



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **UETTDRVC03B Plan for the removal of vegetation up to vegetation exclusion zone near live electrical apparatus**

Release: 1

## **UETTDRVC03B Plan for the removal of vegetation up to vegetation exclusion zone near live electrical apparatus**

### **Modification History**

Not Applicable

### **Unit Descriptor**

#### **Unit Descriptor**

1)

#### **1.1) Descriptor**

This Competency Standard Unit covers the preparation for the controlled removal of vegetation 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. This includes electrical and communications conductors and cables/powerlines and associated equipment on poles and structures according to requirements and established procedures. It does not include the full gamut of rigging techniques and practices required of a Rigger or entry into to the safe approach distance (SAD) as defined for persons, mobile plant, equipment and specialised tools.

It includes the preparation of a plan for the control and removal of vegetation, specification of appropriate chemical control methods, use of slinging and loading techniques and practices to be used, traffic management, and appropriate pruning and/or cutting techniques and practices (encompasses cutting plan) for given vegetation species to minimise regrowth within the electrical field according to requirements and procedures. Also included is the preparation of risk assessment control measures that encompass job safety assessment. Encompassed is 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:.

	UEENEEE001B	Apply OHS practices in the workplace
and	UETTDREL03B	Comply with environmental and incidence response procedures
and	UETTDREL04B	Working safely near live electrical apparatus as non-electrical worker

**Prerequisite Unit(s)** 2)

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 for the development of the plan for the removal of vegetation up to vegetation exclusion zone near electrical apparatus. | 1.1 | Work instructions are received and confirmed.   |
|   |  | 1.2 | Relevant requirements and established procedures to be followed for the development of the work plan 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 | Suggestions to assist in meeting the planning for the removal of vegetation up to the live work zone near live electrical apparatus outcomes are made                             |

## **ELEMENT**

## **PERFORMANCE CRITERIA**

to others involved in the work.

- 1.5 Hazards are identified, OHS risks are identified and reported according to established procedures.
- 1.6 Scope of responsibility under the relevant work permit(s) /access authorisation(s) are identified and confirmed according to requirements and established procedures with relevant personnel.
- 1.7 Resources including, plant, equipment, tools and personal protective equipment required for the job are identified in accordance with established procedures.
- 1.8 Relevant responsibility associated with First Aid, Aerial Rescue, Tree-Top Rescue and/or other related work safety procedures at the worksite are confirmed, where appropriate, 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 Site preparation requirements are confirmed according to given instructions and planning of the work schedule for a quality outcome and to meet sustainable energy principles and practices to minimise risk and damage to property, commerce, stock, and individuals in accordance and established procedures.
- 1.11 Road signs, barriers and warning device requirements and positioning in accordance with given instructions and requirements are confirmed.

## ELEMENT

## PERFORMANCE CRITERIA

- |   |  |     |  |
|---|--|-----|--|
| 2 | Carry out the development of the Plan for the removal of vegetation up to vegetation exclusion zone near live electrical apparatus | 2.1 | OHS and sustainable energy principles and practices to reduce the incidents of accidents and minimise waste are confirmed 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 confirmed in accordance with given instructions and, according to requirements confirmed to eliminate the prospects of incidents.   |
|   |  | 2.3 | Operational knowledge for planning the removal of vegetation up to the live work zone near live electrical apparatus to be applied to the work, is confirmed to ensure completion will be within an agreed timeframe and, to quality standards with a minimum of waste according to requirements and established procedures. |
|   |  | 2.4 | Produce plan for the removal of vegetation up to the live work zone near live electrical apparatus accordance with given instructions and established procedures.  |
|   |  | 2.5 | 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.   |
|   |  | 2.6 | Non-routine events are referred to the immediate authorised personnel for directions according to established procedures.  |
|   |  | 2.7 | Development of the plan is carried out in accordance with the work schedule and to requirements.   |
|   |  | 2.8 | Problems associated with producing the plan for the removal of vegetation up to the live work zone live electrical apparatus are attended to according to acquired known solutions and skills related to routine procedures to ensure the plan is produced   |

**ELEMENT**

**PERFORMANCE CRITERIA**

- as per instructions and established procedures.
- 2.9 On going checks of quality of the work are undertaken in accordance with given instructions and established procedures.
- 3 Complete development of the plan for the removal of vegetation up to vegetation exclusion zone near electrical apparatus.
- 3.1 Work undertaken is checked against work schedule and anomalies reported to Authorised personnel in accordance with established procedures.
- 3.2 Potential accidents and/or incidents are identified and reported to authorised personnel in accordance with established procedures.
- 3.3 Work site to be rehabilitated, cleaned up and made safe is identified 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 planning for the removal of vegetation up to vegetation exclusion zone 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.

