



Skills England

Standard Draft Preview

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Standard in development
L3: Rail off track technician
Version 2.0

Title of occupation

Rail off track technician

UOS reference number

ST1515

Core and options

No

Level of occupation

Level 3

Occupational maps data

Route: Engineering and manufacturing

Pathway: Maintenance, installation and repair

Cluster: Service, repair and/or overhaul operative or technician

Typical duration of apprenticeship

36 months

Target date for approval

01/09/2026

Resubmission

No

Would your proposed apprenticeship standard replace an existing framework?

No

Does professional recognition exist for the occupation?

Yes

Regulated occupation

Is this a statutory regulated occupation?

No

Occupational summary

This occupation is found in rail transport, engineering, and infrastructure construction sectors. Rail off track technicians are employed by national infrastructure providers and specialist engineering contractors.

The broad purpose of the occupation is to inspect, maintain, install, renew or replace off track railway infrastructure and associated assets to ensure the safe, reliable and efficient operation of the railway network. The types of assets they typically work on include, but are not limited to; fencing, drainage systems, vegetation management, structures, access points, lineside equipment, cable routes and asset protection systems. They can work across a variety of railway environments, including mainline, freight, depot and high-speed rail infrastructure.

In their daily work, an employee in this occupation interacts with off track maintenance crews, signallers, engineering teams and supervisors, coordinating alongside other specialists to inspect, maintain, install, renew or replace off track infrastructure and associated assets. The environment they work in is highly collaborative and safety critical.

An employee in this occupation will be responsible for inspecting, maintaining, installing, renewing or replacing off track infrastructure and associated assets in line with operational requirements and instruction.

Typical job titles

Drainage & lineside technician

Lineside asset technician

Lineside drainage maintenance technician

Lineside maintenance technician

Lineside technician

Lineside vegetation technician

Off track maintenance technician

Off track technician

Railway boundary maintenance technician

Are there any statutory / regulatory or other typical entry requirements?

No

Occupation duties

DUTY	KSBS
Duty 1 Comply and promote health, safety, security, sustainability, environmental and quality regulations and organisational procedures	K1 K2 K3 K4 S1 S2 S3 S4 B1 B6
Duty 2 Plan and prepare to undertake off track activities	K5 K6 K7 K8 K9 K10 S5 S6 S7 S8 S9 S10 B8
Duty 3 Gather and interpret technical data for off track maintenance activities.	K11 K12 K13 K14 K15 S11 S12 S13 S14 S15
Duty 4 Collaborate within teams to ensure safe, cost-effective delivery	K16 K17 K18 K19 K20 S16 S17 S18 S19 S20 B2 B3 B7
Duty 5 Complete off track inspection activities	K21 K22 K23 K24 K25 S21 S22 S23 S24
Duty 6 Maintain, adjust, repair, renew or remove off track assets	K26 K27 K28 K29 K30 K31 K32 S25 S26 S27 S28 S29 S30 S31 S32
Duty 7 Close out work and complete records to organisational requirements	K33 K34 K35 S33 S34 S35 B5
Duty 8 Undertake continued professional and self development	K36 K37 S36 S37 B4

KSBS

Knowledge

- K1:** Health, safety, environmental, security, and other regulation, legislation, standards, and guidance used to ensure a safe and environmentally sound work environment.
- K2:** The principles of sustainability and circular economy within the sector to minimising waste, through reuse, repair, restoring and recycling.
- K3:** The hazards and risks in the work environment, using risk assessments and safe systems of work.
- K4:** The responsibilities of the role and the impact of working in a safety critical environment.
- K5:** Planning, prioritisation, organisation, and time management techniques.
- K6:** Self-management and self-motivation techniques, including being fit for duty.
- K7:** Preparation and maintenance of the work area.
- K8:** Consumables, tools, equipment and machinery used during work on off track activities. Purpose, use and calibration requirements.
- K9:** Principles of first line maintenance of tools, equipment and machinery including pre-checks, inspections and condition.
- K10:** Business operation considerations, including quality, cost, whole life cost, delivery, and ethical practices.
- K11:** Principles of railway track asset design, construction and management: relevance and use.
- K12:** Technical specifications, drawings and technical information of off track assets. Condition trends, anomalies.
- K13:** The quality assurance requirements and monitoring processes
- K14:** The importance and potential consequences, features and limitations of human performance, factors affecting human performance and non-technical skills.
- K15:** Digital systems and information technology required to undertake works, including general data protection regulation (GDPR) and cyber security.
- K16:** Principles and techniques of managing stakeholders involved in off track work. Pre job briefings, co-ordinating internal and external stakeholder involvement. Sharing information at the right time to the right people
- K17:** Principles of cooperation and working with others, including working in a team, considering others' needs, deal with conflict/aggressive behaviour and how to support others in the team
- K18:** Principles of equity, diversity, and inclusion in the workplace, including treating others with respect, the value of diverse perspectives in resolving issues and improving delivery.
- K19:** Verbal and visual communication methods, and techniques, including giving and receiving information, matching style to audience, use of technical terminology, listening

techniques, and safety critical communications protocols.

