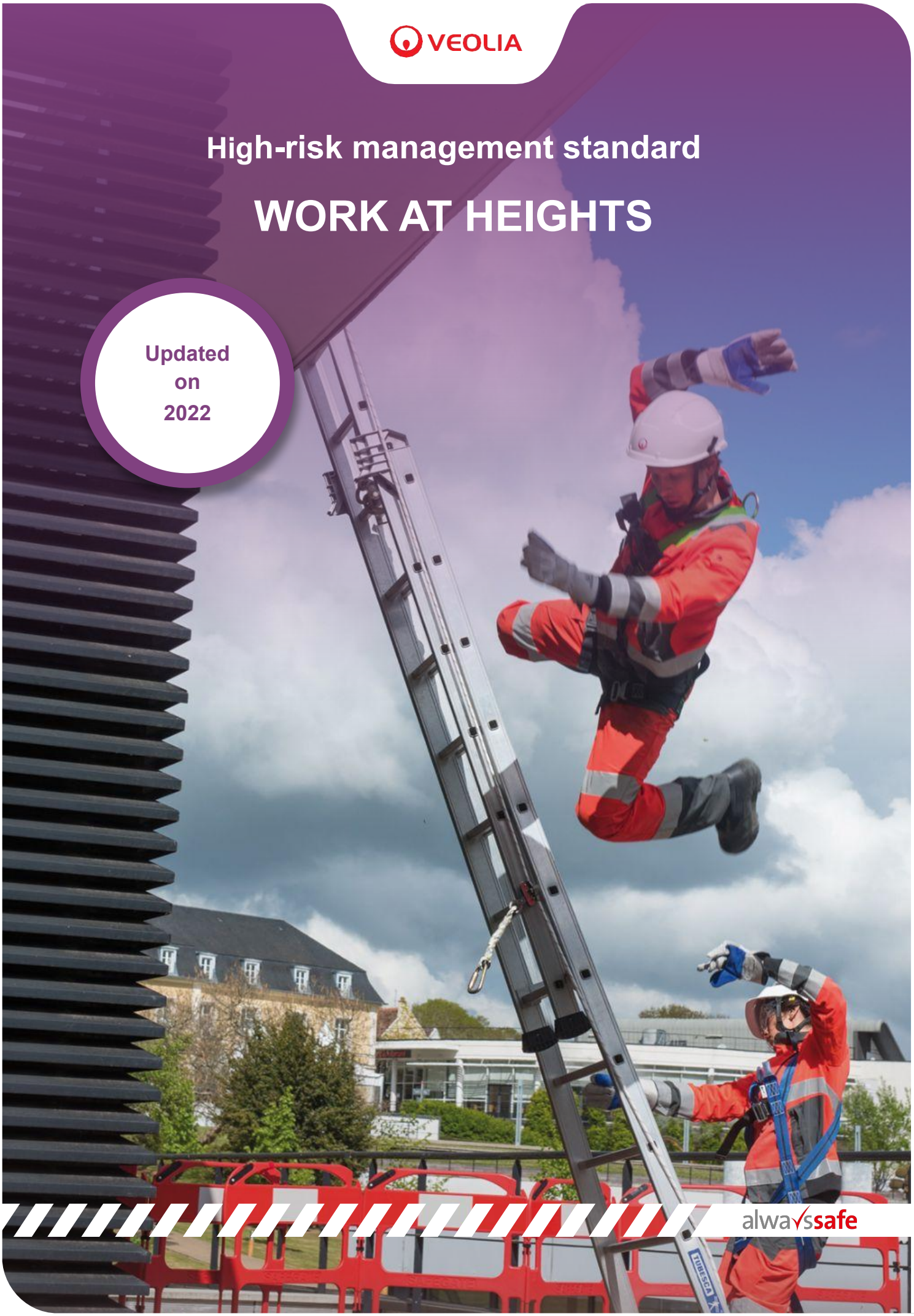
VEOLIA

High-risk management standard

WORK AT HEIGHTS

Updated
on
2022



always safe

Falls are a major cause of death and serious injury in Veolia workplaces all over the world.
Fall hazards are found in many workplaces where work is carried out at height, for example working on a roof, a truck, fragile surfaces, water tower, electric pylon and accessing silos.
Falls can also occur at ground level and below, i.e. into holes, for example trenches, biogas wells, or workshop vehicle inspection pits.

Every employer has a responsibility to:

- assess if the risk of working at height can be eliminated.
- ensure, so far as is reasonably practicable, that any work involving the risk of a fall is carried out on the ground or on a solid construction.
- provide safe means of access to and exit from the workplace.
- minimise the risk of falls so far as is reasonably practicable by providing a fall prevention device, work positioning system or a fall-arrest system.

Designers, manufacturers, suppliers, importers and installers of plant or structures that could be used for work must ensure, so far as is reasonably practicable, that the plant or structure is without risks to health and safety. Designers of plant or structures have an important role in eliminating or minimising the risks of falls in the design stage. They have to take into account Veolia Standards and Regulations in the design stage.

Directors of Business units, have a duty to exercise due diligence to ensure that the business or undertaking complies with Veolia Standard and Regulations. This includes taking reasonable steps to ensure that the business, or undertaking, has and uses appropriate resources and processes to eliminate or minimise risks of falls, from one level to another, that are likely to cause injury.

Workers have a duty to take reasonable care for their own health and safety and in a way that does not adversely affect the health and safety of other persons. Workers must comply with any reasonable instruction given by the person conducting the business or undertaking.

SCOPE:
This document applies to all activities and sites of Veolia. Contractors of Veolia must also comply with this standard. It provides practical guidance for persons conducting a business or undertaking on how to manage the health & safety risks associated with working at height.

Global Occupational Health & Safety

VEOLIA

LIFE SAVING RULES

alwaysafe

WORK AT HEIGHTS

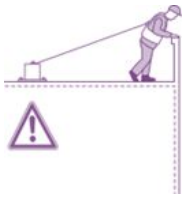
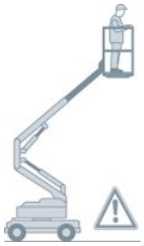
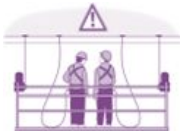
I keep my harness attached at all times when working at height and I protect others from falling objects.

> Summary

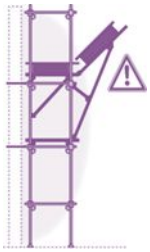
1.0 > Definitions

Working at height:
Obtaining access to or egress from such place while at work except by a staircase in a permanent workplace, or during the task, where, if measures required by the regulations were not taken, a person could fall a distance liable to cause personal injury. This could include work above or below ground level.

Examples within Veolia activities:

Work on the ground or on construction	 Near a trench or an excavation	 Work on a roof, a terrace of a building or on a fragile surface	 Near an opening or a hole in the ground	 Vehicle inspection pits	 Platform with guardrails
Fall prevention devices	 Scaffolding	 Elevating work platform	 Light duty suspended scaffold	 Safety net	 Perimeter guardrails
Work positioning system	 Winch and industrial rope access system	 Safety tripod	 Restraint technique	 Specific equipment for pylon	

Examples within Veolia activities:

Fall-arrest system	 Catch platform	 Industrial safety net	 Individual fall-arrest system	 Anchorage points, lifelines, self retracting lifelines, lanyards or rail systems
Ladders	 Cage ladder or fix ladder	 Mobile platform	 Ladder	
Administrative controls	 Work procedure	 Permit to work	 "No Go" area	

2.0 > Managing the risk of falls

2.0.1 – How to identify fall hazards?

The main hazards associated with working at height are:

- persons falling.
- falling objects.
- falls from collapsing structures.

These may occur due to:

- faulty design of the access equipment.
- structural failure of suspension systems or components, through overloading, overbalancing, poor erection / maintenance / inspection.
- misuse.
- overreaching and overbalancing.
- unauthorised alterations.

You must identify all locations and tasks (normal and emergency) that could cause injury due to a fall.

This includes access to the areas where work is to be carried out. Particular attention should be paid to the following activities, any structure or plant being constructed or installed, demolished or dismantled, inspected, tested, repaired or cleaned:

NEW

- a fragile surface (for example: cement sheeting roofs, rusty metal roofs, fibreglass sheeting roofs, ceilings of clean air rooms and skylights,false ceiling).
- a potentially unstable surface (for example, areas where there is potential for ground collapse).
- using equipment to work at the elevated level (for example, when using elevating work platforms or portable ladders).
- sloping or slippery surface where it is difficult for people to maintain their balance (for example, on glazed tiles).
- near an unprotected open edge (for example, near incomplete stairwells).
- near a hole, shaft or pit into which a worker or third party could fall (for example, trenches, lift shafts or service pits).

You must inspect the workplace. Walk around the workplace and talk to your workers to find out where work is carried out that could result in falls. A checklist may be useful in this process. Key things to look for include:

Surfaces:

- the stability, fragility or brittleness.
- the potential to slip, for example where surfaces are wet, polished or glazed.
- the safe movement of workers where surfaces change.
- the strength or capability to support loads.
- the slope of work surfaces, for example, where they exceed 7 degrees.

In some situations, advice may be needed from technical specialists, such as structural engineers, to check the stability of structures or load bearing capacity.

You should review available information, including incident records.

You should check your records of previous injuries and near-miss incidents related to falls. Fall hazards and relevant risks information and advice within particular industries and work activities are also available from regulations, industry associations, unions, technical specialists and safety consultants.

2.0.2 – How to assess the risk?

