

# Level 2 NVQ Certificate in Track Patrolling (7597-42)

September 2011 Version 1.0



## Qualification at a glance

<b>Subject area</b>	Rail Engineering
<b>City &amp; Guilds number</b>	7597
<b>Age group approved</b>	16-18, 19+
<b>Entry requirements</b>	None
<b>Assessment</b>	Portfolio
<b>Fast track</b>	Automatic approval available
<b>Support materials</b>	Centre handbook
<b>Registration and certification</b>	Consult the Walled Garden/Online Catalogue for last dates

<b>Title and level</b>	<b>City &amp; Guilds number</b>	<b>Accreditation number</b>
Level 2 Certificate in Track Patrolling	7597-42	600/1019/8



# Contents

<b>1</b>	<b>Introduction</b>	<b>4</b>
	Qualification structure	4
<b>2</b>	<b>Centre requirements</b>	<b>6</b>
	Resource requirements	6
	Candidate entry requirements	7
<b>3</b>	<b>Delivering the qualification</b>	<b>8</b>
	Initial assessment and induction	8
	Recommended delivery strategies	8
	Recording forms	8
<b>4</b>	<b>Assessment</b>	<b>9</b>
	Summary of assessment methods	9
	Evidence requirements	9
<b>5</b>	<b>Units</b>	<b>11</b>
<b>Unit 101</b>	<b>Undertake routine manual maintenance of the permanent way</b>	<b>12</b>
<b>Unit 201</b>	<b>Prepare to undertake duties in the rail industry</b>	<b>16</b>
<b>Unit 202</b>	<b>Contribute to the security of the work environment in the rail industry</b>	<b>18</b>
<b>Unit 203</b>	<b>Carry out routine inspection of the permanent way</b>	<b>20</b>
<b>Unit 205</b>	<b>Undertake replacement of permanent way assets and components</b>	<b>23</b>
<b>Unit 208</b>	<b>Deal with incidents and contingencies within the railway environment</b>	<b>27</b>
<b>Unit 301</b>	<b>Ensure that the rail track is fit for operational purposes following engineering activity</b>	<b>31</b>
<b>Unit 325</b>	<b>Implement and monitor safe working systems for permanent way activities as a protection master</b>	<b>34</b>
<b>Appendix 1</b>	<b>Relationships to other qualifications</b>	<b>37</b>
<b>Appendix 2</b>	<b>Sources of general information</b>	<b>38</b>



# 1 Introduction

This document tells you what you need to do to deliver the qualifications:

Area	Description
Who are the qualifications for?	They are for anyone working in railways engineering, including those preparing for a specialised role or management responsibility.
What do the qualifications cover?	These qualifications prove competence of industrial performance, knowledge and understanding and recognise the ability of individuals working in traction and rolling stock within the rail sector.
Are the qualifications part of a framework or initiative?	The Level 1 is part of the Rail Engineering Apprenticeship Framework.
What opportunities for progression are there?	Candidates who are successful will be able to progress in employment or to a range of further education and professional body qualifications. For example: <ul style="list-style-type: none"> <li>• (7597) Level 2 NVQs in Rail Engineering Track Maintenance</li> <li>• Institute of Leadership and Management qualifications</li> </ul>

## Qualification structure

To achieve the **Level 2 NVQ Certificate in Track Patrolling**, learners must achieve **30** credits from the mandatory units.

Unit accreditation number	City & Guilds unit	Unit title	Credit value
<b>Mandatory</b>			
F/601/7815	201	Prepare to undertake duties in the rail industry	2
L/502/6507	202	Contribute to the security of the work environment in the rail industry	1
F/502/6374	208	Deal with incidents and contingencies within the railway environment	2
K/502/6398	301	Ensure that the rail track is fit for operational purposes following engineering activity	4
M/502/6368	101	Undertake routine manual maintenance of the permanent way	3

<b>Unit accreditation number</b>	<b>City &amp; Guilds unit</b>	<b>Unit title</b>	<b>Credit value</b>
H/502/6366	203	Carry out routine inspection of the permanent way infrastructure	6
K/502/6370	205	Undertake replacement of permanent way assets and components	4
R/502/6394	325	Implement and monitor safe working systems for permanent way activities as a protection master	8



## 2 Centre requirements

This section outlines the approval processes for centres to offer these qualifications and any resources that centres will need in place to offer the qualifications including qualification-specific requirements for the staff delivering the qualifications.