K20: Written communication techniques. Plain English principles. Industry terminology. Report writing. Documentation requirements

K21: The principles and types of inspection

K22: The standards, processes and procedures related to inspection

K23: The importance of taking a systematic and thorough approach, and techniques to stay alert and manage distraction.

K24: The technical specifications for the assets being inspected or surveyed and how to identify any defects and variations, including tolerances and intervention limits.

K25: Types of work that can be undertaken during an inspection. Limits of authority, escalation routes

K26: Off track Maintenance principles, strategies and procedures.

K27: Schedules sequencing and timescales, including seasonal and periodical schedules

K28: Techniques to remain calm under pressure

K29: The type and complexity of asset intervention

K30: Removal methods and techniques, including suitability and availability of replacement materials and disposal of unwanted materials and substances.

K31: Assembly methods and techniques

K32: The process for reinstating an asset. Quality assurance procedures

K33: The importance of accurate recording, including impact of incomplete records on maintenance planning, traceability and audit trails.

K34: Problem solving tools and techniques. How to deal promptly and effectively with problems within your control and report those that cannot be resolved

K35: Continuous improvement (CI) tools and techniques, including techniques to collect feedback and review own work

K36: Planned and unplanned Continuing Professional Development (CPD) and recording method

K37: Importance of health, wellbeing and resilience and ways to manage and maintain it for self

Skills

S1: Apply relevant health, safety, environmental and security, procedures diligently and in compliance with regulations, standards, and guidance.

- S2:** Apply regulation, legislation, standards, and guidance relating to sustainability and the circular economy
- S3:** Follow safe systems of work, recognise hazards in the workplace and apply controls to mitigate them.
- S4:** Undertake the responsibilities of the role within the limits of authority.
- S5:** Use planning, prioritising, organising, and time management techniques to plan off track activities
- S6:** Prepare and organise self for to be fit for work.
- S7:** Prepare and maintain the work area before, during and after the activity.
- S8:** Select, check and use the correct equipment to carry out the activity, ensuring its calibrated as required prior to use
- S9:** Apply principles of first line maintenance of tools, equipment and machinery
- S10:** Undertake off track activities in line with business operation considerations.
- S11:** Apply the relevant principles of asset design, construction and management to off track infrastructure activities.
- S12:** Read and interpret specifications, drawings and technical information for off track assets
- S13:** Comply with quality assurance requirements and monitoring processes.
- S14:** Recognise and manage factors affecting own performance and factors affecting the performance of others, to maintain a safe working environment.
- S15:** Use digital and information technology and follow cyber security and GDPR requirements.
- S16:** Apply the principles of collaboration and working with others
- S17:** Leads delivery activities as required, ensuring successful outcomes and proactive control of site-based risks.
- S18:** Apply principles of equity, diversity, and inclusion in the workplace
- S19:** Communicate and respond verbally and visually without unnecessary detail.
- S20:** Communicates fact-based information in writing with clarity and precision, including only relevant content.
- S21:** Identify and confirm the inspection checks to be made and acceptance criteria to be used in line with plan.
- S22:** Apply a systematic and thorough approach to track inspections, ensuring compliance with organisational procedures

S23: Identify and analyse defects variations from the specification

S24: Undertake repairs within the limits of authority and time available.

S25: Carry out off track activities in an agreed time scale and within the limits of authority, and instructions.

S26: Apply technical schedule sequencing to off track engineering activities

S27: Carry out asset repair in line with specifications

S28: Check that the defective asset is correctly identified as defective and a replacement is available

S29: Use tools and techniques to remove the asset.

S30: Complete quality assurance checks to ensure that replacement assets or components are suitable for use and free from defects.

S31: Replace the asset in the correct sequence using appropriate tools techniques and precautions to prevent damage.

S32: Check that the replaced asset meets the specified operating conditions and work area is left in a safe and operable condition.

S33: Create and share accurate and complete records.

S34: Apply problem-solving techniques to resolve issues promptly, minimising disruption to work activities

S35: Apply continuous improvement (CI) tools and techniques, including a critical review of own work and identification of possible improvement.

S36: Carry out and record planned and unplanned learning and development activities

S37: Identify, develop and adopt strategies for self to support health, wellbeing and resilience taking action when required.

Behaviours

B1: Make your own and other people's health and safety at work a priority.

B2: Work cooperatively and collaboratively.

B3: Be flexible and responsive when meeting work demands.

B4: Take ownership of your continued professional development journey.

B5: Be responsible for the quality of your work.

B6: Act in an environmentally friendly and sustainable way.

B7: Be fair and inclusive in how you treat others.

B8: Consider the human factors applicable to your work.

Qualifications

English and maths

English and maths qualifications must be completed in line with the apprenticeship funding rules.

Does the apprenticeship need to include any mandated qualifications in addition to the above-mentioned English and maths qualifications?

No

Professional recognition

This standard aligns with the following professional recognition:

- Relevant Professional Engineering Institution for Engineering technician

Consultation

Consultation has been undertaken in line with Skills England policy.

Progression routes

ST0496 Rail and rail systems senior engineer (integrated degree) L6

Supporting uploads

Mandatory qualification uploads

Mandated degree evidence uploads

Professional body confirmation uploads

Subject sector area