NOKIA

FASTEN

Working at Height Requirements

Version 2 - 2017

When working at height think **FASTEN**

You don't get a second chance when working at height; setting minimum requirements to protect our people is vital.

We have clear principles that will help protect everyone working for Nokia and Working at Height.

Everyone will:

- Be medically fit to climb.
- Be trained, to the right level.
- Have suitable and appropriate Personal Protective Equipment.
- Be aware of our requirements and follow them at all times.

FASTEN Fit to Work:
Everyone will be medically fit to Work at Height.

FASTEN Arrangements:
Processes and procedures will be managed to ensure we are always working in the safest way possible.

FASTEN Supervision:
We will adhere to all requirements and maintain high standards of safety.

FASTEN Training:
No one will undertake any Work unless trained in the tasks required.

FASTEN Equipment:
All equipment will be tested and checked prior to use and periodically.

FASTEN Non-negotiable:
There is no excuse for cutting corners or rushing a job to get it done more quickly - unsafe behaviour is never tolerated.

FASTEN Introduction

Basic requirements for the different types of working at height in Nokia

Roof work

- Ensure staff are suitably trained.
- Assess the roof surface and incline before work starts.
- Put controls in place to prevent access to fragile surfaces and falls from unprotected edges.
- Consider hazards, such as access obstructions, EMF, antennas, air conditioning circuits (legionaries disease risk), flues/vents/chimney emissions (risk of toxic, asphyxiating gases), bird droppings (can be hazardous).
- Follow the following hierarchy of rules:
  - Work within an area protected by a guard rail or parapet.
  - Keep two metres away from unprotected edges and fragile surfaces - where practical set out a safe working area with barriers a minimum of two metres from unprotected edges and fragile surfaces.
  - Use a restraint system attached to suitable anchor/s.

Climbing

All climbers must:

- Be continually attached (work restraint or fall arrest) when working at height.
- Hold a valid climbing certificate applicable to the task and structure.
- Not access any structure without the approval of the owner/operator.
- Have all required information, documentation and equipment in place before work starts.

Rigging

A Rigger uses simple lifting rigs to undertake telecommunication installations and decommissioning at height. It is the most complex type of climbing that is done as there is a significant amount of hoisting and lifting involved in everyday operations.

In addition to climbing measures, the following is required:

- An appropriate lifting plan.
- Suitable, sufficient and safe lifting equipment.
- Workplace activity controls and management.
- Risk assessment reviews with any changes in working practice, equipment or environment.

FASTEN Fit to Work

If someone is not fit to Work at Height, they are not only a hazard to themselves; they are a hazard to their colleagues and others around them.

Questions that you need to think about and ask:

- Are they medically fit?
- Do they look overtired, distracted or stressed?
- Are they under the influence of alcohol or drugs?
- Have they taken medication that may cause drowsiness?
- Do they have a minor injury that may impact on their ability to Work at Height safely?

As a manager, you should:

- Communicate the importance of being fit to climb.
- Be approachable - people should feel confident in talking to you (in confidence) about any problems they may have that may affect their safety.
- Be aware of/look for signs of fatigue, stress, illness and distraction.
- Ensure everyone undertakes required medical examinations.

FASTEN Arrangements

In order to stay safe we need to have robust systems in place that are followed at all time. All work needs to be planned thoroughly and managed carefully to ensure that no-one is ever harmed by the work they do.

General requirements

1. Pre-start checks

- Is everyone authorised, trained and fit to work on site?
- Has a visual check been made on all the equipment?
- Is the site safe to access and work on – is the structure safe to climb?
- Are weather conditions safe? (monitor continuously).
- Are further controls needed?

2. Safe System of Work (SSoW)

A documented process must be in place to identify significant risks and establish effective, practical controls and procedures.

3. Rescue plan

Ensure that you have a plan to deal with emergencies when Working at Height.

Managing conditions on site

Working in the hours of darkness

Working at height must not take place during the hours of darkness.

