

27 Preventing Falls and Falling Objects

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Introduction

27.1.1 This chapter provides guidance for compliance with the Working at Height (WAH) Regulations and Merchant Shipping and Fishing Vessels (Health and Safety at Work) (Work at Height) Regulations (MSFV(HSW)(WAH)R for the safe management of defence activities in order to prevent/reduce the risk of falls of personnel or equipment from height that is liable to cause personal injury; and how the roles and responsibilities are attributed within defence. The scope extends to any foreseeable risk of falls from height involving defence assets or the defence estate including unauthorised parties gaining access to areas with significant risks of falls; sheer drops, unguarded fixed access ladders etc.

27.1.2 This chapter does not cover defence personnel responsible for planning, supervising or undertaking work at height on designated Restricted High Places (RHPs)¹, these should be managed in accordance with JSP 375, Part 2, Vol 3. This chapter does not apply to undertaking Adventurous Training (e.g. caving, climbing etc.) for which Service specific policies and nationally accepted good practise should be followed, however, it does apply to the maintenance or modification of high ropes course, route setting on climbing walls etc.

27.1.3 For the purpose of Defence activities the definition of WAH is: *any activity in any place above, at or below ground level, including obtaining access or egress (except by staircase) from such a place, that if there were no precautions in place, a person or item could fall a distance liable to cause personal injury.* Falls remain the single biggest cause of workplace deaths and one of the main causes of major injury. The risk of falls, regardless of the distance, can have serious consequences depending on what the person or object falls onto/into. Injuries often occur as there is a failure to recognise a problem:

- failure to provide safe systems of work;
- failure to ensure that safe systems of work are followed;
- inadequate information, instruction, training or supervision provided;
- failure to use appropriate safety equipment, including PPE e.g. safety harnesses;

¹ RHPs are, for example, masts, towers and other buildings, plant rooms and installations including work platforms with permanent fixed access systems such as fixed ladders, step-irons, etc. A mast or tower structure which does not have a fixed access system but is climbable by using its lattice frame may also be designated as an RHP. NOTE: RHPs do not apply to ships .

- failure to provide safe plant/equipment.

27.1.4 The risk of falls from high places (e.g. into a pit/excavation, from a ship mast, or from a roof) or objects falling on to people below is generally obvious and the need for managing this activity is easily recognised. Falls of relatively short distance (other than high places) are often overlooked in the activity risk assessment as they are considered incidental to the main and the risk of serious injury is therefore not always appreciated; these may include:

- use of ladders, steps-ladders etc; (e.g infrastructure maintenance tasks changing lights or ceiling tiles in an office);
- working on and/or erecting scaffolding;
- climbing in/out of road vehicles;
- working on aircraft aircraft;
- use of plant and machinery;
- unloading/loading (e.g. refilling tankers, using loading bays)/maintenance of vehicles or equipment;
- working on a “deck”² in the Maritime and Air environment;
- working near or adjacent to fragile material (e.g. sky lights);
- working at ground level adjacent to an open excavation/pit/hole;
- working within an excavation/pit/hole.

27.1.5 Where an activity carried out in the interests of national security cannot comply with any of the WAHR, an exemption case specific to the activity for a person or class of persons to be exempted from the relevant part(s) of the regulation(s) will be required to be submitted to the relevant Defence Regulatory Authority domain; (land, maritime, air) for consideration (see paragraphs 27.3.1 – 27.3.5 for more details).

Roles and Responsibilities

Procurement or Acquisition

27.2.1 All equipment acquired for use with WAH activities must be properly designed, constructed (including safe access for inspection and maintenance both externally and internally) and correctly installed for the purpose intended. Asset safety case documentation including relevant operational/maintenance and safety information should be provided to the end user.

Commanding Officers (COs)/Heads of Establishment (HoEs)

27.2.2 The CO/HoE should ensure that the identification of all areas under their control where there is a risk of falls or falling objects, that the risks to personnel and/or visitors (or others who may be affected) are assessed and appropriate management systems are implemented. Any areas with the potential for persons to gain access (particularly on remote or unguarded sites) to significant WAH risks eg sheer drops, unguarded fixed access ladders should be controlled to restrict access to authorised persons only.