### **Centres already offering City & Guilds qualifications in this subject area**

Centres who wish to offer this qualification must use the standard Qualification Approval Process.

### **Resource requirements**

#### **Assessors and internal verifiers**

Assessors' and internal verifiers' requirements have been specified by GoSkills in their assessment strategy. The full document is available from our website.

Centre staff may undertake more than one role, assessor and/or internal verifier, but must never internally verify their own assessments.

The primary responsibility of the assessor is to assess candidates to the required quality and consistency against the national occupational standard. It is important that an assessor can recognise occupational competence as specified by the national standard. Assessors therefore need to have a thorough understanding of assessment and quality assurance practices, as well as in depth technical understanding related to the qualifications for which they are assessing candidates.

It will be the responsibility of the approved centre to select and appoint assessors. Potential assessors should:

- hold (or be working towards) an appropriate qualification, as specified by the appropriate regulatory authority, confirming their competence to assess NVQ candidates,
- have the necessary and sufficient experience of the role for which they intend to undertake assessments and actual experience of the functions described by the occupational standards that comprise the qualification.

A primary responsibility of the internal verifier is to assure the quality and consistency of assessments carried out by the assessors for whom they are responsible. Internal verifiers therefore need to have a thorough understanding of quality assurance and assessment practices, as well as sufficient technical understanding related to the qualifications they are internally verifying.

It will be the responsibility of the approved centre to select and appoint internal verifiers. Potential internal verifiers should:

- hold (or be working towards) an appropriate qualification, as specified by the appropriate regulatory authority, confirming their competence to internally verify NVQ assessments,
- hold (or be working towards) an appropriate qualification, as specified by the appropriate regulatory authority, confirming their competence to verify NVQ candidates,
- have the necessary and sufficient experience of the role for which they intend to verify assessments. This experience will have provided potential verifiers with detailed knowledge of the functions described by the occupational standards that comprise the qualification.

Trainee assessors and internal verifiers must have a plan, which is overseen by the recognised assessment centre, to achieve the internal verifier qualification within an agreed timescale.

### **Continuing professional development (CPD)**

Centres are expected to support their staff in ensuring that their knowledge remains current of the occupational area and of best practice in delivery, mentoring, training, assessment and verification, and that it takes account of any national or legislative developments.

### **Candidate entry requirements**

Candidates should not be entered for a qualification of the same type, content and level as that of a qualification they already hold.

In addition, centres must ensure that candidates have the potential and opportunity to gain the qualifications successfully.

There are no formal entry requirements for candidates undertaking this qualification.

### **Age restrictions**

These qualifications are **not** approved for use by learners under the age of 16 and City & Guilds cannot accept any registrations for candidates in this age group.



## 3 Delivering the qualification

### Initial assessment and induction

Centres will need to make an initial assessment of each candidate prior to the start of their programme to ensure they are entered for an appropriate type and level of qualification.

### Recommended delivery strategies

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Centres may design course programmes of study in any way which:

- best meets the needs and capabilities of their candidates
- satisfies the requirements of the qualification.

When designing and delivering the course programme, centres might wish to incorporate other teaching and learning that is not assessed as part of the qualification. This might include the following:

- literacy, language and/or numeracy
- personal learning and thinking skills
- personal and social development
- employment rights and responsibilities

Where applicable, this could involve enabling the candidate to access relevant qualifications covering these skills.

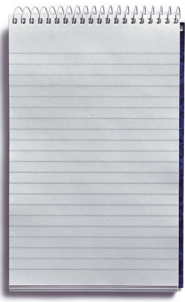
### Recording forms

Candidates and centres may decide to use a paper-based or electronic method of recording evidence. To support the delivery of vocational qualifications we offer our own e-portfolio, Learning Assistant, an easy-to-use and secure online tool to support and evidence learners' progress towards achieving qualifications. Further details are available at:

**[www.cityandguilds.com/eportfolios](http://www.cityandguilds.com/eportfolios).**

**Recording forms** are available on the City & Guilds website. Centres may devise or customise alternative forms, which must be approved for use by the External Verifier before they are used by candidates and assessors at the centre.





## 4 Assessment

### Summary of assessment methods

Candidates will be required to complete a portfolio of evidence for **each** unit.

