

# Work at Height Standard

(SHEMS-STD-GR-049)

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## 1 Introduction

The purpose of this Standard is to set out the requirements for the planning and management of work at height (WAH) undertaken by or on behalf of Unitas.

This Standard requires that:

- The need for WAH to be **eliminated** where reasonably practicable by design or being managed out
- If not avoidable, the need for WAH be **reduced** so far as is reasonably practicable, to limit the potential for falls
- Where WAH cannot be reasonably avoided, existing safe places of work are used where appropriate, and individuals informed of safe working controls through training and instruction.
- Where the risk of a fall remains, measures are implemented to **minimise** the distance and consequences of a fall should one occur
- Collective measures that protect **all** those at risk are considered as best practice
- The risks from fragile surfaces, falling materials and weather conditions are properly controlled
- Suitable emergency and rescue arrangements are in place
- All WAH is planned, executed, supervised, monitored and reviewed by competent persons, in accordance with an agreed safe system of work (SSW) which is based upon a task specific risk assessment (RA)

This Standard **does not** preclude the use of **ladder/stepladders**, where a risk assessment and associated safe system of work can demonstrate that, in short term circumstances, they may be an appropriate choice.

## 2 Scope

The scope of the SHEMS covers all persons, workplaces and Operations in the Unitas business.

Exceptions will be documented through a SHEMS Appendix B process ([SHEMS-FOR-GR-999](#)), authorised by the Operations Director responsible for coordinating SHE.

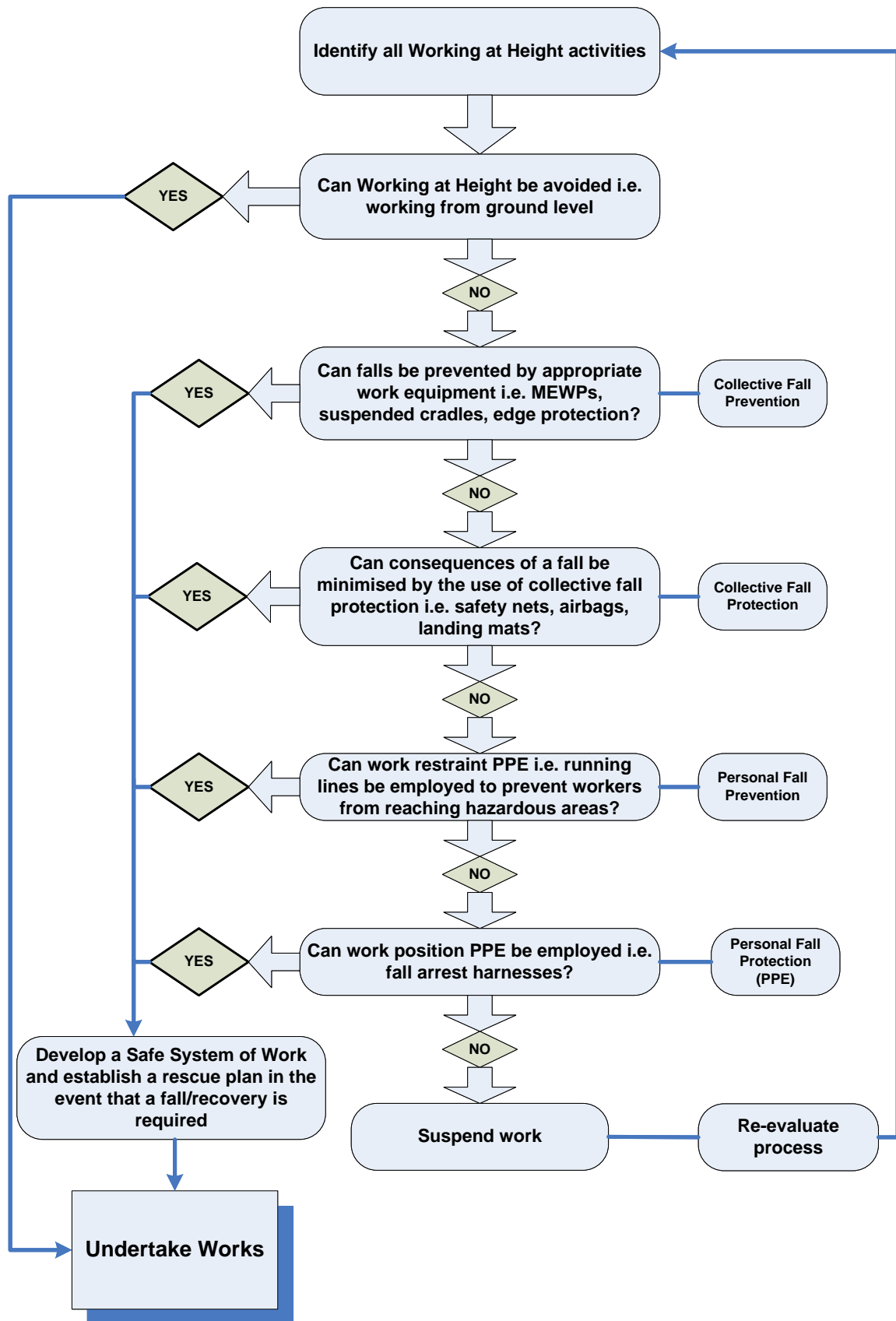
Unitas SHEMS manual ([SHEMS-STD-GR-003](#)) provides guidance and signposting for the compliance, implementation, monitoring, audit and review of our systems, and demonstrating continual improvement.