- In exceptional circumstances it may be required. This must be agreed by a Nokia H&S Manager and additional controls to reduce the risk, such as lighting/familiarisation with the site during daylight hours/extra personnel, must be agreed, documented and put in place.

Weather conditions

Weather conditions must be considered when planning any Work at Height.

Identify, plan and respond to key risks:

- Lightning (stop work immediately).
- High winds (give careful consideration to lifting operations).
- Heavy rain.
- Ice-Snow.
- Extreme cold.
- Extreme heat.

If monitored carefully, weather changes can be anticipated but sometimes changes can occur quickly and without warning. If they do, work may have to be stopped.

FASTEN Arrangements

"ALWAYS MAKE SURE THAT NO-ONE ENTERS THE SPACE BELOW YOU WHEN WORKING AT HEIGHT."

One of Nokia's Lifesaving Rules - the minimum standards that must always be followed to protect you from the work we do with the highest fatality rate. No one should ever put pressure on you to break a Life Saving Rule.

Shut down

- Before work starts put arrangements in place for any required shut downs.
- Isolate and secure all systems before work starts.

Drop zones

Protect people below by:

- Defining and implementing drop zones.
- Excluding unauthorised people from this area - use warning signs or barriers.
- Ensuring hard hats are worn by those authorised to enter the drop zone.

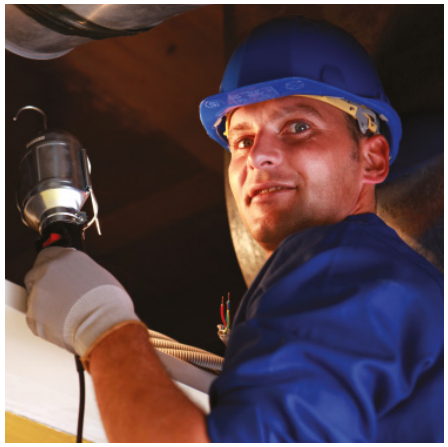
Hours of work

- Hours of work must be controlled and monitored, no one should work more than 12 hours on any day.
- Ensure you comply with local legislation.

EMF

- The power of the radio frequency signal will be at its strongest from its point of source, that is, as it leaves the antenna. It quickly drops the further away you are.
- Make sure you are familiar with the types of EMF equipment and understand their functions. If in doubt speak to your supervisor.
- Assess the risk of EMF levels exceeding the relevant ICNIRP document and implement appropriate controls, such as shut downs, exclusions zones and RF monitors.

FASTEN Arrangements



"DO NOT WORK LIVE. DO NOT WORK ON ANY ELECTRICAL SYSTEM UNLESS YOU ARE TRAINED."

One of Nokia's Lifesaving Rules - the minimum standards that must always be followed to protect you from the work we do with the highest fatality rate. No one should ever put pressure on you to break a Lifesaving Rule.

Electrical

- Never work on live equipment, unless the task is a recognised testing procedure, undertaken by trained and qualified personnel, using approved test equipment.
- Work on HV equipment requires a Permit to Work and must only be carried out by a qualified person.

Lone working

- Lone working is only allowed for low risk activities and should be avoided if possible.
- Lone working is not permitted if the work involves the use of personal fall protection equipment - there must be at least two people present.
- Only work that can be undertaken from a safe, guarded area or more than 2m from a fall hazard may be undertaken by a lone worker.
- Maintain adequate controls:
  - Inform manager at the start of the task.
  - Periodic checks / control by management.
  - Inform manager of completion of work.
- Any work that requires the use of PPE must not be undertaken alone.

Other risks

- Identify and manage potential conflicts with other parties (other teams on site, landlord or tenants).
- Street Work will create conflict with the public and traffic, arrangements should be put in place to manage this.
- Wild animals and insects can create a significant risk, these are difficult to control and need to be resolved as and when they occur.
- Ensure adequate arrangements are in place for the personal security of staff.

