



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **TLI32511 Certificate III in Rail Infrastructure**

**Release: 1**

## **TLI32511 Certificate III in Rail Infrastructure**

### **Modification History**

Changes to core and elective units. Packaging rules updated. Equivalent.

## Description

*Please note RTO to insert unit group selected from the group choice below on the testamur*  
**Rationale:**

This is a general qualification for a person engaged in the rail infrastructure environment who performs tasks involving a broad range of skilled applications in a wide variety of contexts. It may involve application of some discretion and judgement in selecting equipment, services or contingency measures. It may also include responsibility for coordinating the work of others.

**Job roles:**

The Certificate III in Rail Infrastructure qualification is aligned to the following defined roles:

**Group A: Rail Infrastructure – Track Maintenance**

- Senior track maintainer
- Ganger

**Group B: Rail Infrastructure – Track Construction**

- Senior track installer
- Ganger

**Group C: Rail Infrastructure – Turnout Construction**

- Specialist track installer
- Special ganger

**Group D: Rail Infrastructure – Track Welding**

- Track welder

**Group E: Rail Infrastructure – Track Examination**

- Track examiner

**Group F: Rail Infrastructure – Rail Testing**

- Rail tester

**Group G: Rail Infrastructure – Timber/Composite Turnout Construction**

- Turnout builder
- Points and crossings builder

**Group H: Rail Infrastructure – Concrete/Steel Turnout Construction**

- Turnout builder
- Points and crossings builder

**Group I: Rail Infrastructure – Track Drainage Maintenance**

- Track drainage maintainer
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## Pathways Information

Not Applicable

## **Licensing/Regulatory Information**

Not Applicable

## Entry Requirements

The entry requirement for this qualification is TLI21311 Certificate II in Rail Infrastructure (Track Work) or relevant industry experience gained by working in the rail infrastructure environment.

## Employability Skills Summary

### Employability Skills Summary for: TLI32511 Certificate III in Rail Infrastructure

The following table contains a summary of the employability skills as identified by the Transport and Logistics Industry for this qualification. The table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that may vary depending on packaging options.

<b>Employability Skill</b>	<b>Industry/enterprise requirements for this qualification include:</b>
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<b>Communication</b>	<ul style="list-style-type: none"><li>• Implement and monitor communication systems and procedures required for construction and/or maintenance operations on rail infrastructure</li><li>• Read and interpret relevant procedures, instructions, signs and labels applicable to the supervision of construction and/or maintenance operations on rail infrastructure</li><li>• Speak clearly and directly on matters related to construction and/or maintenance operations on rail infrastructure</li><li>• Listen to and interpret verbal information related to construction and/or maintenance operations on rail infrastructure</li><li>• Write and complete basic documents as part of duties</li><li>• Negotiate issues with others in the course of construction and maintenance operations on rail infrastructure</li><li>• Recognise and interpret non-verbal signs, signals and behaviour</li><li>• Use relevant communication equipment</li></ul>
<b>Teamwork</b>	<ul style="list-style-type: none"><li>• Work effectively with others in the course of construction and/or maintenance operations on rail infrastructure</li><li>• Provide leadership to team or work group</li><li>• Motivate others in the workplace</li><li>• Assist others in the workplace to achieve and maintain competence</li><li>• Assist in the resolution of interpersonal conflicts that may arise during construction and/or maintenance operations on rail infrastructure</li><li>• Avoid and prevent the harassment of others in the workplace</li><li>• Work with persons of different ages, gender, race, religion, political persuasion, etc.</li></ul>
<b>Problem solving</b>	<ul style="list-style-type: none"><li>• Identify and solve or report problems arising in the course of construction and/or maintenance operations on rail infrastructure</li></ul>

