



Australian Government

MSL975055 Classify building sites

Release: 1

MSL975055 Classify building sites

Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL975027 Classify building sites. Foundation skills information added. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Application

This unit of competency describes the skills and knowledge to classify building sites, including residential, light industrial, commercial and institutional structures for the purpose of providing guidance for the design of footing systems.

This unit applies to senior technical officers working in the construction materials testing industry sector. Site classification is applicable to single dwelling houses, townhouses and commercial, institutional or light industrial buildings. The classification depends on reactivity of the foundation soils and other potential problems, such as mine subsidence, groundwater conditions and slope. These influence the design of footings, so as to minimise damage due to foundation movement during the life of the building. Operations are performed in accordance with laboratory and/or workplace procedures, and appropriate legislative requirements.

This competency is typically performed by paraprofessionals working under the supervision of an engineer.

No licensing or certification requirements exist at the time of publication. However, regulations and/or external accreditation requirements for laboratory operations exist, so local requirements should be checked. Relevant legislation, industry standards and codes of practice within Australia must also be applied.

Pre-requisite Unit

MSL974028 Classify soils

Competency Field

Testing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 **Prepare to classify site**

- 1.1 Review job request and any accompanying documentation to identify purpose of site classification, proposed structure, client's information needs and timeframe
- 1.2 Review relevant building codes or regulations, standards and workplace procedures for classifying site
- 1.3 Locate any previous site classifications conducted in same area
- 1.4 Review supplied site drawings, topography, borehole locations and logs, photographs and design plans for planned structure
- 1.5 Inspect supplied samples and investigation data for completeness and obvious errors
- 1.6 Confirm that investigation data meets depth requirements for the type of site and location
- 1.7 Liaise with client when supplied documentation, samples, investigation data and/or job request do not comply with workplace procedures and resolve any problems

2 **Analyse site information and test results**

- 2.1 Locate and assess site features, such as slope, structures, drainage, trees and vegetation or abnormal soil conditions that may affect site classification
- 2.2 Determine if fill is present on-site, whether controlled or uncontrolled, and its depth and extent
- 2.3 Determine bearing capacity of soil
- 2.4 Review shrink/swell or correlated clay index test results to determine soil reactivity
- 2.5 Review bore log data in conjunction with soil reactivity and calculate potential soil movement
- 2.6 Recognise obvious errors, insufficient or inconsistent data and limitations of test results

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.	
	2.7	Arrange for, or conduct, additional sampling and/or testing to ensure reliable data for site classification, as required
3 Report site classification	3.1	Use standard symbols and descriptors to assign a valid site classification that accurately reflects soil reactivity, surface movement and any problematic features
	3.2	Summarise field observations, calculations and test results used to determine site classification
	3.3	Accurately describe site features that will affect the design of the proposed structure
	3.4	Provide adequate data to inform footing system design
	3.5	Authorise release of site classification report to the client, or forward the report to a signatory for review and release
4 Finalise site classification	4.1	Store client's documentation, samples and test data, and site classification in accordance with workplace procedures
	4.2	Maintain confidentiality of client information

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

- Learning skills to recognise soil characteristics and accurately classifying samples of gravel, sand, silt and clay
- Numeracy skills to:
 - compare the physical properties of samples with test results and expected values and recognising anomalous results
 - perform accurate calculations, such as surface movement.

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

Unit Mapping Information

Equivalent to MSL975027 Classify building sites, Release 1.

Links

Training Package Companion Volumes -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL975055 Classify building sites

Modification History

Release	Comments
Release 1	This version was released in <i>MSL Laboratory Operations Training Package Release 2.0</i>. Supersedes and equivalent to MSL975027 Classify building sites. Foundation skills information added. Range of conditions removed. Assessment requirements amended. Equivalent outcome.

Performance Evidence

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

- safely conducted at least 5 site classifications from the following list of Australian Standard site classes: S, M, H1, H2, E and P.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- importance of ethical/professional conduct of site classifications and legal implications of errors
- Australian and international standards and guidelines covering the requirements for the competence of testing and calibration laboratories, laboratory safety, and quality and environmental management and:
 - State/Territory Building Codes and Regulations
 - AS 2870-2011 Residential slabs and footings
 - AS 3798-2007 Guidelines on earthworks for commercial and residential developments
 - AS 1726-2017 Geotechnical site investigations
 - AS 1289 Set Methods of testing soils for engineering purposes
 - National Association of Testing Authorities (NATA) documents regarding construction materials testing (Field application document)
- engineering properties of soil and rock materials
- information required for footing system design
- methods of assigning a site classification
- influences of topography, site preparation, structures and vegetation on classification decisions
- in situ and laboratory test methods applicable to site classification
- common calculations (e.g. surface movement) used in site classification

- common sources of site misclassification, including:
 - misidentification of soil properties
 - non-recognition of fill or nature of fill
 - laboratory test results inconsistent with site observations and/or bore logs
- principles and purpose of test methods implemented (why they are used and what they demonstrate)
- technological advances that include automation
- awareness of environmental sustainability issues as they relate to the work task
- legal, ethical and work health and safety (WHS) requirements specific to the work task including traceability, confidentiality and security requirements of all client information, and laboratory data and records.

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:
 - client requirements, building site documentation, sampling data and test results
 - relevant codes, regulations, standards and test methods, and workplace procedures
 - calculator and/or computer with appropriate software.

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

Links

Training Package Companion Volumes -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>