A Risk Assessment must be carried out by a competent person, before working at height, to decide what control measures are required to avoid or reduce the risk. Work should be done at a safe level to minimise the risk. If this is not possible, then the Risk Assessment must consider:

- the people - physical condition, age, vertigo, pregnancy.
- the activity - construction, maintenance, visual inspection.
- the equipment used - mobile access platforms, scaffold, ladders, etc.
- location - near / over water, power lines, roads.
- the environment - weather, temperature, wind.
- the duration of the work.
- if there are procedures.
- if there are prepared tasks.
- the condition & stability of the working surface e.g. fragile surfaces, soft grounds, roofs.
- the design and layout of elevated work areas, including the distance of a potential fall.
- the number and movement of all people at the workplace.
- the proximity of workers to unsafe areas where loads are placed on elevated working areas (for example, loading docks) and where work is to be carried out above people and there is a risk of falling objects.
- the adequacy of inspection and maintenance of plant and equipment (for example, scaffolding).
- the adequacy of lighting for a clear vision.
- the weather conditions: rain, wind, storms, extreme heat or cold temperatures can cause slippery or unstable conditions.
- the suitability of footwear and clothes regarding the working conditions.
- the suitability and condition of ladders, including where and how they are being used.
- the adequacy of current knowledge and training to perform the task safely (for example, young, new or inexperienced workers may be unfamiliar with a task).
- the adequacy of procedures for all potential emergency situations.

Walk around the workplace and talk to your workers to find out where work is carried out that could result in falls.

2.0.3 – Selection of suitable work equipment

When selecting equipment to be used when working at heights (above or below ground) the following items must be taken into account:

NEW

- the working and weather conditions and the risks exposure to the safety of persons at the place where the work equipment has to be used.
- in the case of work equipment for access and egress, the distance to be negotiated.
- number of employees for the task.
- the distance and consequences of a potential fall.
- the duration and frequency of use.
- the need for easy and timely evacuation and rescue in case of an emergency.
- any additional risk posed by the use, installation or removal of that work equipment or by evacuation and rescue from it.
- the characteristics for work equipment for work at height including:
  - dimensions which are appropriate to the nature of the work to be performed and the foreseeable loadings.
  - allowing passage without risk.
  - the most suitable work equipment, with regard to the hierarchy of control, to be applied during the assessment of risk.

A Risk Assessment must be carried out by a competent person, before working at height, to decide what control measures are required to avoid or reduce the risk.

2.0.4 – Risk management-Hierarchy of control

Control measures must be ranked from the highest level of protection and reliability to the lowest. This ranking is known as the HIERARCHY OF CONTROL or RISK MANAGEMENT HIERARCHY.

You should always aim to **eliminate a hazard**, which is the most effective control. If it is not reasonably practicable, the risk must be minimized by one or a combination of the following:

HIGHEST	ELIMINATION	Can the working at height be totally eliminated?	MOST
Health & Safety Protection ↑	SUBSTITUTION	Can the work be done another way?	Reliability of control measures ↑
	ENGINEERING	Can a mechanical system be used to keep workers remote from the working at height?	
	ISOLATION	Can a guardrail be put in place to remove people from the hazards? Can we set a Collective Protective Equipment? Can the frequency of intervention in these places be reduced?	
	ADMINISTRATIVE CONTROLS	Can training, increased supervision, procedures, rotation and signage minimize exposure?	
LOWEST	PERSONAL PROTECTIVE EQUIPMENT	Can PPE protect the workers from the hazard or risk?	LEAST

IMPLEMENTING AND MAINTAINING CONTROL MEASURES

You must ensure that the control measures you implement remain effective. This includes checking that the control measures are fit for purpose, suitable for the nature and duration of the work and are installed and used correctly.

To allow the chosen control measures to operate effectively:

You should develop work procedures on how to correctly install, use and maintain the control measures. The procedures should include control of process,a planned program of inspections and maintenance for the control measures.

NEW

The inspection regime should include details of:

- the equipment and accessories to be inspected (including its unique identification).
- the frequency and type of inspection (pre-use checks, detailed inspections).
- action to be taken on finding defective equipment.
- means of recording the inspections.
- training of users.
- the system of monitoring the inspection regime to verify that inspections are carried out appropriately.

The manufacturer and/or supplier of the equipment should be consulted for any product specific requirements. If any sign of wear or weakness is found during the inspection, the components or means of attachment must be withdrawn from use until they are replaced with properly functioning components.

You must provide information, training and instruction to workers, including procedures for emergency and rescue. You should also cover:

- the type of control measures used to prevent falls.
- procedures for reporting fall hazards and incidents.
- the correct selection, fitting, use, care, inspection, maintenance and storage of fall-arrest and restraint equipment.
- the correct use of tools and equipment used in the work (for example, using a tool belt instead of carrying tools).
- control measures for other potential hazards (for example, electrical hazards).

You must provide supervision by ensuring that workers exposed to a risk of a fall are adequately supervised by a competent person and check that:

- only workers who have received training and instruction in relation to the system of work are authorised to carry out the work.
- workers use the fall control measure in the correct manner.

The control measures that are put in place to prevent falls must be reviewed regularly, and if necessary revised, to make sure they work as planned and to maintain an environment that is without risks for health and safety.

Falls of persons

In general, measures have to be taken where a person could be injured due to a fall.

Other factors must be taken into account when assessing the risks which will make risk of injury more likely i.e. working near a traffic route or above a sharp / dangerous surface.

The four main ways of controlling the risk of falling should be:

- to maintain a safe distance from the edge, by use of physical barrier or safety distance (minimum 3 meter from the edge).
- the provision of suitable edge protection (e.g. guards rails, toe boards).
- the use of safety nets or other collective safe guards to limit the distance and consequences of a group of people falling.
- the use of safety harnesses and lanyards to prevent individual falls.

Fall-arrest

Fall-arrest is a type of PPE that limits how far a person may fall - it will not prevent the fall occurring in the first place.

Incorrect application of PPE can result in serious injury and may prove fatal. All persons using such equipment must be trained in its use.

Equipment and their accessories provided for arresting falls must be:

- of suitable and sufficient strength to arrest the fall of the person using it.
- be inspected before use for signs of excessive wear and/or damage. Correct function of locking mechanisms, webbing checked for cuts, burns, frays or signs of chemical attack. If any defect is found, the equipment must be rejected and withdrawn immediately from use.
- attached securely to the structure or plant, and the structure or plant must be of suitable and sufficient strength and stability to safely support the equipment and any person(s) liable to fall.
- it is important, if any worker falls and is caught by the fall-arrest equipment, that they should not be subjected to any excessive force. Hence a shock absorber, such as tear-out lanyards, must be used and, where possible, always anchored above head height to reduce the impact forces of a fall.
- a rescue plan must take into account time scales required to prevent injury and should ensure that the person/persons requiring rescue are not kept waiting longer than 5 minutes.
- anchor points should be above the person working at height (where possible) and the fall-arrest line must be as short as practicable to minimise the potential fall distance.
- any eye-bolts used as anchorage points for fall-arrest equipment and/or safety harness must be included in the normal lifting equipment inspection regime. Eye bolts used as anchorage are potentially subject to shock loadings and the fixing into the wall is equally important. These types of fixings are usually inspected by specialists.

Falling objects

When working at height, only objects / tools essential to the work should be carried and they should be properly secured in a tool bag, so they can be transported without objects falling.

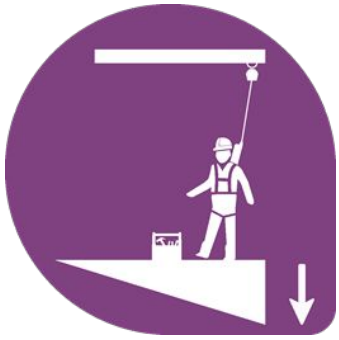
Pockets /clothing should be checked for any loose items, and they must be secured or removed if not necessary for the work.

To prevent objects falling onto people, some or all of the following precautions should be used, as necessary:

- create an exclusion zone beneath where the work is taking place, by erection of barriers and warning signs.
- provide barriers at the workplace such as mesh guards or nets to prevent the fall of / catch items that are knocked off the structure.
- secure loose objects to the person or structure, by means of a strap/rein.

When people are working at heights above ground level, any persons approaching the work area from below must wear safety helmets (protective headwear are forbidden).

I keep my harness attached at all times when working at height and I protect others from falling objects. (Live Saving Rules)



3.0 > Requirements

Application

NEW

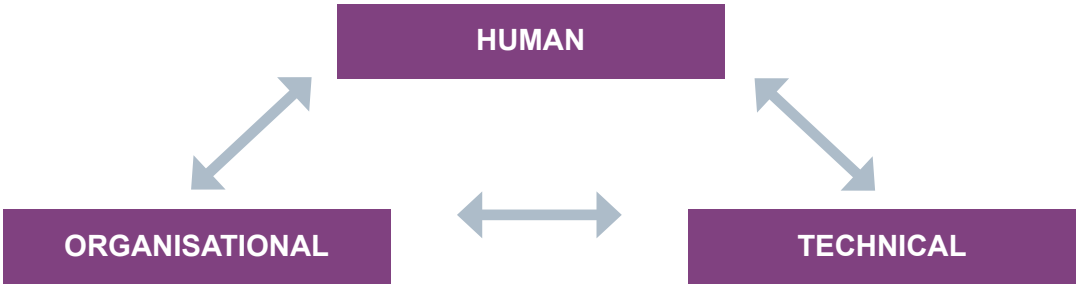
This high risk management standard applies to all interventions/activities related to work at heights, exception made when stricter requirements must be complied (such as national regulations, international standards, clients requirements, codes of practices…).

This standard applies to all Veolia entities and to all acting under their responsibility, such as managers, employees, contractors, suppliers, visitors or any other person acting in the name of a Veolia entity.

Requirements and Departure (Adoption of Alternative Control Measures)

Use of the word “must” within this Standard means a requirement is mandatory.