	<ul style="list-style-type: none"><li>• Monitor and anticipate problems that may occur in the course of construction and/or maintenance operations on rail infrastructure and take appropriate action to report or resolve the problems within limits of responsibility</li><li>• Identify and control hazards and risks in a range of rail infrastructure situations and take appropriate precautions</li><li>• Use mathematics to solve various calculations related to construction and/or maintenance operations on rail infrastructure</li></ul>
<b>Initiative and enterprise</b>	<ul style="list-style-type: none"><li>• Modify activities dependent on differing rail infrastructure situations and contingencies</li><li>• Take appropriate initiative in a range of operational situations, such as those above</li><li>• Respond appropriately to changes in equipment, standard operating procedures and the work environment</li></ul>
<b>Planning and organising</b>	<ul style="list-style-type: none"><li>• Follow and apply operational and emergency plans, systems and procedures</li><li>• Implement workplace security and safety management systems</li><li>• Monitor and evaluate operational performance and compliance</li><li>• Collect and interpret information needed in the course of construction and/or maintenance operations on rail infrastructure</li><li>• Organise and plan work activities</li><li>• Manage time and priorities in the course of construction and/or maintenance operations on rail infrastructure</li></ul>
<b>Self management</b>	<ul style="list-style-type: none"><li>• Interpret and apply procedures and instructions</li><li>• Establish and follow own work plans and schedules</li><li>• Evaluate own work performance</li></ul>
<b>Learning</b>	<ul style="list-style-type: none"><li>• Assist others to adapt to changes in workplace systems, equipment, procedures and the workplace operating environment</li><li>• Assist in the instruction, coaching or mentoring of others in the workplace</li><li>• Contribute to the assessment of the competence of others in the workplace</li><li>• Participate in updating own knowledge and skills required for rail infrastructure construction and/or maintenance activities</li></ul>
<b>Technology</b>	<ul style="list-style-type: none"><li>• Use equipment and materials required during construction and/or maintenance operations on rail infrastructure</li><li>• Follow and apply operational and servicing instructions for equipment used during construction and/or maintenance operations on rail infrastructure</li><li>• Follow and apply OH&amp;S procedures when using and servicing rail equipment and facilities</li></ul>

## Packaging Rules

### Requirements for completion of the qualification:

A successful assessment outcome for a total of **11 units** of competency comprising:

- **5 core units** listed below

plus

- **all specialist elective units** from one of the **selected groups (A – I)** listed below

plus

- a minimum of 2 general elective units and up to 4 general elective units (depending on the specialist elective (job role) group that was selected) from the general elective units listed below; up to 2 of these electives may be drawn with appropriate contextualisation from any currently endorsed national Training Package or accredited course, provided that the units contribute to the vocational outcome of the qualification.

Where imported units are selected, care must be taken to ensure that all prerequisites specified in the unit are complied with.

### Core units:

Field	Unit
<b>E</b> <b>Communication and Calculation</b>	RIICCM201A Carry out measurements and calculations
	TLIE2007A Use communication systems
	TLIE2029A Conduct workplace information briefings
<b>F</b> <b>Safety Management</b>	TLIF3003A Implement and monitor occupational health and safety procedures
<b>J</b> <b>Quality</b>	TLIJ3002A Apply quality systems

### Specialist elective units:

Select all units from one of the following specialist elective groups:

- Group A: Track Maintenance
- Group B: Track Construction
- Group C: Turnout Construction
- Group D: Track Welding
- Group E: Track Examination
- Group F: Rail Testing
- Group G: Timber/Composite Turnout Construction
- Group H: Concrete/Steel Turnout Construction
- Group I: Track Drainage Maintenance

<b>Group A</b>	<b>Track Maintenance</b>
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Field	Unit
<b>B Equipment Checking and Maintenance</b>	TLIB3094B Check and repair track geometry TLIB3095A Check and repair points and crossings
<b>E Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications
<b>S Construction and Installation</b>	TLIS3026B Implement track maintenance and construction

