 Eskom	Standard	
---	----------	--

Title: **Work at Height Standard**

Document Identifier: **32-418**

Alternative Reference Number: **Not applicable**

Area of Applicability: **Eskom Holdings SOC Ltd**


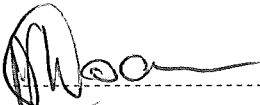

Functional Area: **Occupational Health and Safety**

Revision: **5**

Total Pages: **16**

Next Review Date: **February 2025**

Disclosure Classification: **Controlled Disclosure**

Compiled by	Functional Responsibility	Authorized by
		
Brenda Matsie	Miranda Moahlodi	Kersefi Pather
Senior Advisor OHS	Senior Manager OHS	General Manager
Sustainability Systems	Sustainability Systems	Sustainability Systems
Date: <u>20/02/2020</u>	Date: <u>06.02.2020</u>	Date: <u>02/03/2020</u>

Contents

	Page
1. Introduction	3
2. Supporting clauses	3
2.1 Scope	3
2.1.1 Purpose	3
2.1.2 Applicability	3
2.1.3 Effective date	3
2.2 Normative/Informative references	3
2.2.1 Normative	3
2.2.2 Informative	4
2.3 Definitions	5
2.4 Abbreviations	6
2.5 Roles and responsibilities	6
2.6 Process for monitoring	7
2.7 Related/Supporting documents	7
3. Work at Height Standard	7
3.1 General requirements	7
3.2 Risk assessment	7
3.3 Fall Protection Plan	9
3.4 Training and authorisation	9
3.5 Height safety equipment	10
3.6 Personal protective equipment (PPE)	11
3.7 Anchor points	11
3.9 Work platforms and access to work areas	13
3.10 Inspection, care and maintenance	14
3.11 Duties of persons at work	15
3.12 Falling objects	15
3.13 Disposal of height safety equipment	15
3.14 Medical fitness	15
4. Acceptance	16
5. Revisions	16
6. Development Team	16
7. Acknowledgements	16

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

1. Introduction

Work at height is a significant part of work in Eskom Holdings and is regarded as a high-risk activity. As a result, all precautions must be taken to prevent incidents while working at height. Wherever reasonably practicable, preference must be given to the performance of work at ground level as opposed to work in an elevated position. Where work in an elevated position is necessary, the requirements in this document shall apply.

2. Supporting clauses

2.1 Scope

This standard defines the framework that must be followed to ensure that work at height is carried out safely in terms of Eskom's SHEQ Policy and legislative requirements.

2.1.1 Purpose

The purpose of this standard is to standardise the requirements for work at height, to ensure the occupational health and safety of employees while working at height, and to minimise risks and hazards.

2.1.2 Applicability

This standard shall apply to Eskom Holdings SOC Limited and its divisions, subsidiaries, and contractors where work at height is conducted by or on behalf of Eskom. This standard, together with other relevant legislative requirements, applies to any work performed above a stable work surface or where persons put themselves in a position where they are exposed to a fall. Emergency Response Team members operating during a rescue in accordance with their training as Rope Rescue Technicians, as prescribed in 32-107 (Fire Risk, Emergency Management and Fire-Fighting Training Programme) will be deemed to be satisfying the purpose and requirements of this standard.

2.1.3 Effective date

This document will be effective from the date of authorisation. The implementation of this standard shall be monitored after a period six months from the date of authorisation (refer to 2.6).

2.2 Normative/Informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] ISO 9001 Quality Management Systems
- [2] 240-62196227 Life-Saving Rules Standard
- [3] 240 -62582234 OHS Roles and Responsibilities and Statutory Appointments Standard

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- [4] 240-84733329 Medical Surveillance Procedure
- [5] 240-141493501 Work at Height on Job Observation Form
- [6] 32-136 Contractor Health and Safety Requirements
- [7] 32-107 Fire Risk, Emergency Management and Fire-Fighting Training Programme
- [8] 32-37 Substance Abuse Procedure
- [9] 32-520 Risk Assessment Procedure
- [10] 32-727 SHEQ Policy
- [11] Occupational Health and Safety Act, Act No. 85 of 1993.