Use of the word “should” within this Protocol means the primary intent is that the requirement is mandatory but specific circumstances may mean implementation of the requirement is not reasonably practicable.



3.0.1 General requirements, qualification and competency

Human

NEW

1. **The Life-Saving Rule relating to this standard must be rolled out to all employees and contractors.**
2. Before starting work at height, a mental safety assessment (MSA) must be performed and the work at height must be stopped if it's unsafe.
3. Work at height must be performed only if operators keep them harness attached at all times when working at height and protect others from falling objects.
4. All authorised workers, including those supervising the operations in work at height ,must receive specific training relevant to their duties.Workers must be trained and instructed in safe operating procedures for the particular brand and type of equipment, as well as the safe use of fall-arrest equipment and emergency rescue procedures. The requirement also applies to workers from permanent or regular contractors that are involved in work at height operations.Training must be recorded, maintained and periodically renewed every 5 years or whenever there is a change in the procedure.
5. All records of training and qualifications must be kept and made available for inspection/checking.
6. You must ensure all employees working at height have fit to work (i.e. through medical examination)
7. Workers from irregular contractors that are involved in work at height operations must receive a specific work at height awareness training adapted to the work situation and the risks.
8. You must identify what PPE needs to be worn and used.
9. All persons involved in work at height (procurement, sales, design & engineering, operators, managers, contractors, etc.) must follow the must follow the module of this standard in e-learning or face-to-face. The e-learning must be refreshed every 3 years.

10. Control measures for working at height must include all those mentioned within this document. NEW
11. In order to ensure that this standard is properly applied to all work at height, observations (such as safety visits, audits, etc.) must be carried out regularly.
12. Observation (such as safety visits, audits, etc.) carried out during the intervention must take into account the behaviour of those observed.
13. Observations must lead to:
    - the activity being stopped until compliance is restored in case of deviations from critical requirements of this standard;
    - immediate remediation and/or corrective action plan in case of deviations from requirements of this standard others than critical;
    - recognition of existing good-practices through sharing and "copy & adapt".

Organisational

1. Purchase, design, installation and assembly of equipment (including hired and contracted equipment) must meet the requirements of this standard. NEW
2. Your control measures should identify all locations and tasks (Normal and Emergency) that could cause injury due to a fall from height and for objects that may fall from a height.
3. You must organize pre-job briefing with all members including onsite contractor and subcontractors present before start every work at height. A systematic job safety analysis (JSA) must be carried out by the team executing the work (employees of Veolia and/or contractors) prior to starting the job. It must include the review of the existing procedures to be applied. (cf appendix 2) NEW
4. The design of installations and equipment should take into account the requirements of this standard, both with regard to the normal operation of the installation, to reduce the risks during servicing and preventive/curative maintenance, but also to allow for the rapid and effective intervention of emergency services in the event of an accident.
5. If possible you should eliminate working at height and find alternative solutions i.e. working at ground level, etc.
6. Risk assessments should make provision for identifying controls needed for persons who may be working at height to include all controls and activities referenced in this document.
7. The control measures that are put in place to prevent falls should be reviewed regularly and after each incident, and if necessary revised, to make sure they work as planned as to maintain an environment that is without risks for health and safety.
8. You must provide supervision by ensuring that workers exposed to a risk of a fall are adequately supervised by a competent person.
9. When working at height only objects / tools essential to the work should be carried and they should be properly secured in a tool bag, so they can be transported without objects falling. NEW
10. When people are working at heights above ground level, any persons approaching the work area from below must wear safety helmets with chin strap (protective headwear are forbidden).

Technical

1. When selecting equipment to be used when working at heights (above or below ground) the following items must be taken into account:
   - the working conditions and the risks exposure to the safety of persons at the place where the work equipment has to be used.
   - in the case of work equipment for access and egress, the distance to be negotiated.
   - number of employees for the task.
   - the distance and consequences of a potential fall.
   - the duration and frequency of use.
   - the need for easy and timely evacuation and rescue in case of an emergency.
   - any additional risk that might be caused by the use, installation or removal of that work equipment or by evacuation and how to avoid it.
2. The manufacturer and/or supplier of the equipment must be consulted for any product specific requirements. NEW
3. All equipment or material must comply with international and local standard regulation.
4. Regular and at least before any use checks and inspections of equipment or PPE should be undertaken and any that is damaged/inadequate must be taken out of use and replaced.
5. Barricades and signposts must be placed on all access areas below the working area and anchorage locations to exclude and alert third parties or other persons.

3.0.2 Requirements for design of plant and structures

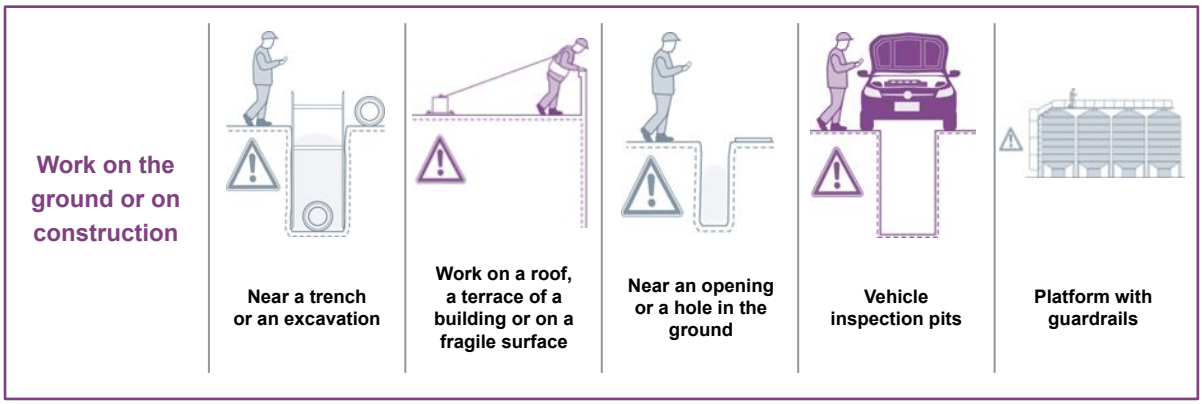
Organisational

1. Specific safety requirements must be kept for particular workers doing subsequent installation, maintenance or repair work.

Technical

1. Safety considerations at the design stage should include:
   - safe entry to and exit from any work area.
   - designing permanent guardrails or other forms of edge protection (for example, parapet walls) for permanent fall prevention on roofs or the like.
   - future maintenance requirements, especially in relation to sloping building exteriors and windows, to ensure maintenance can be carried out safely.
   - specifying the strength of roof structures and other points to which guard-rail, or anchor points for work positioning systems will be fixed.
   - incorporating a fall prevention system (i.e on silos and overhead conveyors).
2. You must not include fixed and mobile ladders in your emergency escape plans. NEW

3.0.3 Requirements for work at height on the ground (near of trench, vehicle inspection pits, on roof, fragile surface, near the opening in the ground) or construction (silos, walkway)



Organisational

The risk assessment should include:

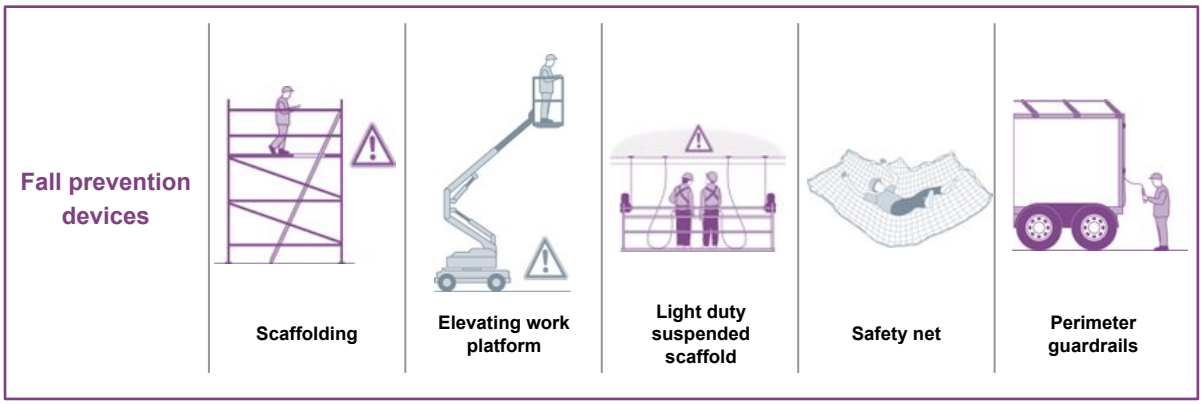
1. Ensuring any holes, penetrations and openings through which a person could fall are physically protected with barriers, guards, etc.
2. That no work must not begin on fragile roofs without a safe system of work in place and ensured that the roof can withstand the work and/or the loads. NEW
3. That safe access onto any fragile roof is provided.
4. That controls to prevent falls are considered:
   - install perimeter edge protection and use stagings on the roof surface to spread the loads.
   - ensure all the work and access stagings or platforms are fitted with guardrails.
   - the use of safety nets.

Technical

1. The surface and its supports should be able to carry safely the expected loads, including workers, materials, tools and equipment. When in doubt, have a structural engineer determine the safe load capacity before use.
2. If a cover is used as a control measure, it should be made of a material that is strong enough to prevent persons or objects falling through and must be securely fixed to prevent any dislodgement or accidental removal.
3. You should provide safe steps and handrails to get access to the vehicles.

3.0.4 Requirements for fall prevention devices

Fall prevention devices include temporary work platforms (scaffolding, light duty suspended scaffold, elevating work platform perimeter guardrails and safety mesh).