FASTEN Arrangements

As a manager, you should:

- Know and assess the risks associated with every job.
- Plan each project thoroughly.
- Ensure correct documents and procedures are in place, including emergency procedures.
- Ensure controls are in place to manage conditions on site.
- Ensure regular safety checks are carried out on site, by a qualified capable person, before and during every project, no matter how routine.
- Know who to get advice from if you come across something that you are not sure about.

Minimum requirements for lifting and hoisting:

Less than 6kg:
Requires one person: Can be carried in a backpack or sealable tool bag attached to the harness.

Loads of 6Kg – 10kg:
Requires one person trained to Climber level: Can be manually raised using a rope and bag, lifted hand over hand, from a guarded platform.

Loads of 10Kg – 20kg:
Requires two people trained Climber level: Use a fixed pulley with non-return mechanism, attached to a suitable point with a short sling. The load can be lifted with a lifting bag, attached to the rope directly or with suitable slings.

Loads of 20kg - 50kg:
Requires three people, including a lift supervisor on the ground trained to minimum of Rigger level. Use two rigged pulleys, attach one to an anchor point on the structure and one to the load to give a 2:1 mechanical advantage. Control from the ground by means of a suitable control (tag) line.

Loads over 50Kg:
Requires three people including a Rigger trained to operate an appropriate lifting appliance (e.g. Tirfor/Capstain).

Loads over 100kg:
Requires a team and compliance with the Non Negotiable elements of the Global Rigging and Lifting Standard.

FASTEN Supervision

Supervision is about taking responsibility for the way things are done and ensuring they are done in the right way. At Nokia we expect someone to be acting as a supervisor at all times when Work at Height is being conducted.

A supervisor's responsibility:

- Ensure only authorised people can access the site – control access by barriers, tape or by physically stopping people from entering.
- Ensure everyone on site is trained to the appropriate level for the task – physically check certificates on a regular basis during routine inspections.
- Be empowered – it is up to you to control the work – you have a duty to intervene.
- Ensure everyone has the right equipment and they use it correctly.
- If a task changes, it must be reassessed to ensure that suitable and appropriate controls are in place.
- Changes to the method must be agreed and documented.
- Be on site at all times to supervise any high-risk work. A supervisor cannot be involved in the work whilst it is happening.
- Supervisors will be monitored and held accountable.

FASTEN Training

All employees working at height must hold a valid certificate for the tasks they undertake. This should be checked by site inspections, audits and spot checks.

1. **Roof Top Worker** - minimum one-day assessed training course (50% practical), refresher training (minimum every two years).
2. **Tower Climber** - minimum two-day assessed training course (60% practical), refresher training (minimum every three years - preferable every two) or if the skill is not used regularly (greater than three times a month), annual refresher training.
3. **Pole Climber** - minimum one-day assessed training course (50% practical), refresher training (minimum every three years).
4. **Rigger** - minimum five-day total (2 of which are the Tower Climbing course) assessed training course (60% practical), refresher training (minimum every three years - preferable every two). Or if the skill is not used regularly (greater than three times a month), requires complete retraining.
5. **Rescue** - additional one-day training programme, separate to the above. Tested annually and refreshed, in alignment with the other training identified above.

As a manager, you should:

- Ensure everyone working on site has the appropriate training.
- Check certificates on a regular basis.
- Make sure your team feels able to speak out if they believe they require further training.
- Regularly review training needs.

FASTEN Equipment

The equipment that is used in working at height is essential in ensuring that the job can be done safely, this means it needs to be appropriate for its intended use, well maintained and familiar to those using it.

All safety equipment must be inspected by a competent person and checked prior to use.

TYPES OF ACCESS EQUIPMENT

Ladders

Portable ladders are designed for access and are not to be used as a working platform or position. As their use is temporary, you not only need to know how to climb but also how to select and use the ladder in order to work safely.