### Evidence requirements

The evidence requirements have been specified by GoSkills in their assessment strategy. The full document is available from our website. The evidence requirements have been identified for each of the units in section 5 of this handbook.

Evidence of occupational competence must be generated and collected through performance under workplace conditions. The evidence collected under these conditions must also be as naturally occurring as possible.

The optimum method of collecting evidence of a candidate's competence is by direct observation of naturally occurring activity in the workplace. This observation must be carried out by a qualified assessor. Observation of naturally occurring activity in the workplace may not be practicable. In these cases the method of collecting evidence of a candidate's competence will be by simulation. This observation must be carried out by a qualified assessor.

### Simulation is permitted for use in Unit 208

Assessment in simulated conditions is only permissible with the express prior consent of the External Verifier. The External Verifier is likely to allow assessment to take place in simulated conditions due to reasons of:

- Health and Safety
- confidentiality
- operational constraints
- cost
- rarity of opportunity.

Witness testimony can be gathered from a candidate's colleagues, managers, customers, suppliers, etc. They should:

- be specific to the activities or product
- give a brief description of the circumstances of the observation
- give a brief description of the background of the witness and the observed activity
- identify the aspects of the competence demonstrated.

Product evidence must be assessed in order to ensure that:

- the evidence meets the required standard

- the candidate has followed the correct processes to generate the product
- the evidence is authentic.

In regards to the acceptability of knowledge evidence, the optimum method of collecting evidence of a candidate's knowledge is by oral questioning following direct observation in the workplace. This questioning must be carried out by a qualified assessor.

In section 5 of this handbook we have listed all units and identified for each one of them:

- those performance statements for which evidence must be collected by direct observation of naturally occurring activity in the workplace,
- those performance statements for which evidence may be collected by a range of alternative assessment methods,
- when the use of simulation is allowed.

It is important that the correct asset/component/equipment, in the correct environment, is used when assessing the learner. The rail industry is a live production environment and assessment "on the job" is not suitable in all instances. The industry has provided guidance as to where an alternative is possible. To support the alternatives the following definitions have been used:

### **Replication**

The asset, component or equipment is in its normal operating condition/status (as in the live environment) but any task is carried out purely for the purposes of the assessment.

An alternative is where the assessment is undertaken in the live environment but the asset, component or equipment has been modified to allow for the assessment (for example, for the replication of fault conditions).

### **Simulation**

The asset component or equipment is reproduced in a protected environment, entirely separate from the live environment (for example, test rig or simulator).



## 5 Units

### Availability of units

Below is a list of the learning outcomes for all the units. If you want to download a complete set of units, go to [www.cityandguilds.com](http://www.cityandguilds.com)

### Structure of units

These units each have the following:

- City & Guilds reference number
- unit accreditation number (UAN)
- title
- level
- credit value
- unit aim
- relationship to NOS, other qualifications and frameworks
- endorsement by a sector or other appropriate body
- information on assessment
- learning outcomes comprised of a number of assessment criteria
- notes for guidance.

### Evidence requirements

Evidence must be collected by observation of naturally occurring activity in the workplace, in respect of the assessment criteria outlined below, supporting evidence and evidence for the remaining assessment criteria can be gathered from sources including observation, questioning, professional discussion, simulation, witness testimony, written and product evidence as outlined at unit level.

<b>Unit</b>	<b>Unit title</b>	<b>Assessment criteria</b>
201	Prepare to undertake duties in the rail industry	1.1, 1.3, 3.1, 3.2, 3.4.
202	Contribute to the security of the work environment in the rail industry	1.1, 1.2, 1.6, 3.1
208	Deal with incidents and contingencies within the railway environment	Range of assessment methods to be used
301	Ensure that the rail track is fit for operational purposes following engineering activity	Observation
101	Undertake routine maintenance of the permanent way	Observation via replication if appropriate
203	Carry out routine inspection of the permanent way infrastructure	Observation
205	Undertake replacement of permanent way assets and components	Observation via replication if appropriate

## Unit 101

## Undertake routine manual maintenance of the permanent way

<b>UAN:</b>	M/502/6368
<b>Level:</b>	1
<b>Credit value:</b>	3
<b>GLH:</b>	16
<b>Relationship to NOS:</b>	This unit is linked to National Occupational Standards For Rail Engineering Unit P3 – Undertake Routine Maintenance of the Permanent Way
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by GoSkills.
<b>Aim:</b>	The purpose of this unit is for learners to demonstrate occupational competency in undertaking routine maintenance of the Permanent Way

<b>Learning outcome</b>
The learner will: 1. Be able to undertake routine manual maintenance of the permanent way
<b>Assessment criteria</b>
The learner can: 1.1 Set up a safe system of work in line with organisational procedures and work to the system 1.2 Follow the relevant maintenance schedules to carry out the required work 1.3 Carry out the maintenance activities within the limits of own personal authority 1.4 Carry out the maintenance activities in the specified sequence and in an agreed time scale 1.5 Report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule to the appropriate person 1.6 Complete relevant maintenance records accurately and pass them on to the appropriate person.

