



# Global PS&S Standard – Working @ Height

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## 1 Principles

**Working at height incidents account for a large number of the serious incidents across Nokia. The technical nature of the work, the largely remote way in which we work and the varied infrastructure onto which we fix our equipment all mean that setting clear requirements in this area is vital:**

- **All employees and contractors will be medically fit to climb**
- **All employees will be trained**
- **All employees will have suitable and appropriate PPE**
- **All employees will be aware of the rules and follow them at all times**

### Using This Document

This Standard details Nokia expectations in relation to “Working @ Height”. The expectations detailed here apply to all Nokia business groups and all contractors and service providers conducting work on its behalf. Notable sections of this Standard are:

Section 3: Contains the minimum requirements that Nokia expects. If these cannot be achieved an exception needs to be agreed with HSSE and documented.

Section 4: Explains who is responsible for ensuring that the requirements are implemented.

Section 5: Provides guidance on how to implement and achieve the requirements of the Standard.

The Standard should be read in conjunction with the Global PS&S Guidance On Working @ Height, which provides further guidance on implementation of the requirements.

## 2. Key Definitions

- 2.1 Working @ Height – Any work where, if there were no precautions in place, a person could fall a distance that could cause personal injury.
- 2.2 Climbing – Manual ascent of a structure.
- 2.3 Rigging – Any work where a person requires the usage of ropes, pulleys and clips for the moving and lifting of heavy objects.
- 2.4 Unprotected Edge – Those areas of a rooftop or structure that are not accessible without the need for PPE to prevent falling. (e.g. where the worker is not protected by guardrails and those areas of rooftops and structures that are not enclosed by a parapet wall or guardrail at least 0.9m high or a safe distance of at least 2m from an unprotected edge). Manholes (Greater than 0.9m) where there is no protection is also considered an unprotected edge.
- 2.5 Fragile Surface – A surface that has not been designed to take the weight of a person or a weakened surface due to erosion/corrosion
- 2.6 Pole – A free standing structure supporting an overhead fixed communication network. This structure could be of timber, steel, concrete, or composite material and may be self supporting, stayed or braced.
- 2.7 Overhead Network – An inter-connected system of wires and cable supported by poles and buildings
- 2.8 Pole Apparatus – Equipment mounted to the pole which could include; steps, arms, ring heads and brackets, stays, insulators, distribution Points and connect blocks, joints, amplifiers, impedance loads. But does not include unauthorised attachments eg. Signs, aerial, mailboxes etc.

### **Type of Worker**

- 2.9 Rooftop Worker – A person who accesses rooftops as part of their work and is required to work on roofs in protected and unprotected areas in a variety of exposed locations.
- 2.10 Tower Climber - A worker required to access and work on open lattice steelwork and monopole structures and be trained in basic rescue from height techniques.
- 2.11 Rigger – A person competent in rigging and using simple lifting rigs to undertake the lifting of tools and equipment.
- 2.12 Rope Access Technician – A person who is capable of rigging working ropes, undertaking rescues and performing rope access tasks under the supervision of a Rope Access Supervisor. They will have some knowledge of legislation, safety requirements, and quality assurance procedures relating to rope access.
- 2.13 Rope Access Supervisor – A person who is capable of supervising rope access work projects, is fully conversant with relevant work techniques and legislation, is able to demonstrate all the skills and knowledge required of a rope access technician, and has comprehensive knowledge of advanced rescue techniques.
- 2.14 Pole Climber – A person required to access overhead fixed networks on poles by climbing them.

## Equipment/PPE

- 2.15 Anchorage Points – A designated point of attachment used for positioning, fall arrest or lifting.
- 2.16 Fall Protection – A means to prevent or limit the consequences of a fall.
- 2.17 Personal Protection Equipment (PPE) – Equipment to protect the user from identified risks of physical harm.
- 2.18 Personal Fall Protection Equipment (PFPE)– Equipment to protect the user against or during a fall.
- 2.19 Fall Prevention – Stops you accessing the point where you could fall.
- 2.20 Work Restraint – Prevents a person from accessing a point where they could fall from an unprotected edge or through a fragile surface.
- 2.21 Fall Arrest – A system that limits the consequences of a fall.
- 2.22 Work positioning – Partial supporting of the body to allow working.
- 2.23 Fixed Fall arrest – An installed system to protect the user in a fall.
- 2.24 Rope Access – A safe method of working at height where ropes and associated equipment are used to gain access to and from the work place, and to be supported there.
- 2.25 MEWP – Mobile Elevated Work Platform, includes trailer and vehicle mounted booms, self propelled boom type and scissor lifts.