Don't forget:

- Only one person on a ladder at a time.
- Face the ladder while climbing up or down and hold the side rails with both hands.
- Carry tools up or down on a belt or use a rope or hoist, not in your hands.
- Maintain 3-point contact while climbing the ladder: Two hands and one foot in transition.
- Portable ladders should always be "footed" by a second person.

Access ladders

- Ladder must be stable and secured to prevent it moving.
- Ladder should be positioned at an angle of 75 degrees (1 in 4 rule - 1 unit out for every 4 units).
- Always grip the ladder when climbing.
- Inspect the ladder before each use.
- Do not over-reach.
- Do not work off the top three rungs as these provide a handhold.

Temporary raised platform

(For low level access) 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

Should be:

- Erected and inspected by a trained and competent person.
- Used in accordance with the manufacturer's instructions.
- Erected with fall protection in place.

Mobile Elevating Work Platforms (MEWPs)

Must be:

- An appropriate type and capacity for intended task.
- Inspected and certificated in accordance with relevant statutory requirements.
- Operated by a trained and competent person.

FASTEN Equipment

Fixed fall arrest systems are the preferred method of fall protection when accessing a structure.

"ALWAYS ATTACH YOURSELF & YOUR EQUIPMENT WHEN WORKING AT HEIGHT"

One of Nokia's Lifesaving Rules - the minimum standards that must always be followed to protect you from the work we do with the highest fatality rate. No one should ever put pressure on you to break a Lifesaving Rule.

FALL ARREST SYSTEMS

Check the following before use:

- Last date of inspection.
- Condition / tension - signs of falls.
- Number of persons allowed to be attached to the system.
- The correct traveller / slider is used, has been inspected and is safe.

ANCHORAGE POINTS

1. **Dedicated anchor** - an anchor point installed for the attachment of fall protection equipment. It must be:
   - Tested, certified and periodically inspected.
   - Clearly labelled.
2. **In-situ anchor** - part of the structure which is considered 'unquestionably reliable' to attach fall protection equipment to (e.g. substantial tower member). When assessing the anchor point, consider:
   - The forces applied to the anchor.
   - Direction of force.
   - A safety factor of 2:1.
   - Any risks which may cause the failure of anchor slings and ropes on sharp edges under a fall arrest situation (if this is a risk, use appropriate protection, such as rope protecting sleeves).

Example:

A fall arrested by EN standard fall arrest equipment will be limited to 6kN (approx 600 Kgf). Applying a factor of safety of 2:1, this will require a selection of anchor capable of withstanding 12kN (1200 kgf) per person.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment is "Personal".

PPE must be:

- Fit for purpose.
- Used in the way it was designed for.
- Issued to an individual for their use only - it should not be shared or left on a site.
- Maintained and in good condition.
- Recorded who it is issued to, when it was issued and when it should be replaced.

FASTEN Equipment examples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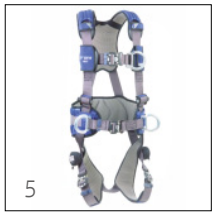
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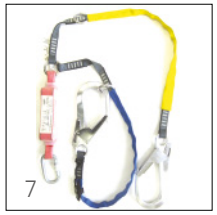
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1. Safety helmet
2. Safety boots
3. Gloves
4. Two point full body harness
5. Four point harness
6. Suspension harness
7. Twin tie back fall arrest lanyards
8. Restraint lanyard
9. Work positioning lanyard
10. Vertical fall arrest system traveller / sleeve
11. Temporary vertical lifeline
12. Self reeling lifeline
13. Roof top restraint system
14. Temporary horizontal lifeline
15. Rope and pulley lifting rig
16. Karabiner connector
17. Anchor sling
18. Tower rescue kit

As a manager, you should make sure:

- Safety equipment is checked regularly, by a competent person.
- Everyone has the correct tools and equipment and that they are trained to use it.
- Your team is aware of the correct PPE required for the task and wear it.
- Replacement tools, equipment and PPE are readily available.
- You communicate the importance of the ‘right to refuse’ to carry out any task if people don’t have the correct tools or equipment.
- Fall arrest and anchorage points are inspected regularly by a competent person.

