

# Excavator

## Mapping Document

RIIMPO320F

Conduct civil construction excavator operations



Industry Training Resources

The information and questions contained in the Learner Guide and PowerPoint presentation have been mapped to the elements, performance criteria, and knowledge evidence for the unit of competency RIIMPO320F Conduct civil construction excavator operations.

## Elements and Performance Criteria

### Element 1 - Plan and prepare for excavator operations

Performance Criteria	Learner Guide/PowerPoint	Formative Assessment		Summative Assessment
		Knowledge	Performance	
1.1 Access, interpret and apply excavator operations documentation	<ul style="list-style-type: none"> <li>Who has duty of care?</li> <li>Worker's duty of care</li> <li>PCBU/Employer's duty of care</li> <li>Work health and safety legislative requirements</li> <li>Where to find Health and Safety information</li> </ul> <p><b>Question</b> 1, 2, 3, 4, 5, 6, 7, 12</p>	Question 1, 2, 3, 4, 5, 6, 7, 8, 9, 14, 15, 16	Task 1-A	<p><b>Knowledge assessment</b> 1</p> <p><b>Practical assessment</b> 1. Pre-start.</p>
1.2 Obtain, interpret, clarify and confirm work requirements	<ul style="list-style-type: none"> <li>Worksite requirements</li> <li>Calculations</li> </ul> <p><b>Question</b> 7, 8, 9, 30, 51</p>	Question 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 16, 32, 52, 59	Task 1-A Task 1-B Task 1-F Task 1-G	<p><b>Knowledge assessment</b> 2, 64</p> <p><b>Practical assessment</b> 3. Complete operations to specifications.</p>
1.3 Identify hazards and environmental issues, assess the risks and implement control measures in line with workplace policies	<ul style="list-style-type: none"> <li>Earthmoving site hazards</li> <li>Environmental management plan (EMP)</li> <li>Earthmoving hazards and risks</li> <li>Decibel levels of common sounds</li> <li>Chemicals and solvents</li> <li>Fatigue</li> <li>Safety around trenches</li> <li>Confined space</li> <li>Disposing of environmentally sensitive fluid</li> </ul>	Question 11, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 33, 34, 35, 39, 40, 41, 42, 43, 49, 50, 134	Task 1-C Task 1-E Task 1-G Task 1-J	<p><b>Knowledge assessment</b> 3, 7, 9, 38, 57, 58</p> <p><b>Practical assessment</b> 2. Drive and operate excavator.</p>

	<ul style="list-style-type: none"> <li>Clean up</li> <li>Job safety and environment analysis (JSEA) or Safe work method statement (SWMS)</li> </ul> <p><b>Question</b> 11, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 32, 33, 34, 35, 42, 43, 49, 50, 52, 53, 54, 92, 152</p>			
1.4 Select and wear personal protective equipment required for work activities	<ul style="list-style-type: none"> <li>Tools and equipment</li> </ul> <p><b>Question</b> 30, 31, 36</p>	Question 31, 36	Task 1-D	<p><b>Knowledge assessment</b> 4, 16</p> <p><b>Practical assessment</b> 1. Pre-start.</p>
1.5 Obtain, identify and implement traffic signage requirements according to standard operating procedures and safe work practices	<p><b>Question</b> 35, 37, 38, 39, 52</p>	Question 37, 38	Task 1-H	<p><b>Knowledge assessment</b> 5, 43, 44</p> <p><b>Practical assessment</b> 2. Drive and operate excavator 5. Load, unload and relocate excavator.</p>
1.6 Select required excavator equipment and/or attachments and confirm suitability for work activities	<ul style="list-style-type: none"> <li>Tools and equipment</li> </ul> <p><b>Question</b> 14, 59, 60, 61, 80</p>	Question 104	Task 1-I Task 4-A	<p><b>Knowledge assessment</b> 6</p> <p><b>Practical assessment</b> 4. Attachments</p>
1.7 Obtain and interpret emergency procedures for excavators, and be prepared for fires, accidents and emergencies	<ul style="list-style-type: none"> <li>Worksite requirements</li> <li>Emergency evacuation plan</li> <li>First aid and emergencies</li> <li>Safety plan</li> </ul> <p><b>Question</b> 10, 30</p>	Question 10, 27, 28, 29, 30, 44	Task 1-K	<p><b>Knowledge assessment</b> 8</p> <p><b>Practical assessment</b> 1. Pre-start</p>
1.8 Coordinate and communicate planned activities with others at the	<ul style="list-style-type: none"> <li>Communication</li> <li>Communication - shift handovers</li> </ul>	Question 17, 93	Task 1-J	<p><b>Knowledge assessment</b></p>

