

WORKING AT HEIGHT STANDARDS – OVERHEAD LINES

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PURPOSE AND SCOPE

Working at height on overhead line towers without an adequate safe system of work has the potential to cause serious injury or death from a fall from height or being struck by falling objects. This procedure defines the working at height standards for National Grid Electricity Transmission Asset Management staff that plan, manage and carry out work at height on the company's overhead line towers to ensure they do so safely and comply with relevant legislation.

PART 1 – PROCEDURAL

1 RESPONSIBILITIES

1.1 Team Leader/OHL Technician

Are responsible for ensuring that sufficient time and resources are allocated on site to allow these working at Height Standards to be complied with. They should ensure compliance by regular on site safety visits.

1.2 Project Leader

When carrying out risk assessment and producing method statements for work by National Grid staff, the Working at Height Standards must be taken into account. The outcome of this shall be documented within the RAMS and communicated to the Person in Charge of Work (PIC) at the setting to work stage. For Contractor work the Project Leader shall ensure that the contractors have taken into account the Working at Height Standards in their risk assessments and method statements.

1.3 Person in Charge of Work (PIC)

Shall communicate the risk assessment and method statements to the rest of the Working Party via the Toolbox Talk. The PIC shall ensure that the Working at Height Standards are complied with throughout the course of work.

1.4 Members of the Working Party

Shall be diligent in ensuring that during the course of work they and others in the Working Party comply with their RAMS and the Working at Height Standards.

2 PERMANENT ATTACHMENT

2.1 Tower Access – Hierarchy Tower Leg

- a) Temporary access / attachment system to be installed and used for works exceeding one continuous day in duration or where risk assessment requires (unless safety from system constraints do not allow system access).
- b) Step bolt lanyards such as Step Safe are only used when access is required for a short duration i.e. works of less than one day.
- c) Double Lanyard not for general use on climbing legs (except for traversing splices where necessary). Can be used when traversing tower steelwork (where options above are not available).

2.2 Cross Arm

- a) Temporary access / attachment system to be installed and used for continuous works exceeding one day in duration or where risk assessment requires.
- b) Double Lanyard may be used for use traversing cross arms for work less than one day in duration.

2.3 Insulators & Conductors – Hierarchy

Before planning access to insulators and conductors consideration must be given to their condition i.e. type and age of insulator or known damage to insulator units, fittings or conductors. Further guidance can be found in TGN200.

2.4 Suspension Towers

Access to conductors by climbing brown porcelain /polymeric insulators is prohibited. Climbing access for glass/ grey porcelain insulators is permitted only after a recorded risk assessment has taken place. This assessment needs to be approved by a Team Leader.

2.5 Tension Towers

- a) Climbing along polymeric insulators is not permitted unless polymeric insulator access platforms are being utilised.
- b) Access by climbing along tension insulators using a fall arrest Lanyard is primarily only for accessing the conductors for work activities on the conductors and fittings or for the inspection / testing of the insulators.
- c) Platform or Pladder is the most appropriate means of access to tension insulators for insulator replacement or similar work.

- d) Use of a Ladder as a working platform shall only be permitted subject to risk assessment with appropriate Team Leader approval.

2.6 Earth Wires

- a) Where there is known damage, fibre optic wrap installed or the earthwire is being held on pul-lifts or conductor stockings, then access should be gained by means that is independently supported from the earthwire i.e. earthwire access ladder (procedure AE-7)
- b) In other cases a hook ladder attached to the earthwire is the accepted means of access.

2.7 Down Leads

Access to conductors, gantries and structures by MEWP only unless an appropriate risk assessment has been carried out and Team Leader approval has been obtained.

2.8 Tower Construction

Double lanyard and Sala blocks or fall rope.

2.9 MEWPs

Personal fall restraint (not fall arrest) systems shall be used at all times - attach on entering and detach on exiting the MEWP basket.

3 MANAGEMENT OF FALLING OBJECTS AND WORK AREAS

Deliberate dropping of materials, equipment or any other items is absolutely forbidden. The only exception to this is in regards to lowering endless ropes (see 3.3).

3.1 Demarcation – Work Area and Danger Zone

Appropriate measures must be put in place to protect the working party and 3rd parties from the danger of falling objects and other site hazards. One of the control methods is the setting up of a clearly defined Work Area and Danger Zone. The need for and type of Work Areas and Danger Zone must be appropriate for the work and should be identified by the Project Leader and documented in the RAMS, this then can be communicated to the Person in Charge of Work. The working party shall be briefed in these requirements at the Tool Box Talk and the suitability of the Work Area and Danger Zone should be monitored by daily on site risk assessments. Detailed guidance on Work Area and Danger Zone demarcation requirements can be found in appendix A.

3.1.1 Exemption for Danger Zones

Danger Zones are not required where the following applies:

- a) All operatives are on tower.
- b) 'Work' with tools or equipment is not taking place.
- c) Where work is at or below ACD level.

Examples of this include condition assessment and paint QA.

3.1.2 Exemption for Work Area

Following a site risk assessment the Project Leader may decide that it is not necessary to have a work area; this decision should be documented in the RAMS.

Note: If a Danger Zone or Work Area is not required then the Project Leader must be sure that there is no risk of danger to members of the public.

Changes to the Project Leaders recommendations, following a site specific risk assessment by the working party, can only be changed following an agreement between the PIC and Project Leader. This is to be recorded in the tool box talk form and conveyed to the working party.

3.2 Guidance on Tethering of Tools, Lifting Tackle and Fittings

- a) Where reasonably practical tools should be 100% tethered at all times. Where this is not reasonably practical the method statement should define an alternative control measure such as tool buckets or extending the **Danger Zone**.
- b) When transferring lifting tackle between the endless rope and its position on the tower it should always be secured to the tower before removing from the endless rope and vice versa.
- c) When fitting or removing tower fittings they should always be secured to the tower before removing from the endless rope and vice versa.
- d) In the case of smaller fittings such as shoes, straps, nuts and bolts these should be raised and lowered in tool buckets and where possible fitted or removed with the tool bucket positioned directly underneath these components.
- e) Note: The number of tools at the point of work shall be minimised. Untethered tools shall be secured such that they cannot fall. All tools shall be tethered as they leave the tool-bag and at the point of work.

3.3 Guidance for Lowering Endless Rope

The rope can be released from bottom arm level (on outage work) after the following has taken place.

- a) A site specific risk assessment has taken place which takes into consideration the following:
 - Proximity of live circuit and other live equipment
 - Weather conditions
- b) The rope to be released in a controlled manner from the bottom arm with the recipient positioned outside the **Danger Zone**.

3.4 Applying / Removing of Drain Earths

Drain earths, operating poles, connecting bonds and Sparrow plates should be raised and lowered in single arm loads only. When fitting / applying drain earthing equipment, lower operatives must retreat a minimum of 2m towards the body of the tower until the drain earthing equipment is secure.

3.5 Single Arm Working

Work as part of a single task team on same arm and conductors is allowed subject to additional controls:

- a) Tool tethering.