## Management Arrangements

- 2.26 Periodic Inspection – the periodic, recorded inspection of the working at height equipment by a qualified, competent person.
- 2.27 Pre Start Checks – Checks of all equipment to be used during the day, e.g. harness, lanyards, assemblies, connectors, fall arrest devices, ropes, slings, etc. These are visual checks that can be conducted by people with minimal levels of training.
- 2.28 Safe System of Work (SSoW) A documented process to identify significant risks and establish effective , practical controls and procedures.
- 2.29 Rescue Plan – A process to deal with reasonably forceable emergencies at height.

## Other

- 2.30 Competent – A level of knowledge, skills and experience that would allow a person to undertake their duties safely.
- 2.31 Authorised – Someone who is formally and properly empowered to perform specified duties.

## 3. Requirements

The requirements listed here apply to all Nokia operations and apply equally to all contractors, suppliers and partners working on behalf of Nokia.

### **Personal Behaviors**

3.1 **Everyone** who works for Nokia at height must adhere to the following rules at all times:

- Must be attached to the structure at all times
- Must prevent objects from falling and hitting people
- Must have a clear, controlled zone around the structure when they are climbing
- Must ensure that they are medically fit to climb
- Ensure that their safety equipment has been inspected and is checked prior to use
- Must check the condition of the structure before climbing
- Must **NOT** climb/stand on fragile surfaces
- Must **NOT** climb whilst impaired due to drugs or alcohol
- Must be accompanied by an appropriately trained and equipped second person, i.e. Work @ Height must not be carried out alone.

3.2 Nokia Business Groups must make sure:

- That these behaviors are clearly communicated to all climbers/riggers
- That all climbers, riggers, rooftop workers must confirm that they have read and understood these requirements
- That there is a process to monitor compliance with and enforce these, where necessary involving personal consequences
- That business process and pressure does not place a person in a situation where they are forced to break these rules
- That climbers are provided with the tools and equipment to allow them to meet the behaviors listed in 3.1
- That the consequences for not complying with the Nokia Standards, in particular individual behaviors listed in 3.1, are clearly communicated to all persons involved in the Work @ Height

## Training

3.3 Training is determined by the level of risk to which a climber is exposed. The minimum training levels, including for Rescue, are set forth in the table below.

Type of Worker	Duration of Training & Max Student Trainer Ratio	Testing / Refresher Requirements	Minimum Syllabus / Relevance
<b>Rooftop Worker</b>	Minimum 1 day; 6:1	50% of this must be practical Practical Skills Check – Formal refresher – Every 2 Years	Rooftop Risks Restraint systems Portable Ladders Anchor points and Horizontal systems Relevant Personal Fall Protection Equipment including pre-use inspection
<b>Tower Climber</b>	Minimum 2 days; 6:1	60% of this must be practical  Formally refreshed, minimum every 3 years. If not climbing regularly (>3 times /month) then needs to be refreshed annually	Towers – Access ladders – Control Measures and Hierarchy Relevant Personal Fall Protection Equipment Pre-use inspection of PFPE Pre-climb structure / workplace checks Site Safety – Drop zones, signage, security Anchor point identification and assessment Restraint systems Vertical Fall Arrest Systems Accessing vertical ladders and structures using twin lanyards Work Positioning Using temporary vertical fall arrest systems Self-Retracting Lifelines (SRLs) Direct lifting (10 kg) Rope / pulley lifting rigs 1;1 , 2:1 up to 50kg Safe handling of tools and equipment at height. Guarded platforms
<b>Pole Climber</b>	Minimum 1 day; 6:1	60% of this must be practical  Formally refreshed, minimum every 3 years. If not climbing regularly (>3 times /month) then needs to be refreshed annually	Relevant Personal Fall Protection Equipment Pre-use inspection of PFPE Pre-climb structure / workplace checks Site Safety – Drop zones, signage, security Correct use of portable ladders Ascending and Descending poles Work positioning Handling tools and equipment Emergency procedures
<b>Rigger</b>	Minimum 3 days; in addition to Tower Climbing (total of 5 days training) 6:1	60% must be practical. Must be assessed and only fully certified following observed field work.  Refreshed at a minimum every 3 years. If not climbing regularly (>3	Rigging and use of lifting rigs including portable winches Lifting equipment – characteristics and limitations Pre-use inspection of lifting equipment Lift plans and rig design and records Use of mechanised lifting appliances Slings communication Lifting procedures and operations