The application of this Standard will facilitate safe working at height on all Unitas Projects and work streams.

### 2.1 External References

- [HSE's Working at height -A brief guide](#)  
This document provide guidance on various contract to minimise working at height risk  
[HSE's INDG403 Safe Use of Ladders and Stepladders](#)
- This document is a toolbox talk on leaning ladder and stepladder safety  
[HSE's INDG405 Safe Use of Ladders and Stepladders](#)
- This is a pocket sized card which provides tips on ladder and stepladder safety
- [HSE's Construction Information Sheet No.58](#) – The selection and management of mobile elevated work platforms
- [NASC SG4:15 Preventing falls in scaffolding operations](#)

## 3 Working at Height Process



### 3.1 Process Working at Height Equipment Selection Hierarchy

## 4 Unitas Requirements

### 4.1 General

Falls from height remain the single biggest cause of workplace death and one of the main causes of major injury.

Work at Height (WAH) includes all work where a person or materials could fall any distance liable to cause personal injury, including falls into excavations or other openings from ground level or below; and working on the rear of vehicles.

### 4.2 Work at Height Hierarchy

The following WAH Hierarchy Process and WAH Work Equipment Selection Hierarchy, detail the priority of measures and options which shall be implemented when planning and managing WAH. Only progressing to the lesser alternatives where it can be demonstrated that it is not reasonably practicable to do so.

### 4.3 Work at Height Minimum Standards

In addition to the general requirements contained within this Standard, there are allocated Minimum Standards to support WAH principles.

### 4.4 Risk Assessment and Safe Systems of Work

All WAH shall be planned and managed via:

- A comprehensive task specific RA carried out by a competent person who is familiar with the work activity and its associated hazards and risks
- A documented SSW developed from the RA, detailing the specific control measures to be implemented in circumstances where WAH cannot reasonably be avoided.,( to eliminate, minimise or mitigate the risk of falls, take account of weather conditions that could endanger safety and health, ensure that WAH equipment is appropriately inspected, that risks from fragile materials and falling objects are properly controlled and includes emergency and rescue arrangements)
- The proposed SSW being evaluated and agreed by a member of Unitas staff who is familiar with the work activity and its associated hazards and risks
- All persons undertaking WAH being trained and competent. They must, receive a recorded task briefing on the agreed SSW and be provided the opportunity to comment before the work is allowed to commence
- All persons who will be working from ladders or stepladders receiving a toolbox talk on the safe use of this equipment, HSE's INDG403 is a useful source of information and can be utilised when delivering toolbox talks. If any specialist equipment is being used such as the Tetra ladder safety equipment, those using this equipment shall have had training in its safe use
- All WAH shall be regularly monitored and reviewed by competent persons, proportionate to the level of risk involved

#### 4.4.1 Weather

Weather conditions must be taken into consideration during the planning stage of a working at height operation. Adverse weather conditions may require the operation to be suspended or a different work method considered; refer to Wind Speed Table below;

WAH Activity	Amber Caution- Wind mph	Red STOP- Wind mph
Cradles	10	17
Scissor/Boom MEWP <b>Check some MEWPs = zero Wind MPH</b>	17	20
Hoists	17	25
Mast Climbers	17	25
Scaffolding	17	25
Roofing & Boarding	17	25
Mobile Cranes	25	30
Tower Cranes	30	38

#### 4.4.2 Working in close proximity to live overhead services

Working in close proximity to live overhead services must be risk assessed by a competent person. The risk assessment should include the following:

- Communication with utility owners
- Proximity to planned work
- Voltage
- Weather conditions
- Proposed equipment to be used
- Nature of the work

See Overhead Services Standard ([SHEMS-STD-GR-031](#)) for further information.

#### 4.4.3 Working on the rear of vehicles

Working on the rear of vehicles must be planned in advance where no other alternative is available. The hazards and risks associated with working on the rear of vehicles are dependent upon the height of the vehicle platform and the work activity. Risk assessments and safe systems of work are adopted at local level taking into consideration the above. Where work involves working from the rear of a vehicle suitable edge protection must be fitted to the vehicle.

