

# Rail Safety Investigation

## Learnings in the assessment environment

RISSB Webinar

**Kerry Russell**

Director Investigations, Rail & Metro

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**Marty Meles**

Senior Transport Safety Investigator

# What we'll cover today

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# 1

## About OTSI

Office of Transport  
Safety Investigations

*We exist to improve safety outcomes and public confidence through independent 'no-blame' investigation, sharing safety lessons, and engagement with the transport sector.*

- NSW Government agency.
- Undertake 'no-blame' investigations into bus, ferry and rail incidents for the state of NSW.
- Chief Investigator initiates investigations and determines how they are conducted.
- Final reports are tabled in NSW Parliament and published on the OTSI website.

The aim of a 'no-blame' investigation is to prevent the occurrence of similar incidents, thereby improving safety outcomes; not to assign blame or liability on individuals.

# About OTSI – where does it fit in rail?

- **Office of Transport Safety Investigations (OTSI)**
  - NSW's 'no-blame' transport safety investigator.
  - Independent of the regulator, industry, government departments and operators.
- **Australian Transport Safety Bureau (ATSB)**
  - National 'no-blame' rail safety investigator.
  - Collaboration agreement with both OTSI and the Office of the Chief Investigator (OCI) for NSW and Victoria rail investigations, respectively.
- **Office of the National Rail Safety Regulator (ONRSR)**
  - Enforcement of Rail Safety National Law.
  - Audits, compliance investigations, statutory notices, prosecution.

**Office of Transport  
Safety Investigations**



# 2

## Werris Creek investigation

# OTSI's findings

- 6 x Findings
- 3 x Safety Issues (organisation/system problems)

## Finding no. 6

- *Several rolling stock operators (RSOs) assessed the mentor driver and trainee driver as competent in shunting operations through both VET and enterprise-based assessments. However, assurance that the skillset demonstrated had met all the RSO's competency requirements was largely ineffective, as:*
  - a) *there was an absence of national procedures in shunting, resulting in differing procedural requirements between RSOs*
  - b) *RSO procedural guidance for shunting was not always complete, resulting in undeterminable assessment benchmarks*
  - c) *competency decisions were reached with insufficient evidence collected to support these assessment decisions, whereby skills and observable behaviours were not defined and the underpinning knowledge of the task observed was not assessed.*



Source: Southern Shorthaul Railroad (SSR)

# 3

## Rail Safety Worker competency



# Standardised VET delivery and assessment

ASQA compliance resources: [Standards for Registered Training Organisations \(RTOs\) 2025](#)

Outcomes Standard:

- 4 x Parts (quality areas)
- 23 x Standards

Commonwealth **legislative instrument** that dictates the requirements by RTOs, to ensure the integrity of training and assessment of VET training packages and accredited courses.



## **National Vocational Education and Training Regulator (Outcome Standards for NVR Registered Training Organisations) Instrument 2025**

I, Andrew Giles, Minister for Skills and Training, make the following Instrument.

Dated 28/2/2025

Andrew Giles  
Minister for Skills and Training

Source:

Australian Government 2025, [NVETR \(Outcome Standards for NVR RTOs\) Instrument 2025 - Federal Register of Legislation](#)

## Standard 1.4:

**The assessment system ensures assessment is conducted in a way that is fair and appropriate and enables accurate assessment judgement of VET student competency.**