² Ground level equates to “Deck” in the Maritime and Air environment

27.2.3 The CO/HoE should ensure that where the WAH activities are controlled by a third party organisation (eg Maintenance Management Organisation, project team, external contractor) that any points of demarcation and responsibility is agreed, clearly defined and documented. Effective communication between any third party organisations and the CO/HoE is necessary to provide assurances that all WAH activities are safely managed iaw JSP 375, Part 2, Vol 1, Chapter 34 (4C System).

Infrastructure Provider/Equipment Manager (IP/EM)

27.2.4 Those with responsibility for the provision and maintenance of infrastructure should ensure that all WAH activities under their control is identified and that suitable and sufficient arrangements are in place to safeguard all defence personnel and/or visitors, and where appropriate in accordance with JSP 375, Part 2, Vol 1, Chapter 34 (4C System), and assurance provided to the CO/HoE.

27.2.5 Where appropriate access to high places should be controlled and restricted to authorised personnel (eg restrictors on windows opening on to roofs, anti-climb devices on fixed access ladders). If the area is designated a RHP the activity should be managed in accordance with JSP 375, Part 2, Vol 3. All RHPs are to be identified with appropriate signage and access restricted to authorised personnel (e.g. physical restrictions).

Managers

27.2.6 Managers are to ensure that all potential activity which may require WAH within their area of responsibility is identified and appropriate measures are undertaken to ensure safety of personnel/visitors. Managers are to ensure that all work at height is :

- properly planned and organised - including safe access and egress to the work area and planning for emergencies and rescue;
- assessed for risks using a hierarchy of control measures:
 - **avoid** - so far as is reasonably practicable work should be conducted at ground level;
 - **prevent** falls – where WAH can not be avoided suitable control measures should be put in place e.g. Safe System of Work, Permit to work, prevent falls using an existing safe place of work or use the correct type of equipment. A safe place of work may need to be created if none exists (e.g. using temporary guard rails around a roof, or by providing a correctly constructed scaffold);
 - **reduce** the distance and consequence of a fall - so far as is reasonably practicable, provide the right type of work equipment to minimise the distance and consequences of a fall. (e.g. the distance that a person can fall can be reduced with safety nets or fall arrest systems);
- appropriately supervised;
- work is undertaken in a way that is - as far as is reasonably practical – safe;
- always done by competent people, including managers and supervisors, who are appropriately trained and supervised;
- undertaken using appropriate equipment that is regularly inspected and maintained by a competent person(s).

27.2.7 Managers should also consider the following control measures in their risk assessment:

- reduce the time personnel are required to be at height e.g. co-ordination of maintenance needs to combine several small maintenance jobs together
- the environmental conditions e.g. are the conditions cold/ wet/ hot, is the location exposed to winds – these conditions could change the surface of the structure, or have an affect the person carrying out the work;
- work being undertaken in the same area will not affect or be affected by the WAH activity or visa versa;
- any areas where levels may change and personnel may be exposed to a fall from one level to another (e.g. a person falling into the interior of a ship from an open floor hatch or aircraft carrier hanger lift) is minimised;
- personnel /contractors involved in WAH at height are physically and mentally fit to carry out their duties safely. (e.g. no known history of heart disease, severe high blood pressure, epilepsy, vertigo, balance conditions, impaired limb function, uncorrected visual impairment, alcohol or drug dependence, and diabetics);
- whether there are fragile³ surfaces in the work area and these are properly controlled;
- the risks from falling objects are properly controlled;
 - any materials/tools for the task may need to be carried or brought securely up to the work area;
 - any materials and objects are stored safely so they won't cause injury if they are disturbed or collapse (e.g. nails, pieces of wood, debris etc). ;
 - mesh or netting slung beneath cradles, harnesses, or mobile elevated platforms to prevent anything falling and causing injury or damage;
 - area below where the work activity is taking place should be secured/fenced off as necessary and suitable signage employed to warn personnel of the activity.
- the risk assessment is regularly reviewed (e.g. when new equipment or plant are introduced, change of personnel or following an accident/or near miss).