Type of Worker	Duration of Training & Max Student Trainer Ratio	Testing / Refresher Requirements	Minimum Syllabus / Relevance
		times /month) then must be completely retrained	
<b>Tower Rescue</b>	1 day – additional and separate to all other courses  6:1	Annual test / refresher as appropriate	Casualty Care – Suspension Trauma Rescue Procedures Equipment for Rescue

## Type of work

- 3.4 **Rooftop Work** – Everyone working on roof structures must be appropriately trained and put in place suitable controls to prevent access to fragile surfaces and falls from unprotected edges. The following controls shall be considered in order of preference:
- Work within an area protected by a guard rail or parapet
  - Keep 2m from unprotected edges and fragile surfaces. Where necessary set out a safe working area by establishing demarcation barriers a minimum of 2m from unprotected edges and fragile surfaces
  - Use a restraint system attached to suitable anchor/s to prevent a fall.

**Climbing**– Everyone who climbs as part of their business for Nokia must:

- Hold a valid climbing certificate applicable to the task to be undertaken and the structure to be accessed
- Make sure that their certificate is available for inspection by Nokia or its partners at all times
- Be trained and equipped to undertake a rescue at height
- Be accompanied by a second suitably trained and equipped climber
- Be continually attached to the structure by an approved fall protection system when not on a protected platform
- Use approved methods of lifting and carrying equipment and tools.

**Pole Climbing** – Everyone working on the Fixed Overhead Network must be appropriately trained and put in place suitable controls. The following controls must be considered in order of preference:

- MEWPs/Cherry Picker or similar. If this is not available or not suitable due to the type of terrain, then:
- Use ladder or steps on the pole. Appropriate restraint must be used both by the person and for the ladder. If a ladder or steps can not be used then:
- Use spikes.



**Rigging** – This is the most complex type of climbing. There is a significant amount of hoisting and lifting involved in everyday operations. This global standard does not attempt to cover all of these. However, Nokia does define some minimum requirements to provide some guidance on how the lifting of equipment should be conducted.

Weight	Method	Minimum Number of People involved in the lift	Equipment used
Loads of less than 6 kg	Can be carried manually in a backpack or sealable bag attached to the harness	1	Backpack or toolbag attached to the harness. Any backpack or toolbag must be sealable to prevent the falling of its contents
Loads of less than 10 kg	Manually raised using a rope lifted hand over hand from a guarded platform	1 Trained to Tower Climber	Rope and bag or means of attachment
Loads of Between 10kg and 20 kg	Hoisted using a fixed pulley, with a non-return mechanism attached to a suitable point with a short sling. The load may be lifted with a lifting bag or attached to the rope directly or with suitable slings	2 Trained to Tower Climber	Pulley with non-return break Rope Attachment sling Lifting bag or means of securing load
Loads of 20 kg to 50 kg	Rope rigging system involving two rigged pulleys – one attached to a suitable anchor point on the structure and one attached to the load to give a 2:1 mechanical advantage. The load should be controlled by a third person on the ground by means of a suitable control (tag) line	3 Lift supervisor to be trained to minimum of Rigger	2 pulleys Lifting rope (minimum 3 x lift height) Anchor / Attachment slings Control line
Loads over 50 Kg	Suitable lifting appliance	3 Rigger, trained and competent in the rigging and operation of lifting appliance	Appropriate lifting appliance (eg. Tirfor, capstain) Anchor / attachment slings Control line

## **Fit to Work**

- 3.5 All Climbers and Riggers who climb as part of their business for Nokia must:
- Be medically fit to climb. At a minimum, a medical examination must be performed by a qualified medical practitioner once every 5 years for people under the age of 40 and once every 2 years for people 40 and over. Medical examination must at a minimum cover general fitness, flexibility and movement, cardio vascular health, medical history, hearing and eyesight.
  - Inform their employer at any point when they are no longer considered fit to climb.

