



Australian Government

ICTOHS2153B Work safely near power infrastructure

Release 1

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Modification History

Release	Comments
Release 2	<p>This version first released with <i>ICT10 Integrated Telecommunications Training Package Version 3.0</i>.</p> <p>References to other units updated.</p> <p>Outcomes deemed equivalent.</p>
Release 1	<p>This version first released with <i>ICT10 Integrated Telecommunications Training Package Version 1.0</i>.</p>

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge to conduct telecommunications operations near substantial safety hazards. It includes safe hazard management at heights near electrical distribution infrastructure, radiation devices or other services in confined spaces.

If state or territory law require a licence to operate an elevated work platform (EWP) TLILIC508A Licence to operate a boom-type elevating work platform (boom length 11 metres or more) should be completed concurrently.

Application of the Unit

Field officers who work with cables on elevated work platforms, in confined spaces and on roofs and other structures apply the skills and knowledge in this unit.

Licensing/Regulatory Information

Licensing, legislative, regulatory and certification requirements apply to working at heights. If an EWP is required, verify state or territory law requirements for a licence to operate an EWP.

If working at heights, achievement of the unit CPCPCM2015A Work safely on roofs from the CPC08 Construction and Plumbing Services integrated framework training package fulfils this requirement.

This unit addresses confined spaces but does not confer endorsement for work in confined spaces. This requires extensive specialised training which is beyond the scope of this unit. Users should confirm requirements with the relevant federal, state or territory authority.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</i>

Elements and Performance Criteria

<p>1. Conduct a risk assessment</p>	<p>1.1 Confirm work instructions with <i>appropriate personnel</i> and seek clarification if required</p> <p>1.2 Select occupational health and safety (<i>OHS</i>) <i>legislation, policy and procedures and technical standards</i> relevant to the work and work site</p> <p>1.3 Assess the <i>risks from electrical, radiation, gas and other services</i> in or adjacent to the worksite</p> <p>1.4 Assess the safety of the worksite, other services and <i>support structures</i> using appropriate <i>monitoring equipment</i></p> <p>1.5 Complete a <i>job safety analysis (JSA)</i> or similar risk assessment record listing potential safety hazards associated with site and work requirements and report <i>safety hazards</i> to relevant personnel</p> <p>1.6 Obtain and confirm permits from <i>relevant authorities</i> within scope of personal authority</p> <p>1.7 Assess potential <i>emergency situations</i> relevant to the site</p> <p>1.8 Note <i>earthing arrangements</i> for telecommunications infrastructure and any other services that impinge on the worksite</p>
<p>2. Develop hazard management plan</p>	<p>2.1 Propose strategies to <i>manage potential safety hazards</i></p> <p>2.2 Communicate hazard management strategies and confirm with co-workers</p> <p>2.3 Establish and confirm safety procedures to ensure management of emergency situations</p> <p>2.4 Obtain <i>safety equipment and personal protective equipment</i></p> <p>2.5 Delineate <i>safe work zones and limits of approach</i> to other services</p> <p>2.6 Arrange <i>road safety and traffic control measures</i></p> <p>2.7 Implement safe strategies for working at heights and in <i>confined spaces</i></p>
<p>3. Work safely</p>	<p>3.1 Use safety equipment and clothing effectively</p> <p>3.2 Use <i>ladders, climbing or lifting equipment</i> to work safely at heights</p> <p>3.3 Operate hand and power tools safely at heights</p> <p>3.4 Work within identified safety zones and approach limits</p>

	<p>3.5 Comply with enterprise and industry earthing practices</p> <p>3.6 Monitor and manage risks throughout work procedures</p> <p>3.7 Apply emergency procedures in the event of an incident</p> <p>3.8 Reinstate the worksite to ensure the safety of telecommunications workers, the public and the telecommunications network</p>
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to listen and liaise with clients on technical and operational matters and raise OHS matters
- literacy skills to interpret technical documentation and standards and demonstrate knowledge by incorporating technical language into identifying and reporting on safety hazards and emergency situations
- planning skills in establishing measures in road safety and strategies for working at heights
- problem solving skills to apply methodology in minimising risks
- research skills to identify OHS legislation, policy and procedures relevant to the worksite safety awareness skills to:
 - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
 - select and use required personal protective equipment conforming to industry and OHS standards
 - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to distinguish between insulated and bare conductors, low voltage (LV) and high voltage (HV) cables and ways of ascertaining the voltages present.
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Required knowledge

- appropriate electrical safety and technical knowledge relating to the type of work, operating plant or vehicle near power lines (safe system of work according to the relevant electrical regulations and Acts)
- environmental control processes:
 - disposal and handling of hazardous and dangerous substances
 - noise pollution
 - waste disposal
- rights and responsibilities of the workplace parties under environmental and OHS Acts, regulations and codes of practice
- sound knowledge of OHS including legislation and standards
- ways in which OHS is managed in the workplace, and activities required under OHS legislation, including:
 - hazard identification
 - hazards that exist in the workplace
 - OHS instruction
 - preferred order of ways to control risks (known as the hierarchy of control)
 - risk assessment and control
 - sound knowledge of operating safely at heights
 - training and provision of OHS information

- workplace environmental and OHS procedures relevant to the work being undertaken, including procedures for:
 - designated personnel responsible for OHS
 - employee participation in OHS management
 - meaning of OHS symbols found on signs and labels in the workplace
 - raising OHS issues
 - recognising and reporting on hazards
 - responding to accidents, fires and emergencies
 - work operations to control risks.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • conduct a risk assessment for a telecommunications site near power infrastructure • develop a hazard management plan • apply safety precautions while working at heights and confined spaces near power infrastructure.
Context of, and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • telecommunications site near power infrastructure • relevant OHS Acts, regulations and codes of practice • enterprise OHS policies and procedures • personal protective equipment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct observation of the candidate assessing and implementing safe work practices • oral or written questioning to assess knowledge of OHS concepts, risk assessment practices and development of hazard management plan • evaluation of written documentation on planning and implementation of safety measures and strategies.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • ICTWHS2170B Follow occupational health and safety and environmental policy and procedures • ICTCBL2065B Splice and terminate optical fibre cable for carriers or service providers.