site prior to commencement of work activity	<ul style="list-style-type: none"> <li>• Choosing the right communication method</li> <li>• Communicating with people</li> </ul> <p><b>Question</b> 17, 23, 29, 53, 54, 93</p>			19, 25, 34  <b>Practical assessment</b> 3. Complete operations to specification
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**Element 2 - Operate excavator in line with established requirements**

	Performance Criteria	Learner Guide/PowerPoint	Formative Assessment		Summative Assessment
			Knowledge	Performance	
	2.1 Carry out pre-start and start-up checks in line with workplace procedures	<p><b>Question</b> 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 73, 75, 76, 95, 122</p>	Question 59, 60, 61, 62, 64, 66, 68, 69, 76, 76, 77	Task 2-A	<p><b>Knowledge assessment</b> 10, 11, 12, 13, 38, 39</p> <p><b>Practical assessment</b> 1. Pre-start</p>
	2.2 Identify faults or defects and rectify or report within scope of own responsibility and according to workplace procedures	<ul style="list-style-type: none"> <li>• Defective parts</li> </ul> <p><b>Question</b> 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 95, 136, 137</p>	Question 62, 63, 65, 66, 69, 70, 71, 72, 73, 74, 75, 99, 100		<p><b>Knowledge assessment</b> 12, 13, 39, 50, 51</p> <p><b>Practical assessment</b> 1. Pre-start</p>
	2.3 Drive and operate excavator using techniques suited to equipment capabilities and site work conditions, and according to workplace procedures	<p><b>Question</b> 55, 56, 80, 81, 82, 88, 89, 92, 103</p>	Question 80, 89, 90	Task 2-B Task 2-C	<p><b>Knowledge assessment</b> 17, 18, 20, 21, 24, 63</p> <p><b>Practical assessment</b> 2. Drive and operate excavator</p>
	2.4 Monitor hazards and risks during operations, and ensure safety of self, other personnel,	<ul style="list-style-type: none"> <li>• Safety around trenches</li> <li>• Overhead powerlines on poles (National Standard)</li> </ul>	Question 25, 40, 45, 46, 47, 48, 53,	Task 1-C Task 1-G Task 2-B	<p><b>Knowledge assessment</b> 14, 15, 18, 20, 22, 23, 30, 32, 38</p>

	plant and equipment	<ul style="list-style-type: none"> <li>Overhead powerlines on towers (National Standard)</li> </ul> <p><b>Question</b> 26, 27, 28, 33, 34, 40, 41, 42, 43, 44, 45, 46, 47, 49, 50, 53, 54, 55, 56, 57, 58, 81, 82, 92</p>	87, 88, 103, 105, 106, 108, 114	Task 2-C	<b>Practical assessment</b> 2. Drive and operate excavator
	2.5 Monitor and manage equipment performance using indicators and alarms in line with manufacturers specifications	<p><b>Question</b> 78</p>	Question 78, 81	Task 2-B Task 2-C	<p><b>Knowledge assessment</b> 65</p> <p><b>Practical assessment</b> 2. Drive and operate excavator</p>
<b>Element 3</b>	<b>Performance Criteria</b>	<b>Learner Guide/PowerPoint</b>	<b>Formative Assessment</b>		<b>Summative Assessment</b>
			<b>Knowledge</b>	<b>Performance</b>	
Lift, carry and place materials to complete work activity	3.1 Establish weight of load and ensure it is within safe operational limits of machine	<ul style="list-style-type: none"> <li>Calculations</li> <li>Table of weight of common materials</li> </ul> <p><b>Question</b> 12, 13, 14, 15, 16, 87, 94</p>	Question 94	Task 3-A	<p><b>Knowledge assessment</b> 26, 60, 61</p> <p><b>Practical assessment</b> 3. Complete operations to specification</p>
	3.2 Use lifting gear within safe working load requirements and in line with workplace requirements	<ul style="list-style-type: none"> <li>Chain slings</li> <li>Flexible steel wire rope (FSWR) slings</li> <li>Flexible steel wire rope (FSWR) slings table</li> <li>Webbing slings</li> <li>Dry natural fibre rope</li> <li>Angle factors when using a sling</li> <li>Load factors</li> </ul> <p><b>Question</b> 96, 97, 98, 99, 100, 101, 102, 105, 113</p>	Question 95, 96, 97, 98	Task 3-A	<p><b>Knowledge assessment</b> 26, 27, 28, 29, 31, 41</p> <p><b>Practical assessment</b> 3. Complete operations to specification</p>
	3.3 Position machinery and ensure stable and effective shift of materials according to work	<ul style="list-style-type: none"> <li>Operating techniques</li> </ul>	Question 55, 56, 57, 58, 91, 92	Task 3-A	<b>Knowledge assessment</b> 24, 30, 31