### *Principles of Assessment*

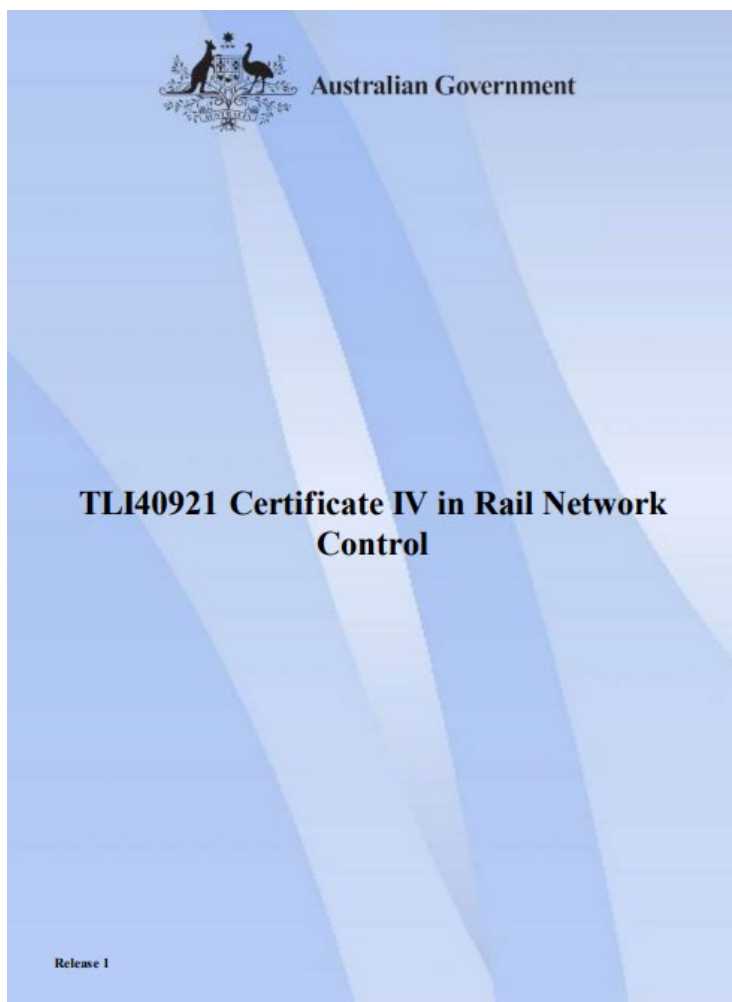
<b>Fairness</b>	<ul style="list-style-type: none"><li>• Reasonable adjustment/s.</li><li>• Right to re-assessment.</li></ul>
<b>Flexibility</b>	<ul style="list-style-type: none"><li>• RPL / credit transfer.</li><li>• Range of assessment methods.</li><li>• Assessment remains relevant to the UoC.</li></ul>
<b>Validity</b>	<ul style="list-style-type: none"><li>• Assessment includes practical application, to ensure skills and knowledge demonstrable in a practical setting.</li></ul>
<b>Reliability</b>	<ul style="list-style-type: none"><li>• Evidence can be consistently interpreted.</li><li>• Results comparable irrespective of assessor.</li></ul>

### *Rules of Evidence*

<b>Validity</b>	<ul style="list-style-type: none"><li>• Adequate evidence collected to ensure skills and knowledge against the UoC is assured.</li></ul>
<b>Sufficiency</b>	<ul style="list-style-type: none"><li>• Quality, quantity and relevance of evidence enables judgement of competence to occur.</li></ul>
<b>Authenticity</b>	<ul style="list-style-type: none"><li>• Evidence presented is the learner's own work.</li></ul>
<b>Currency</b>	<ul style="list-style-type: none"><li>• Assessment evidence demonstrates current competence.</li></ul>

Adapted from:  
Australian Government 2025, [NVETR \(Outcome Standards for NVR RTOs\) Instrument 2025 - Federal Register of Legislation](#)

# Enterprise attainment – instead of VET



- AQF unit of competency or qualification is not available.
- Equivalent AQF qualification has been previously issued:
  - periodic reassessment of competence
  - transfer of location / employment.
- AQF qualification ‘is not reasonably practical’:
  - unreasonably onerous for the rail transport operator’s risk profile, e.g. heritage / volunteer railways
  - content in the applicable unit of competency is largely irrelevant
  - not all units of competency in the qualification are required.

# Enterprise attainment

## – different to VET?

### ONRSR's expectations:

- documented justification for non-adherence
- preferably align with AQF as far as possible
- use of Certificate IV Trainer and Assessor, or equivalent
- implementation of AQF if new / updated product of relevance becomes available
- remain 'consistent with the principles of competence-based training and assessment'.



### ONRSR Policy

Application of the AQF to Rail Safety  
Worker Competence Assessment



Source:  
ONRSR 2021, [Application of the AQF to Rail Safety Worker Competence Assessment](#)

# Example assessments – issues found

S = performed correctly R = remedial action required NA = not applicable			
Procedure or Task	S	R	NA
2.3. Differing classes of rollingstock are known and the differing type of product it is able to convey.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 3: Couple, uncouple and secure rail vehicles			
3.1. Rail vehicles are positioned to meet coupling requirements in accordance with [REDACTED] policies and procedures and customer requirements.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2. Differing coupling systems are identified and applied appropriately to couple and / or uncouple rail vehicles in accordance with manufacturer and organisational procedures.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.3. Three (3) Step Protection is applied prior to entering the line of fire.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## ‘Principles of assessment’ and ‘Rules of evidence’

- Practical skills are not ‘well described’ and do not ‘include observable behaviours’.
- No record of candidate’s underpinning knowledge, i.e Why is the task being performed? Are they just mimicking?
- No contextual or supplementary evidence of the observed task.