27.2.8 Managers must ensure that collective protection measures are given priority over personal protection measures:

- **Collective protection** is equipment that does not require the person working at height to act for it to be effective e.g. permanent or temporary guard rails/barriers, toe-boards, scaffold towers;
- **Personal protection** is equipment which requires the individual to act for it to be effective e.g. putting on a safety harness correctly and connecting it, with an energy-absorbing lanyard, to a suitable anchor point.

Note: most fall restraint equipment has a maximum load safety limit. .

27.2.9 The manager when selecting equipment should also take account of:

- the most appropriate equipment for the task;
- the working conditions at the task location

³ "fragile surface" means a surface which would be liable to fail if any reasonable foreseeable loading were to be applied to it.

- nature, frequency and duration of the work; and
- risks to the safety of all those at the task location where the work equipment is to be used.
- how the equipment/tools for the task are to be brought up to the work area;
- how to secure any equipment/tools e.g. drills, spanners, wrenches etc to prevent them from falling below the work area

27.2.10 For further advice on types of equipment/tools to use with WAH activities, managers should consult their local health and Safety advisor or their TLB Chief Environment and Safety Organisation (CESO).

All Personnel

27.2.11 Personnel should only use work equipment or safety devices (these should be checked before and after use) provided to them in accordance with instruction and training. They should work to their level of competence and should not disregard the systems in place for their own and other persons safety. Any unsafe working practices should be reported.

27.2.12 Personnel should report any equipment or safety device defects to their manager immediately. If personnel feel they have any medical or physical condition which could affect their ability to carry out their duties safely whilst WAH they should bring this to their managers' attention.

Exemptions

27.3.1 The provision in the WAHR allows the Secretary of State for Defence to exempt a person or class of persons from specified parts of the specific regulations.

27.3.2 An exemption from the WAHR will only be granted where the Secretary of State for Defence (SofS) is satisfied that the person or class of persons involved in activities detailed in an exemption case submission (ECS) are carried out in the interests of national security. Any exemption granted will be time limited (maximum five years), and be subject to conditions. Where the provisions of the WAHR cannot be complied with and an exemption is granted, control measures are to be put in place to mitigate the WAH activity to a level that is as low as reasonable practicable and minimises the risk to the health and safety of the person or class of persons concerned.

27.3.3 The ECS must contain a reasoned argument to demonstrate that in order to protect national security (operational capability) the MOD is reliant on the exemption being granted, and the conditions stipulated in the regulations have been satisfied. The ECS must include the following information:

- the type of person, or class of person being exempted;
- the name and purpose of the particular equipment/system/activity giving rise to the problem;
- an outline of the problem and its magnitude – i.e. without exemption how particular activities (e.g. training) will be adversely affected, numbers of people placed at potential risk, the impact on front line operational capability (e.g.

military tasks that will become impossible to undertake, or otherwise severely hampered) etc;

- actions undertaken and/or considered to comply with the regulations – where compliance is being ruled out on cost grounds, cost data is to provided;
- an action plan for compliance with the regulations in the short, medium and long term i.e. proposed mitigation measures to reduce the risk to a level that is as low as is reasonably practicable likely costs and timescales, etc;
- the time period for which the exemption is required (limited to a maximum of five years) and the rationale for it;
- the plan for assessment of defence personnel undertaking the activity and provision of suitable and appropriate health surveillance/health monitoring;
- where renewal of an existing exemption is being sought, details on the success or otherwise of the previous action plan, including the results of health surveillance/monitoring.

27.3.4 The preparation of the ECS will require input from operating authorities, acquisition teams and medical personnel etc. as appropriate. The draft ECS is to be passed for scrutiny to the relevant subject matter experts within the appropriate Defence Regulators Domains (e.g. if the activity is land based then the submission will go to the Defence Land Safety Regulator) for scrutiny. If the ECS is unsuccessful, the activity will be discontinued until such time as it can be made compliant with the regulations.