	requirements	<b>Question</b> 48, 55, 56, 82, 84, 85, 86, 87, 88, 89, 90, 91, 92, 104, 105, 106, 107, 108, 111, 112, 114			<b>Practical assessment</b> 3. Complete operations to specification
	3.4 Shift load safely and effectively, using hand, audible and communication signals, in line with workplace procedures	<b>Question</b> 93, 109, 110	Question 82, 83, 84, 85, 86, 107, 109, 110, 111,, 112, 113	Task 3-A	<b>Knowledge assessment</b> 33, 34  <b>Practical assessment</b> 3. Complete operations to specification
	3.5 Park up, shut down, secure and carry out post operational inspection of equipment in line with workplace procedures	<b>Question</b> 77, 79, 115, 116, 117, 118, 119	Question 79, 115, 117, 118, 119, 120, 121, 122, 123, 124, 133	Task 3-A	<b>Knowledge assessment</b> 66  <b>Practical assessment</b> 2. Drive and operate excavator
<b>Element 4</b>	<b>Performance Criteria</b>	<b>Learner Guide/PowerPoint</b>	<b>Formative Assessment</b> <b>Knowledge Performance</b>		<b>Summative Assessment</b>
Select, remove, fit and use attachments for an excavator	4.1 Select attachment for the task	<b>Question</b> 144, 145, 146	Question 144, 145, 146	Task 4-A	<b>Knowledge assessment</b> 35, 36, 41  <b>Practical assessment</b> 4. Attachments
	4.2 Fit attachment in line with workplace procedures	<b>Question</b> 147	Question 101, 102, 147, 149	Task 4-B Task 4-D	<b>Knowledge assessment</b> 37  <b>Practical assessment</b> 4. Attachments
	4.3 Test attachment and ensure correct fitting and operation	<b>Question</b> 148, 149, 150, 151, 152	Question 67, 76, 148, 150, 151, 152	Task 4-B	<b>Knowledge assessment</b> 37, 38, 39

					<b>Practical assessment</b> 4. Attachments
	4.4 Use attachment within design limits and in accordance with workplace procedures	<b>Question</b> 15, 16, 153, 154	Question 153	Task 4-C	<b>Knowledge assessment</b> 36, 40, 41  <b>Practical assessment</b> 4. Attachments
	4.5 Remove, clean and store attachments in designated location in line with workplace procedures	<b>Question</b> 155, 156	Question 116, 127, 154, 155, 156	Task 4-E	<b>Knowledge assessment</b> 42  <b>Practical assessment</b> 4. Attachments

**Element 5 - Prepare to relocate the excavator**

Performance Criteria	Learner Guide/PowerPoint	Formative Assessment		Summative Assessment
		Knowledge	Performance	
5.1 Prepare excavator for relocation	<b>Question</b> 140, 141	Question 140	Task 5-A Task 5-B Task 5-C	<b>Knowledge assessment</b> 47, 48  <b>Practical assessment</b> 5. Load, unload and relocate excavator.
5.2 Move excavator safely within and/or between work areas, observing relevant codes and traffic management requirements	<b>Question</b> 48, 81, 139, 142, 143	Question 139, 141	Task 5-A	<b>Knowledge assessment</b> 43, 44, 46  <b>Practical assessment</b> 5. Load, unload and relocate

				excavator.
5.3 Assist loading and unloading machine from float/trailer in accordance with safe work practices	<ul style="list-style-type: none"> <li>Loading and unloading from float/trailer</li> </ul> <p><b>Question</b> 142, 143</p>	Question 142, 143	Task 5-C Task 5-F	<p><b>Knowledge assessment</b> 43, 45, 49</p> <p><b>Practical assessment</b> 5. Load, unload and relocate excavator.</p>

