



Australian Government

Department of Education, Employment and Workplace Relations

UETTDRVC04B Assess vegetation and recommend control measures for work near live electrical apparatus

Release: 1

UETTDRVC04B Assess vegetation and recommend control measures for work near live electrical apparatus

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

1)

1.1) Descriptor

This Competency Standard Unit covers the assessment of vegetation and in particular trees for defects and hazards prior to cutting and pruning around live powerlines up to the live work zone as defined for both Instructed and Authorised Persons in the industry guidelines associated with live electrical apparatus. The assessment is compiled and recorded in accordance with requirements and/or established procedures for defined species of vegetation and/or particular tree types.

Also included is the preparation of risk assessment control measures that encompass job safety assessment and compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, Industry bi-partite body - Guidelines/Codes of Practices or other related requirements for Safe work and access near live Electrical and Mechanical Apparatus.

Application of the Unit

Application of the Unit 4)

This competency standards unit shall apply to Transmission, Distribution, Rail Traction, Telecommunications and Vegetation Management Control industry sectors.

Licensing/Regulatory Information

1.2) License to practice

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 for the removal of vegetation around live powerlines up to the live work zone including near live electrical apparatus, and regulations that directly relate to Occupational Health and Safety and/or contracts of training where they apply.

Pre-Requisites

Prerequisite Unit(s) 2)

2.1) Competencies

Granting of competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed:.

	UETTDRVC08B	Safe use of Elevating Work Platform (EWP) near live electrical apparatus
or	UETTDRVC06B	Cut vegetation at ground level outside 'vegetation exclusion zone' near live electrical apparatus
or	UETTDRVC05B	Cut vegetation above ground outside live work zone near live electrical apparatus (platform)
or	UETTDRVC01B	Cut vegetation above ground outside work zone near live electrical apparatus (climbing)

For the full prerequisite chain details for this unit please refer to Table 3 in Volume 1, Part 2

Employability Skills Information

- Employability Skills** 3)
- The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

- 6) Elements:** Elements describe the essential outcomes of a unit of competency
- Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare and plan to conduct assessment of vegetation and, recommend control measures for work near live electrical apparatus.	1.1 Work instructions are identified and confirmed.
	1.2 Relevant requirements and established procedures to be followed for the work to be performed are discussed with all personnel to establish and confirm the work schedule.
	1.3 OHS policies and procedures to be followed for the work to be performed are received and confirmed.
	1.4 Recommendations to assist in meeting assessment of vegetation and recommendation of control measures for working near live electrical apparatus outcomes are made to others involved in the work.
	1.5 Hazards are identified, OHS risks associated with working near live electrical apparatus are

ELEMENT

PERFORMANCE CRITERIA

- identified and reported according to established procedures.
- 1.6 Scope of responsibility under the relevant work permit(s)/access authorisation(s) are received and confirmed according to requirements and established procedures with relevant personnel.
- 1.7 Resources including, equipment, tools and personal protective equipment required for the job are identified and, where to be used confirmed in working order according to established procedures.
- 1.8 First Aid, Pole Top Rescue and/or other related work safety procedures at the worksite are identified in accordance with requirements and established procedures to ensure safety measures are followed in the instance of an incident.
- 1.9 Client issues are identified and referred to appropriate personnel in accordance with industry/acceptable /community standards.
- 1.10 Work schedule 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 identified, where appropriate, in accordance with given instructions and requirements.
- 2 Conduct assessment of vegetation and, recommend control measures for work near live electrical apparatus.
- 2.1 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 power tools/equipment, techniques and practices are identified for inclusion in the assessment report according to requirements confirmed to eliminate the prospects of incidents.
- 2.3 Operational knowledge for the assessment of

ELEMENT

PERFORMANCE CRITERIA

- vegetation and recommendation of control measures for working near live electrical apparatus to be applied to the work 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 Assessment of vegetation and in particular trees for defects is undertaken in accordance with established procedures.
- 2.5 Analysis of assessment results and recommendation is made of vegetation control measures to be deployed for working near live electrical apparatus in accordance with requirements and/or established procedures.
- 2.6 Hazard warnings and safety signs are recognised and hazards and assessed OHS risks are monitored and reported/referred to the immediate authorised personnel for directions according to established procedures.
- 2.7 Non-routine events are responded and referred to the immediate authorised personnel for directions according to established procedures.
- 2.8 Problems associated with the assessment of vegetation and the recommendation of control measures for working near live electrical apparatus are attended to using acquired known solutions and skills to ensure requirements and established procedures are met.
- 2.9 On going checks of quality of the work are undertaken in accordance with given instructions and established procedures.
- 3 Complete the assessment of vegetation and recommend control measures for work near live electrical apparatus.
- 3.1 Work undertaken is checked against 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.