**Learning outcome**

The learner will:

2. Know how to undertake routine manual maintenance of the permanent way

**Assessment criteria**

The learner can:

- 2.1 List the organisation's procedures that define the appropriate safe system of work for the activity
- 2.2 Describe how to follow the organisation's approved maintenance schedules and related specifications
- 2.3 List the types of maintenance activities that could be required
- 2.4 Describe how to identify and confirm the assets, equipment or components to be maintained
- 2.5 List organisational methods, techniques and procedures for maintenance of the permanent way
- 2.6 Describe the organisation's procedures for the : • recording of work carried out • component and equipment care and control
- 2.7 Describe the implications of not following the policies and procedures for the care and control of components and equipment
- 2.8 Describe how to check the maintenance activity to ensure compliance with the original specification
- 2.9 Describe the relevant approved reporting lines and procedures
- 2.10 Describe the likely impact of own work on the operations of other departments and the impact of their work on the activity
- 2.11 Explain the limits of own authority and responsibility and those of others involved.

# Unit 101            Undertake routine manual maintenance of the permanent way

## Supporting information

The learner will be expected to work within their organisation's procedures and also within the limits of their own responsibility. The assets or equipment to be maintained will be aspects of the track and its associated infrastructure. It could include the maintenance requirements for plain line, switches, drains and vegetation.

The types of maintenance activities involved will follow set procedures and must take account of track access limitations. The activities include, as appropriate:

- Tightening bolts, nuts and screws to specific requirements
- Filling and replenishing lubricators
- Cleaning out ditches, drains and catch pits
- Fixing, fitting or refitting pads, insulators, rail fastenings, fishplates and bolts
- Applying lubricants – point oiling/fishplate greasing
- Cutting back/clearing vegetation
- Removing and disposing of waste
- Boxing in ballast.

When assessing the unit the following points should be covered as appropriate:

### **Assessment criterion 2.1**

- The organisation's safety management system
- Relevant sections of the health and safety at work act
- Control of substances hazardous to health (COSHH)
- Track access restrictions
- Track work instructions
- Task risk control sheets
- Current rule book
- Regulations for working under overhead line equipment (OHLE) and in vicinity of direct current (DC) lines
- Manual handling regulations
- Reporting of injuries, diseases and dangerous occurrences regulations (RIDDOR)
- Safety sign regulations
- Personal protective equipment (PPE)
- Health and safety at work act (HASWA)

**Assessment criterion 2.5** the methods, techniques and procedures include as appropriate:

- Method statements
- Hot weather restrictions
- Extreme weather plans
- Track work instructions
- Task risk control sheets

## Unit 201

## Prepare to undertake duties in the rail industry

<b>UAN:</b>	F/601/7815
<b>Level:</b>	2
<b>Credit value:</b>	2
<b>GLH:</b>	18
<b>Relationship to NOS:</b>	This unit is linked to GoSkills National Occupational Standard Unit P1 Maintain and develop personal knowledge, understanding and skills in the rail industry
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed Go Skills approved as a shared unit
<b>Aim:</b>	This unit is about identifying the rules, regulations, instructions and procedures that you must comply with to make sure you are fit for duty. It outlines the requirements that enable you to commence duties in a safe and knowledgeable manner and to ensure safe lines of communication within the working environment.