Organisational

1. The surface area must be checked to make sure that there are no penetrations or obstructions that could cause uncontrolled movement or overturning of the platform.
2. The manufacturer's or supplier's instructions must be consulted for information on safe operation.

Scaffolding

3. Scaffolding work platforms must be erected, altered and dismantled by competent persons and should be under the direct supervision of a qualified specialist of building scaffolding.
4. Scaffolding should be further inspected on a weekly basis or following severe adverse weather (if external) or following significant alteration.
5. Unauthorised access must prevent from scaffolding that is incomplete and left unattended (for example, by attaching danger tags and warning signs at appropriate locations).

Elevating work platforms

6. The elevating work platforms must only be used as working platforms and not as a means of entering and exiting a work area.
7. Mobile elevating work platforms must be used on a solid level surface unless designed for rough terrain (eg.underground network) NEW

Technical

Scaffolding work platforms must have:

1. Same type and not mixed components, unless the mixing of components has been approved by the original manufacturer of the prefabricated scaffolds.
2. A provided safe access to and egress from the scaffold.
3. Hands guardrails, middle guardrails and toe board at every level of the work platform.

Light duty suspended scaffold and Elevating work platform:

4. Where the scaffold is suspended by two wire ropes to each winch, operators must wear a safety harness and lanyard with shock absorber (check coherence with height), attached to a suitable anchor point of the suspended scaffold.

Perimeter guardrails:

5. Guardrails must be made up of top guardrail, mid-guardrail and toeboard. They should incorporate a top guardrail 900 mm to 1,100 mm above the working surface and a mid-guardrail 500 mm to 550 mm and a toe board.

NEW

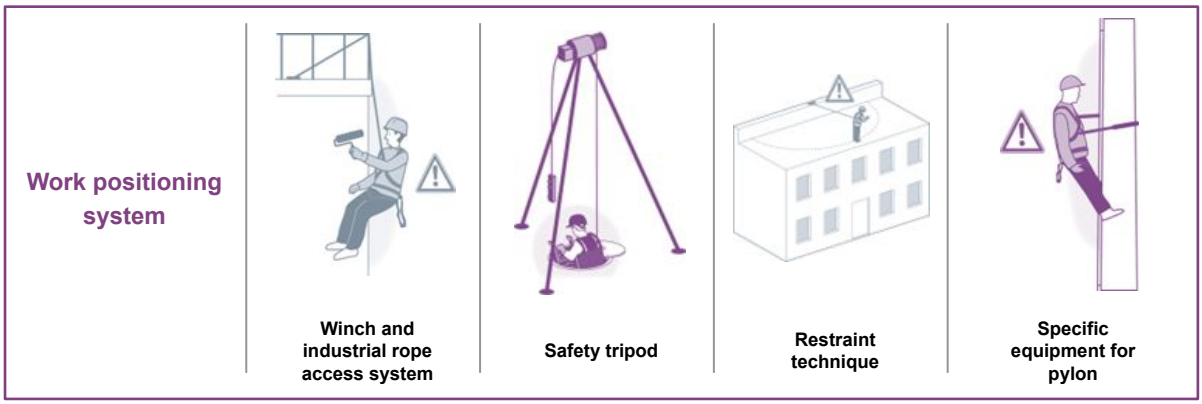
Safety net must be:

6. Installed in accordance with the manufacturer's instructions by competent or trained persons that have to be protected against the risk of falling by using appropriate control measures such as scaffolding, elevating work platforms or fall-arrest systems.

All equipments must be inspected regularly by a competent person and approved for each used.

3.0.5 Requirements for work positioning system

Work positioning system includes industrial rope access system, safety tripod, winch and restraint technique.



Human

1. Workers must use individual fall-arrest system (safety harness, lanyards, shock absorbers, etc.).

Organisational

1. Work positioning system must be installed only in a location where it is possible to provide prompt assistance or rescue if required.
2. Any person close to unguarded edge must be adequately secured (less than 3 meters).
3. Supervisors must communicate constantly with workers during tasks.
4. Restraint techniques should only be used if it is not reasonably practicable to prevent falls by a physical barrier.
5. An individual fall-arrest system must be used instead of restraint techniques if any of the following situations apply:
   - the user can reach a position where a fall is possible.
   - the user has a restraint line that can be adjusted in length so that a free fall position can be reached.
   - there is a danger the user may fall through the surface, for example fragile roofing material.
   - the slope is over 15 degrees.

Technical

1. All equipment must be inspected regularly by a competent person and approved for each use.
2. Prior to use: all fixed anchorage points and quick lock systems must be checked by a trained and competent person before the rope access lines are attached.
3. If the equipment has been used to arrest a fall it must not be used again until it has been inspected and certified by a competent person as safe to use. NEW
4. A back-up system is used to protect the operator (linked with fall-arrest system).

Industrial rope access system

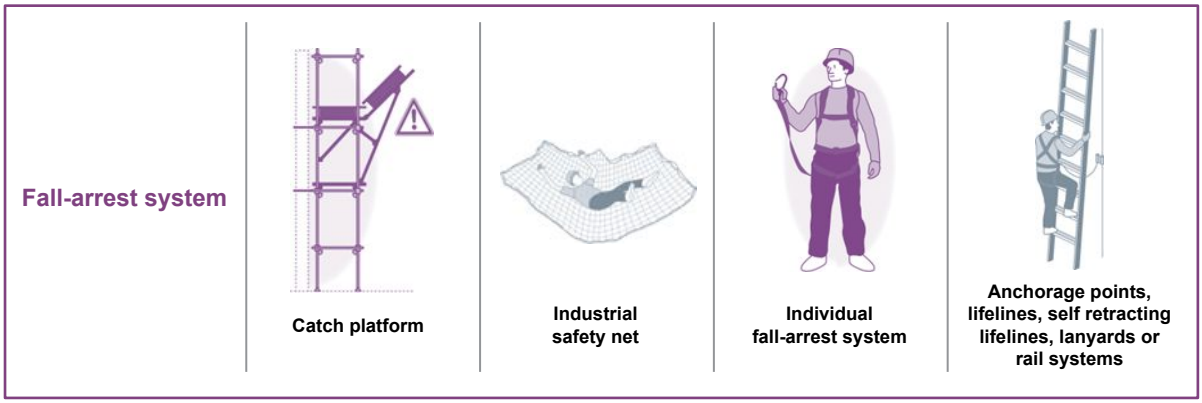
5. Each person must use an individual rope and anchor.
6. Barricades and signposts are placed on all access areas below the working area and anchorage locations to exclude and alert the public.

Restraint technique

7. A restraint system must be installed by a trained and competent person in accordance with the manufacturer's instructions.
8. Restraint anchorage must be designed for fall-arrest loading.

3.0.6 Requirements for Fall-arrest system

Fall-arrest system includes catch platforms, industrial safety nets, individual fall-arrest system and anchorage lines or rails.



Human

Individual fall-arrest system

1. Before using safety harness, workers must fully understand the reasons for its use and the limitations of its use.
2. The user must then visually check all equipment of his/her individual fall-arrest system, to make sure the equipment is fit for purpose, and sign any record sheet required to this effect.
3. When accessing the roof of a vehicle, material for repairs or maintenance, the users must ensure that they are attached to either an inertia reel (fall-arrest) or bi-line system prior to commencing any works.
4. Workers must never work alone when using a harness as fall protection.

Anchorage lines or rails

5. Workers who use a double lanyard means to climb must always be connected to the ladder or structure.

Organisational

1. Equipment must be inspected before use for signs of excessive wear and/or damage. Correct function of locking mechanisms, webbing checked for cuts, burns, frays or signs of chemical attack. If any defect is found, the equipment must be rejected and withdrawn immediately from use.
2. A rescue plan must take into account time scales required to prevent injury and should ensure that the person/persons requiring rescue are not kept waiting longer than 5 minutes.

Safety net

3. Material must not be allowed to accumulate in suspended safety nets.
4. No welding or oxy cutting must be performed above safety nets.
5. Safety nets must be inspected by competent person, particularly after installation, relocation or repair.
6. Safety nets must be stored correctly in dry, shaded areas with air circulation

Individual fall-arrest system

7. All anchorages must be tested and approved by a competent person before use.
8. Inspection of all components should be conducted in accordance with the manufacturer's specifications and the relevant standards. If any signs of wear or weakness are found during the inspection, the components or means of attachment must be withdrawn from use until they are replaced with properly functioning components.
9. All harnesses must be uniquely identifiable and formally inspected by a competent person every year, any actions to be implemented by repair/replacement or destruction of the defective equipment and the inspections and subsequent actions recorded.

Technical

1. Anchor points should be above the person working at height (where possible) and the fall-arrest line must be as short as practicable to minimise the potential fall distance.
2. The equipment and anchorages must be designed, manufactured and installed to be capable of withstanding the force applied to them as a result of a person's fall.
3. The system must be designed and installed so that the person travels the shortest possible distance before having the fall stopped.
4. If the equipment has been used to arrest a fall it must be not used again until it has been inspected and certified by a competent person as safe to use.
5. In compliance with regulation, any eye-bolts used as anchorage points for fall-arrest equipment and/or safety harness must be included in the normal lifting equipment inspection regime.

