



Australian Government

MSS025024 Produce site maps

Release: 1

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Modification History

Release 1. Unit code changed. Application changed. Elements changed. Performance Criteria changed. Foundation Skills populated. Range of Conditions removed. Assessment Requirements changed. Supersedes and is equivalent to MSS025005 Produce site maps.

Application

This unit describes the skills and knowledge required to map the environmental features of a site using sketch maps, computer rendered graphics or geographic information systems (GIS) software.

This unit applies to environmental technicians or similar roles who are required to source and collect environmental data, assess data quality, present data using visualisation tools and incorporate data onto maps.

This unit applies in a range of industry sectors, including but not limited to environmental monitoring, sampling and field testing (e.g. air, odour, water, soil and noise); groundwater and clean water (e.g. catchments, supply and environmental flows); water treatment, storm and wastewater management; solid and hazardous waste management; management of contaminated sites; site remediation or rehabilitation; geotechnical services; occupational hygiene monitoring (e.g. air, noise and radiation); natural resource management; resource efficiency (e.g. energy, water and waste auditing).

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

MSS024029 Collect spatial and discrete environmental data

Competency Field

Environmental monitoring and technology

Unit Sector

Not applicable

Elements and Performance Criteria

Elements	Performance Criteria
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Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Source and assess existing site information and data	1.1 Confirm the client's information needs, timeframe and site map specifications 1.2 Obtain existing site information and review its relevance and accuracy 1.3 Locate external sources of data sets and assess their availability, value and limitations 1.4 Confirm ownership, access arrangements and price of relevant data sets 1.5 Obtain selected data sets in accordance with workplace procedures 1.6 Build a detailed description of the site using existing information and data and identify any gaps
2. Collect field data	2.1 Establish information needs and identify field techniques to collect relevant spatial and environmental data 2.2 Determine procedures and methods to be used for field work 2.3 Determine data format and quality requirements, site permits and/or access restrictions and legislative/regulatory requirements relevant to field data collection 2.4 Clarify and/or confirm requirements with supervisor 2.5 Assemble and check all field equipment and supplies are fit for purpose, and prepare and stow them for safe transport 2.6 Take sufficient and accurate measurements of the site and its features to ensure data reliability
3. Prepare data and supporting information	3.1 Assess the integrity of data to determine suitability for site map specifications 3.2 Recognise and resolve any disparities between data sets 3.3 Determine compatible formats for data 3.4 Select and assemble data to meet client needs 3.5 Interpret data to prepare supporting information in written and visual formats
4. Produce maps to meet specifications	4.1 Transfer data accurately from data sources 4.2 Prepare sketch and/or computer-generated maps to the required quality standard, map specifications and within the expected timeframe 4.3 Ensure that required site features and standard map elements are included in accordance with standard cartographic design principles

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	4.4 Compare map against site features to ‘ground-truth’ information 4.5 Seek feedback from users regarding the utility of map and data and resolve any problems 4.6 Analyse feedback and make amendments to improve the quality of map

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret complex workplace documents
- Writing skills to interpret and explain information from data
- Oral communication skills to communicate with client, supervisor and suppliers of data
- Numeracy skills to collect field data to specifications, process and interpret data and present data visually.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSS025005 Produce site maps.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5b04f318-804f-4dc0-9463-c3fb9a3fe998>

Assessment Requirements for MSS025024 Produce site maps

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- produce at least 2 site maps which present different sets of data
- use software to produce supporting information for each map in both written and visual formats.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- environmental terms, concepts, and features relevant to data sets and maps
- types and functions of maps, charts, aerial photos and their advantages/disadvantages including at least 3 of the following:
 - topographic
 - land use and land title maps
 - vegetation, soils and regional ecosystem maps
 - air photos
 - satellite imagery
 - thematic maps produced using geographic information system (GIS) software, such as Mapinfo and Arcview
- map conventions, symbols and representation of topographical features on maps and plans
- mapping principles, including layout, legend, scale, media, printing and presentation styles
- methods of scaling information and plotting data
- visualisation of data including graphs, tables or diagrams
- use of software and hardware, such as printers and plotters
- functional components of a compass/global positioning system (GPS) and factors affecting compass/GPS accuracy
- techniques for estimating distance and taking bearings
- legislation, regulations, licences and permit requirements relevant to site and field work
- environmental management plan framework of policy, procedures and management plans for site
- common site hazards and control measures

- health safety and environmental requirements, including field safety and survival principles.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - site/project history, maps and aerial photos
 - guidelines, codes, regulations, and workplace procedures governing data collection
 - relevant field equipment, GPS receivers and related GPS software
 - relevant computer software and hardware
 - access to relevant existing data sets
- modelling of industry operating conditions.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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