**Element 6 - Conduct housekeeping activities**

Performance Criteria	Learner Guide/PowerPoint	Formative Assessment		Summative Assessment
		Knowledge	Performance	
6.1 Clear work area and dispose of or recycle materials according to workplace procedures	<ul style="list-style-type: none"> <li>Disposing of environmentally sensitive fluid</li> <li>Clean up</li> </ul> <p><b>Question</b> 11, 129, 130, 131, 132, 133, 134, 135</p>	Question 125, 126	Task 6-A Task 6-B	<p><b>Knowledge assessment</b> 52, 53</p> <p><b>Practical assessment</b> 6. Housekeeping</p>
6.2 Manage and/or report hazards to maintain a safe working environment	<ul style="list-style-type: none"> <li>Disposing of environmentally sensitive fluid</li> <li>Clean up</li> </ul> <p><b>Question</b> 35, 40, 131, 135, 136</p>	Question	Task 6-C	<p><b>Knowledge assessment</b> 52, 54</p> <p><b>Practical assessment</b> 6. Housekeeping</p>
6.3 Complete and file or distribute documentation in a manner that complies with workplace practices	<p><b>Question</b> 74, 135, 136, 137, 138</p>	Question 136, 137, 138	Task 6-C	<p><b>Knowledge assessment</b> 54, 55</p> <p><b>Practical assessment</b> 6. Housekeeping</p>



### Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements and performance criteria of this unit. This includes:

Requirement	Learner Guide/PowerPoint/Review Questions	Knowledge Assessment
Key policies and procedures, legislation and established requirements for excavator operations, including those relating to:		
<ul style="list-style-type: none"> <li>Isolation requirements</li> </ul>	<p><b>Question</b> 68, 75, 119</p>	<p><b>Question</b> 13, 38</p>
<ul style="list-style-type: none"> <li>Fires, accidents and emergencies</li> </ul>	<ul style="list-style-type: none"> <li>Worksite requirements</li> <li>Emergency evacuation plan</li> <li>First aid and emergencies</li> <li>Safety plan</li> </ul> <p><b>Question</b> 10, 30, 44</p>	<p><b>Question</b> 1, 3, 8</p>
<ul style="list-style-type: none"> <li>Work health and safety, including signs of operator fatigue and how it should be managed</li> </ul>	<ul style="list-style-type: none"> <li>Who has duty of care?</li> <li>Workers duty of care</li> <li>PCBU/Employer’s duty of care</li> <li>Earthmoving site hazards</li> <li>Earthmoving hazards and risks</li> <li>Decibel levels of common sounds</li> <li>Chemicals and solvents</li> <li>Fatigue</li> <li>Work health and safety legislative requirements</li> <li>Where to find Health and Safety information</li> <li>Overhead powerlines on poles (National Standard)</li> <li>Overhead powerlines on towers (National Standard)</li> </ul> <p><b>Question</b> 1, 2, 3, 4, 5, 41, 42, 43, 45, 46, 47, 52, 92</p>	<p><b>Question</b> 14, 15, 18, 23, 32, 57, 58, 59</p>

