



Australian Government

UETTDRVC21 Use climbing techniques to cut vegetation above ground near live electrical apparatus

Release: 1

UETTDRCV21 Use climbing techniques to cut vegetation above ground near live electrical apparatus

Modification History

Release 1. This is the first release of this unit of competency in the UET Transmission, Distribution and Rail Sector Training Package.

Application

This unit covers cutting and/or pruning vegetation above ground level (using climbing techniques) and removal of vegetation obstructions up to the climber exclusion zone as defined for both authorised and instructed persons in the industry guidelines associated with live electrical apparatus, using the established cutting plan relevant to the vegetation type. It encompasses the safe use of appropriate specialised tools and equipment according to requirements and established procedures. It includes the utilisation of climbing techniques in conjunction with aerial emergency rescue procedures, and inspection and preparation of climbing equipment with recommendations for corrective action being referred to appropriate authorities.

It includes safely accessing trees from above ground level to install restraints/slings, removing tree limbs in a safe manner, and clearing debris from the felling site to eliminate the occurrence of electrical incidents. It does not include entry of persons, mobile plant, equipment, and/or specialised tools into the safe approach distance (SAD) as defined.

Also included is the preparation of risk assessment control measures that encompass job safety assessment. All work and zones are in compliance with relevant state or territory regulatory agencies/bodies, local government legislation, industry bi-partite bodies, guidelines/codes of practices or other related requirements for safe work and access near live electrical and mechanical apparatus.

The skills and knowledge described in this unit may only be practiced under the regulations pertaining to each state and territory for the safe planning and removal of vegetation around live powerlines up to the live work zone, including near live electrical apparatus, and regulations that directly relate to work health and safety (WHS)/occupational health and safety (OHS) and/or contracts of training where they apply.

Pre-requisite Unit

Common Unit Group

UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

UETTDREL13 Comply with sustainability, environmental and incidental response policies and procedures

UETTDREL14 Working safely near live electrical apparatus as a non-electrical worker

UETTDRC23 Plan the removal of vegetation up to vegetation exclusion zone near live electrical apparatus

UETTDRC27 Monitor safety compliance of vegetation control work in an ESI environment

UETTDRC33 Apply pruning techniques to vegetation control near live electrical apparatus

UETTDRC34 Undertake release and rescue from a tree near live electrical apparatus

Competency Field

Vegetation

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to cut/prune vegetation above ground (using climbing technique) up to the vegetation exclusion zone near live electrical apparatus

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1** Work instructions and cutting plan are received and confirmed
- 1.2** Relevant requirements and established procedures to be followed for the work to be performed in accord with the cutting are discussed with all personnel to establish and confirm the work schedule
- 1.3** WHS/OHS policies and procedures to be followed for the work to be performed are received and confirmed
- 1.4** Suggestions to assist and/or improve meeting the cutting of vegetation above ground level outside the climber exclusion zone near electrical apparatus outcomes are made to others involved in the work
- 1.5** Hazards are identified and WHS/OHS risks associated with working near live electrical apparatus are identified and reported according to established procedures

- 1.6** Scope of responsibility under the relevant work permits/access authorisations are identified according to requirements and established procedures with relevant personnel
 - 1.7** Resources, including, equipment, tools, approved platforms and personal protective equipment (PPE), required for the job are obtained and confirmed safe and in working order according to established procedures
 - 1.8** Relevant responsibilities associated with first aid, working aloft, and/or other related work safety procedures at the worksite are confirmed in accordance with requirements and established procedures to ensure safety measures are followed in the instance of an incident
 - 1.9** Client issues, including environmental values, are identified and referred to appropriate personnel in accordance with industry/community standards
 - 1.10** Site is prepared to produce a quality outcome, follow sustainable energy principles and practices, and to minimise risk and damage to property, commerce, stock and individuals in accordance with established procedures
 - 1.11** Road signs, barriers and warning devices are obtained and positioned in accordance with given instructions and requirements
 - 1.12** Pre-operational checks are undertaken to confirm safe and correct operation of tools and equipment for safe use near live electrical apparatus according to requirements and established procedures
 - 1.13** Work permits/access authorisations are confirmed and received, where applicable, with relevant personnel for commencement of the work according to requirements and established procedures
- 2 Carry out the cutting/pruning of vegetation above ground (using climbing technique) up to the vegetation exclusion zone near live electrical apparatus**
 - 2.1** WHS/OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are followed in accordance with given instructions, requirements and/or established procedures

