

COMPETENCY FRAMEWORK

MINING UM ENDORSEMENT

(Underground Metalliferous)

Surveyors Act 2003 s39

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Interpretation of the Framework

The notes to the framework are for guidance only are not an official part of the framework. The Board can add to, amend or delete notes at their discretion.

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Document References

Ref	Title	Document ID	Version	Owner
[1]	Surveyors Act 2003			State of Qld
[2]	Competency Frameworks (Overview)	SBQ-CF-0100	V1.00	SBQ
[3]	Competency Frameworks (Surveying Associate)	SBQ-CF-0101	V4.00	SBQ
[4]	Competency Frameworks (Surveying Graduate)	SBQ-CF-0102	V4.10	SBQ
[5]	Competency Frameworks (Surveyor)	SBQ-CF-0103	V5.00	SBQ
[6]	Competency Frameworks (Consulting Endorsement)	SBQ-CF-0104	V1.00	SBQ
[7]	Competency Frameworks (Engineering Endorsement)	SBQ-CF-0105	V4.00	SBQ
[8]	Competency Frameworks (Cadastral Endorsement)	SBQ-CF-0106	V4.00	SBQ
[9]	Competency Frameworks (Hydrographic Endorsement)	SBQ-CF-0107 Superseded	V1.00	SBQ
[10]	Competency Frameworks (Mining Endorsement)	SBQ-CF-0108 Superseded	V3.00	SBQ
[11]	Competency Frameworks (Associate Degree Mapping)	SBQ-CF-0109 Superseded	V1.00	SBQ
[12]	Competency Frameworks (Graduate Degree Mapping)	SBQ-CF-0110 Superseded	V1.00	SBQ
[13]	Competency Frameworks (Surveyor Degree Mapping)	SBQ-CF-0111 Superseded	V1.00	SBQ
[14]	Competency Frameworks (Mining O Endorsement)	SBQ-CF-0112	V1.00	SBQ
[15]	Competency Frameworks (Mining UC Endorsement)	SBQ-CF-0113	V1.00	SBQ
[16]	Competency Frameworks (Mining UM Endorsement)	SBQ-CF-0114	V1.00	SBQ

Introduction

This document describes the Competency Framework for endorsement as a Mining UM Surveyor as prescribed under section 39 of the Surveyors Act 2003.

The competency framework describes the competency Units, Elements and Descriptors that are required to be met for endorsement as a Mining UM Surveyor. The competency framework describes the performance that the candidate is required to display. Competency is developed through the appropriate combination of qualifications, skills, knowledge, and experience.

Definitions

Unit of Competency (Unit): A major segment of the overall competency of a profession, typically representing a major function, role or field of activity.

Element of Competency (Element): A subdivision of a unit of competency into an observable function or activity.

Performance Criteria (Descriptors): An indicative list of the aspects of professional performance that would be regarded as evidence of competent professional performance in the work place in an element of competency.

Notes: The notes within framework are for guidance only and are not an official part of the framework. The notes are an aid to assist in the understanding of the requirement of a Unit, Element or Descriptor.

Competency Requirements for Mining UM Endorsement

Applicants will need to have displayed their competency at the Surveyor level, as well as their competency in this discipline of surveying before being granted a Mining UM Endorsement.

An Applicant seeking the issue of a Mining UM Endorsement will need to demonstrate competency in the following document.

Competency Table for Underground Metalliferous (UM) Endorsement

Application of the framework

This competency framework reflects the competencies required for persons to obtain initial endorsement. In applying the framework throughout a registered person's career, it is recognised that it is not necessary to maintain the detailed technical competencies prescribed in parts of the framework. Where registered persons are not required to apply these technical competencies as part of their work duties, it is acceptable for them to be able to demonstrate that they have an understanding of the application of, and any limitations that may apply to the use of, these techniques.

Element	Descriptors	Notes
UM.1 Understand and apply relevant law.	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Operate in accordance with government Acts, Regulations or instructions 	<p>The legislation referred to in descriptor (iii) includes but is not limited to the appropriate parts of:</p> <ul style="list-style-type: none"> Work Health and Safety Act Mineral Resources Act Surveyors Act 2003 Mining and Quarrying Safety and Health Act 1999 <p>and their associated regulations.</p> <p>A</p>
UM.2 Work in interdisciplinary teams	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Explain the roles of other professionals, technicians and trades persons ii. Explain interactions between various departments and survey requirements within a mining operation 	<p>The element requires the understanding of interactions between various departments and may: Development, Production, Exploration, Technical Services, Support Services, Environmental, Commercial, Maintenance, Management.</p>
UM.3 Plan, organise, direct and control tasks, people and other resources	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Set work objectives and prioritise activities ii. Determine work methods and procedures iii. Estimate times, costs and resources iv. Compile work schedules and allocating resources v. Establish project recording systems for surveying records and design changes 	<p>This element requires the surveyor to identify and prioritise tasks efficiently and manage the mine's survey team.</p>

<p>UM.4 Explain standard mining methods</p>	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Describe different mining methods and their applications ii. Described methods of mine ventilation. iii. Describe methods of ore haulage. iv. Described requirements of mine monitoring and rehabilitation. v. Describe hazards associated with underground metalliferous mines and how it influences mine surveying and surveys. 	<p>This requires the surveyor to understand mining methodologies and how surveyors interact with these operational and ancillary aspects of mining.</p>
<p>UM.5 Prepare plans suitable for lodgement</p>	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Prepare plans to meet the required working plans/drawings ii. Prepare statutory plans to meet the required standards. 	<p>The specific legislation and drafting standards referred to are: Mining and Quarrying Safety and Health Act and Regs Guidance Note 19</p>
<p>UM.6 Plan, organise, direct and control tasks associated with operational surveys.</p>	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Describe various methods of surveying and technology used in underground metalliferous mines. ii. Describe the survey limitations working in underground metalliferous mines. iii. Compile plans for the use by mining personnel for development and production operations. iv. Describe the surveys required for the development and extraction of ore from an underground mine. 	<p>Surveyors are required to identify the routine operational surveys required to fulfil the surveying duties and operational requirements for the development and extraction of ore.</p>

<p>UM. 7 Perform data searches</p>	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Perform searches of current and historical data. ii. Describe locations and availability of data for the purposes of historical searches. iii. Describe the limitations of the data found iv. Use relevant endorsements when using this data for current mining operations. 	<p>This element requires that a surveyor has shown that they have the ability to research numerous facilities to locate and verify historical data and identify its limitations.</p>
<p>UM.8 Establish, measure and adjust extensive mine control networks</p>	<p>Applicants will need to demonstrate that they are able to :</p> <ul style="list-style-type: none"> i. Establish project control networks using terrestrial measurements. ii. Re-establish and validate existing control networks iii. Evaluate and adjust measurements by appropriate adjustment methods iv. Use adequate redundant measurements to validate data v. Analyse and critically evaluate the adjustment 	<p>The element requires evidence that the applicant has completed control surveys that involve:</p> <ul style="list-style-type: none"> • Networks of an enduring nature • Multiple interconnections between stations • Networks of substantial scale and complexity