



Australian Government

Department of Education, Employment and Workplace Relations

TLIS2030A Carry out track ballasting

Release: 1

TLIS2030A Carry out track ballasting

Modification History

Not Applicable

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to carry out track ballasting both manually and mechanically in accordance with safeworking and regulatory requirements and workplace procedures. It includes determining the job requirements, carrying out the ballast activity in accordance with work orders, and completing all required documentation. Licensing or certification requirements may be applicable to this unit.

Application of the Unit

Application of the Unit

Persons achieving competence in this unit will need to fulfil the applicable legislated rail safety requirements including acts and regulations from each state and territory together with any nationally approved compliance codes and/or guidelines.

Work is performed under some supervision, generally within a team environment. It involves the application of routine operational principles and procedures to carrying out track ballasting as part of workplace activities across a variety of operational contexts within the Australian rail system.

Operators of mechanised equipment must have undertaken training and, where appropriate, hold the relevant licence, permit or certificate and be recognised as competent for the class of machinery being used.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Determine job requirements	1.1 Worksite is identified 1.2 Work method is selected to meet job requirements 1.3 Resources are identified to meet the scope of the job and work methods selected
2 Undertake ballast activity	2.1 Ballast is removed from track using appropriate methods and equipment in accordance with workplace procedures 2.2 Ballast profile is established through repair of existing ballast and/or distribution of new ballast using appropriate methods and equipment in accordance with workplace procedures 2.3 Work is completed to meet ballast profile requirements to ensure safe operation of trains in accordance with workplace procedures
3 Complete documentation	3.1 Documentation is completed in line with workplace requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant safety, OH&S and environmental procedures and regulations
- Workplace procedures for the carrying out of track ballasting
- Problems that may occur when carrying out of track ballasting, and action that can be taken to report or resolve the problems
- Hazards that may exist when carrying out of track ballasting, and ways of controlling the risks involved
- Ballast profile standards
- Functions of ballast
- Basic understanding of materials and methods involved in the restoration of ballast profiles
- Relevant recording and documentation procedures

Required skills:

- Communicate effectively with others when carrying out track ballast activities
- Read and interpret instructions and manuals relevant to the carrying out of track ballasting

Required skills:

- Interpret and follow operational instructions including the correct work sequences when carrying out track ballasting
- Complete documentation related to the carrying out of track ballasting
- Use agreed communication methods
- Work collaboratively with others when carrying out track ballasting
- Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when carrying out track ballasting in accordance with regulatory requirements and workplace procedures
- Perform work activities in terms of planned schedule
- Modify activities depending on differing operational contingencies, risk situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to equipment
- Select and use required personal protective equipment
- Select and use relevant equipment and tools

Evidence Guide**EVIDENCE GUIDE**

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
 - the underpinning knowledge and skills
 - relevant legislation and workplace procedures
 - other relevant aspects of the range statement
- Assessment must include exercises which demonstrate competent performance of the following in a range of situations:
 - removing and distributing existing ballast by manual and/or mechanical methods
 - distributing new ballast by manual and/or mechanical methods
 - ensuring completed work meets ballast profile

EVIDENCE GUIDE

- requirements
- Context of and specific resources for assessment**
- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
 - Resources for assessment include:
 - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
 - access to an appropriate range of relevant operational situations in the workplace
 - In both real and simulated environments, access is required to:
 - relevant and appropriate materials and equipment, and
 - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- Method of assessment**
- Assessment of this unit must be undertaken by a registered training organisation
 - As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
 - Practical assessment must occur:
 - through activities in an appropriately simulated environment at the registered training organisation, and/or
 - in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Operations may be conducted:
- by day or night
 - in all weather conditions
- Work may be conducted in:
- restricted spaces
 - exposed conditions
 - controlled or open environments
- Work may involve:
- exposure to chemicals, and dangerous or hazardous substances

RANGE STATEMENT

- Equipment may include:
- movements of equipment, goods and vehicles
 - off-track plant (front end loaders, back hoes etc.)
 - ballast hoppers
 - hand tools and small plant
 - ballast sled
 - ballast undercutters
 - ballast cleaners
 - ballast forks
 - ballast regulators
 - other mechanical means
- Materials may include:
- gravel ballast
 - crushed rock ballast
 - metal fines/road base
- Ballast profile may differ for:
- different rail mass
 - rail types (non-welded, welded and curve)
 - traffic task
 - sleeper type
- Methods may include:
- unloading ballast hoppers
 - spreading ballast dumped by truck or front end loader or similar equipment
 - profiling using shovels, ballast forks or using a ballast regulator
 - removing ballast using manual methods
 - removing ballast using:
 - off-track plant
 - ballast cleaners
 - undercutters
 - ballast sled
- Liaison may include:
- internal or external personnel from other work areas (e.g. train controllers)
- Communications systems may include:
- two-way radios
 - telephones/mobile phones
 - agreed audible or hand signals
- Depending on work context, safety and personal protective equipment may include:
- high visibility clothing
 - hearing protection
 - gloves
 - sunscreen
 - sunglasses
 - safety glasses
 - dust mask

RANGE STATEMENT

- insect repellent
 - safety headwear
 - safety footwear
 - portable radios/mobile phone
 - hand lamps
 - flags
 - safety devices
- Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
- company procedures
 - enterprise procedures
 - organisational procedures
 - established procedures
- Information/documents may include:
- operational instructions, policies and workplace procedures
 - local authority regulations and procedures
 - work orders
 - technical instructions
 - manufacturers or workplace equipment instructions and operation manuals
 - emergency procedure manuals
 - two-way radio/mobile phone operation procedures
 - QA plans, data and document control
 - conditions of service, legislation and industrial agreements including workplace agreements and awards
- Information may be provided:
- electronically
 - in writing, via forms/documents/plans
 - orally, via face-to-face communications
 - via trackside signals
- Applicable procedures and codes may include:
- legislated rail safety requirements including acts and regulations from each applicable state and territory together with any nationally approved compliance codes and/or guidelines
 - relevant Australian Standards and related requirements, including AS 4292
 - relevant state/territory OH&S legislation
 - relevant state/territory environmental protection legislation

Unit Sector(s)

Not Applicable

Competency Field

Competency Field

S - Construction and Installation