benefit is critical, the submission should be elevated to the appropriate authority for a decision; under exceptional circumstances, Operational Theatre Commanders may authorise Operational Dispensations<sup>2</sup> for a period of up to 28 days whilst the submission is considered.

24. If the Defence imperative is crucial, a request to deviate from Service instructions, DCOP, policy, regulations and directives (particularly if it involves live fire training), Commanders shall get approval from the appropriate authority (e.g. Duty Holder, Regulatory Authority) who will require evidence that the risks are tolerable to approve the activity.

### **Defence Personnel**

25. Personnel undergoing training are not considered competent until they have the combination of training, skills, experience, and knowledge and the ability to apply them to perform a task safely. Personnel undergoing training shall adhere to any instructions delivered before and / or during training. The level of supervision and competency of those instructing and supervising will be directed by the appropriate authority. Trainees are to be fully briefed on all hazards they will face during training.

### **Managing the Safe System of Training**

26. For military training activities, the hazards must have already been assessed and the consequent controls approved by the appropriate authority and integrated into formal procedures to reduce the risks to the ALARP condition, within the constraints imposed by the Training Imperative. The SST consists of four separate generic elements:

- a. Safe Persons;
- b. Safe Equipment;
- c. Safe Place; and
- d. Safe Practices.

### **Safe Persons**

27. These are persons who have received the appropriate information, instruction, training and supervision required to carry out a specific task correctly and safely. They are deemed as a competent person within the SST by virtue of their training, skills, experience, and knowledge and their ability to apply them to perform a task safely.

28. Commanders must ensure that instructors and those supervising the training are competent and given an appropriate level of supervision to ensure that the delivery of training matches the ability of those being trained and complies in full, with all the elements of the SST.

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<sup>2</sup> See DSA02: Defence Land Safety Regulator.

## Safe Equipment

29. Any equipment including explosives and ammunition, brought into service following the Defence process for the production of a Safety Case<sup>3</sup>, with appropriate documentation defining the safe operation and maintenance of the equipment under service conditions. Commanders shall ensure:

- a. their subordinates have available, and make proper use of, the correct equipment to carry out an activity in accordance with the appropriate Service Equipment Support Publication or similar set of instructions.
- b. only competent persons or those under training who are being provided with the appropriate supervision are allowed to operate and service the equipment.
- c. complete training and maintenance records are kept.

## Safe Place

30. A place in which the controls, necessary to enable authorised training to be conducted safely, have been identified by a site-specific risk assessment<sup>4</sup> and directed through appropriate Standing Orders such as Range Standing Orders. Commanders shall ensure both instructors and those under training are fully briefed on all necessary controls to be implemented in order to maintain the Safe Place.

## Safe Practices

31. Practices conducted strictly in accordance with drills, procedures and instructions laid down by the Service authorities. These drills and procedures, taking into account the Training Imperative, are identified in the Safety Case and developed in accordance with the Defence Systems Approach to Training (DSAT). Safe Practice includes following correct procedures, the provision of effective supervision and delivery of effective training, the briefing of all warnings, cautions and controls together with the use of appropriate Personal Protective Equipment (PPE). Training is only delivered by a competent person to ensure that procedures are strictly adhered to and such instruction and training is closely supervised by the Chain of Command to ensure Safe Practice is implemented.

## Persons at Risk During Military Training

32. There are 3 categories of people at risk during training:

- a. Defence personnel undergoing training and those conducting it.
- b. Defence personnel and contractors employed in support of training.
- c. the general public; this includes those unaware of the military training activity and in the worst case, the trespasser, who deliberately disregards warnings or is unable to interpret warning signs.

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<sup>3</sup> A structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that a system is safe for a given application in a given operating environment.

<sup>4</sup> JSP 375, Volume 1, Chapter 8.

## Confirmation that the Safe System of Training is Applicable

33. It is not within a Commander's delegated authority to deviate from Service instructions, DCOP, policy, regulations and directives. The first step therefore, when carrying out a risk assessment of a training activity, is to establish whether or not all elements of the SST are in place. If all elements are in place, the relevant controls should be recorded on the risk assessment and there is no need to proceed further.