<b>Learning outcome</b>
The learner will: 1. Be able to complete personal preparation
<b>Assessment criteria</b>
The learner can: 1.1 Meet organisational standards for appearance and conduct 1.2 Comply with organisational procedures relating to fitness for duty 1.3 Possess the required documentation and equipment as specified by the organisation

<b>Learning outcome</b>
The learner will: 2. Know how to complete personal preparation
<b>Assessment criteria</b>
The learner can: 2.1 List the standards of appearance and conduct required by the organisation 2.2 Describe the importance of appearance, conduct and fitness in relation to the role 2.3 Describe organisational procedures relating to fitness for duty



- |   |
|---|
| 2.4 List the type of equipment required for duty<br>2.5 Describe how to access and use required equipment<br>2.6 List the documents required when completing personal preparation<br>2.7 Describe the standards of behaviour required by the organisation |
|---|

<b>Learning outcome</b>
The learner will: 3. Be able to prepare for duty
<b>Assessment criteria</b>
The learner can: 3.1 Communicate to the relevant person any necessary information relating to personal duties 3.2 Access and confirm information relating to the work to be undertaken 3.3 Comply with organisational procedures relating to personal safety 3.4 Complete preparations for duty within the allocated time 3.5 Complete required documents accurately and process them correctly

<b>Learning outcome</b>
The learner will: 4. Know how to prepare for duty
<b>Assessment criteria</b>
The learner can: 4.1 Describe organisational procedures relating to booking on and booking off duty 4.2 List the duties that are to be undertaken and describe organisational procedures relating to them 4.3 Describe organisational and legal requirements relevant to personal duties 4.4 List the people within the organisation who are relevant to the work role 4.5 Describe the relevant documentation completion requirements within the organisation

## Unit 202

## Contribute to the security of the work environment in the rail industry

<b>UAN:</b>	L/502/6507
<b>Level:</b>	2
<b>Credit value:</b>	1
<b>GLH:</b>	5
<b>Relationship to NOS:</b>	This unit is linked to GoSkills National Occupational Standard Unit 2 Contribute to the Security of the Work Environment in the Rail Industry
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by Go Skills approved as a shared unit
<b>Aim:</b>	This unit is about making sure you understand the importance of maintaining the security of the work environment. It outlines the rules, regulations and procedures which ensure a secure work environment and identifies how to respond to security breaches and emergencies which may arise.

<b>Learning outcome</b>
The learner will: 1. Be able to contribute to the security of the work environment in the rail industry
<b>Assessment criteria</b>
The learner can: 1.1 Comply with security systems and procedures 1.2 Obtain confirmation of visitor credentials 1.3 Respond to breaches of security within the limits of own personal authority 1.4 Report any actions taken to the relevant person(s) in line with organisational procedures

**Learning outcome**

The learner will:

2. Know how to contribute to the security of the work environment in the rail industry

**Assessment criteria**

The learner can:

- 2.1 Describe how to maintain a secure work environment
- 2.2 Describe organisational security procedures
- 2.3 List the types of security breaches that may occur
- 2.4 Describe the organisation's emergency situation procedures in relation to security
- 2.5 Describe the security systems and procedures in the local facilities and work areas
- 2.6 Describe the organisation's policy for receiving visitors
- 2.7 Describe the limits of own authority in relation to security.

## Unit 203

## Carry out routine inspection of the permanent way

<b>UAN:</b>	H/502/6366
<b>Level:</b>	2
<b>Credit value:</b>	6
<b>GLH:</b>	40
<b>Relationship to NOS:</b>	This unit is directly linked to the GoSkills Rail Engineering NOS Unit P 1 – Carry out routine inspection of the Permanent Way infrastructure
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by Go Skills
<b>Aim:</b>	The purpose of this unit is for learners to demonstrate occupational competency in carrying out routine inspection of the rail permanent way infrastructure.

<b>Learning outcome</b>
The learner will: 1. Be able to carry out routine inspection
<b>Assessment criteria</b>
The learner can: 1.1 Set up a safe system of work in line with organisational procedures and work to the system 1.2. Follow the correct specification for the product or equipment being inspected 1.3 Identify and confirm the inspection checks to be made and acceptance criteria to be used 1.4 Carry out all required visual inspections safely 1.5 Identify any defects or variations from the specification of the product or equipment being inspected 1.6 Record the results of the inspection in the appropriate format 1.7 Deal with problems within own area of control promptly in line with organisational procedures 1.8 Report problems that cannot be resolved to the appropriate person.