10.1. Conduct the following brake tests using the approved [REDACTED] procedures:

\* Full continuity.

Performed Correctly Remedial Action Required Not Applicable

Comments

Demonstrated and explained competence re brake test

*Insufficient evidence gathered to justify that a sound, reliable and consistent competency decision could be made, irrespective of assessor.*

# Example (theory) route assessment

## AS 7454:2017 – (RISSB) Management of Network Route Competence

2 Route Knowledge			
Explain and name Yard limits at ALL locations within the area being assessed.	C		Demonstrated good route knowledge. Identified all signals & designations. Identified network controllers
Demonstrate an understanding of loads that can be carried by [REDACTED] locomotives for the route being assessed.	C		
Explain the location of various signals and their designations on the area being assessed.	C		
Demonstrate knowledge of the location of sidings, crossing loops, cripple sidings, points of no return and grade crossings.	C		
Explains who the Area Controller is for the route being assessed.	C		
Demonstrate knowledge of the location of Level crossings for the area being assessed.	C		
Demonstrate knowledge of the various grades for the area being assessed.	C		

- Informed by route risk assessments.
- Gap analysis for transferring crews.
- Supported by route learning plans.
- Daylight vs. nighttime.
- Operation in degraded conditions.
- 32 x route elements to include:
  - route features
  - signalling and protection systems
  - lineside signage, speeds
  - operating restrictions / local instructions.



# Other emerging issues

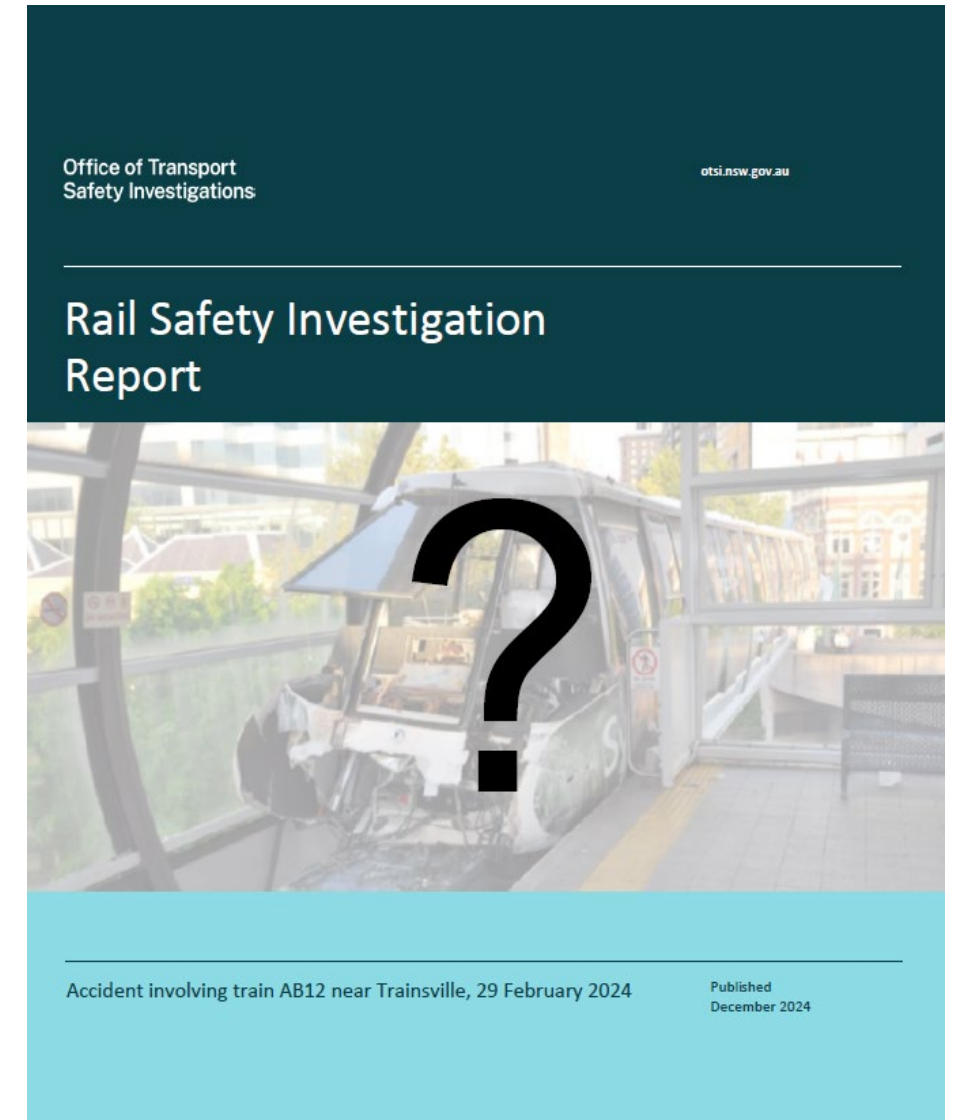
- Lack of procedural guidance which describes the task (no benchmark); resulting in inconsistent competency judgements based on an individual assessor's knowledge, skills and experience.
- Non-assessment of workers on transference to a new rail transport operator (or location), in relation to its specific policies, procedures, instructions, operating environment and equipment.
- Due to a lack of time or resources, components of assessments 'skipped' entirely.
- Verbal description of task sufficing as evidence of practical skill.