## Assessment Process

34. The aim of the risk assessment of a training activity is to:

- a. establish if all elements of the SST are in place, identify what hazards, if any, are not covered by the SST and consequently what additional controls are needed to reduce the risk to the ALARP condition.
- b. analyse the residual risk to decide if the residual risk is:
  - (1) adequately controlled; where the risks are deemed by the Commander in charge of the training activity to be ALARP, the activity can be carried out; or
  - (2) not adequately controlled; where there are unacceptable risks, further measures are to be introduced to reduce the risk to ALARP.
- c. where residual risks cannot be adequately controlled the activity is not to proceed unless dispensation is granted by the appropriate authority.

35. A risk assessment using MOD Form 5010 (or single-service substitute) shall be carried out when:

- a. risk assessments for specific activities at a specific site are not provided.
- b. instructions for the activity proposed are not covered by, or are contrary to, drills and instructions issued by the appropriate Service authority.
- c. approval is required from the appropriate authority.
- d. a heat illness or cold injury could occur in accordance with JSP 375 Chapter 41, Heat Illness Prevention, or Chapter 42, Cold Injury Prevention, respectively.

36. Where there are proposed changes to training exercises the SST shall be subjected to a full compliance check prior to the activity commencing to confirm the SST remains fully in place and there are no new hazards introduced. If there is any doubt, the intended revised activity shall be subjected to a full written risk assessment.

## Generic Risk Assessment

37. Generic Risk Assessments (GRAs) are employed where similar activities are undertaken or repeated. These assessments describe the hazards involved and direct a standard set of control measures that are to be employed to reduce the associated risks. Repetitive training activities carried out in training units lend themselves particularly to GRAs. The methodology for carrying out GRAs in military training is the same as the risk assessment process detailed above.



38. Given infinitely variable factors present in military activities, for example the location of training, the weather or the state of training of personnel, GRAs will require careful scrutiny to ensure that they are applicable to the particular activity at that specific time and location.

39. Where the person carrying out the training risk assessment, for whatever reason, considers that there are still hazards remaining which require additional control measures, they shall list them, and the additional control measures required on the risk assessment form (MOD Form 5010 or single-service substitute).

40. Risk assessments, including those in support of Operational Dispensations, together with the resultant control measure instructions etc, are living documents and shall be reviewed:

- a. if there is reason to suspect that the risk assessment is no longer valid.
- b. if there are significant changes to the activity.
- c. annually.
- d. immediately following any accident, incident or near-miss.

### **Exercise Instructions**

41. Exercise instructions shall contain a copy of any Exercise Risk Assessment which should consider, as a minimum, the following factors:

- a. all Defence personnel and the general public.
- b. equipment together with their associated publications containing hazard warnings and controls.
- c. materials (ammunition, food, water, fuel, etc).
- d. procedures and associated guidance.
- e. the environment; the most important factors are likely to be climate, weather and terrain, but also hazards and controls in any site-specific Training Area Standing Orders.
- f. Service publications, drills, practices and instructions.

42. If all the elements of the SST are in place, the Exercise Risk Assessment shall list the controls in place. If parts of the SST are missing or do not fully cover the activity, then additional hazards shall be added to the risk assessment (MOD Form 5010 or single-service substitute).

43. The Exercise Instructions shall contain an Exercise Action Safety Plan (EASP) or where live firing is being undertaken a Range Action Safety Plan (RASP) or Range Safety Document (RSD) either as part of the co-ordinating instructions or as a separate annex giving the details of the controls to be put in place and their execution. There must also be an approved medical plan.



44. Exercise Instructions shall clearly state the written authority required to make changes to the exercise.

### **Retention of Records**

45. Risk assessments and associated documents should be retained in accordance with the requirements of JSP 375, Volume 1, Chapter 39 (Retention of Records).

### **Related Documents**

46. The following documents should be consulted in conjunction with this chapter:

- a. JSP 375, Volume 1.
  - (1) Chapter 8 - Risk Assessment.
  - (2) Chapter 39 - Retention of Records.
  - (3) Chapter 41 - Heat Illness Prevention.
  - (4) Chapter 42 - Cold Injury Prevention.

Withdrawn