## **Supervision**

- 3.6 All Working @ Height must have a designated and competent Supervisor or Team Leader in place. They must understand their responsibilities and be trained. They will be held accountable for the what happens on site. The supervisor must:
- Make sure only authorized people access site
  - Make sure everyone on site is trained to the appropriate level for the task
  - Make sure everyone has the right equipment
  - Make sure that everyone knows what that are doing and how they should be doing it
  - Make sure that any changes to the method of work are agreed, assessed and documented
  - Be present on site at all times whilst high risk work occurs.

## **Equipment Required – Including Access Equipment and Personal Protective Equipment**

- 3.7 Access Equipment is any equipment used to provide a temporary access to elevated work position. This includes; portable ladders and steps, staging and podiums, portable and fixed scaffolding, Mobile Elevating Work Platforms (MEWPS). Third party equipment can only be used if authorization has been given and the integrity of the proposed equipment can be assured.

Ladders and steps must:

- Only be used for access or short duration work where other, safer means are not possible. Ladders and steps must:-
  - Be of a design and standard applicable to the task
  - Be Inspected and in a safe condition
  - Be used in accordance with the manufactures instructions.

Temporary raised platforms will typically be used for low level access. These platforms must:

- Be of appropriate height and type to allow the task to be completed safely.
- Have adequate guarding to prevent a fall.

Fixed and Portable Scaffolds:

- All scaffolds must be erected and inspected by a trained and competent person.

- All scaffolds will be erected, inspected and used in accordance with the manufactures instructions and relevant statutory requirements.
- Fall protection shall be used during the erection of scaffolds.

Mobile Elevating Work Platforms:

- Must be of an appropriate type and capacity for the intended task and environments.
- Must be inspected and certificated in accordance with relevant statutory requirements.
- Must be operated by a trained and competent person.
- Work Restraint shall be used by the occupants of the platform.

Anchor Points – Personal anchor points fall into two general categories.

Designed for the sole use attachment of fall protection. They must:

- Be identified, tested and certified.
- Be periodically inspected by an appropriate qualified person and they must be labeled for identification.
- Not be used for lifting.

Attachment Point: - An “unquestionably reliable” anchor for the attachment of Fall Protective Equipment, e.g., a substantial tower member. They must:

- Be as high as possible.
- Be capable of withstanding a dynamic load when a person is falling.

Fixed Fall Arrest Systems

Where installed Fall Arrest systems exist on a structure these must:

- Be used as the preferred method when accessing the structure.
- Have the appropriate, approved traveller / slider.
- The last date of inspection and determined to be safe.
- Not show any signs of falls and be under the appropriate tension .
- State the number of persons allowed to be attached to the system.

## **Personal Protective Equipment**

3.8 Everyone who works at height should have the following basic equipment outlined in the table in the guidance document. Where the equipment is considered Personal Protective Equipment (PPE), it must be:-

- Fit for purpose, conform to a recognized standard and comply with the requirements detailed in the guidance document.
- Issued to an individual for the use by the individual only.
- Recorded when it was issued, to whom and when it should be replaced.
- Maintained, inspected and recorded that it is in good condition.
- Inspected pre use and in accordance with statutory requirements.

There must be a readily available stock for replacement of worn or otherwise defective equipment