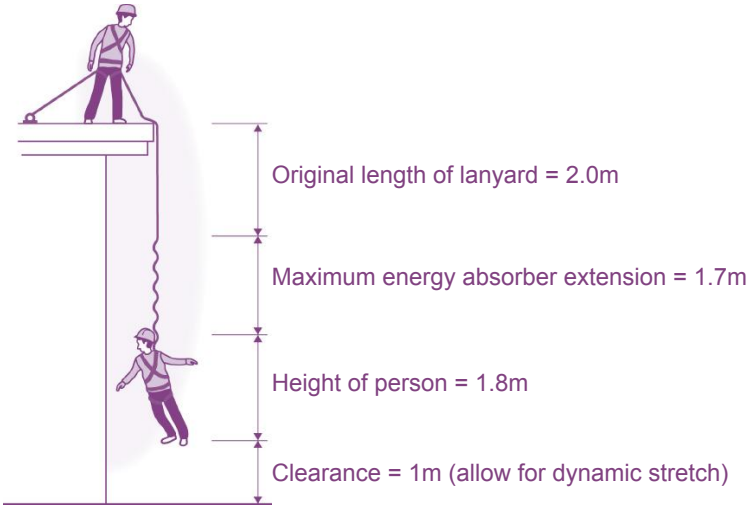
Catch platforms

6. Must incorporate a fully planked-out deck.
7. Must be positioned so the deck extends to at least two metres.
8. Must be beyond all unprotected edges of the work area, except where extended guard railing is fitted to the catch platform.
9. Must be positioned as close as possible to the underside of the work area-the distance a person could fall before landing on the catch platform should be no more than one metre.
10. Must be used with an adequate form edge protection.

Safety nets

11. Safety nets must be hung as close as is practicable to the underside of the working area, but no more than two metres below the working area.
12. The safety net must have sufficient tension and clearance to prevent a falling person from touching any surface or structure below the net. NEW

Individual fall-arrest system



13. Each anchorage point should be located so that a lanyard of the system can be attached to it before the person using the system moves into a position where the person could fall (placing the anchorage point at a right angle to the position of the lanyard at the perimeter edge to prevent pendulum aspect).
14. Fall-arrest systems, incorporating a lanyard, must be installed so that the maximum distance a person would free fall, before the fall-arrest system takes effect, is two metres.
15. You must use compatible components.
16. There must be sufficient distance between the work surface and any surface below to enable the system, including the action of any shock absorber, to fully deploy.
17. To work out whether there is enough distance available, you must take into account:
    - the worker's height.
    - the height and position of the anchorage point.
    - the length of the lanyard.
    - any slack in the horizontal life line.
    - any stretching of the lanyard or horizontal life line when extended by a fall.
    - the length of the energy absorber when extended by a fall.

Anchorage lines or rails

18. The locking device must be attached to the frontal attachment point of the harness and the lanyard assembly is a maximum of 300 mm length.
19. The point of connection onto the ladder by the climber must be near the base of the ladder to allow the connection before ascension begins and also to provide continuous connection to the disconnecting point, when at a safe higher level.
20. Permanent systems must be of wire or rail construction and installed according to the manufacturer's instructions.

3.0.7 Requirements for ladders

Ladders includes mobile platform, step ladders and cage ladder or fix ladder.

Ladders			
			
	Cage ladder or fix ladder	Mobile platform	Ladder

Human

1. Prior to each use, operators must undertake their own visual pre-use inspection of all access equipment to satisfy themselves of its condition and suitability for purpose.
2. The ladder must be inspected for faults, such as broken rungs, stiles and footing before it is used and damaged ladders removed from service.
3. The ladder must be the correct height for the access to avoid reaching or stretching.
4. Ladders must not be loaded beyond the maximum intended load for which they were built, nor beyond their manufacturer's rated capacity.
   - all the locking devices on the ladder must be secured.
   - worker must maintained three points of contact on the ladder while climbing it.
   - worker must be always face the ladder when climbing up or down.
   - you must Identify what PPE needs to be worn and used (fall-arrest system, helmets, gloves, slip resistant shoes, other).
5. It is important that mud or grease, etc., is cleaned off footwear before any attempt is made to climb or descend a ladder. Where ladders become contaminated they should be taken out of service and cleaned.
6. You must not allow anyone else to be on the ladder at the same time as the worker climbing.
7. You must not use metal or metal reinforced ladders when working on live electrical installations.
8. You must not carry out work such as arc welding or oxy cutting.

Organisational

1. If you need to use a ladder for working at height, you must use mobile platform.
2. Work from stand-alone ladders must not be allowed. Inspections are considered as work. Stand-alone ladders must only be used for access purposes.
3. If mobile platform are used, they must be selected to suit the task to be undertaken. In doing this, you should consider the duration of the task, the physical surroundings of where the task is to be undertaken and the prevailing weather conditions.

NEW

4. Any ladder used at a workplace must be set up on a solid and stable surface, and set up so as to prevent the ladder from slipping. Single and extension ladders can be prevented from slipping by:
   - the distance between the ladder base and the supporting structure should be about one metre for every four metres (4:1 ratio), and setting up step ladders in the fully opened position.

   - securing ladders at the top or bottom, or if necessary, at both ends.
   - she ladder is secured against displacement (i.e. slipping or sliding) and/or there is another person holding the base of the ladder.
5. Where fixed or extension ladders are used for access or egress, you must check that:
   - there is a firm, stable work platform, free from obstructions, to step onto from the ladder.
   - the ladder extends at least one metre above the stepping-off point on the working platform.
   - fall protection is provided at the stepping- off point where people access the working platform.
6. A competent person must formally inspect mobile ladders every year, recording in simple form that the inspection has been carried out.
7. The area around the top and bottom of the ladder should always be clear.
8. You must secure all tools and equipment that are being carried up a ladder (i.e. tool belts or tool bags pulled up on a rope).
9. The bottom of the ladder must be barricaded to prevent movement by unauthorized personnel, and to ensure that no one is standing in an area where they may come in contact with a falling object.
10. Ladders must be secured in any location where they can be displaced by workplace activities, pedestrian traffic or vehicular traffic, such as in passageways, doorways, or driveways. You may use a service vehicle as a barricade to keep activity or traffic away from the ladder.
11. Ideally the equipment should be stored in one area and secured by chain to assist in control and inspection and to prevent damage occurring.

Cage ladder or fix ladder

12. Where an alternative route exists, it must be taken (even if it takes longer), i.e. use of stairwells rather than fixed ladders.

Technical

1. You must not build or modify ladders internally. Veolia only uses ladders built by the manufacturer.
2. Chain or rope ladders are prohibited unless all other means of accessing the work area have been considered and are not possible.
3. Ladders should be manufactured for industrial use.
4. All mobile ladders and mobile platform must have identification and control evidences.
5. Mobile and fix ladders must not be painted, unless a transparent paint or varnishes are used. Ensure that the ladders are not slipping after being painted.

Cage ladder or fix ladder

6. All unused ladders must be removed from service by removing any lower access sections or securing a blanking plate (or similar) to prevent access.
7. Ladders (external) which are potentially accessible by public/trespassers should have a locking device or a removable lower section to prevent unauthorized access.
8. All ladders above 2.4m in height should have fall prevention hoops / cage fitted and fall- arrest system.
9. Fixed ladders should be installed in accordance with international standard and country regulation.
10. For ladder flights above 6 metres additional fall prevention/arrest systems must be installed, i.e. sliding rail, restraint blocks. The type of system will depend on the existing ladder arrangements.
11. If the height of cage ladder is over 6m from the ground you must have separate platform every 6 metres.

Where an alternative route exists, it must be taken, even if it takes longer.

3.0.8 Requirements for administrative controls

Administrative controls should be used to support other control measures and may include “no go” areas, permit systems, the sequencing of work and safe work procedures.

Administrative controls			
			
	Work procedure	Permit to work	“No go” Area

Human

1. A safe work procedure/fundamentals rules that describes the steps involved in safely undertaking a task should be maintained. It may also include any particular training, instruction, consequences scale and the level of supervision required.

Organisational

1. You must define roles & responsibilities for all members of team involve in work at height activities. NEW
2. Relevant information and instruction should be provided about “no go” areas with adequate supervision to ensure that no unauthorised worker or third part enter in the “no go” area.
3. You must obtain permit to work before starting to work at height with registration, except if using mobile platform.
4. Work must be organised so that people do not interfere with other workers or increase the risk to themselves or others.

Technical

1. Barriers must be used in conjunction with signs to cordon-off areas where there is a risk of falling or being hit by falling objects. They must be highly visible and securely fixed to prevent displacement.
2. Tagging must be used for all access points to a scaffold to restrict unauthorised access during erection and dismantling, with “only licensed and qualify scaffolders permitted on an incomplete scaffold” tag.

This document applies to all activities and sites of Veolia. Contractors of Veolia must also comply with this standard.

3.0.9 Requirements for emergency procedure for falls

Human

1. Workers must be provided with suitable and adequate information, instruction and training in relation to the emergency procedures.
2. Workers should also be trained to administer first aid or have access to persons who are trained in first aid.
3. Workers and emergency response workers should be trained to rescue procedures and be able to recognise the risks of suspension intolerance and act quickly in the rescue of a person.
4. Training frequency should take into account the worker's competence and their ability to retain competence through regular exposure to the equipment and skills needed to perform a rescue (practical exercise: minimum 1 per year).
5. Workers must avoid to put themselves at risk during a rescue.

Organisational

NEW

1. A written emergency plan must be established, validated and communicated to all involved before any intervention.
2. Potential accident scenarios must be identified and emergency measures must be defined and ready to be deployed. On industrial sites, this plan must be developed with the client.
3. Emergency plans should be tested regularly.
4. You must ensure that workers have access to first aid equipment and facilities for the administration of first aid.
5. When establishing emergency procedures, you should take into account the following:
   - location of the work area.
   - communications.
   - rescue equipment.
   - how to deal with equipment failure and people being elevated at that stage.
   - capabilities of rescuers.
   - first aid.
   - local emergency services-if they are to be relied on for rescue.
6. The time a worker spends in suspension after a fall should be limited to less than five minutes. When a suspension is longer than five minutes, foothold straps or a way of placing weight on the legs should be provided.
7. The rescue process should start immediately.