FASTEN Non-negotiable

FASTEN outlines Nokia's expectations in relation to Working at Height. This standard applies to all Nokia Business Groups and all contractors and service providers conducting work on our behalf.

If anyone feels that someone is asking them to do something which is unsafe, they have the **'right to refuse'** to continue working and will be supported in this.

Everyone has a **'duty to intervene'** if you witness someone working or behaving in an unsafe manner. No matter who they are you must challenge this.

RESPONSIBILITIES

Business Group leaders

- Ensure, within your area of responsibility, that the requirements of this standard are implemented.

HSSE and Health & Safety Teams

Ensure that for every location Nokia operates in, the standard is localised and implemented. This can be:

- Specific to a country.
- Defined across a region where there is regional alignment.
- It can also be tailored to customer requirements or expectations and should consider local legal requirements and restrictions.

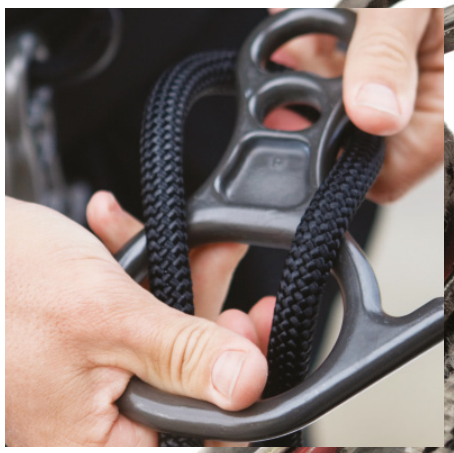
Procurement

Ensure that where companies or individuals are sourced to provide Work at Height that:

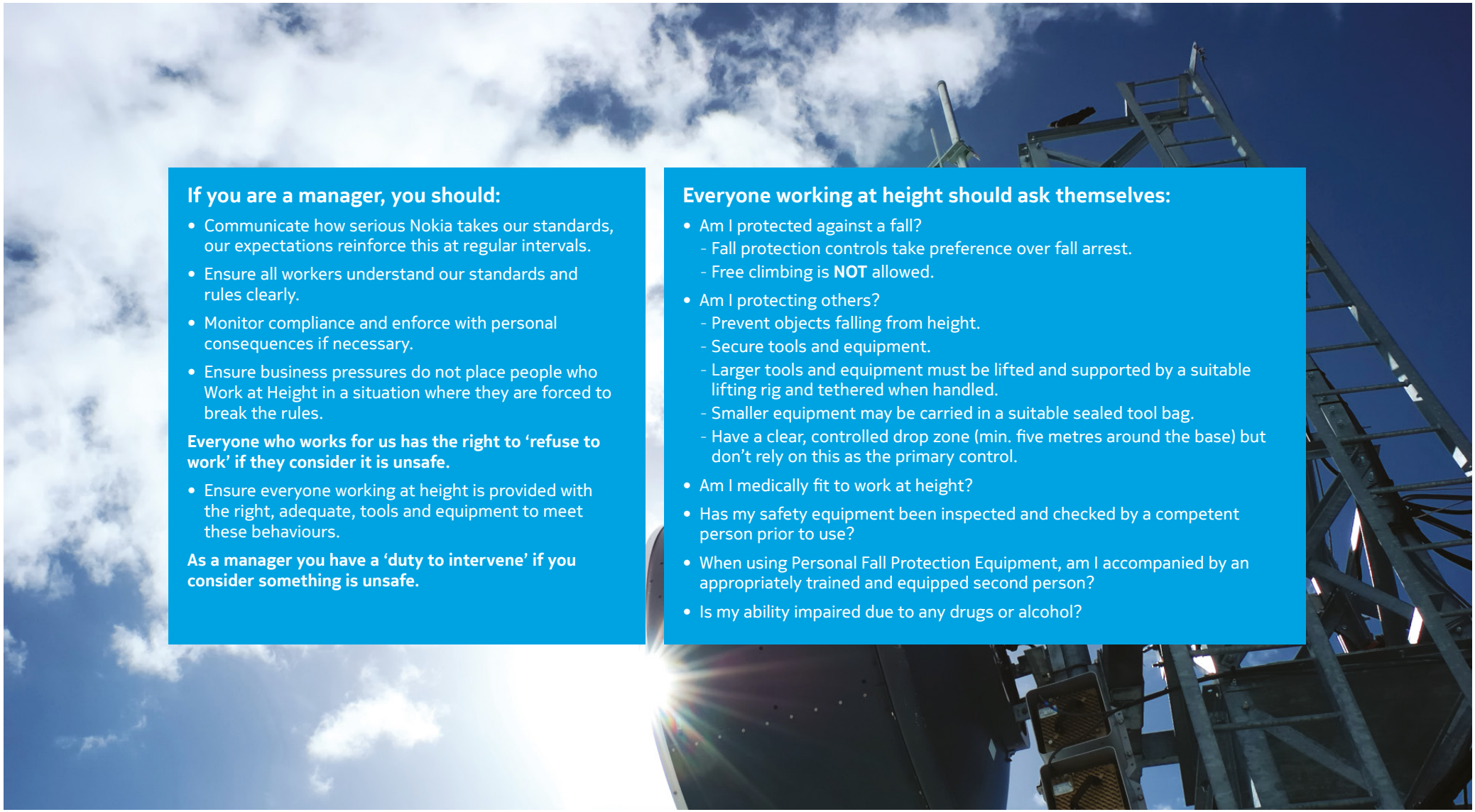
- The requirements are clearly communicated, understood and that the supplier can meet these expectations when they are awarded work.
- The supplier is made aware of Nokia's reporting requirements related to working at height.