- 2.2 Lifting, climbing, working aloft, and use of tools/equipment, techniques and practices are safely followed in accordance with given instructions and according to requirements to eliminate the prospects of incidents
 - 2.3 Operational knowledge for the cutting of vegetation above ground level outside the climber exclusion zone near electrical apparatus is confirmed to ensure completion in an agreed timeframe and to quality standards with a minimum of waste according to requirements and established procedures
 - 2.4 Cutting of vegetation above ground level outside the climber exclusion zone near electrical apparatus is carried out in accordance with the cutting plan and work schedule and given instructions and established procedures
 - 2.5 Hazard warnings and safety signs are recognised and hazards and assessed WHS/OHS risks monitored and reported/referred to immediate authorised personnel for directions according to established procedures
 - 2.6 Non-routine events are referred to immediate authorised personnel for directions according to established procedures
 - 2.7 Problems associated with cutting vegetation above ground level outside of the vegetation exclusion zone near electrical apparatus are attended to using acquired known solutions and skills related to routine procedures to ensure work instructions and established procedures are met
 - 2.8 Ongoing checks of quality of the work are undertaken in accordance with given instructions and established procedures
- 3 **Complete the cutting/pruning of vegetation above ground (using climbing technique) up to the vegetation exclusion zone near live electrical apparatus**
 - 3.1 Work undertaken is checked against cutting plan and work schedule and anomalies reported to authorised personnel in accordance with established procedures
 - 3.2 Accidents and/or incidents are actioned and reported to authorised personnel in accordance with established

procedures

- 3.3** Worksite is rehabilitated, cleaned up and made safe using sustainable energy principles and practices in accordance with given instructions and established procedures or an agreed standard
- 3.4** Tools, equipment and any surplus resources and materials are, where appropriate, cleaned, checked and returned to storage in accordance with established procedures
- 3.5** Appropriate personnel are notified of work completion according to established procedures
- 3.6** Post-operational checks, minor maintenance and/or relevant documentation of equipment and tools/platform are conducted according to requirements
- 3.7** Requirements for returning work permits and/or access authorisation permits are confirmed, where applicable
- 3.8** Work completion records and report forms/data sheets are completed accurately in accordance with given instructions and established procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UETTDRC21A Use climbing techniques to cut vegetation above ground near live electrical apparatus.

Links

UET Training Package Companion Volume Implementation Guide is found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>

Assessment Requirements for UETTDRVC21 Use climbing techniques to cut vegetation above ground near live electrical apparatus

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including the use of risk control measures
- applying sustainable energy principles and practices
- confirming operational knowledge associated with the cutting vegetation above ground outside live work zone near live electrical apparatus in all of the following:
 - principles of electricity and three phase power system
 - power system
 - recognition of aerial voltage systems
 - identification of low voltage (LV) aerial circuits
 - identification of high voltage (HV) aerial circuits
 - safe working zone and ordinary person zone so defined by relevant authorities
 - use of technical standards, acts, regulations, codes /guidelines and established/enterprise/asset owner's procedures
 - system control - information required and function
 - vicinity permit - Information required and function
 - sensitive earth fault system
 - environmental principals and procedures
- confirming safe practices associated with the cutting vegetation above ground outside live work zone near live electrical apparatus in all of the following:
 - WHS/OHS safety practices and procedures
 - electric shock and resuscitation
 - release and rescue
 - role of the safety observer
 - events constituting an incident
 - procedures in the event of/responding to incidents
 - methods of identifying hazards