Requirement	Learner Guide/PowerPoint/Review Questions	Knowledge Assessment
<ul style="list-style-type: none"> <li>Site isolation and traffic control responsibilities and authorities</li> </ul>	<p><b>Question</b> 37, 38, 39, 52, 53, 54, 139</p>	<p><b>Question</b> 5, 23, 43, 44</p>
<ul style="list-style-type: none"> <li>Project quality requirements</li> </ul>	<p><b>Question</b> 7, 8</p>	<p><b>Question</b> 2</p>
<ul style="list-style-type: none"> <li>Chain of responsibility for loading and unloading of equipment</li> </ul>	<ul style="list-style-type: none"> <li>Loading and unloading from float/trailer</li> </ul> <p><b>Question</b> 139, 140, 141, 142, 143</p>	<p><b>Question</b> 49</p>
<ul style="list-style-type: none"> <li>Operational maintenance and basic diagnostics</li> </ul>	<ul style="list-style-type: none"> <li>Steps you should follow to refuel your machine</li> <li>Defective parts</li> </ul> <p><b>Question</b> 6, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 76, 77, 79, 120, 121, 122, 123, 124, 125, 126, 127, 128</p>	<p><b>Question</b> 11, 12, 38, 39, 42, 50, 51, 56</p>
<ul style="list-style-type: none"> <li>Personal protective equipment</li> </ul>	<ul style="list-style-type: none"> <li>Tools and equipment</li> </ul> <p><b>Question</b> 19, 30, 31, 36</p>	<p><b>Question</b> 4, 16</p>
<ul style="list-style-type: none"> <li>Recyclable materials</li> </ul>	<ul style="list-style-type: none"> <li>Clean up</li> </ul> <p><b>Question</b> 129, 135</p>	<p><b>Question</b> 7</p>
<ul style="list-style-type: none"> <li>Housekeeping activities</li> </ul>	<ul style="list-style-type: none"> <li>Disposal of environmentally sensitive fluids</li> <li>Clean up</li> </ul> <p><b>Question</b> 40, 129, 130, 131, 132, 133, 134, 135</p>	<p><b>Question</b> 52, 53, 54, 55</p>

Requirement	Learner Guide/PowerPoint/Review Questions	Knowledge Assessment
Key factors affecting work activities described in performance evidence, including:		
<ul style="list-style-type: none"> <li>Equipment processes, technical capability and limitations</li> </ul>	<ul style="list-style-type: none"> <li>Steps you should follow to refuel your machine</li> </ul> <p><b>Question</b> 6, 12, 13, 14, 15, 16, 80, 88, 89, 91, 96, 97, 117, 118, 122, 145, 146, 147</p>	<p><b>Question</b> 1, 10, 17, 20, 28, 29, 30, 35, 36, 37, 39, 41</p>
<ul style="list-style-type: none"> <li>Drawings and sketches</li> </ul>	<p><b>Question</b> 5, 7</p>	<p><b>Question</b> 64</p>
<ul style="list-style-type: none"> <li>Ground conditions</li> </ul>	<ul style="list-style-type: none"> <li>Earthmoving site hazards</li> <li>Earthmoving hazards and risks</li> </ul> <p><b>Question</b> 11, 23, 24, 25, 26, 27, 28, 48, 82, 87, 90, 103, 104</p>	<p><b>Question</b> 1, 14, 20, 21, 22, 63</p>
<ul style="list-style-type: none"> <li>Material characteristics including density and viscosity</li> </ul>	<ul style="list-style-type: none"> <li>Principles of soil technology for civil works</li> <li>Table of weight of common materials</li> </ul> <p><b>Question</b> 90</p>	<p><b>Question</b> 21</p>

Requirement	Learner Guide/PowerPoint/Review Questions	Knowledge Assessment
Key features associated with civil construction works, including:		
<ul style="list-style-type: none"> <li>Civil construction terminology</li> </ul>	<ul style="list-style-type: none"> <li>Introduction to an excavator</li> <li>An example of an excavator</li> <li>The basics of road construction</li> <li>Principles of soil technology for civil works</li> <li>Table of weight of common materials</li> <li>Safety around trenches</li> <li>Operating techniques</li> </ul> <p><b>Question</b> 11, 12, 42, 48, 49, 50, 63, 64, 65, 66, 80, 82, 83, 86, 109</p>	<p><b>Question</b> 6, 17, 24, 30, 33, 35, 36, 37</p>
<ul style="list-style-type: none"> <li>Basic principles of material technology and material compaction for civil works</li> </ul>	<ul style="list-style-type: none"> <li>Principles of soil technology for civil works</li> </ul> <p><b>Question</b> <b>90</b></p>	<p><b>Question</b> 21, 63</p>
<ul style="list-style-type: none"> <li>Basic earthworks calculations</li> </ul>	<ul style="list-style-type: none"> <li>Calculations</li> <li>Table of weight of common materials</li> </ul> <p><b>Question</b> 13, 14, 15, 16</p>	<p><b>Question</b> 26, 60, 61</p>
<ul style="list-style-type: none"> <li>Civil construction activity sequence of road construction, earthworks and drainage</li> </ul>	<ul style="list-style-type: none"> <li>The basics of road construction</li> </ul>	<p><b>Question</b> 62</p>