<b>Learning outcome</b>
The learner will: 2. Know how to carry out routine inspection
<b>Assessment criteria</b>
The learner can: 2.1 List the organisation's procedures that define the appropriate safe system of work for the activity 2.2 Describe what constitutes the track or line side environment as defined by own organisation 2.3 Describe the operational and environmental constraints on the organisation that could occur whilst undertaking visual inspections including: open to traffic, closed to traffic, restricted track access, day work/night work 2.4 Describe the organisation's methods and techniques for inspection relevant to own role 2.5 Describe what constitutes a defect or variation to the permanent way infrastructure 2.6 Describe how to identify defects and variations in products, equipment or systems by visual means 2.7 Describe the circumstances in which immediate action is required 2.8 Describe what quality control systems and documentation procedures are required by own organisation 2.9 Describe the relevant reporting lines and procedures as approved by own organisationsb

# **Unit 203            Carry out routine inspection of the permanent way**

## Supporting information

When assessing the unit the following points should be covered as appropriate:

### **Assessment criterion 2.1**

- The organisation's safety management system
- Relevant sections of the health and safety at work act
- Control of substances hazardous to health (COSHH)
- Track access restrictions
- Track work instructions
- Task risk control sheets
- Current rule book
- Regulations for working under overhead line equipment (OHLE) and in vicinity of direct current (DC) lines
- Manual handling regulations
- Reporting of injuries, diseases and dangerous occurrences regulations (RIDDOR)
- Safety sign regulations
- Personal protective equipment (PPE)
- Health and safety at work act (HASWA)

## Unit 205

## Undertake replacement of permanent way assets and components

<b>UAN:</b>	K/502/6370
<b>Level:</b>	2
<b>Credit value:</b>	4
<b>GLH:</b>	24
<b>Relationship to NOS:</b>	This unit is directly linked to the GoSkills Rail Engineering NOS Unit P5 – Undertake replacement of Permanent Way assets and components
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by Go Skills
<b>Aim:</b>	The purpose of this unit is for learners to demonstrate occupational competency in undertaking replacement of Permanent Way assets and components

<b>Learning outcome</b>
The learner will: 1. Be able to undertake replacement of permanent way assets and components
<b>Assessment criteria</b>
The learner can: 1.1 Set up a safe system of work for the activity in line with organisational procedures and work to the system 1.2 Follow the appropriate engineering diagrams and related specifications for the components/asset being replaced 1.3 Obtain all the required components and ensure that they are in a suitable condition for replacement and fit for purpose 1.4 Ensure that any replacement components used meet the required specification 1.5 Prevent damage to components, tools and equipment during replacement 1.6 Replace the components in the correct sequence using appropriate tools and techniques 1.7 Make necessary settings or adjustments to the components to ensure they will function correctly 1.8 Deal promptly with problems within own control and report those that cannot be resolved 1.9 Maintain documentation in line with own organisation's procedures

**Learning outcome**

The learner will:

2. Know how to undertake replacement of permanent way assets and components

**Assessment criteria**

The learner can:

- 2.1 list the relevant health and safety legislation, regulations and safe working practices appropriate to the activity and organisation
- 2.2 describe how to follow engineering diagrams and related specifications as approved by own organisation
- 2.3 describe the methods and techniques for component and asset replacement appropriate to own role
- 2.4 describe the methods and techniques for ensuring that components meet the required specification
- 2.5 explain how defects in components can affect the performance of the permanent way assets
- 2.6 describe the methods and techniques for handling equipment including:
  - manual handling
  - mechanical handling
  - use of small tools
  - equipment handling
- 2.7 describe the organisation's procedures for the use, care and control of tools and equipment including calibration
- 2.8 describe the organisation's approved relevant reporting lines and procedures
- 2.9 describe the impact of the activity on other departments and the impact of their actions on the activity
- 2.10 explain the limits of own authority and responsibility and those of others involved.



## Unit 205 Undertake replacement of permanent way assets and components

### Supporting information

The type of asset to be worked on will be either plain line or switches and crossings equipment and associated fastenings. The type of components to be replaced in respect of either plain line or switches and crossings, including as appropriate:

- Ballast (wet beds)
- Rails
- Sleeper/bearers
- Drains
- Fastenings
- Insulations
- Chairs and base plates
- Fish-plated joints
- Welded joints (preparatory work)
- Lubricators

The assembly methods and techniques to be used will either be manual and mechanical methods and may include the use of small plant and equipment.

