

# UKTTE11

## Monitor lifting operations in the Tram and Tramway environment



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### Overview

This standard is about monitoring lifting operations in the Tram and Tramway environment, including the re-railing of a Tram vehicle. The lifting operations will involve the preparation and movement of large and irregular shaped loads which may be of uneven weight distribution, of a fragile nature and have difficult to access lifting points or are without lifting points. The location and final destination of the load will be within the Tramway environment, such as in a depot, workshop or out on site. You will be able to confirm that the area for the movement activity is secure and that the workforce, general public and the environment is protected prior to and during the lifting operations. You will also be able to ensure that the correct licences or permits are in place prior to moving and that all operations follow an approved movement plan. You will be able to recognise when the planned lifting operations cannot be carried out and have the ability to challenge the lifting procedures and to suggest alternative solutions.

You will know and understand how others and the environment can be affected by lifting operations and the ways in which disruption to others can be minimised.

This standard is for those who work as a technician or supervisor in the engineering or construction Tram and Tramway environment.

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### Performance criteria

- You must be able to:*
- P1 source and interpret **information and documentation** regarding the planned lifting operation
  - P2 identify and confirm the objective of the lifting operation in the Tram and Tramway environment
  - P3 ensure **resource** requirements are in place and prepared prior to lifting operations taking place
  - P4 confirm **safe systems of work** are in place prior to lifting operations taking place
  - P5 confirm lifting team members understand their own role and responsibilities in relation to the lifting operations
  - P6 confirm a load is **prepared** for lifting operations
  - P7 confirm the load location is prepared and suitable for accepting the load
  - P8 monitor the lifting operations and ensure the load is correctly positioned and released in its intended destination

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### Knowledge and understanding

*You need to know and understand:*

- K1 how people and the environment can be protected during lifting operations
- K2 the **stakeholders** who might be affected by lifting operations
- K3 how disruption to other works and people not involved in the lifting operations can be minimised
- K4 the lifting operation **concerns and problems** and how these may be overcome
- K5 how to establish the weight of a load and its centre of gravity
- K6 the methods and techniques for planning a route
- K7 the types of equipment used for lifting operations
- K8 how to determine the suitability of equipment used for lifting operations
- K9 the care and control procedures for lifting and moving equipment
- K10 the load handling techniques and how these can vary
- K11 methods and techniques for monitoring and recording lifting operations in the Tram and Tramway environment
- K12 the procedures to follow when a load has to be left suspended for a period of time
- K13 the methods and techniques for the safe release and positioning of a load
- K14 the organisational requirements for recording and reporting lifting operations
- K15 when the preservation of evidence is required

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### Additional Information

#### Scope related to performance criteria

P1 **information and documentation** may include; local safety certificates, location plans, route of the load, calibration certificates, tolerances, manufactures instructions, risk assessments, specifications, licence/permit, lifting plan, competencies of lifting team members, proximity guidance (energy networks, utilities, overhead lines, building (including grade ii listings), street works.

P3 **Resource** requirements may include; people, equipment (load capacity, stability), ground support,

P4 **Safe systems of work** may include; authorised access/egress points, signage, lighting, CCTV, walking to and from a work site, planned protection arrangements, emergency stop protection arrangements, possession arrangements, isolation requirements, communication/warning arrangements and techniques, positions of safety, safety zones, lookout arrangements, first aid points, emergency assembly point, safety briefings, fire evacuation, working at height requirements, working in confined spaces requirements, authorised walking routes, Personal Protective Equipment (PPE) requirements, emergency service support (as required), walking to and from a vehicle, designated parking areas.

P6 **Prepared** may include; correct orientation, protected, secured.

#### Scope related to knowledge criteria

K2 **Stakeholders** may include; external (general public, councils, landowners, businesses, emergency service, passengers, customers), internal (team members, other departments, dedicated safety personnel, senior personnel)

K4 **Concerns and problems** may include; heritage, environmental (e.g. wind speed, visibility, ground support), hazardous materials, work method/plan errors, incorrect maintenance, certification error, load control, slippage, non-conforming plant, equipment or machinery, breaches of security, lifting equipment stability and capacity, lifting zones and overhangs.

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### Additional Information

#### Glossary

##### **Tram vehicle**

Tramcars, tram vehicles, and any other rail vehicles that operate on tramways. It includes one or more trams coupled together and includes non-passenger-carrying vehicles.

##### **Tramway environment**

Includes the tramway (a set of rails, switches and crossings which form the route of a Tram) , infrastructure (fixed assets used for the running of the Tram transport system, including, the tramway, bridges, tunnels, stops, stations and fixed equipment for signalling, communications and electrification), depots, stabling yards.

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