#### 4.4.4 Working adjacent to a trench or excavation

Fall prevention must be in place prior to working adjacent to a trench or excavation. The edge protection, including vehicle stop blocks where appropriate, shall provide a rigid barrier to stop persons, vehicles and plant from falling into the trench or excavation e.g. proprietary trench support systems such as drag boxes and/or their associated guardrail sections protruding a minimum of 950mm above the excavation/trench. Where space permits secondary protection should be considered in the form of an exclusion zone a minimum of 2 metres back from the edge protection, this can be created by the use of securely clipped Heras fence panels or crowd control barriers. Similar exclusion zones can be used where there are shallow or battered/benched excavations.

#### 4.4.5 Working in a MEWP or Scissor lift

Only competent trained persons shall operate MEWPs or Scissor lifts. A pre use check must be undertaken before commencing work. The MEWP or Scissor lift must be inspected every seven days and recorded in the site LOLER Inspection form ([SHEMS-FOR-GR-066](#)).

All MEWPS shall be fitted with both 1) audible warning systems to warn of potential entrapment and 2) electronic Pre-Crush Sensing systems (PCS) or other physical anti entrapment devices (secondary guarding devices) specifically designed for the machine. (N.B. due to the availability of PCS, this is a phased approach, as full refit and compliance to PCS may not be achieved before autumn 2017). From 1st October 2017 PCS will be required on all MEWPS, even where other secondary guarding devices are fitted.

#### 4.5 Use of Platform Steps, Ladders and Stepladders

Unitas allows the use of platform steps, ladder/stepladders where a risk assessment and associated safe system of work can demonstrate that, in the circumstances, they are an appropriate choice.

Advances in technology are to be considered when selecting ladders and stepladders e.g. platform steps and podium steps incorporate guardrail protection. Platform steps are the preferred choice for short and medium term work, due to the additional sided protection included.

The HSE's key message is that ladders/stepladders should only be used for low-risk, short-duration work. Ladders/stepladders remain one of the most common agents involved in a fall from height and account for more than a quarter of all falls. Ladders permits may be required subject to risk, check with each Business Unit requirements.

Ladder safety systems, such as those provided by Tetra, enable a ladder to be secured using an eyebolt and ratchet strap to prevent the ladder slipping. When used in conjunction with associated safety equipment consisting of a fall-arrest harness and safety line which attaches to the ladder, should the worker slip and fall from the ladder, the ladder will be held in place and the fall arrested. All persons using such equipment shall have received training in its safe use.

##### 4.5.1 Ladder Register & Inspection

A ladder register shall be completed and maintained. Ladders and step ladders shall be inspected by a competent person every week ([SHEMS-FOR-GR-147](#)). Before use checks shall be completed by the individual prior to use. Ladders must conform to either Class 1 Industrial or BS EN 131 Professional Use Standard.

##### 4.5.2 Safe Use of Ladder

Ladders and stepladders are designed for simple work of a short duration, before selecting ladders or stepladders ensure that the hierarchy of control is followed.

Ladders and stepladders should only be used where they meet the following criteria:

- For light work - carrying less than 10kg
- Where a handhold is available
- Maintain 3 points of contact with the ladder.

And,

- Inspect ladder before use
- Secure ladder and ensure it cannot slip
- Ground should be firm and level
- Ensure ladder angle of 75 degrees (1 unit out for every 4 units up)
- Do not work from the top 3 rungs
- Ensure ladder extends 3 rungs or 1metre above the place of landing to which it provides access

- Do not use step ladders side on

**Note:** ladders or mobile scaffold towers must not be used in the vicinity of live overhead services unless they are made from a non-conductive material and a safe system of work developed and implemented.

Ladders must be locked away securely when not in use to prevent misuse

## 4.6 Harnesses, Work Positioning Devices and Fall Arrest Systems

Full body harness with a fixed fall restraint must be worn in boom type MEWPs. Lanyards must be adjusted to the shortest length practical. Harnesses shall be worn in scissor lifts if there is a residual risk of falls. Lanyard Karabiners must always be secured directly to the designated anchor point. The structure of the MEWP is not to be used as an anchor point for people working outside of the MEWP platform. Harness must be checked before use and be part of a regular inspection process ([SHEMS-FOR-GR-047](#) and [048](#)). Any harness or lanyard involved in a fall arrest shall be disposed of.

**Individual guidance documents are available for most work at height equipment and protective devices, seek further advice from the SHE Manager or SHE Advisors as required.**

## 4.7 Rescue/Recovery

When working at height consideration must be given as to whether a “Rescue plan” is required to be produced and in place. If a plan is necessary, a simulation must be undertaken to ensure that it is effective and highlights any changes needed.