4.0 > Glossary

Anchorage: means a secure point for attaching a lanyard, lifeline or other component of a travel restraint system or fall-arrest system.

Appropriate anchor point: a secure point on a scaffold, ideally above and behind the scaffolder so as to minimise the impact load should the scaffolder fall.

Approved anchor point: a secure point of attachment on a structure identified in a written procedure or drawing.

Barricade (edge protection): a barrier to prevent access to a work area or to prevent a person falling which has been erected along the edge or an opening in the surface of a building, or other structure, or from the surface from which work is to be done, and is adequately fixed and capable of withstanding the weight of a person falling against or leaning on it. Examples are:

- clamped or secured scaffold tubes.
- structural mesh or members which have been welded, nailed, securely tied or clamped.
- wire rope slings which have been shackled or secured.
- plastic barricading mesh (fluorescent red/ orange) firmly attached to fixed supports/ posts.

Competent person: a person who has acquired the knowledge and skills to carry out the task through training or experience. Competency is a combination of the attributes enabling a worker to identify both the risks arising from a situation and the measures needed to deal with them.

Fall: means a fall by a person from one level to another.

Fall-arrest system: includes catch platforms, industrial safety nets, individual fall-arrest system and anchorage lines or rails.

Fall prevention devices: include temporary work platforms (scaffolding, light duty suspended scaffold, elevating work platform perimeter guardrails and safety mesh.

Ladders: includes mobile platform, step ladders and cage ladder or fix ladder.

Lanyard: an assembly consisting of a line and components which will enable connection between a harness and an anchorage point and will absorb energy in the event of a fall.

Lifeline: a line provided for direct or indirect attachment to a body belt, body harness, lanyard, or deceleration device. Such lifelines may be horizontal or vertical in application.

Personal energy absorber (or deceleration device): means a device which reduces the deceleration force imposed when a fall is suddenly arrested, and correspondingly reduces the loadings on the anchorage and the person's body. The energy absorber may either be a separate item or manufactured as part of the lanyard.

Restraint line: is the line securing workers to a point of anchorage and is used to prevent a person from reaching a point from which he or she could fall.

Suspension trauma (orthostatic intolerance): A condition that may occur when a person falls and remains suspended both vertical and sedentary for a period of time. Blood pools in the veins of the legs, which could result in unconsciousness. If a person is not rescued quickly, permanent damage and possibly death may result.

Toe board: a board fixed at the lip of a working platform intended to prevent the falls of materials over the edge of the platform.

Work positioning system: includes industrial rope access system, safety tripod, winch and restraint technique.

NEW

APPENDIX 1 > Applicability and Compliance Assessment

> 3.0.1 GENERAL REQUIREMENTS, QUALIFICATION AND COMPETENCY	C	NC	Criticality
HUMAN			
1. **The Life-Saving Rule relating to this standard must be rolled out to all employees and contractors.**			1: Critical
2. Before starting work at height, a mental safety assessment (MSA) must be performed and the work at height must be stopped if it's unsafe.			1: Critical
3. Work at height must be performed only if operators keep them harness attached at all times when working at height and protect others from falling objects.			1: Critical
4. All authorised workers, including those supervising the operations in work at height ,must receive specific training relevant to their duties.Workers must be trained and instructed in safe operating procedures for the particular brand and type of equipment, as well as the safe use of fall-arrest equipment and emergency rescue procedures. The requirement also applies to workers from permanent or regular contractors that are involved in work at height operations.Training must be recorded, maintained and periodically renewed every 5 years or whenever there is a change in the procedure.			1: Critical
5. All records of training and qualifications must be kept and made available for inspection/checking.			2: Important
6. You must ensure all employees working at height have fit to work (i.e. through medical examination).			1: Critical
7. Workers from irregular contractors that are involved in work at height operations must receive a specific work at height awareness training adapted to the work situation and the risks.			1: Critical
8. You must identify what PPE needs to be worn and used.			1: Critical
9. All persons involved in work at height (procurement, sales, design & engineering, operators, managers, contractors, etc.) must follow the must follow the module of this standard in e-learning or face-to-face. The e-learning must be refreshed every 3 years.			2:important
10. Control measures for working at height must include all those mentioned within this document.			2: Important
11. In order to ensure that this standard is properly applied to all work at height within the perimeter, safety visits must be carried out regularly			2: Important
12. Observation (such as safety visits, audits, etc.) carried out during the intervention must take into account the behaviour of those observed.			1: Critical
13. Observations must lead to: • the activity being stopped until compliance is restored in case of deviations from critical requirements of this standard; • immediate remediation and/or corrective action plan in case of deviations from requirements of this standard others than critical; • recognition of existing good-practices through sharing and "copy & adapt".			2: Important
ORGANISATIONAL			
1. Purchase, design, installation and assembly of equipment (including hired and contracted equipment) must meet the requirements of this standard.			1: Critical
2. Your control measures should identify all locations and tasks (normal and emergency) that could cause injury due to a fall from height and for objects that may fall from a height.			2.important
3. You must organize pre-job briefing with all members including onsite contractor and subcontractors present before start every work at height. A systematic job safety analysis (JSA) must be carried out by the team executing the work (employees of Veolia and/or contractors) prior to starting the job. It must include the review of the existing procedures to be applied. (cf appendix 2)			1: Critical

C: Compliant
NC: Non compliant
P: Priority as defined
1: Critical = Requirement that is fundamental to be deployed to avoid serious incidents.
2: Important = Requirement that is essential and should be implemented to the extent possible to avoid incidents.
3: Useful = Requirement that has an effective role in strengthening prevention

NEW

4. The design of installations and equipment should take into account the requirements of this standard, both with regard to the normal operation of the installation, to reduce the risks during servicing and preventive/curative maintenance, but also to allow for the rapid and effective intervention of emergency services in the event of an accident.			2: Important
5. If possible you should eliminate working at height and find alternative solutions i.e. working at ground level, etc.			2: Important
6. Risk assessments should make provision for identifying controls needed for persons who may be working at height to include all controls and activities referenced in this document.			2: Important
7. The control measures that are put in place to prevent falls should be reviewed regularly and after each incident, and if necessary revised, to make sure they work as planned and to maintain an environment that is without risks for health and safety.			2: Important
8. You must provide supervision by ensuring that workers exposed to a risk of a fall are adequately supervised by a competent person.			1: Critical
9. When working at height only objects / tools essential to the work should be carried and they should be properly secured in a tool bag, so they can be transported without objects falling.			1: Critical
10. When people are working at heights above ground level, any persons approaching the work area from below must wear safety helmets with chin strap (protective headwear are forbidden).			1: Critical
TECHNICAL			
1. When selecting equipment to be used when working at heights (above or below ground), the following items must be taken into account: • the working conditions and the risks exposure to the safety of persons at the place where the work equipment has to be used. • in the case of work equipment for access and egress, the distance to be negotiated. • number of employees for the task. • the distance and consequences of a potential fall. • the duration and frequency of use. • the need for easy and timely evacuation and rescue in an emergency. • any additional risk posed by the use, installation or removal of that work equipment or by evacuation and rescue from it.			1: Critical
2. The manufacturer and/or supplier of the equipment must be consulted for any product specific requirements.			1: Critical
3. All equipment or material must comply with international and local standard regulation.			1: Critical
4. Regular and at least before any use checks and inspections of equipment or PPE should be undertaken and any that is damaged/inadequate must be taken out of use and replaced.			1: Critical
5. Barricades and signposts must be placed on all access areas below the working area and anchorage locations to exclude and alert third parties or other persons.			1: Critical
> 3.0.2 REQUIREMENTS FOR DESIGN OF PLANT AND STRUCTURES	**C**	**NC**	**Criticality**
ORGANISATIONAL			
1. Specific safety requirements must be kept for particular workers doing subsequent installation, maintenance or repair work.			2: Important
TECHNICAL			
1. Safety considerations at the design stage should include: • safe entry to and exit from any work area. • designing permanent guardrails or other forms of edge protection (for example, parapet walls) for permanent fall prevention on roofs or the like. • future maintenance requirements, especially in relation to sloping building exteriors and windows, to ensure maintenance can be carried out safely. • specifying the strength of roof structures and other points to which guard-rail, or anchor points for work positioning systems will be fixed. • incorporating a fall prevention system (i.e on silos and overhead conveyors.)			1: Critical
2. You must not include fixed and mobile ladders in your emergency escape plans.			2: Important

NEW

> 3.0.3 REQUIREMENTS FOR WORK AT HEIGHT, ON THE GROUND OR IN A CONSTRUCTION	C	NC	Criticality
ORGANISATIONAL			
The risk assessment should include:			
1. Ensuring any holes, penetrations and openings through which a person could fall are physically protected with barriers, guards, etc.			1: Critical
2. That no work must not begin on fragile roofs without a safe system of work in place and ensured that the roof can withstand the work and/or the loads.			1: Critical
3. That safe access onto any fragile roof is provided.			1: Critical
4. That controls to prevent falls are considered i.e. • install perimeter edge protection and use stagings on the roof surface to spread the loads. • ensure all the work and access stagings or platforms are fitted with guardrails. • the use of safety nets.			2: Important
TECHNICAL			
1. The surface and its supports should be able to safely carry the expected loads, including workers, materials, tools and equipment. When in doubt, have a structural engineer determine the safe load capacity before use.			1: Critical
2. If a cover is used as a control measure, it should be made of a material that is strong enough to prevent persons or objects falling through and must be securely fixed to prevent any dislodgement or accidental removal.			1: Critical
3. Providing safe steps and handrails to get access onto the vehicles.			1: Critical
> 3.0.4 REQUIREMENTS FOR FALL PREVENTION DEVICES	C	NC	Criticality
ORGANISATIONAL			
1. The surface area must be checked to make sure that there are no penetrations or obstructions that could cause uncontrolled movement or overturning of the platform.			1: Critical
2. The manufacturer's or supplier's instructions must be consulted for information on safe operation.			2: Important
Scaffolding			
3. Scaffolding work platforms must be erected altered and dismantled by competent persons and should be under the direct supervision of a qualified specialist of building scaffolding.			1: Critical
4. Scaffolding should be further inspected on a weekly basis or following severe adverse weather (if external) or following significant alteration.			1: Critical
5. Unauthorised access must be prevent on scaffolding that is incomplete and left unattended (for example, by attaching danger tags and warning signs at appropriate locations).			1: Critical
Elevating platforms			
6. The elevating work platforms must only be used as working platforms and not as a means of entering and exiting a work area.			2: Important
7. Mobile elevating work platforms must be used on a solid level surface unless designed for rough terrain (eg.underground network).			1: Critical

