



Australian Government

Department of Education, Employment and Workplace Relations

ICTWOR4032A Undertake a civil site survey

Release: 1

ICTWOR4032A Undertake a civil site survey

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to assess a site for a telecommunications project. It involves gathering information about the site and the project, surveying the site and evaluating the suitability of the site for the work.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.</p>
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Application of the Unit

Application of the unit	<p>Technical staff whose work involves undertaking a civil site survey apply the skills and knowledge in this unit. The site surveys may be undertaken for an upgrade or a new installation.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for survey	1.1. Discuss detailed requirements and arrange access to site with <i>key stakeholders</i> 1.2. Examine regulatory and statutory requirements associated with the telecommunications project 1.3. Determine need for <i>specialist studies</i> for the site
2. Survey land, buildings and facilities	2.1. <i>Survey existing buildings</i> to assess capability of meeting changes required for the project 2.2. Collect information through <i>site survey</i> 2.3. Determine <i>environmental impact</i> of development 2.4. Estimate impact of prevailing <i>weather conditions</i> on planned changes 2.5. Assess and document <i>building options</i> should a new structure be necessary 2.6. Assess geographical nature of land and determine <i>barriers to signalling</i>
3. Report survey findings and recommendations	3.1. Outline survey findings and recommendations to accommodate project requirements on the site 3.2. Develop options to meet planned changes along with cost-benefit data 3.3. Complete report and forward to relevant stakeholders following relevant procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
<ul style="list-style-type: none"> • communication skills to liaise with internal and external personnel on technical and operational matters • literacy skills to: <ul style="list-style-type: none"> • interpret technical telecommunications specifications • read and interpret drawings related to layouts, design, construction and project management • write reports • numeracy skills to take and analyse measurements

REQUIRED SKILLS AND KNOWLEDGE

- planning and organisational skills to organise and coordinate surveys
- problem solving skills to solve site problems for telecommunications projects
- task management skills to work systematically with required attention to detail and adherence to safety requirements
- technical skills to assess technical requirements compared to survey data

Required knowledge

- background information required to undertake a civil site survey
- meteorology and weather conditions
- features and operating requirements of construction equipment
- geographical barriers to signalling
- legislation, codes of practice and other formal agreements that impact on the work activity
- licensing and regulatory issues applying to a civil site survey on telecommunications sites
- soil testing methods and requirements
- specific knowledge of:
 - civil site safety practices
 - personal protective equipment for civil survey projects
 - occupational health and safety (OHS) requirements relating to surveys and site conditions
- typical issues and challenges that occur on-site

Evidence Guide

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"> • negotiate with key stakeholders, enterprise personnel, customers, community representatives, specialists and other contractors on environmental and network needs • undertake a survey of environmental conditions, land, buildings and facilities for a telecommunications project • apply legislative impacts on the project including relevant operational codes, OHS requirements and work practices • report survey findings outlining options and including recommendations with supporting reasons, coverage of existing and proposed needs.
Context of, and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • site for civil site survey • use of equipment currently used in industry • relevant regulatory and enterprise documentation that impacts on survey work.
Methods 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 performing a civil site survey • review of reports completed by the candidate outlining survey findings, recommendations and options • oral or written questioning to assess knowledge of regulatory and enterprise requirements and survey methods.
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"> • ICTPMG5031A Prepare a project brief.

EVIDENCE GUIDE

	<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**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.

Key stakeholders may include:

- community representatives
- contractors
- customers
- enterprise personnel
- survey specialists.

Regulatory and statutory

- Australian Communications and Media

RANGE STATEMENT	
<i>requirements</i> may include:	Authority (ACMA) technical standards <ul style="list-style-type: none"> • Australian building codes and regulations • International Standards ISO 9000 and ISO 9001 • environmental protection • fire regulations • heritage legislation • industrial relations awards and agreements • International Telecommunications Union (ITU) recommendations • local government • Telecommunications Act and telecommunications national code • OHS Act • Privacy Act • Trade Practices Act • spectrum management regulation.
<i>Specialist studies</i> relate to:	<ul style="list-style-type: none"> • archaeologists • environmental experts • geologists • heritage experts • surveyors.
<i>Survey existing buildings</i> may include:	<ul style="list-style-type: none"> • access • building design • ceiling heights • communications options • earthing arrangements • existing environmental conditions • floor loading • floor space • security arrangements.
<i>Site survey</i> may include:	<ul style="list-style-type: none"> • building availability capacity • earthing requirements environmental impact • geological and land surveys • land: <ul style="list-style-type: none"> • Crown • private • line of sight data • power availability • regulatory and statutory requirements

RANGE STATEMENT	
	<ul style="list-style-type: none"> • site availability • site ownership and acquisition data • soil • weather conditions.
<i>Environmental impact</i> may involve:	<ul style="list-style-type: none"> • disturbance of flora and fauna • features: <ul style="list-style-type: none"> • access • dams • fences • hazards • survey marks • issues: <ul style="list-style-type: none"> • environment • habitats • heritage values • legislation • seasonal changes • traditional landowners • pollution: <ul style="list-style-type: none"> • air • noise • water • radio frequency hazards • visual impact: <ul style="list-style-type: none"> • location of other services and plant • potential hazards • potential soil erosion areas.
<i>Weather conditions</i> may include impact of:	<ul style="list-style-type: none"> • cyclone • earthquake • fire risk • flooding • fog • rainfall • snow • wind.
<i>Building options</i> may include:	<ul style="list-style-type: none"> • container • hut • new building

RANGE STATEMENT	
	<ul style="list-style-type: none"> • portable housing • underground housing.
<i>Barriers to signalling</i> may include:	<ul style="list-style-type: none"> • distance • land or water • line of sight • local features • weather conditions.

Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Workplace effectiveness
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