3.16. Process explained regarding requirements to shunt a wagon with defective air brake.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXPLAIN PROCESS
3.17. Process explained regarding requirements to shunt a wagon with defective hand brake / park.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXPLAIN PROCESS
3.18. Process explained regarding requirements to shunt a wagon with no air or hand brake / park.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EXPLAIN PROCESS

# Future OTSI investigations

*Given the widespread and varied nature of issues with competency assurance of Rail Safety Workers, potentially resulting in gaps in safety-critical knowledge and skill, this is a focus area for industry safety bodies such as OTSI, ATSB and ONRSR safety investigation activities.*

**Is your organisation at risk of a competency-related safety incident?**






# 4

## Summary

# Key takeaways

- 1) Competency assessment requirements for both VET and enterprise-attainment are effectively near-identical.
- 2) A good assessment is one that allows an independent assessor to come to the same conclusion of candidate competence solely based on the evidence collected.
- 3) The identified issues are not unique to any location, operator or specific incident. Industry has unintentionally drifted from requirements to the point of it becoming 'the norm.'
- 4) Validate your assessments
  - Are they valid? Are they reliable?
- 5) Guidance materials are available to assist from ASQA, ONRSR and RISSB.

# Final report




Australian Government  
Australian Transport Safety Bureau

Office of Transport  
Safety Investigations


## Collision between banking locomotives and grain train 5446

Near Werris Creek, New South Wales, on 6 January 2022



**ATSB Transport Safety Report**  
Rail Occurrence Investigation (Defined)  
RO-2022-001  
Final – 20 August 2024

# Safety Advisory Notice



Australian Government  
Australian Transport Safety Bureau

## Safety Advisory Notice

To rail transport operators

Number: RO-2022-001-SAN-02

### Office of Transport Safety Investigations

### Assessment of rail safety worker competence

A recent ATSB / OTSI investigation has found issues with the assessment of rail safety worker competence. These issues have involved both vocational education and training (VET) and enterprise-based qualifications.

#### What happened

The Office of Transport Safety Investigations (OTSI) has completed an investigation into an accident, on behalf of the ATSB, where 3 locomotives located at the rear of a loaded grain train separated from the lead portion of the train in transit. Shortly afterwards, the lead portion of the train stopped and the 3 now detached locomotives at the rear collided with the stationary lead portion. This resulted in significant damage to the rear wagon and a locomotive.

#### What increased risk

The investigation found that the train crew had not performed a 'stretch test' after completing shunting duties at Werris Creek, which contributed to the incident. It also found that while the train crew had been assessed as competent in shunting during both VET and enterprise-based assessments on several occasions, the supporting evidence collected was usually limited to a single check box that the task had been 'performed correctly'.