NEW

TECHNICAL			
Scaffolding work platforms must have:			
1. Same type and not mixed components, unless the mixing of components has been approved by the original manufacturer of the prefabricated scaffolds.			1: Critical
2. Safe access to and egress from the scaffold is provided.			1: Critical
3. Hands guardrails, middle guardrails and toe board at every level of the work platform.			1: Critical
Light duty suspended scaffold and Elevating work platform			
4. Where the scaffold is suspended by two wire ropes to each winch, operators must have a safety harness and lanyard with shock absorber (check coherence with height) attached to a suitable anchor point of the suspended scaffold.			1: Critical
Perimeter guardrails			
5. Guardrails should incorporate a top guardrail 900 mm to 1,100 mm above the working surface and a mid-guardrail 500 mm to 550 mm and a toe board.			1: Critical
Safety net must be :			
6. Installed in accordance with the manufacturer's instructions by competent or training persons that have to be protected against the risk of falling by using appropriate control measures such as scaffolding, elevating work platforms or fall-arrest systems.			1: Critical
> 3.0.5 REQUIREMENTS FOR WORK POSITION SYSTEM	**C**	**NC**	**Criticality**
HUMAN			
1. Workers must use individual fall-arrest system (safety harness, lanyards, shock absorbers, etc.).			1: Critical
ORGANISATIONAL			
1. Work positioning system must be installed only in a location where it is possible to provide prompt assistance or rescue if required.			1: Critical
2. Any person close to unguarded edge must be adequately secured (less than 3 meters).			1: Critical
3. Supervisors must communicate constantly with workers during tasks.			1: Critical
4. Restraint techniques should only be used if it is not reasonably practicable to prevent falls by a physical barrier.			2: Important
5. An individual fall-arrest system must be used instead of restraint techniques if any of the following situations apply: • the user can reach a position where a fall is possible. • the user has a restraint line that can be adjusted in length so that a free fall position can be reached. • there is a danger the user may fall through the surface, for example fragile roofing material. • the slope is over 15 degrees.			1: Critical

NEW

TECHNICAL			
1. All equipment must be inspected regularly by a competent person and approved for each use.			1: Critical
2. Prior to use: All fixed anchorage points and quick lock systems must be checked by a trained and competent person before to attach the rope access lines.			1: Critical
3. If the equipment has been used to arrest a fall it must not be used again until it has been inspected and certified by a competent person as safe to use.			1: Critical
4. A back-up system is used to protect the operator (linked with a fall-arrest system).			1: Critical
Industrial rope access system			
5. Each person must use an individual rope and anchor.			1: Critical
6. Barricades and signposts are placed on all access areas below the working area and anchorage locations to exclude and alert the public.			1: Critical
Restraint technique			
7. A restraint system must be installed by a trained and competent person in accordance with the manufacturer's instructions.			1: Critical
8. Restraint anchorage must be designed for fall-arrest loading.			1: Critical
> 3.0.6 REQUIREMENTS FOR FALL-ARREST SYSTEM	**C**	**NC**	**Criticality**
HUMAN			
Individual fall-arrest system			
1. Before using safety harness, workers must fully understand the reasons for its use and the limitations of its use.			1: Critical
2. The user must then visually check all equipment of his/her individual fall-arrest system, to make sure the equipment is fit for purpose, and sign any record sheet required to this effect.			1: Critical
3. When accessing the roof of a vehicle, material for repairs or maintenance, the users must ensure that they are attached to either an inertia reel (fall-arrest) or bi-line system prior to commencing any works.			1: Critical
4. Workers must never work alone when using a harness as fall protection.			1: Critical
Anchorage lines or rails			
5. Workers who use a double lanyard means to climb must always be connected to the ladder or structure.			1: Critical

NEW

ORGANISATIONAL			
1. Equipment must be inspected before any signs of excessive wear and/or damage appear. Correct function of locking mechanisms, webbing checked for cuts, burns, frays or signs of chemical attack. If any defect is found, the equipment must be rejected and withdrawn immediately from use.			1: Critical
2. A rescue plan must take into account time scales required to prevent injury and should ensure that the person/persons requiring rescue are not kept waiting longer than 5 minutes.			1: Critical
Safety nets			
3. Material must not allowed to accumulate in suspended safety nets.			1: Critical
4. No welding or oxy cutting must be performed above safety nets.			1: Critical
5. Safety nets must be inspected by a competent person, particularly after installation, relocation or repair.			1: Critical
6. Safety nets must be stored correctly in dry, shaded areas with air circulation.			2: Important
Individual fall-arrest system			
7. All anchorages must be tested and approved by a competent person before use.			1: Critical
8. Inspection of all components should be conducted in accordance with the manufacturer's specifications and the relevant standards. If any signs of wear or weakness are found during the inspection, the components or means of attachment must be withdrawn from use until they are replaced with properly functioning components.			1: Critical
9. All harnesses must be uniquely identifiable and formally inspected by a competent person every year, any actions to be implemented by repair/replacement or destruction of the defective equipment and the inspections and subsequent actions recorded.			1: Critical
TECHNICAL			
1. Anchor points should be above the person working at height (where possible) and the fall-arrest line must be as short as practicable to minimise the potential fall distance.			1: Critical
2. The equipment and anchorages must be designed, manufactured and installed to be capable of withstanding the force applied to them as a result of a person's fall.			1: Critical
3. The system must be designed and installed so that the person travels the shortest possible distance before having the fall stopped.			1: Critical
4. If the equipment has been used to arrest a fall it must be not used again until it has been inspected and certified by a competent person as safe to use.			1: Critical
5. In compliance with regulation, any eye-bolts used as anchorage points for fall-arrest equipment and/ or safety harness must be included in the normal lifting equipment inspection regime.			1: Critical
Catch platforms			
6. Must incorporate a fully planked-out deck.			1: Critical
7. Must be positioned so the deck extends to at least two metres.			1: Critical
8. Must be beyond all unprotected edges of the work area, except where extended guard railing is fitted to the catch platform.			1: Critical
9. Must be positioned as close as possible to the underside of the work area - the distance a person could fall before landing on the catch platform should be no more than one metre.			1: Critical
10. Must be used with an adequate form edge protection.			1: Critical

NEW

Safety nets			
11. Safety nets must be hung as close as is practicable to the underside of the working area, but no more than two metres below the working area.			1: Critical
12. The safety net must have sufficient tension and clearance to prevent a falling person from touching any surface or structure below the net.			1: Critical
Individual fall-arrest system			
13. Each anchorage point should be located so that a lanyard of the system can be attached to it before the person using the system moves into a position where the person could fall (placing the anchorage point at a right angle to the position of the lanyard, at the perimeter edge to prevent pendulum aspect).			2: Important
14. Fall-arrest systems, incorporating a lanyard, must be installed so that the maximum distance a person would free fall before the fall-arrest system takes effect is two metres.			1: Critical
15. You must use compatible components.			1: Critical
16. There must be sufficient distance between the work surface and any surface below to enable the system, including the action of any shock absorber to fully deploy.			1: Critical
17. To work out whether there is enough distance available, you must take into account: • the worker's height. • the height and position of the anchorage point. • the length of the lanyard. • any slack in the horizontal life line. • any stretching of the lanyard or horizontal life line when extended by a fall. • the length of the energy absorber when extended by a fall.			1: Critical
Anchorage lines or rails			
18. The locking device must be attached to the frontal attachment point of the harness and the lanyard assembly be a maximum of 300 mm length.			1: Critical
19. The point of connection onto the ladder by the climber must be near the base of the ladder to allow the connection before ascending begins and also to provide continuous connection to the disconnecting point when at a safe higher level.			1: Critical
20. Permanent systems must be of wire or rail construction and installed according to the manufacturer's instructions.			2: Important