	<p>Aboriginal people and other people from a non-English speaking background may have second language issues.</p> <p>Access must be provided to appropriate learning and assessment support when required.</p> <p>Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.</p> <p>In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Appropriate personnel</i> may include:</p>	<ul style="list-style-type: none"> • construction manager • consultant • project manager • safety officer • site manager • site supervisor.
<p><i>OHS legislation, policy and procedures and technical standards</i> may include:</p>	<ul style="list-style-type: none"> • Australian Communications Industry Forum (ACIF) standards and codes • Australian Communications and Media Authority (ACMA) standards TS 14 • AS Communications Cabling Manual (CCM) Volume 1 • AS/NZS 3000:2007 • AS/NZS 3080:2003 • AS/NZS 3084:2003 • AS/NZS 3085.1:2004 • AS/NZS IEC 61935.1:2006 • AS/NZS IEC 61935.2:2006 • AS/NZS ISO/IEC 14763.3:2007 • AS/NZS ISO/IEC 15018:2005 • AS/NZS ISO/IEC 24702:2007 • cabling security codes and regulations • Environmental Protection Acts • general duty of care under OHS legislation and common law • International Standards ISO 9000 and 9001 • International Telecommunications Union (ITU) recommendations • OHS Acts and relevant codes and standards • provisions relating to OHS issue resolution • provisions relating to roles and responsibilities of health and safety representatives and OHS committees • road and traffic control legislation and codes • regulations and codes of practice relating to hazards present in the workplace or industry • technical standards AS/ACIF S008:2006 and AS/ACIF

	<p>S009:2006</p> <ul style="list-style-type: none"> • Telecommunications Act and relevant codes.
<p><i>Risks from electrical, radiation, gas and other services</i> may relate to:</p>	<ul style="list-style-type: none"> • cable types • fire alarms • gas pipes • pole construction • radiation emissions • sewerage • voltages • water pipes.
<p><i>Support structures</i> may include:</p>	<ul style="list-style-type: none"> • joint use with electrical services, building services or other utilities • support structures construction may include: <ul style="list-style-type: none"> • brick • concrete • steel or a suitable combination • wood.
<p><i>Monitoring equipment</i> may include:</p>	<ul style="list-style-type: none"> • electrical current leakages devices • gas leakage detector • pole safety tester • radio frequency (RF) leakage detector.
<p><i>Job safety analysis (JSA)</i> includes:</p>	<ul style="list-style-type: none"> • documents for new workplace or worksite situation • health, safety and environmental hazards • primary application of assessment • sheets to record the steps in the risk management process: <ul style="list-style-type: none"> • assessment • control • identification.
<p><i>Safety hazards</i> may include:</p>	<ul style="list-style-type: none"> • electrical current leakage • general site conditions • geography structural faults in support structures • radiation • weather • debris on ground • electrically unsafe equipment • faulty equipment • gas leak • loose wires • slippery surfaces • unsafe work at heights.

<p>Relevant authorities may include:</p>	<ul style="list-style-type: none"> • cable location services (Dial Before you Dig) • environment protection • local government • private owners • utility providers: <ul style="list-style-type: none"> • electricity • gas • telecommunications • water.
<p>Emergency situations may include:</p>	<ul style="list-style-type: none"> • collapse of support structure • damage to infrastructure • injury to personnel.
<p>Earthing arrangements may include:</p>	<ul style="list-style-type: none"> • ACMA standards • manufacturer's • enterprise • local environmental hazard requirements.
<p>Manage potential safety hazards may include:</p>	<ul style="list-style-type: none"> • additional safety precautions or equipment • road closures • roof guards • shutdown or relocation of other services • site clearances • specialised operational equipment • temporary outage • warning signs.
<p>Safety equipment may include:</p>	<ul style="list-style-type: none"> • aerial safety belts and lines • flashing lights • guards • traffic signs • warning signs and tapes • witches hats.
<p>Personal protective equipment may include:</p>	<ul style="list-style-type: none"> • asbestos precautions • dust protection • earmuffs • eye protection • gas monitoring equipment • gloves: <ul style="list-style-type: none"> • plastic • rubber • leather • gumboots

	<ul style="list-style-type: none"> • hard hats • overalls • personal reflecting jackets • radiation protection clothing • riggers gloves • safety boots • vests.
<i>Safe work zones and limits of approach</i> may relate to:	<ul style="list-style-type: none"> • area near electricity supply assets and sources of radiation • advice published by: <ul style="list-style-type: none"> • ACIF • asset owners • private companies • state and territory authorities • from one to several metres away from live electrical or radiation emitting infrastructure • gas and water services.
<i>Road safety and traffic control measures</i> may include:	<ul style="list-style-type: none"> • additional personnel to manage traffic flow • barricades • placement of cones • sign and warning lights.
<i>Confined spaces</i> includes:	<ul style="list-style-type: none"> • equipment cupboards • pits • power asset space • roof spaces • shafts.
<i>Ladders, climbing or lifting equipment</i> may include:	<ul style="list-style-type: none"> • devices to support construction personnel at heights: <ul style="list-style-type: none"> • elevated work platforms • fixed ladders • non-metallic ladders • safety harnesses.

Unit Sector(s)

Telecommunications - Occupational health and safety