2.2.2 Informative

- [1] SANS 50353-2: Personal Protective Equipment against Falls from a Height – Guided-type Fall Arresters on a Flexible Anchorage Rope
- [2] SANS 50354: Personal Protective Equipment against Falls from a Height – Lanyards
- [3] SANS 50355: Personal Protective Equipment against Falls from a Height – Energy Absorbers
- [4] SANS 50358: Personal Equipment for Work Positioning and Prevention of Falls from a Height Work Positioning Systems
- [5] SANS 50361: Personal Protective Equipment against Falls from a Height – Full Body Harness
- [6] SANS 50362: Personal Protective Equipment against Falls from a Height – Connectors
- [7] SANS 50363: Personal Protective Equipment against Falls from a Height – Fall Arrest System
- [8] SANS 50365: Personal Protective Equipment against Falls from a Height – General Requirements for Instructions for Use and for Marking
- [9] SANS 50795: Protection against Falls from Height – Anchor Devices; Requirements and Testing
- [10] SANS 50341: Personal Protective Equipment against Falls from a Height – Descender Device
- [11] SANS 1397: Safety Helmets for Industrial Use and for Firemen
- [12] SANS 10085: The Design, Erection, Use and Inspection of Access Scaffolding
- [13] British: The Work at Height Regulations 2005
- [14] AS/NZS 1891.4: Industrial Fall-arrest Systems and Devices – Selection, Use and Maintenance
- [15] SANS 10333-1 Industrial rope access.
- [16] SANS 10333-3 Industrial rope access.
- [17] SANS 33 Equipment for use in industrial rope access work.
- [18] SANS 50360 Personal protective equipment against falls from a height – Retractable type fall arresters.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

2.3 Definitions

- 2.3.1** Anchor point: means an element to which personal protective equipment can be attached after the installation of the anchor device.
- 2.3.2** Anchor device: means an element or series of elements or components which incorporate an anchor point or anchor points.
- 2.3.3** Barricading: means a physical barrier to prevent people from accessing a work area, to warn staff below of workers above and of potential falling objects.
- 2.3.4** Competent person: means a person who, in respect of the work or task to be performed, has the required knowledge, training and experience and, where applicable, qualifications specific to that work or task; provided that, where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No. 67 of 2000), those qualifications and that training shall be regarded as required qualifications and training.
- 2.3.5** Drop Zone: means a specific area upon which material/equipment may be dropped from a position at height.
- 2.3.6** Employer: means any person who employs or provides work to any other person and remunerates that person or expressly or tacitly undertakes to remunerate him/her.
- 2.3.7** Fall arrest equipment: means the equipment used to restrain a person in a fall, including personal equipment such as a body harness, lanyards, deceleration devices, lifelines or similar equipment.
- 2.3.8** Fall arrest system: means the personal protection equipment used for creating a system to prevent falls from a height, comprising a full body harness and a connecting subsystem for fall arrest purposes.
- 2.3.9** Fall prevention equipment: means the equipment used to prevent persons from falling from a fall-risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment, such as guardrails, screens, barricades, anchorages or similar equipment.
- 2.3.10** Fall protection plan: means a documented plan, which includes and provides for –
- a) all risks relating to working from a fall-risk position, considering the nature of the work undertaken;
 - b) the procedures and methods to be applied in order to eliminate the risk of falling; and
 - c) a rescue plan and procedures.
- 2.3.11** Fall risk: means any potential exposure to falling either from, off or into.
- 2.3.12** Height safety equipment: means any equipment used while working at height, including the following categories:
- a) Equipment used to work at height, for example scaffolds, ladders, mobile elevated work platforms, platforms, and climbing irons;
 - b) Fall prevention equipment;
 - c) Fall arrest equipment.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- 2.3.13** Medical certificate of fitness: means a valid medical certificate of fitness issued by the Occupational Health Nurse/Practitioner/Doctor as contemplated in the Construction Regulations.
- 2.3.14** Risk assessment: means a process of determining any risk associated with any hazard in order to identify the steps that must be taken to mitigate, remove, reduce or control such hazard. A risk assessment is typically a careful examination of what could cause harm to people as a result of a work activity. It allows one to take the necessary precautions to prevent harm from occurring.
- 2.3.15** Training records (work at height): mean the documented training records that identify the holder as having successfully completed appropriate work-at-height training and that allow the holder to perform permitted work. These must be readily available on site.
- 2.3.16** Work at height: means any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into. Work at height is, as a result, work in any place (except a staircase in a permanent workplace), including a place at, above or below ground level, where a person could be injured if he/she fell from that place. Access and egress, for example climbing, that present a risk of falling, can also be regarded as work at height.
- 2.3.17** Work platforms: mean a surface from which work can be carried out, such as a roof, floor, podium and/or scaffold. The purpose of the work platform is to support the combined imposed loads of workers, materials, equipment and plant.