Examples of when a rescue plan would be required:

- Working in a MEWP (i.e. cherry picker)
- Erection/dismantling of scaffolding
- Work involving abseiling
- Tree works

## 5 Work Equipment Selection Hierarchy

Where WAH **cannot** be reasonably avoided the hierarchy of work equipment selection listed below **shall** be implemented, only progressing to the lesser alternatives where it can be demonstrated by risk assessment that it is not reasonably practicable to do otherwise.

- **Prevent** falls by using an **existing** safe place of work that does not require the use or addition of work equipment to prevent a fall (e.g. a flat roof or balcony with permanent edge protection)
- **Prevent** falls by using work equipment that protects **all** those at risk (e.g. access equipment fitted with guard rails such as independent scaffolds, tower scaffolds, MEWPS)
- **Prevent** falls by using work equipment that protects the **individual** (e.g. a podium or a work restraint system that makes it impossible for a person to get to a fall position)
- Mitigate falls by using work equipment to minimise the distance and consequences of a fall and protect all those at risk (e.g. nets or soft landing systems positioned close under the work surface)
- Mitigate falls by using work equipment to minimise the distance and consequences of a fall and protect the individual (e.g. a personal fall arrest system with the anchor point sited above the head, or a rope access system)
- Mitigate falls by using work equipment that minimises the consequences of a fall (e.g. nets rigged at a lower level, or inflatable injury protection)
- Mitigate falls through training, instruction or other means (e.g. ensure that ladders are inspected regularly and are used by competent people, demarcate areas to provide a warning, provide adequate lighting, apply sensible housekeeping measures, provide sensible footwear etc.)



Any applicable Unitas **WAH Mandatory Minimum Standards** shall be complied with.

### 5.1 Index of Unitas WAH Minimum Standards

- Mobile Elevating Work Platforms (MEWPS)
- Mobile Towers
- Preventing Unauthorised Access from Occupied Premises onto Scaffolding
- Protection of Risers and Openings
- Protection of Stairways, Landings and Corridors
- Temporary Roof/Slab/Floor Edge Protection
- Temporary Lift Shaft Gates
- Waste Chute
- Fall Arrest Safety Nets
- Harnesses and Lanyards
- Loading and Unloading of Lorries and Trailers
- Low Level Access Systems
- Permanent Running Line Systems
- Proprietary Soft Landing Systems
- Rope Access
- Podium and Push Around Vertical (PAV) Access Equipment
- Access to Lofts
- Specialist WAH Teams
- Scaffold Management
- Tethered Tools

## 6 Appendix

### 6.1 Work at Height Matrix

	Ladders	Ladders over 4 m	Hop ups (up to 0.5 m)	Stepladders	Podium Steps	Scaffold tower	Scissor Lifts	Cherry picker	1 man PAVMEWP	Lorry Mounted MEWP	Large MEWP Mast climber	T&F Scaffold	System Scaffolds	Man cages	Abseilers Rope Access	Suspended cradle	Bosuns chairs
Specific Risk Assessment	Y	Y	Minimum size 600 x 600	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
CPCS req	N	N	N	N	N	PASMA	Y / IPAF	Y / IPAF	Y / IPAF	Y / IPAF	Y / IPAF	CISRS	CISRS/Manuf. training	N	IRATA	N	N
Harness & Lanyards req	N	Y	N	N	N	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y
Duration limit - continuous use	15 min	15 min	1/2 day	30 min	1/2 day	-		1/2 day	-		-	-	-	2 hrs	2hrs	2hrs	2 hrs
Works limit	I handed work or access	I handed work or access	static work	2 handed light work	2 handed light work	limited by carry-ability to platform, or hoist up	limited by platform / deck SWL	limited by basket SWL	Limited by SWL	ability to load platform and SWL	ability to load platform and SWL	as design	as design	light tools	inspection	only when all else discarded	light tools and maintenance
Management or supervisor checks	condition 7 day and each task	condition 7 day and each task	suitable	condition 7 day and each task	condition 7 day and each task	condition 7 day and each task	condition 7 day and each task	condition 7 day and each task	condition 7 day and each task	condition 7 day and each task	condition 7 day and each task	condition 7 day	condition 7 day	each use	design & every day	design & every day	each use
Temporary Works co-ordinator	N	N	N	N	N	N	N	N	N	N	N	Y	Y	N	N	N	N
Documented rescue Plan	N	Y	N	N	N	N	Y	Y	Y	Y	Y	N	N	Y	Y	Y	Y
Recorded in use Inspections	Weekly	Weekly	Weekly	Weekly	Weekly	Pre-use, alteration and weekly	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)	Pre-use, alteration and weekly	Pre-use, alteration and weekly	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)	Weekly & 6 monthly (LOLER)