## **Management Arrangements**

- 3.9 The conditions faced at the site where Working @ Height will be undertaken will have a significant impact on the risks for all concerned. Therefore, Nokia and any third party engaged by Nokia must have in place robust management controls:
- To prevent Working at height during the hours of darkness i.e. at night.
  - To identify, plan for and respond to changing Weather Conditions, which can change rapidly during the work.
  - To implement shut downs where required of customer equipment, other operator equipment or other power source, that pose a risk including EMF/RF.
  - To ensure that appropriate Drop Zones are defined and implemented.
  - To identify and manage conflicts with other parties – including other teams working on the site, landlord or tenants, members of the public and traffic.
  - Identifying and responding to the presence of wild animals and insects.
  - To manage any Lone Working activities to ensure only low risk activities are undertaken by lone workers and appropriate controls are in place.
  - To ensure that all Lifting Operations are properly planned and adequately supervised and that all lifting equipment is suitable and safe for the task undertaken.
  - To ensure adequate arrangements are in place for the personal security of people working on site.
  - To implement and maintain appropriate safe systems of work for the isolation of live electrical Equipment.
- 3.10 Pre Start Checks must be on site before any work at height takes place that ensures that all controls are in place. As a minimum these must:
- Confirm that everyone is authorized, fit and appropriately trained.
  - Confirm that the team have the correct equipment – personal and other - to conduct the work safely, including the presence of adequate emergency and rescue equipment.
  - Confirm that the site is safe to access and work on.
  - Confirm that the weather conditions are safe for the work to continue and are monitored during the work activity.
  - Have a mechanism for escalation should any of the above not be in place.
  - Identify any site or task based risks that need further control.

## 4. Implementation Expectations

- 4.1 Every business group leader must ensure, within their area of responsibility, that the requirements of this Standard are implemented.
- 4.2 HSSE must ensure that for every location that Nokia operates in, that the minimum requirements in Section 3 are defined for local implementation, captured in local documentation, consulted with local stakeholders and communicated to all relevant parties. This can be:
  - 4.2.1 Specific to a country.
  - 4.2.2 Defined across a region where there is regional alignment or Nokia requirements that exceed local requirements in all listed areas.
  - 4.2.3 Tailored based on customer requirements or expectations.
  - 4.2.4 Reflective of local legal requirements and restrictions.
- 4.3 Nokia HR must ensure that a process exists for the management of all employed Nokia employees that:
  - 4.3.1 Record any medical impediments specific to Working @ Height.
  - 4.3.2 Enables action to be taken should an individual not meet the requirements defined in the standard.
- 4.4 Procurement must ensure that where companies or individuals are sourced to provide Working @ Height that:
  - 4.4.1 The requirements in Section 3 are clearly communicated, understood and that the supplier can meet these expectations when they are awarded work.
  - 4.4.2 The supplier is made aware of Nokia reporting requirements related to Working @ Height.
  - 4.4.3 The supplier is contractually bound to follow Nokia policies and standards applicable to the work.
- 4.5 Contractors/Third Parties are responsible for ensuring that minimum requirements defined in Section 3 are locally adopted, clearly communicated to their employees, understood and implemented within their area of work.

## 5. Recommendations

The requirements listed in Section 3 apply to all Nokia operations, but the geographical spread of the business means that the extent of implementation may vary. The recommendations contained in this section aim to provide guidance on how to achieve the requirements. Any decision to deviate from these requirements must be documented.

Working @ Height risk is something to which Nokia field employees, supplier, contractors and partners working for or on behalf of Nokia may be exposed. Where they are exposed to this risk, the consequences of an incident are severe.

When approaching implementation this needs to be conducted on a risk based approach.

In order to determine the extent to which the requirements of this standard apply, each business group must conduct an assessment of the Working @ Height risk within their operation. The Working @ Height Gap Analysis tool allows the risk profile of a business group or country to be mapped out.

The requirements in section 3 detail *what* is expected, as the measures needed to reach this standard vary around the world. There is a Global PS&S Guidance Document available that should be read in conjunction with this Standard.

## 5. Change Histroy

Ver	Status	Date	Author	Owner	Reviewed by	Review date	Approver	Approval date	Description of changes
0.1	Approved	2015.03.26	Gareth I Davies	Gareth I Davies	-	-	Gareth I Davies	2015.03.26	Global Head of Health & Safety
0.2	Approved	2016.06.01	Andrew Eadie	Andrew Eadie	-	-	Gareth I Davies	2016.06.01	Updated to incorporate enlarged organization
3.0	Approved	2017.01.31	Andrew Eadie	Andrew Eadie	-	-	Andrew Eadie	2017.01.31	Update to Incorporate Rigging & Lifting Standard
4.0	Approved	2023.06.13	Sameh Eisa	Sameh Eisa	Rodney Van Wyk	2023.06.13	Paulo Conceicao	2023.06.13	Modifications include rebranding and organizational changes.