2.4 Abbreviations

Abbreviation	Explanation
A&F	Assurance and Forensic
AS/NZS	Australian/New Zealand Standards
CE	Chief Executive
DE	Divisional Executive
EAL	Eskom Academy of Learning
FAS	Fall Arrest System
EDC	Eskom Documentation Centre
GE	Group Executive
HR	Human Resources
kN	Kilo Newton
MEWP	Mobile Elevated Work Platform
OHS Act	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)
PPE	Personal Protective Equipment
SETA	Sector Education and Training Authority
SHEQ	Safety, Health, Environment and Quality
SANS	South African National Standards
SAQA	South African Qualifications Authority
SOP	Safe Operating Procedure
T&D	Training & Development

2.5 Roles and responsibilities

The delegated manager, in terms of section 16(2) of the OHS Act, together with appointed responsible managers as defined in the OHS Roles and Responsibilities and Statutory

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

Appointments Standard (240-62582234), shall be responsible for safety in their designated area of responsibility. Each division/group/subsidiary shall, where required, compile appropriate work instruction documents to support this standard.

2.6 Process for monitoring

Compliance with the requirements of this standard must be audited by the Operating/Business Unit at least annually as part of an internal review process. The Sustainability Systems OHS Department will monitor the implementation of the standard through its audit programmes.

2.7 Related/Supporting documents

- [1] 240-100979553 Appointment of a Fall Arrest System Inspector
- [2] 240-103139003 Inspection Checklist for FAS
- [3] 240-100979499 Personal Protective Equipment for Work at Heights Specification
- [4] 240-70044602 Risk Assessment Template
- [5] 240-83818077 Fall Protection Plan Compiler Template
- [6] 240-44175132 Eskom Personal Protective Equipment
- [7] 240-100979553 Inspector of Fall Arrest Systems – CR 10 (2)(d)
- [8] 240-100979499 Leadership Overview Questionnaire for PPE for Work at Heights Specification
- [9] 240-141493501 Work at Height on Job Observation Form

3. Work at Height Standard

3.1 General requirements

- 3.1.1** While work is in progress, and where reasonably practicable, adequate warning signs and/or barricades shall be used in areas where there is a risk that persons may be injured by materials or equipment falling from the work area.
- 3.1.2** The risk assessment has to address falling objects and controlled movement or access inside the drop zone.
- 3.1.3** Where reasonably practicable and subject to the risk assessment, a drop zone shall be established before work at height commences, with appropriate warning signs or barricading to warn staff members below of workers above and of potential falling objects.

3.2 Risk assessment

- 3.2.1** A risk assessment should be conducted according to the Risk Assessment Procedure 32-520, using the Risk Assessment Template 240-70044602.
- 3.2.2** Work-at-height risk assessments shall take into account factors such as –

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- the necessity for the work to be done in an elevated position as opposed to doing the work at ground level;
- barricading and other fall-prevention measures;
- requirements of the safe work procedure;
- restrictions in fall distances and clearances;
- the mobility required for the task, for example the degree of vertical or horizontal movement;
- the height being worked at;
- possible injuries;
- the duration of exposure;
- the frequency of performing these activities;
- the type of work and ergonomic considerations;
- the work site/area congestion;
- the potential/likelihood/causes of a fall occurring;
- the endurance of workers;
- the risk control measures;
- electrical hazards and safe clearances from overhead power lines;
- the structure (ease of access, secure footing and compatibility with fall-prevention and/or fall-arrest equipment);
- the terrain;
- barricading;
- the restrictions with reference to working alone (a rescue must always be executable);
- falling objects;
- suitable anchor points;
- weather conditions;
- the type of equipment and its intended use;
- the medical fitness of the employees who work at height;
- other persons or contractors working in close proximity;
- competency in and understanding of the applicable work procedures.