27.3.5 After passing scrutiny, the sponsor will forward the completed ECS to the Secretary of State for signature. A copy of the completed certificate should be forwarded to DSA.

Retention of Records

27.4.1 WAH risk assessments (original and revised) together with related maintenance; and inspection records etc. are to be retained in accordance with JSP 375, Part 2, Vol 1, Chapter 39 - Retention of Records.

Related Documents

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

JSP 375, Part 2, Vol 1

- Chapter 08 - Health and Safety Risk Assessment
- Chapter 15 - Personal Protective Equipment;
- Chapter 22 - Work Equipment;
- Chapter 24 - Lifting Operations and Lifting Equipment;
- Chapter 30 - Permit to Work;
- Chapter 33 - Construction and Excavation;
- Chapter 34 - 4C System: The Management of Visiting Workers and Contractors
- Chapter 39 - Retention of Records

JSP 375, Part 2, Vol 3

- Chapter 02 - Common Requirements;
- Chapter 07 - Working at Height.

Other JSPs/MOD Guidance

- JSP 815 - Defence Environment and Safety Management;
- JSP 569 - Working at Height - Personal Protective Equipment.
- Defence Clothing Catalogue.

Legislation and Guidance

- [Legislation.gov.uk](http://legislation.gov.uk) - [Health and Safety at Work Etc Act](#);
- [Legislation.gov.uk](http://legislation.gov.uk) - [Management of Health & Safety at Work Regulations](#);
- [Legislation.gov.uk](http://legislation.gov.uk) - [The Workplace \(Health Safety & Welfare\) Regulations](#);
- [Legislation.gov.uk](http://legislation.gov.uk) - [The Working at Height Regulations](#);
- [Legislation.gov.uk](http://legislation.gov.uk) - [Lifting Operations and Lifting Equipment Regulations](#);
- [Gov.uk](http://gov.uk) - [The Merchant Shipping and Fishing Vessels \(Health and Safety at Work\) \(Work at Height\) Regulations](#) ;
- [Legislation.gov.uk](http://legislation.gov.uk) - [The Provision and Use of Work Equipment \(PUWER\) Regulations](#);
- [Legislation.gov.uk](http://legislation.gov.uk) - [The Construction \(Design & Management\) Regulations](#);
- [Legislation.gov.uk](http://legislation.gov.uk) - [Personal Protective Equipment at Work Regulations](#);
- [HSE](http://hse.gov.uk) - [HSG33 - Health and Safety in roof work](#);;
- [HSE](http://hse.gov.uk) - [INDG401 - The Work at Height Regulations - A brief guide](#);
- [HSE](http://hse.gov.uk) - [INDG402 - Safe use of Ladders and Stepladders](#);
- [HSE](http://hse.gov.uk) - [INDG413 – Preventing Falls from Vehicles](#);
- [HSE](http://hse.gov.uk) – [INDG284 – Working on Roofs](#);
- [HSE](http://hse.gov.uk) - [Selecting equipment for work at height](#);
- [HSE](http://hse.gov.uk) - [Work at height - Access equipment Information Toolkit \(WAIT\)](#).

Template EXEMPTION CERTIFICATE (...name of Regulations and date...)

1. For persons undertaking [...name of activities to be exempt.....] using [.....name of equipment/system.....].

2. [... name of Regulation and date....] cannot be complied with fully when undertaking [...name of activities to be exempt.....] using [.....name of equipment/system.....].

3. I having considered the case made for exemption at Ref [...Exemption Case Submission reference...] do hereby exempt, in accordance with the power vested in me by virtue of regulation [.....number...] of [.....name of Regulation and date....], in the interests of national security, all persons undertaking [...name of activities to be exempt.....] using [.....name of equipment/system.....].

4. This exemption is granted subject to the following conditions:

- a.
- b.
- c.

5. I may vary or revoke this Exemption at any time by a certificate in writing, and in any event this Exemption shall expire, unless renewed, on [...date...].

Signed..... Date.....

Certificate No:.....

