

**Draft 0.1**

This is a draft update to CPPSIS6041 Compile mine survey plans:

<https://training.gov.au/Training/Details/CPPSIS6041>.

Code changed to CPPSUR6041.

Changed PCs to active voice.

Changed 'person' to 'candidate' in PE.

Range of Conditions added to Knowledge Evidence.

I've added mapping info.

TAG will need to reassess this as unit is redeveloped.

## Unit of Competency

### CPPSUR6041 Compile mine survey plans

#### Modification history

Release	Comments
1	<del>Replaces superseded equivalent CPPSIS6041A Compile mine survey plan.</del> <del>This version first released with CPP Property Services Training Package Version 3.</del>
	Replaces superseded equivalent CPPSIS6041 Compile mine survey plans

#### Application

This unit specifies the skills and knowledge required to compile a mine survey plan using computer-aided design (CAD) programs to produce mine drawings. The unit covers identifying and planning project deliverables and liaising with clients and others to present project specifications and report on outcomes.

The unit also covers organising work processes by implementing project management mechanisms; checking and validating essential surveying information; planning for risks and contingencies; and creating a survey database, file structures and conventions and metadata. The unit requires the ability to use specialist surveying tools and techniques to measure, reduce and validate spatial data and create mine plans, cross-sections and plots.

The unit supports those who work in a technical management role in a mining environment and take responsibility for liaising with clients and end users to meet project requirements.

Licensing, legislative, regulatory or certification requirements apply to this unit in some States where mining surveying must be undertaken under the supervision of a registered surveyor. Relevant state and territory regulatory authorities should be consulted to confirm those requirements.

#### Prerequisite Unit

None

#### Unit Sector

Surveying and spatial information services

#### Elements and Performance Criteria

1. Organise work processes.	<ul style="list-style-type: none"><li>1.1 Determine client requirements and project specifications in consultation with appropriate persons.</li><li>1.2 Access and interpret design information to identify spatial data requirements and components to be measured and monitored.</li><li>1.3 Check essential surveying information for currency and validity.</li><li>1.4 Create survey database, file structures and conventions, and metadata according to project specifications.</li><li>1.5 Implement project management mechanisms to schedule, measure, record and report progress of activities in relation to agreed timeframes and plans.</li><li>1.6 Follow risk management and contingency strategies to ensure project complies with legal, statutory and organisational requirements.</li><li>1.7 Implement and maintain agreed communication processes between client and other appropriate persons.</li></ul>
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2. Standardise mine survey plan requirements.	2.1 Identify requirements for lodging plan according to organisational requirements. 2.2 Research and summarise mine plan drawing and plotting requirements to meet project specifications. 2.3 Manage contingencies and constraints and resolved problems to ensure plans meet specifications.
3. Produce mine survey plans.	3.1 Reduce measured spatial data to project reference system. 3.2 Create mine plans according to project specifications and organisational requirements. 3.3 validate and record measurements according to project specifications.
4. Finalise mine	4.1 Finalised mine survey plans and notify relevant personnel of results according to organisational requirements. 4.2 Complete documentation and archive spatial data according to organisational requirements.

### Foundation Skills

Candidates require:

- initiative and enterprise skills to:
  - translate specifications into drawing designs
- numeracy skills to:
  - apply coordinate system to measured spatial data
  - apply understanding of height, depth, dimension and position to actual operational activity and virtual representation
- oral communication skills to:
  - liaise with clients to identify plotting detail
- reading skills to:
  - interpret graphical information in cross-sections and plans
  - interpret technical drawing standards
- writing skills to:
  - record measurements in a format that can be interpreted by a third party
- technology skills to:
  - calibrate specialist surveying equipment to take measurements
  - operate hardware, including computers and plotters
  - use CAD software to create plans
- problem-solving skills to:
  - identify legal non-compliance issues.

### Unit Mapping Information

Supersedes and is equivalent to CPPSIS

### Links

Companion Volume Implementation Guide:

<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>

## Assessment Requirements for CPPSUR6041 Compile mine survey plans

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### Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by:

- using a computer and computer-aided design (CAD) software to compile a mine survey plan that meets technical specifications for two projects.

While compiling the above mine survey plans, the candidate must:

- define and document project deliverables, constraints and activities
- prepare for work by checking the following essential surveying information for currency and validity:
  - mine grid coordinate systems
  - requirements for data processing
- communicate clearly with clients and stakeholders to clarify and report project requirements and plot details
- comply with statutory, legal and organisational requirements relating to:
  - completing records and reporting
  - mine drawings
  - protocols for saving and formatting drawing files
- comply with drawing standards and specifications to create mine plans, views and plots at required scale, which incorporate:
  - grid convergence
  - long and cross-section plot requirements
  - map legends
  - plot symbols
  - sheet surround
- create metadata, database, file structures and conventions as the basis for design work
- exercise precision and accuracy in relation to measurements, tolerances and design
- follow project management techniques to schedule, measure, record and report progress of project activities
- prepare the CAD environment by setting up the hardware and software systems and drawing defaults, and customising menus
- identify and comply with plan lodgement requirements, standard drawing requirements and plotting specifications.

### Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- Australian drawing standards, data formats and precision and accuracy requirements for preparing mine drawings using CAD
- CAD principles, capabilities and uses in relation to mine design

- data reduction and manipulation techniques
- industry-accepted standards for mine survey plans
- statutory, legal and organisational requirements for mine survey plans
- methods for validating measurements to identify errors
- key features of mine grid coordinate systems
- organisational requirements relating to:
  - completing records
  - reporting
  - saving and formatting drawing files
  - working safely
- standard engineering and mining plan design and presentation conventions
- types of mine plans, including:
  - accident plans
  - emergency plans
  - open cut mine plans
  - surface infrastructure plans
  - underground level plans
  - ventilation plans
- appropriate persons:
  - client
  - colleague
  - end user
  - registered or qualified surveyor
  - site personnel
  - supplier
- metadata:
  - availability
  - conditions of use
  - coordinate system
  - currency
  - custodian
  - data accuracy
  - data description
  - date of acquisition
  - licence
  - quality
  - source
  - spatial data acquisition methodologies
  - version control.

### Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to:

- equipment:
  - computer and CAD software
- specifications:
  - organisational policies, procedures and documentation relating to data privacy and information copyright for plan content
- physical conditions:
  - access to equipped work station
- relationships with team members and supervisor:
  - lead role in a team
- relationships with client:
  - client consultation required.

## Links

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<https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b>