Group B Track Construction	
Field	Unit
<b>B Equipment Checking and Maintenance</b>	TLIB3094B Check and repair track geometry
<b>E Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications
<b>S Construction and Installation</b>	TLIS3026B Implement track maintenance and construction

Group C Turnout Construction	
Field	Unit
<b>E Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications
<b>S Construction and Installation</b>	TLIS3026B Implement track maintenance and construction TLIS3045A Install turnouts

Group D Track Welding	
Field	Unit
<b>E Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications



<b>W Equipment and Systems Operations</b>	TLIW2012A Grind rails TLIW3015A Weld rail using aluminothermic welding process TLIW3035A Heat and cut materials using oxy-LPG equipment for the rail industry
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<b>Group E Track Examination</b>	
<b>Field</b>	<b>Unit</b>
<b>B Equipment Checking and Maintenance</b>	TLIB3099A Examine track infrastructure TLIB3100A Visually inspect track infrastructure

<b>Group F Rail Testing</b>	
<b>Field</b>	<b>Unit</b>
<b>S Construction and Installation</b>	TLIS3010A Test rail using ultrasonic equipment TLIS3011A Test rail using nondestructive testing equipment

<b>Group G Timber/Composite Turnout Construction</b>	
<b>Field</b>	<b>Unit</b>
<b>E Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications
<b>S Construction and Installation</b>	TLIS3041A Construct timber or composite points and crossings

<b>Group H Concrete/Steel Turnout Construction</b>	
<b>Field</b>	<b>Unit</b>
<b>E Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications
<b>S Construction and Installation</b>	TLIS3040A Construct concrete or steel points and crossings

<b>Group I      Track Drainage Maintenance</b>	
<b>Field</b>	<b>Unit</b>
<b>E      Communication and Calculation</b>	RIICCM203A Read and interpret plans and specifications
<b>S      Construction and Installation</b>	TLIS2027A    Install and maintain surface track drainage

**General elective units:**

<b>Field</b>	<b>Unit</b>
<b>B      Equipment Checking and Maintenance</b>	TLIB3040A    Inspect poles and associated hardware
	TLIB4071A    Install and maintain pole mounted switches and transformers
	TLIB2091A    Measure and record track geometry
	TLIB2097A    Install and maintain guard rails
	TLIB3099A    Examine track infrastructure
	TLIB3102A    Adjust rail
<b>C      Vehicle Operation</b>	TLIC2058A    Travel medium or heavy self-propelled on-track equipment
	TLIC3045A    Operate road/rail vehicle
<b>E      Communication and Calculation</b>	TLIE2008A    Process workplace documentation
<b>F      Safety Management</b>	RIIRIS401A    Apply site risk management system
	TLIF2006A    Apply accident-emergency procedures
	TLIF3058A    Apply safeworking rules and regulations to rail functions
	TLIF3089A    Implement fatigue management policies and procedures for rail infrastructure
<b>G      Teamwork</b>	TLIG1001A    Work effectively with others
	TLIG3002A    Lead a work team or group
<b>I      Customer Service</b>	TLII1002A    Apply customer service skills

<b>S Construction and Installation</b>	TLIS2012A	Install and service rail lubrication equipment
	TLIS3025A	Implement ballast unloading
	TLIS3026B	Implement track maintenance and construction
	TLIS2027A	Install and maintain surface track drainage
	TLIS2033A	Install and repair temporary track supports
	TLIS2035A	Install and repair fences and gates
	TLIS3037B	Install and repair rail earthworks
<b>U Environment</b>	TLIU4001A	Implement and monitor environmental protection policies and procedures
<b>W Equipment and Systems Operations</b>	NWP227B	Control vegetation on a site
	AHCARB202A	Fell small trees
	AHCARB205A	Operate and maintain chainsaws
	TLIW3013A	Grind switches and crossings
	TLIW3016A	Weld rail using flashbutt welding process
	TLIW3027A	Operate minor track equipment