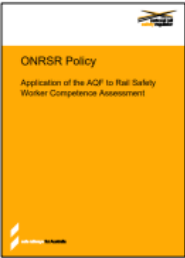
#### Safety advisory notice

**RO-2022-001-SAN-02:** The Australian Transport Safety Bureau strongly encourages rail transport operators, and registered training organisations acting on their behalf, to review and validate their rail safety worker competency assessments. This is to ensure these assessment tools, processes and judgements are reliably meeting the principles and requirements of competency-based training and assessment.

#### Assessment of competence

The competence of rail safety workers is critical to safe railway operations. Where competency assessments are aligned to the Australian Qualifications Framework (AQF), i.e. VET, certain standards must be met. These include, in part, that sufficient assessment evidence is collected to ensure a sound, reliable and consistent competency decision is made, irrespective of the assessor. For example, for practical assessments well-described skills, observable behaviours and underpinning knowledge of the task being performed should be assessed and recorded. Where complying with the AQF is not reasonably practical, for example, a suitable unit of competency or qualification is not available, enterprise-based assessments should still follow these same principles of competence-based training and assessment. Practical guidance to assist rail transport operators in meeting their obligations include those from the Australian Skills Quality Authority (*Users' guide to the standards for registered training organisations 2015*) and the Office of the National Rail Safety Regulator (*Application of the AQF to rail safety worker competence assessment*). Read more about this ATSB investigation: [Collision between banking locomotives and grain train 5446, near Werris Creek, New South Wales, on 6 January 2022](#)

Released: 20 August 2024



ONRSR Policy  
Application of the AQF to Rail Safety Worker Competence Assessment

RSW competence assessment policy (Source: ONRSR)

Australia's national transport safety investigator

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[atsbinfo@atsb.gov.au](mailto:atsbinfo@atsb.gov.au)  
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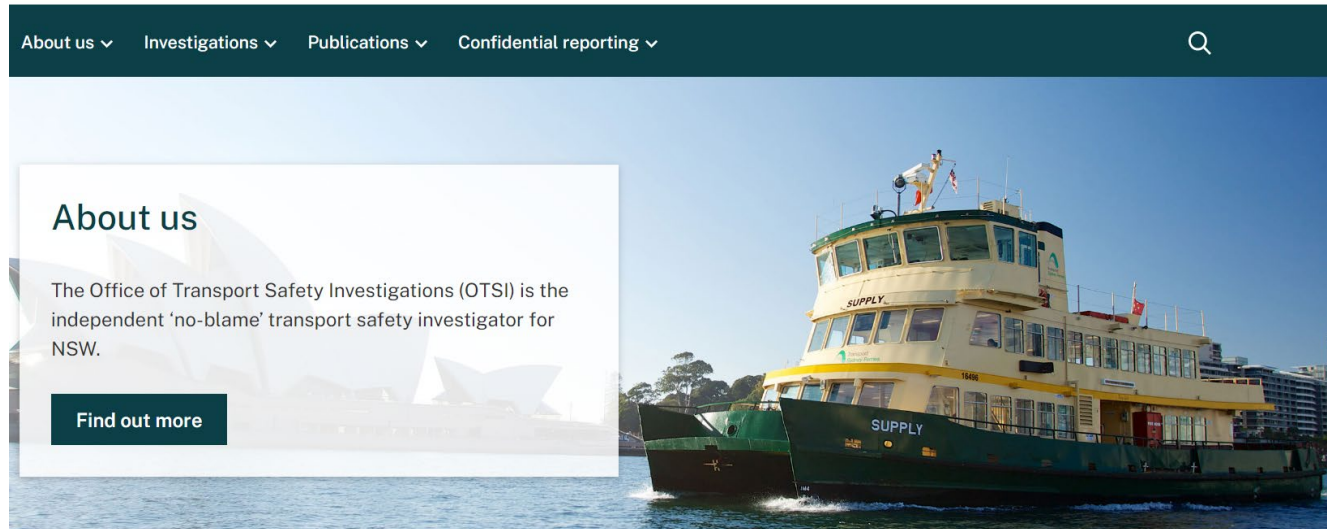
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## Office of Transport Safety Investigations



# Questions?



Source:  
OTSI / ATSB 2019, [Collision of Waratah passenger train A42 with buffer stop, at Richmond Station, New South Wales, on 22 January 2018 | ATSB](#)