3.2.3 The risk assessment will determine the selection of suitable work-at-height equipment and systems for the work to be performed safely.

3.2.4 Be aware of the hazards resulting from adverse weather conditions and, where necessary, modify the work method accordingly.

3.2.5 Ensure that planned job observations are conducted at least annually on each person working at height.

3.2.6 In the case of live work, the work has to be performed in accordance with the relevant/applicable standards and procedures, while maintaining the minimum safe working clearance.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

3.3 Fall Protection Plan

- 3.3.1** A task-specific/job-specific Fall Protection Plan shall be developed by a competent fall protection plan developer for any activity where there is a risk of a fall.
- 3.3.2** The Fall Protection Plan shall be approved by a competent person.
- 3.3.3** A competent fall protection plan developer must be appointed.
- 3.3.4** The Fall Protection Plan shall include a task-specific/job-specific risk assessment and requirements relating to the following:
- a) The training programme for employees working from a fall-risk position;
 - b) Appointments and authorisations;
 - c) The procedure addressing the inspection, testing and maintenance of all fall protection equipment;
 - d) A risk assessment that is site-specific with regard to fall risks for work to be performed;
 - e) The processes for the evaluation of the employees' medical fitness necessary to work in a fall-risk position and the records of this (medical surveillance programme);
 - f) Equipment use and specification;
 - g) Fall prevention, fall arrest and fall rescue;
 - h) Method statements or safe work procedures/task analysis/work instructions.
- 3.3.5** Adherence to the Fall Protection Plan is mandatory.
- 3.3.6** The Fall Protection Plan must be suitably amended in accordance with the risk assessment, equipment technology, standards and legislation.
- 3.3.7** The Fall Protection Plan must be monitored and reviewed as required by the work performed and changes in hazards.
- 3.3.8** The Fall Protection Plan must include the rescue plan.

3.4 Training and authorisation

- 3.4.1** Every employer shall ensure that no person engages in any activity in relation to work at height unless they are competent to do so.
- 3.4.2** The responsibility for evaluating and accepting accredited instructors to present the basic Fall Arrest System and Rescue Course for Eskom employees is co-ordinated by the EAL in conjunction with the National Work-at-Height Workgroup.
- 3.4.3** Only training providers that use competent training instructors and assessors who are SETA-accredited and SAQA-registered in terms of the relevant unit standards shall be used.
- 3.4.4** All persons who work at height or who will be required to do rescue at height shall receive three days of FAS training and two days of rescue training in accordance with unit standard 229998 and 229995
- 3.4.5** The contractor must ensure that all persons who work at height and those who will be required to do rescue at height shall receive training according to the relevant unit standards. As a minimum, individuals who work at height and are not responsible for performing a rescue must undergo three days of FAS training (Unit Standard 229998), and

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

the rescuers must furthermore undergo two days of rescue training in accordance with unit standard 229995. Rescuers must be appointed in writing for that particular site/project.

- 3.4.6 The client or contractor may identify further training (e.g. Advanced rescue US229999) applicable to the scope of work, and ensure that their employees are trained.
- 3.4.7 Official FAS training shall not have an expiry date on the certificate. Only the date of training shall be indicated on the certificate.
- 3.4.8 Official rescue training shall expire every three years.
- 3.4.9 A certificate of successful completion of training shall be issued to the candidate upon the completion of training.
- 3.4.10 Upon completion of institutionalised training, the candidate will be required to work at height under the supervision of a competent person. The candidate shall only be competent to work at height after being observed on the job and declared so by the competent person.
- 3.4.11 A minimum of one job observation per annum shall be conducted on each person working at height.
- 3.4.12 All employees required to perform rescues shall be trained in First Aid Level 2 before attending rescue training.
- 3.4.13 Documented training records for all work-at-height training must be kept and filed for auditing purposes.