- E2.8.5 Magnetism
- E2.8.8 Electrotechnology science and materials
- 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
- T2.5.6 Basic vegetation control hazard assessment and risk management principles
- T2.5.7 Pruning principles near powerline
- T2.5.8 Establishing rigging requirements for vegetation control
- T2.5.9 Powerline access and isolation procedures
- T2.5.10 Tree preservation principles
- T2.5.13 Chemical control of foliage
- 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:

<b>Range of tools/equipment/materials/procedures/workplaces/other variables</b>		
<b>Group No</b>	<b>The minimum number of items on which skill is to be demonstrate</b>	<b>Item List</b>

## EVIDENCE GUIDE

	<b>d</b>	
A	Confirm operational knowledge associated with the planning of the removal of vegetation in all of the following:	<p>Principles of electricity, the three phase power system.</p> <p>Power system.</p> <p>Recognition of aerial voltage systems.</p> <p>Identification of Low Voltage Aerial Circuits.</p> <p>Identification of High Voltage Aerial Circuits.</p> <p>"Safe working zone" so defined by relevant authorities.</p> <p>Use of technical standards, acts, regulations, codes /guidelines and established/enterprise/asset owner's procedures.</p> <p>Confirm environmental principals and procedures.</p>
B	Confirm safe practices associated with the planning of the removal of vegetation in all of the following:	<p>OHS safety practices and procedures.</p> <p>Electric shock and resuscitation.</p> <p>Release and rescue</p> <p>Role of the Safety Observer</p> <p>Events constituting an incident.</p> <p>Procedures in the event of/responding to, incidents.</p> <p>Hierarchy and methods of identifying and controlling hazards.</p> <p>Risk assessment procedures.</p> <p>Selection of the best position for monitoring and controlling work (cutting)</p> <p>Selection of correct line of site to the cutter</p> <p>Correct observation of the work from ground level</p> <p>Constant analysis and decision making relevant to the safety of the work, taking into account prevailing site conditions (lay of the land) and on-going weather conditions.</p>

## EVIDENCE GUIDE

C	Confirm vegetation control associated with the planning of the removal of vegetation in all of the following:	Identify tree types Confirm vegetation species and types Confirm vegetation cutting techniques for different vegetation Confirm appropriate vegetation machinery and equipment to be used Use of feeder route plans Conduct calculations related to loading and slinging.
D	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 actual planning for the removal of vegetation up to the vegetation exclusion zone 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 preparation for the controlled removal of vegetation 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.

Includes electrical and communications conductors and cables/powerlines and associated equipment on poles and structures according to requirements and established procedures.

Excludes the full gamut of rigging techniques and practices required of a Rigger or entry into to the safe approach distance (SAD) as defined for persons, mobile plant, equipment and specialised tools.

Includes the preparation of a plan for the control and removal of vegetation, specifying appropriate chemical control methods, using slinging and loading techniques and practices to be used, traffic management, and appropriate pruning and/or cutting techniques and practices (encompasses cutting plan) for given vegetation species to minimise regrowth within the electrical field according to requirements and procedures.

Includes 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 "ordinary person zone" near energised electrical apparatus (inc. electrical powerlines) for non-electrical worker/ordinary persons and in some instances vegetation.

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 "ordinary person zone"

Electricity supply infrastructure assets including electrical apparatus, electrical and communication conductors, and equipment

Safe approach distances zones/Safe Working Clearance

It may also include other areas such as: Feeder route plans, infrastructure constructions and excavations, rural applications, road construction, pavements and inclement weather Plant, equipment and tools for use in electrical environments for vegetation control, loading and slinging equipment.

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.

## **RANGE STATEMENT**

Constants and variables included in this unit are fully described in the Definitions Section 1 of this volume and form an integral part of the Range Statement.

- Appropriate and relevant persons (see Personnel)
- Appropriate authorities
- Appropriate work platform
- Assessing risk
- Assessment
- Authorisation
- 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