Contractors / Partners

Ensuring that our requirements are clearly communicated to their employees, understood and implemented within their area of work.



FASTEN Non-negotiable



If you are a manager, you should:

- Communicate how serious Nokia takes our standards, our expectations reinforce this at regular intervals.
- Ensure all workers understand our standards and rules clearly.
- Monitor compliance and enforce with personal consequences if necessary.
- Ensure business pressures do not place people who Work at Height in a situation where they are forced to break the rules.

Everyone who works for us has the right to 'refuse to work' if they consider it is unsafe.

- Ensure everyone working at height is provided with the right, adequate, tools and equipment to meet these behaviours.

As a manager you have a 'duty to intervene' if you consider something is unsafe.

Everyone working at height should ask themselves:

- Am I protected against a fall?
  - Fall protection controls take preference over fall arrest.
  - Free climbing is **NOT** allowed.
- Am I protecting others?
  - Prevent objects falling from height.
  - Secure tools and equipment.
  - Larger tools and equipment must be lifted and supported by a suitable lifting rig and tethered when handled.
  - Smaller equipment may be carried in a suitable sealed tool bag.
  - Have a clear, controlled drop zone (min. five metres around the base) but don't rely on this as the primary control.
- Am I medically fit to work at height?
- Has my safety equipment been inspected and checked by a competent person prior to use?
- When using Personal Fall Protection Equipment, am I accompanied by an appropriately trained and equipped second person?
- Is my ability impaired due to any drugs or alcohol?

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About us
Nokia is a global leader innovating the technologies at the heart of our connected world. Powered by the research and innovation of Nokia Bell Labs, we serve communications service providers, governments, large enterprises and consumers, with the industry's most complete, end-to-end portfolio of products, services and licensing.

From the enabling infrastructure for 5G and the Internet of Things, to emerging applications in virtual reality and digital health, we are shaping the future of technology to transform the human experience.

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