3.5 Height safety equipment

- 3.5.1 All height safety equipment purchased shall conform to relevant national standards, international standards, statutory requirements and the approved Eskom Specification.
- 3.5.2 All height safety equipment must comply with an appropriate maintenance, testing and inspection standard.
- 3.5.3 Any new or amended specification and/or standard for height safety equipment must be accepted by the National Work-at-Height Workgroup.
- 3.5.4 Any new or amended work-at-height equipment must be included in the specification and subjected to a technical assessment by the workgroups mandated by the National Work-at-Height Workgroup prior to any acquisitions.
- 3.5.5 The use of a work-positioning belt with a work-positioning lanyard (safety belt) without a full body harness and fall arrest system is strictly prohibited for fall arrest purposes.
- 3.5.6 Equipment should not place a load greater than 6 kN or as stipulated by the relevant SANS or accepted international standards on the user in the event of a fall. The equipment should protect the user from impact with the ground or surrounding structures, as well as injury from the harness in the event of a fall.
- 3.5.7 FAS equipment will be scrapped, using a condition-based approach where the FAS equipment inspector inspects FAS equipment on a routine basis (usually every 3 months) and takes the known limits on usable life into account, if stipulated on the FAS unit.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

3.6 Personal protective equipment (PPE)

- 3.6.1** When working at height, appropriate PPE as determined by the risk assessment and written safe work procedure/task analysis/work instruction has to be used at all times. (The equipment must comply with the 240-100979499 Personal Protective Equipment for Work at Heights Specification.)
- 3.6.2** All equipment selected must be compatible, for example a retractable lanyard should not be extended by another shock absorber or a small snap hook should not be used on an eye bolt.
- 3.6.3** The equipment selected must be suitable for the job and not harm the user in the event of a fall.
- 3.6.4** The type of personal protective equipment to be used must be appropriate to the activity and provide adequate hand, eye, face, foot and head protection.
- 3.6.5** Work restraint methods must be used before placing workers in fall arrest situations.
- 3.6.6** Once issued to an individual, that particular fall prevention and/or fall arrest system is for the exclusive use and control of that user. A formal issue control system must be implemented that records –
- a) the condition of equipment when issued;
 - b) the condition of equipment when returned;
 - c) the name and employee number of the user;
 - d) the name and employee number of the issuer;
 - e) the date(s) of issue and return;
 - f) any acceptable repairs carried out.

3.7 Anchor points

- 3.7.1** The selection of anchor points is determined by the type of work and structure involved. NOTE: certain structures may not provide adequate strength for fall arrest purposes. In such cases, alternative means of fall protection have to be developed, based on an appropriate risk assessment.
- 3.7.2** Dedicated fall arrest anchor points shall be tested annually, according to SANS 50795, and records of such tests shall be kept. NOTE: not applicable to fixed anchor points forming part of the original structure.
- 3.7.3** Dedicated anchor points must be clearly marked as such, with the load-bearing capability, direction of use, date of inspection, standard to which it was tested and unique serial number.
- 3.7.4** If there is any doubt about the structural adequacy of the anchor structure, a structural engineer will make an assessment and sign off the structure.
- 3.7.5** Technicians have to be able to connect to anchor points before they enter a fall risk position.
- 3.7.6** Anchor points must, as far as practicable, be placed above a technician to minimise the fall distance and pendulum effect.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- 3.7.7** Rope or webbing anchor slings may not be placed around a structure with sharp edges without adequate protection.
- 3.7.8** In vertical or diagonal orientation, sufficient means must be used to prevent the sling from sliding, for example by double-wrapping the attachment sling or by attaching it to a cross-member. Choking is allowed only for slings designed for choking.
- 3.7.9** Handrails may not be used as anchor points for any fall arrest equipment or fall arrest systems, unless they have been specifically engineered and certified for this purpose.

3.8 Safe use of equipment and systems

3.8.1 The following general points apply to any work where fall arrest is required:

- a) The user of fall arrest equipment should be connected to at least one anchor point/fall arrest system whenever that user is at risk of falling.
- b) Equipment and systems must be used according to the manufacturer's instructions.
- c) Equipment must be carefully handled to ensure that no parts are damaged.
- d) The user must ensure that the equipment is in good working order and has been serviced, inspected and maintained before and after use.
- e) Defective equipment may not be used and must be removed from circulation, destroyed or marked as defective.
- f) Users must check the correct assembly of the equipment before use, for example check that all buckles are used correctly and that no clothing is caught in snap hooks.
- g) The carrying of hand tools must not interfere with the movement of the operator or the working of the system. A tool bag with a rope must be used to attach tools.
- h) Equipment shall be stored in a cool, dry environment away from chemicals.
- i) If the equipment has arrested a fall, it must be withdrawn from service and referred for inspection.