**Performance Evidence**

The candidate must demonstrate completion of excavator operations that safely, effectively and efficiently follows workplace procedures to carry out work activity on at least two occasions, and include:

<b>Requirement</b>		<b>Practical Assessment</b>
Conducting prestart checks prior to commencing operations and shutdown procedures on completion of operations	<ul style="list-style-type: none"> <li>• Locate and apply relevant documentation, policies and procedures</li> <li>• Select and wear personal protective equipment required for work activities</li> <li>• Carry out vehicle refuelling requirements and procedures where applicable</li> <li>• Identify common equipment faults</li> <li>• Meet written and verbal reporting requirements and procedures associated with equipment operations</li> </ul>	1. Pre-start.
Driving and operating the equipment, and adjusting techniques to site conditions	<ul style="list-style-type: none"> <li>• Apply safe work practices, identifying and reporting all potential hazards, risks and environmental issues</li> <li>• Apply problem solving and troubleshooting techniques when operating equipment</li> <li>• Monitor and manage equipment performance using indicators and alarms</li> </ul>	2. Drive and operate excavator.

Requirement		Practical Assessment
<p>Completing operations to specification using at least two different material types and activities including:</p> <ul style="list-style-type: none"> <li>• loading, cutting/boxing</li> <li>• stripping/spreading</li> <li>• lifting and carry materials</li> <li>• bulk excavation</li> <li>• mixing/backfilling</li> <li>• trench excavation</li> <li>• stockpiling</li> <li>• battering</li> <li>• benching</li> <li>• site clean up</li> </ul>	<ul style="list-style-type: none"> <li>• Apply levelling techniques</li> <li>• Establish weight of load</li> <li>• Manage changes in the loads centre of gravity during transportation</li> <li>• Use a range of communication techniques and equipment essential to the safe completion of work activity, including hand, audible and other signals</li> <li>• Organise work activities to meet all task requirements</li> </ul>	3. Complete operations to specification
<p>Selecting, fitting, testing, using and removing at least two attachments, the attachment must be certified and approved in line with workplace procedures and could include, but not limited to, the following:</p> <ul style="list-style-type: none"> <li>• tilt bucket</li> <li>• buckets</li> <li>• lifting device</li> <li>• vibrating compaction wheel</li> <li>• ripper/tyne</li> <li>• compaction plate</li> <li>• compaction wheel</li> <li>• rock breaker</li> <li>• auger</li> </ul>	<ul style="list-style-type: none"> <li>• Select and use the required tools and equipment</li> <li>• Apply methods of changing machine attachments</li> </ul>	4. Attachments
Assisting with loading and unloading excavator from float/trailer		5. Load, unload and relocate excavator.
Parking and securing equipment		2. Drive and operate excavator

## Assessment conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- Include access to an excavator
- Include access to attachments
- Include access to personal protective equipment
- Be conducted in a safe environment; and,
- Be assessed in context of this sector's work environment; and,
- Be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- Confirm consistent performance can be applied in a range of relevant workplace circumstances

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment\* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

## Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- Vocational competencies at least to the level being delivered and assessed
- Current industry skills directly relevant to the training and assessment being provided
- Current knowledge and skills in vocational training and learning that informs their training and assessment
- Formal relevant qualifications in training and assessment
- Having knowledge of and/or experience using the latest techniques and processes
- Possessing a high level of RII training product knowledge
- Having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- Demonstrating the performance evidence, and knowledge evidence as outlined in this Unit of Competency, and
- The minimum years of current\*\* work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 Year
	2	2 Years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 Years
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors, assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and, where no industry standard is specified, should comply with any relevant regulation.	

\*Guidance on simulated environments has been stipulated in the RII implementation guide located on VETNet.

\*\*Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

\*\*\* While a Unit of Competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

#### Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>