NEW

> 3.0.7 REQUIREMENTS FOR LADDERS	C	NC	Criticality
HUMAN			
1. Prior to each use, operators must undertake their own visual pre-use inspection of all access equipment to assess its condition and suitability for purpose.			1: Critical
2. The ladder must be inspected for faults, such as broken rungs, stiles and footing before it is used and damaged ladders must be removed from service.			1: Critical
3. The ladder must be the correct height for the access to avoid reaching or stretching.			2: Important
4. Ladders must not be loaded beyond the maximum intended load for which they were built, nor beyond their manufacturer's rated capacity: • all the locking devices on the ladder must be secured. • worker must maintain three points of contact on the ladder while climbing it. • worker must always face the ladder when climbing up or down. • identify what PPE needs to be worn and used (fall-arrest system, helmets, gloves, slip resistant shoes, other).			1: Critical
5. It is important that mud or grease, etc., is cleaned off footwear before any attempt is made to climb or descend a ladder. Where ladders become contaminated they should be taken out of service and cleaned.			2: Important
6. You must not allow anyone else to be on the ladder at the same time as another climbing worker.			1: Critical
7. You must not use metal or metal reinforced ladders when working on live electrical installations.			1: Critical
8. You must not carry out work such as arc welding or oxy cutting.			1: Critical
ORGANISATIONAL			
1. If you need to use a ladder for working at height, you must use a mobile platform.			1: Critical
2. Work from stand-alone ladders must be not allowed. Inspections are considered as work. Stand-alone ladders must only be used for access purposes.			1: Critical
3. If mobile platforms are used, they must be selected to suit the task to be undertaken. In doing this, you should consider the duration of the task, the physical surroundings of where the task is to be undertaken and the prevailing weather conditions.			2: Important
4. Any ladder used at a workplace must be set up on a solid and stable surface, and set up so as to prevent the ladder from slipping. Single and extension ladders can be prevented from slipping by: • the distance between the ladder base and the supporting structure should be about one metre for every four metres (4:1 ratio), and setting up step ladders in the fully opened position. • securing ladders at the top or bottom, or if necessary, at both ends. • the ladder is secured against displacement (i.e. slipping or sliding) and/or there is another person holding the base of the ladder.			1: Critical

NEW

5. Where fixed or extension ladders are used for access or egress, you must check that: • there is a firm, stable work platform, free from obstructions, to step onto from the ladder. • the ladder extends at least one metre above the stepping-off point on the working platform. • fall protection is provided at the stepping-off point where people access the working platform.]			1: Critical
6. A competent person must formally inspect mobile ladders every year, recording in simple form that the inspection has been carried out.			2: Important
7. Always should keep the area around the top and bottom of the ladder clear.			2: Important
8. You must secure all tools and equipment that are being carried up a ladder (i.e. tool belts or tool bags pulled up on a rope).			1: Critical
9. The bottom of the ladder must be barricaded to prevent movement by unauthorized personnel, and to ensure that no one is standing in an area where they may come in contact with a falling object.			1: Critical
10. Ladders must be secured in any location where they can be displaced by workplace activities, pedestrian traffic or vehicular traffic, such as in passageways, doorways, or driveways. You may use a service vehicle as a barricade to keep activity or traffic away from the ladder.			1: Critical
11. Ideally the equipment should be stored in one area and secured by chain to assist in control and inspection and to prevent damage occurring.			2: Important
Cage ladder or fix ladder			
12. Where alternative routes exists, they must be taken (even if it takes longer), i.e. use of stairwells rather than fixed ladders.			2: Important
TECHNICAL			
1. You must not build or modify ladders internally in Veolia and use only ladders built by manufacturer.			1: Critical
2. Chain or rope ladders are prohibited unless all other means of accessing the work area have been considered and are not possible.			2: Important
3. Ladders should be manufactured for industrial use.			2: Important
4. All mobile ladders and mobile platform must have identification and control evidences.			2: Important
5. Mobile and fix Ladders must not be painted, unless a transparent paint or varnishes are used. Ensure that the ladders are not slipping after being painted..			2: Important
Cage ladder or fix ladder			
6. All unused ladders must be removed from service by removing any lower access sections or securing a blanking plate (or similar) to prevent access.			2: Important
7. Ladders (external) which are potentially accessible by public/trespassers should have a locking device or removable lower section to prevent unauthorized access.			2: Important
8. All ladders above 2.4m in height should have fall prevention hoops/cage fitted and fall-arrest system.			2: Important
9. Fixed ladders should be installed in accordance with international standard and country regulation.			1: Critical
10. For ladder flights above 6 metres additional, fall prevention/ arrest systems must be installed, i.e. sliding rail, restraint blocks. The type of system will depend on the existing ladder arrangements.			1: Critical
11. If the height of cage ladder is over 6m from the ground, you must have a separate platform every 6 m.			1: Critical

NEW

> 3.0.8 REQUIREMENTS FOR ADMINISTRATIVE CONTROLS	C	NC	Criticality
HUMAN			
1. A safe work procedure/fundamentals rules that describes the steps involved in safely undertaking a task should be maintained. It may also include any particular training, instruction, consequences scale and the level of supervision required.			2: Important
ORGANISATIONAL			
1. You must define roles & responsibilities for all members of team involve in work at height activities.			2: Important
2. Relevant information and instruction should be provided about “no go” areas with adequate supervision to ensure that no unauthorised worker or third part enter in the “no go” area.			1: Critical
3. You must obtain permit to work before to work at height with registration except using mobile platform.			1: Critical
4. Work must be organised so that people do not interfere with other workers or increase the risk to themselves or others.			2: Important
TECHNICAL			
1. Barriers must be used in conjunction with signs to cordon-off areas where there is a risk of falling or being hit by falling objects. They must be highly visible and securely fixed to prevent displacement.			1: Critical
2. Tagging must be used for all access points to a scaffold to restrict unauthorised access during erection and dismantling, with ‘only licensed and qualify scaffolders permitted on an incomplete scaffold’ tags.			1: Critical

NEW

> 3.0.9 REQUIREMENTS FOR EMERGENCY PROCEDURE FOR FALLS	C	NC	Criticality
HUMAN			
1. Workers must be provided with suitable and adequate information, instruction and training in relation to the emergency procedures.			1: Critical
2. Workers should also be trained to administer first aid or that workers have access to persons who are trained in first aid.			1: Critical
3. Workers and emergency response workers should be trained in the rescue procedures and be able to recognise the risks of suspension intolerance and act quickly in the rescue of a person.			1: Critical
4. Training frequency should take into account the workers' competence and their ability to retain competence through regular exposure to the equipment and skills needed to perform a rescue. (practical exercise: minimum 1 per year).			2: Important
5. Workers must avoid to put themselves at risk during a rescue.			1: Critical
ORGANISATIONAL			
1. A written emergency plan must be established, validated and communicated to all involved before any intervention.			1: Critical
2. Potential accident scenarios must be identified and emergency measures must be defined and ready to be deployed. On industrial sites, this plan must be developed with the client.			2: Important
3. Emergency plans should be tested regularly.			2: Important
4. You must ensure that workers have access to first aid equipment and facilities for the administration of first aid.			1: Critical
5. When establishing emergency procedures, you should take into account the following: • location of the work area. • communications. • rescue equipment. • how to deal with equipment failure and people being elevated at that stage. • capabilities of rescuers. • first aid. • local emergency services—if they are to be relied on for rescue			1: Critical
6. The time a worker spends in suspension after a fall should be limited to less than five minutes. When a suspension is longer than five minutes, foothold straps or a way of placing weight on the legs should be provided.			1: Critical
7. The rescue process should start immediately.			1: Critical

APPENDIX 2 > 10 questions for safe work at height

You should always aim to eliminate a hazard which is the most effective control.

WORKING AT HEIGHT:

obtaining access to or egress from such place while at work except by a staircase in a permanent workplace, or during the task, where, if measures required by the Regulations were not taken, a person could fall a distance liable to cause personal injury.

This could include work above or below ground level.

1 PRE-JOB BRIEFING

Are all members including onsite contractor and subcontractors present at the pre-job meeting?
Does everyone understand:

- their roles & responsibilities.
- signaling & communications.
- what to do if an incident occurs.

2 PLANNING REVIEW

Has the risk assessment, permit to work form & Emergency procedure completed and understood by team? Has the equipment been selected that meets Veolia Working at Heights Standard and compatible with anchoring systems to be used?

3 QUALIFICATION & COMPETENCY

Are all team members who will be inspecting or using fall-arrest system, or constructing or inspecting scaffolds, competent to do so?
Are rescue personnel trained?
Are all team members fit to work today?

4 EQUIPMENT CHECK

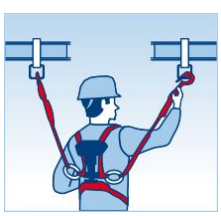
Have all daily pre-use inspections been done covering all system components, anchor points and other required PPE?
Are all equipment tags valid?
Equipment selection meets manufacturer's specifications?

5 WORK AREA ACCESS

Are work area access systems (scaffolds, ladders, work platforms) ready for use?
Are ladders used set on a level surface and is secure and has slip resistant feet? Suitable for the load? Are ladder rungs clean?

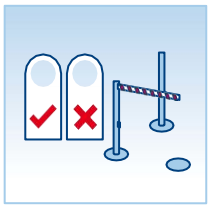
6 ANCHORING

Have all anchorage points been inspected and validated by a competent person ?
Has this inspection been registrated ? Are workers who use a double lanyard means to climb always connected to the ladder or structure?



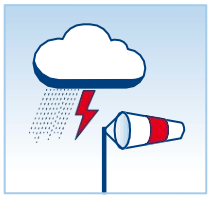
7 WORK AREA SAFETY

Has the work area been inspected today? Are the barriers, signs and scaffold inspection tags adequate to control access to the work area? Is the area barricaded to avoid traffic and pedestrian flow near area? Is there exposure to open holes or dropped objects? Any other hazards?



8 PLANNING REVIEW

Do all team members understand limitations related to weather (e.g. wind, wet, cold)? Has the forecast been checked?
Will other operations be done simultaneously?
Will work be done over water?
Any other preparations needed?

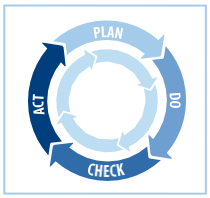


9 EMERGENCY RESPONSE PLAN REVIEW

Is rescue equipment available and ready for use? Do all team members understand the emergency response procedure for people who have fallen, are suspended in a harness & could develop suspension trauma? Has the procedure been tested?

10 POST WORK REVIEW

Once the job involving work at height has been completed, identify key learnings, document them and share with others.



You should always aim to eliminate a hazard, which is the effective control.

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