3.8.2 Fall over sharp edges

Where lanyards can strike a sharp edge in the event of a fall, the result may be a failure to arrest the fall safely or a complete break in the lanyard. Selecting a different anchor point or using a protective covering can overcome this hazard.

3.8.3 Fragile work surfaces

- a) As far as is reasonably practicable, avoid work or movement over fragile surfaces.
- b) As far as is reasonably practicable, provide and use suitable and sufficient platforms, coverings, guardrails or similar means of support or protection so that any foreseeable load is supported by such supports or borne by such protection.
- c) Where a risk remains that a person at work may fall despite the measures taken under point b, suitable and sufficient measures must be taken to minimise the distances and consequences of a fall.
- d) Prominent warning notices shall, as far as is reasonably practicable, be affixed at the approach to the place where the fragile surface is situated, or persons must be alerted to the risk by other means if this is not practicable.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- e) On fragile surfaces such as roofs, where there is a risk of falling through or over the edge, the following must be taken into account:
 - i. Potential fall distance – a fixed-length lanyard can cause an unacceptably long fall close to the anchor if the fall is through the surface;
 - ii. Fall clearance – the areas around and underneath the surface have to be checked for potential obstructions;
 - iii. Sharp edges;
 - iv. Swing clearance;
 - v. The use of walkways, preferably with handrails, is the preferred method of movement over fragile surfaces.

3.8.4 Restraint systems

Restraint systems are suitable for areas where the users can keep a secure footing without tensioning the system or using their hands to do so. Fall arrest systems should be used in the following situations:

- a) If the users can reach a point where they can fall over an edge;
- b) If the restraint line can be adjusted in length, resulting in a fall position;
- c) If the user can fall through a fragile surface;
- d) If any other reasonable misuse of the system could result in a free fall;
- e) Where restraint systems are in use, adequate controls and supervision must be in place to prevent the misuse of the system.

3.9 Work platforms and access to work areas

3.9.1 Make sure that access to work areas does not present any fall hazards, for example open holes or fragile surfaces.

3.9.2 Select the correct means of access to the work area, taking into account the job requirements; for example use a scaffold to create a safe work platform for a longer job duration and heavier work, and use rope access instead of a scaffold for jobs of shorter duration.

3.9.3 Make sure that the operator of the access equipment, for example a mobile elevated-platform, is properly trained in the use of the equipment.

3.9.4 Every work area or means of access or egress at height must –

- a) be stable and of sufficient strength and rigidity for the purpose for which it is intended to be or is being used;
- b) where applicable, rest on a stable, sufficiently strong surface;
- c) be of sufficient dimensions to permit the safe passage of persons and the safe use of any plant or materials required to be used and to provide a safe working area, having regard to the work to be carried out there;
- d) possess suitable and sufficient means for preventing a fall;
- e) possess a surface that has no gap –
 - i. through which a person could fall; or
 - ii. through which any material or object could fall and injure a person;

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- f) be constructed, used and maintained in a condition to prevent, as far as is reasonably practicable –
 - i. the risk of slipping or tripping; or
 - ii. any person from being caught between it and any adjacent structure;
- g) where it has moving parts, be prevented by appropriate devices from moving inadvertently during work at height;
- h) be so erected and used as to ensure that its components do not become accidentally displaced so as to endanger any person;
- i) when altered or modified, be so altered or modified as to ensure that it remains stable and does not alter the integrity there; and
- j) be dismantled in such a way as to prevent accidental displacement.

3.9.5 A working platform and any supporting structure may not be loaded to the point where it presents a risk of collapse or any deformation that could affect its safe use. Safe work load shall be displayed.