ELEMENT

PERFORMANCE CRITERIA

- 3.3 Work site is made safe in accordance with given instructions and established procedures.
- 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 Works completion records, report forms/data sheets are completed accurately in accordance with given instructions and established procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

7) Essential Knowledge and Associated Skills (EKAS): This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of assessing vegetation and recommending control measures for work near live electrical apparatus.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

The extent of the essential knowledge and associated skills (EKAS) required is given in Volume 2 - Part 2.2 EKAS. It forms an integral part of this unit.

- E2.18.1 Occupational Health and Safety principles
- E2.18.2 Electrical safe working practices
- T2.3.1 Powerline safety practices
- T2.5.5 Powerline clearances and approach distances
- T2.5.12 Assessment of vegetation principles
- T2.8.1 Enterprises specific - policies and procedure instructions
- T2.8.2 Enterprises specific - OHS instructions

Evidence Guide

EVIDENCE GUIDE

9) This provides essential advice for assessment of the unit of competency and must be read in conjunction with the Performance Criteria and the Range Statement of the unit of competency and the Training Package Assessment Guidelines.

The Evidence Guide forms an integral part of this Competency Standard Unit and shall be used in conjunction with all component parts of this unit and, performed in accordance with the Assessment Guidelines of this Training Package.

Overview of Assessment

9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry's preferred model for apprenticeships. However, where summative (or final) assessment is used it is to include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with Industry and, Regulatory policy in this regard.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Hence, sources of evidence need to be 'rich' in nature so as to minimise error in judgment. Activities associated with normal every day work have a bearing on the decision as to how much and how detailed the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practiced. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

EVIDENCE GUIDE

Critical aspects of evidence required to demonstrate competency in this unit

9.2)

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each Element and associated Performance Criteria shall be demonstrated on at least two occasions in accordance with the "Assessment Guidelines - UET09". Evidence shall also comprise:

- A representative body of Performance Criteria demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
 - Implement Occupational Health and Safety workplace procedures and practices including the use of risk control measures as specified in the Performance Criteria and range; and
 - Apply sustainable energy principles and practices as specified in the Performance Criteria and range; and
 - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit to such an extent that the learner's performance outcome is reported in accordance with the preferred approach; namely a percentile graded result, where required by the regulated environment; and
 - Demonstrate an appropriate level of employability skills; and
 - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures; and
- Demonstrated performance across a representative range of contexts from the prescribed items below:

Range of tools/equipment/materials/procedures/workplaces/other variables		
Group No	The minimum number of items on which skill is to be demonstrated	Item List
A	Confirm	Principles of electricity, the three

EVIDENCE GUIDE

	operational knowledge associated with the assessment of vegetation and making recommendations prior to working near live electrical apparatus, in all of the following:	<p>phase power system. Power system. Recognition of aerial voltage systems. Identification of Low Voltage Aerial Circuits. Identification of High Voltage Aerial Circuits. "Safe working 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 (SEF) System Confirm environmental principals and procedures Safe approach distances for insulated cranes and plant. Safe approach distances for persons and hand held tools.</p>
B	Confirm safe practices associated with the assessment of vegetation and making recommendations prior to working near live electrical apparatus, in all of the following:	<p>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. 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</p>

EVIDENCE GUIDE

		the work, taking into account prevailing site conditions (lay of the land) and on-going weather conditions
C	Confirm vegetation control associated with the assessment of vegetation and making recommendations prior to working near live electrical apparatus, in all of the following:	<p>Identify tree types</p> <p>Confirm vegetation species and types</p> <p>Confirm vegetation cutting techniques for different vegetation</p> <p>Confirm appropriate vegetation machinery and equipment to be used</p> <p>Use of feeder route plans</p> <p>Conduct calculations related to loading and slinging</p>
D	Confirm the safe assessment of vegetation and making recommendations prior to working near live electrical apparatus, in all of the following:	<p>Safe use of tools, plant and equipment.</p> <p>Safe storage, transportation and use of chemicals.</p> <p>Pre and post operational checks, inspections and minor maintenance on tools and equipment.</p> <p>Safe deployment of machinery and equipment in varying conditions and weather.</p> <p>Safe use of appropriate personal protective equipment.</p> <p>Safe cutting/pruning and tree trimming methods</p> <p>Correct advice on vegetation species, types and characteristics</p> <p>Correct advice on cutting plans relevant to the vegetation species and type</p> <p>Analysis of vegetation control measures particularly of trees for defects</p> <p>Safe assessments techniques of vegetation for defects and hazards.</p>

EVIDENCE GUIDE

		Correct recommendations for appropriate pruning and/or cutting processes to be used near live electrical apparatus Preparing assessment reports with appropriate recommendations for course of action.
E	At least one occasion	Dealing with an unplanned event by drawing on essential knowledge and associated skills to provide appropriate solutions incorporated in the holistic assessment with the above listed items.