- risk assessment procedures for both worksite and pre-job checklist
- selection of the best position for monitoring and controlling work (cutting)
- selection of correct line of site to the cutter
- correct observation of the work from ground level
- constant analysis and decision making relevant to the safety of the work, taking into account prevailing site conditions (lay of the land) and ongoing weather conditions
- confirming vegetation control associated with the cutting vegetation above ground outside live work zone near live electrical apparatus in all of the following:
 - identifying tree types
 - confirming vegetation species and types
 - confirming vegetation cutting techniques for different vegetation
 - confirming appropriate vegetation machinery and equipment to be used
 - using feeder route plans
- confirming the safe cutting of vegetation above ground outside live work zone near live electrical apparatus in all of the following:
 - using cutting plans relevant to the vegetation type
 - safely using all relevant personnel protective equipment (PPE)
 - using safe rigging and climbing procedures and techniques
 - safely operating restraints, slings, lifting and loads
 - safely using tools and equipment, such as hand saws, chainsaws, specialised tools and equipment and/or power pruners above ground
 - safely using chemical control and application above ground
 - using safe cutting, pruning and tree trimming techniques above ground near electrical apparatus
 - conducting pre and post-operational checks, inspection and minor maintenance
 - safely deploying equipment and tools in varying ground conditions and weather
 - safely removing debris
- dealing with unplanned events on at least one (1) occasion.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- climbing techniques encompassing:
 - Commonwealth/state/territory and local government legislation, standards, codes, supply authority regulations and/or enterprise requirements, including relevant certification and licensing applicable to climbing for the purpose of vegetation control
 - vegetation that is and is not permissible to climb for vegetation control
 - safety precautions which are specific to tree climbing structures for the control of vegetation - safe working practices and procedures; WHS/OHS hazards and precautions; identification of WHS/OHS hazards; assessment and control of WHS/OHS risks; types, selection, maintenance, storage and use of PPE, including harnesses; dangers of climbing

- in confined spaces and at heights; permit to work systems and isolation procedures/protocols; safe working policies, procedures and practices when climbing; and emergency response and rescue, including first aid
- techniques in safe methods of controlling the descent of vegetation in an electrical environment - safety procedures, including safety ropes and lines; checking and setting up equipment; load calculations/estimations; techniques in using lowering equipment; and determining the serviceability of ropes and other lowering devices
- load charts and safe working load estimates - field formulas; branch and trunk calculations; mathematical calculations; and use of technology related to loads, slings, weights and height
- tree climbing and pruning practices - safe climbing with ropes and harnesses; methods of ensuring operation of safety lines and ropes, roping techniques, load bearing equipment and lifts; purposes of restraints, straps, slings, bends and hitches; purposes of pulleys, maillon rapides, lowering drum and T-bar flying capstan; and techniques in climbing with spikes and pole belts
- role of safety observer and delimitation of fall and drown zones
- enterprise-specific vegetation control equipment encompassing:
 - types and application of vegetation cutting tools – chainsaws, tool line, and specialised pruning tools (cocky beaks and pruning saws)
 - purpose and use of cutting plans relevant to the vegetation type
 - cutting techniques of vegetation control tools and equipment
 - techniques in undertaking different branch cuts - scarf under-cut, top cut technique, top scarf bottom-back cut technique, and side scarf opposite back-cut technique
 - pre-operational checks on vegetation control tools and equipment
 - techniques in safely using vegetation control equipment - visual inspection of vegetation control equipment, methods of using equipment at heights and in confined spaces, and precautions to note during use of equipment (proximity of other personnel, proximity of powerlines and obstacles, and possible fire danger due to sparks)
 - types of PPE used in conjunction with vegetation control equipment - head protection, eye protection, hearing protection, hand protection, foot protection, body protection and general protection
 - basic maintenance of vegetation control equipment - cleaning, proper storage, basic repair and replacement, and testing for compliance to manufacturer and WHS/OHS requirements.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated conditions involving realistic

and authentic activities that replicate operational workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and PPE currently used in industry
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

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