3.9.6 Scaffolding may be assembled, dismantled or significantly altered only under the supervision of a competent person and by persons who have received appropriate and specific training in the operations envisaged, which training addresses specific risks that the operations may entail and the precautions to be taken and, more particularly, in –

- a) understanding the plan for the assembly, dismantling or alteration of the scaffolding concerned;
- b) safety during the assembly, dismantling or alteration of the scaffolding concerned;
- c) measures to prevent the risk of persons, materials or objects falling;
- d) safety measures in the event of changing weather conditions that could adversely affect the safety of the scaffolding concerned;
- e) permissible loadings; and
- f) any other risks that the assembly, dismantling or alteration of the scaffolding may entail.

3.10 Inspection, care and maintenance

3.10.1 All fall prevention and/or fall arrest equipment must be uniquely marked and/or numbered and registered in a statutory and/or approved maintenance register for inspection, testing and maintenance.

3.10.2 Only competent persons are allowed to inspect, test and maintain fall prevention and/or fall arrest equipment.

3.10.3 The inspection by the competent person may not replace the inspection that must routinely be performed by the user prior to using the equipment.

3.10.4 Where a user suspects that fall prevention and/or fall arrest equipment is unsafe, the equipment must immediately be withdrawn from service and inspected by a competent person.

3.10.5 Where an inspection carried out by a competent person reveals that an item is unsafe for use, that item shall be withdrawn from service immediately.

3.10.6 After a fall arrest system has been subjected to a fall, it is removed from service until it has been inspected and recertified as safe for use by the manufacturer or the authorised agent.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

3.10.7 All fall prevention and/or fall arrest equipment must be transported and stored in accordance with the manufacturer's specifications.

3.10.8 No fall prevention and/or fall arrest equipment may be painted and/or defaced or modified in any way without the prior approval of a competent person.

3.10.9 FAS equipment will be scrapped, using a condition-based approach where the FAS equipment inspector inspects FAS equipment on a routine basis (usually every 3 months).

3.10.10 The surface and every parapet, permanent rail or other such fall protection measures of every place of work at height must be checked on each occasion before the place is used.

3.11 Duties of persons at work

3.11.1 Every person shall, where working under the control of another person, report to that person any activity or defect relating to work at height that they know is likely to endanger their safety or that of another person.

3.11.2 Every person must use any work equipment or safety device provided to them for work at height by their employer or by a person under whose control they work, in accordance with any training they have received in the use of the work equipment or device concerned.

3.12 Falling objects

3.12.1 A drop zone must be established and demarcated.

3.12.2 Suitable steps must be taken to prevent any material or objects from falling that could cause harm to people or property.

3.12.3 Where it is not reasonably practicable to comply with the requirements of paragraph 3.12.1, every employer must take suitable and sufficient steps to prevent any person from being struck by any falling material or object that is liable to cause personal injury.

3.12.4 No material or object shall be thrown or tipped from height in circumstances where it is likely to cause injury to any person.

3.12.5 Materials and objects must be stored in such a way as to prevent risk to any person arising from the collapse, overturning or unintended movement of such materials or objects.

3.13 Disposal of height safety equipment

There must be a divisional and/or business unit work instruction for the disposal and/or destruction of all withdrawn height safety equipment that cannot be satisfactorily repaired.

3.14 Medical fitness

- a) "Working at height" must be indicated on all the job specifications of employees who are expected to work at height and taken into account in all medical assessments/surveillances.
- b) It is a prerequisite for workers to be medically fit to work safely in a fall-risk position or similar environment, and as proof of this, such workers have to be in possession of a medical certificate of fitness.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.

- c) Medical Fitness for Duty shall be evaluated by the Occupational Health Practitioner in terms of the Medical Surveillance Programme and Standard.

4. Acceptance

This document has been seen and accepted by:

- Risk and Sustainability MANCOM
- Work-at-Height Workgroup

5. Revisions

Date	Rev.	Compiler	Remarks
Dec 2019	5	Brenda Matsie	Revision of an existing document
Sep 2017	4	Brenda Matsie	Revision of an existing document
April 2017	3	Brenda Matsie	Revision of an existing document

6. Development Team

The following people were involved in the development of this document:

- Brenda Matsie (Sustainability Systems)
- Work-at-Height Workgroup members

7. Acknowledgements

Not applicable.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorised version on the system.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Ltd, Reg No 2002/015527/30.