Context of and specific resources for assessment

9.3)

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to safely undertake an assessment of vegetation and make recommendations of control measures for work near live electrical apparatus.

In addition to the resources listed above, in Context of and specific resources for assessment, evidence should show demonstrated competency working below ground, in limited spaces, with different structural/construction types and method and in a variety of environments.

EVIDENCE GUIDE

Method of assessment

9.4)

This Competency Standard Unit shall be assessed by methods given in Volume 1, Part 3 "Assessment Guidelines".

Note:

Competent performance with inherent safe working practices is expected in the Transmission, Distribution and Rail Traction Industry. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and associated skills described in this unit.

Concurrent assessment and relationship with other units

9.5)

There are no concurrent assessment recommendations for this unit.

Range Statement

RANGE STATEMENT

8) This relates to the unit of competency as a whole providing the range of contexts and conditions to which the Performance Criteria apply. It allows for different work environments and situations that will affect performance.

This Competency Standard Unit shall/may be demonstrated in relation to the assessment of vegetation and in particular trees for defects and hazards prior to cutting and pruning near live electrical apparatus up to the live work zone as defined for both Authorised and Instructed Persons in the industry guidelines associated with live electrical apparatus.

The assessment is compiled and recorded in accordance with requirements and/or established procedures for established species of vegetation and/or particular tree species, types and characteristics

Also included is the preparation of risk assessment control measures that encompass job safety assessment and compliance with relevant State or Territory regulatory agencies/bodies, local government legislation, Industry bi-partite body -

Guidelines/Codes of Practices or other related requirements for Safe work and access near live Electrical and Mechanical Apparatus

Working safely up to the defined "safe working zone" near energised electrical apparatus (inc. electrical powerlines) for non-electrical worker/ordinary persons.

Risk assessment control measures that encompass job safety assessment.

Excludes any work that is or may be performed by other competent operatives within the defined "live work zone"

Electricity supply infrastructure assets condition - sagging, swaying, ties, cross arms, poles, insulators, conductors, service wires, electrical apparatus/equipment, etc.

Safe approach distances zones/Safe Working Clearance

Other areas which may need to be taken into consideration are: work permit(s) and/or access authorisation permits, technical standards and Industry Guidelines, rural applications, inclement weather, ground configuration and access - undulations, uneven ground, soft ground, damp, road construction, pavements, etc, feeder route plans and the use of technology and mathematical calculations

Equipment and specialised tools for use in electrical environments and loading and slinging techniques

Vegetation control includes: site rehabilitation, horticultural vegetation cutting and pruning techniques to minimise regrowth - chemicals and physical cutting and pruning tools/equipment, concerns for vegetation type/species and significance - heritage, significant, urban/rural; vegetation fire prone areas and areas of particular significance.

Areas of particular significance

Loading and slinging techniques

The following constants and variables included in the Element/Performance Criteria in this unit are fully described in the Definitions Section 1 of this volume and form an integral part of the Range Statement of this unit:

RANGE STATEMENT

- Appropriate and relevant persons (see Personnel)
- Appropriate authorities
- Appropriate work platform
- Assessing risk
- Assessment
- Authorisation
- Diagnostic, testing and restoration
- Documenting detail work events, record keeping and or storage of information
- Drawings and specifications
- Emergency
- Environmental and sustainable energy procedures
- Environmental legislation
- Environmental management documentation
- Established procedures
- Fall prevention
- Hazards
- Identifying hazards
- Inspect
- Legislation
- MSDS
- Notification
- OHS practices
- OHS issues
- Permits and/or permits to work
- Personnel
- Quality assurance systems
- Requirements
- Testing procedures
- Work clearance systems

Unit Sector(s)

Not Applicable

Custom Content Section

2.2) Literacy and numeracy skills

Participants are best equipped to achieve this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 "Literacy and Numeracy"

Reading	2	Writing	2	Numeracy	2
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Competency Field

Competency Field 5)

Vegetation Units