The complexity of the assembly operations will be influenced by:

- Track configuration
- Using variable/diverse sources of information
- Track stability
- Environmental procedures

When assessing the unit the following points should be covered as appropriate:

#### **Assessment criterion 2.1**

- The organisation's safety management system
- Relevant sections of the health and safety at work act
- Control of substances hazardous to health (COSHH)
- Track access restrictions
- Track work instructions
- Task risk control sheets
- Current rule book
- Regulations for working under overhead line equipment (OHLE) and in vicinity of direct current (DC) lines
- Manual handling regulations

- Reporting of injuries, diseases and dangerous occurrences regulations (RIDDOR)
- Safety sign regulations
- Personal protective equipment (PPE)
- Health and safety at work act (HASWA)

## Unit 208

## Deal with incidents and contingencies within the railway environment

<b>UAN:</b>	F/502/6374
<b>Level:</b>	2
<b>Credit value:</b>	2
<b>GLH:</b>	4
<b>Relationship to NOS:</b>	This unit is directly linked to the GoSkills Rail Engineering NOS Unit P10 – Deal with incidents and contingencies within the railway environment
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by Go Skills
<b>Aim:</b>	The purpose of this unit is for learners to demonstrate occupational competency in dealing with incidents and contingencies within the railway environment

<b>Learning outcome</b>
The learner will: 1. Be able to deal with incidents and contingencies within the railway environment
<b>Assessment criteria</b>
The learner can: 1.1 Set up a safe system of work in line with organisational procedures and work to the system 1.2 Call for expert help in the event of contingencies occurring in line with organisational procedures 1.3 Take prompt and appropriate action to minimise risk of personal and third party injury as a first priority and then damage to property and equipment 1.4 Follow shutdown and evacuation procedures promptly and correctly 1.5 Deal safely with dangers that can be contained using appropriate equipment and materials, in line with organisational procedures.

**Learning outcome**

The learner will:

2. Know how to deal with incidents and contingencies within the railway environment

**Assessment criteria**

The learner can:

- 2.1 List the organisation's procedures that define the appropriate safe system of work for the activity
- 2.2 Describe the relevant first aid procedures that are approved by own organisation
- 2.3 List the relevant evacuation procedures that are approved by own organisation
- 2.4 Describe how to deal with the various incidents and contingencies in line with own organisation's procedures, including:
  - the advice and support to give when dealing with requests for rapid response
  - communicating effectively with others
- 2.5 Describe how to obtain feedback on the support and advice provided
- 2.6 Describe own organisation's procedures for incident and contingency reporting
- 2.7 Describe the relevant reporting lines and procedures as approved by own organisation
- 2.8 Explain the limits of own authority and responsibility and those of others involved

## **Unit 208            Deal with incidents and contingencies within the railway environment**

### Supporting information

The learner will be expected to work within their organisation's procedures and also within the limits of their own responsibility.

The assets or equipment to be maintained will be aspects of the track and its associated infrastructure. It could include the maintenance requirements for plain line, switches, drains and vegetation. The types of maintenance activities involved will follow set procedures and must take account of track access limitations.

The activities include, as appropriate:

- Tightening bolts, nuts and screws to specific requirements
- Filling and replenishing lubricators
- Cleaning out ditches, drains and catch pits
- Fixing, fitting or refitting pads, insulators, rail fastenings, fishplates and bolts
- Applying lubricants – point oiling/fishplate greasing
- Cutting back/clearing vegetation
- Removing and disposing of waste
- Boxing in ballast.

When assessing the unit the following points should be covered as appropriate:

#### **Assessment criterion 2.1**

- The organisation's safety management system
- Relevant sections of the health and safety at work act
- Control of substances hazardous to health (COSHH)
- Track access restrictions
- Track work instructions
- Task risk control sheets
- Current rule book
- Regulations for working under overhead line equipment (OHLE) and in vicinity of direct current (DC) lines
- Manual handling regulations
- Reporting of injuries, diseases and dangerous occurrences regulations (RIDDOR)
- Safety sign regulations
- Personal protective equipment (PPE)
- Health and safety at work act (HASWA)

**Assessment criterion 2.5**

the methods, techniques and procedures include as appropriate:

- Method statements
- Hot weather restrictions
- Extreme weather plans
- Track work instructions
- Task risk control sheets

## Unit 301

## Ensure that the rail track is fit for operational purposes following engineering activity

<b>UAN:</b>	K/502/6398
<b>Level:</b>	3
<b>Credit value:</b>	4
<b>GLH:</b>	30
<b>Relationship to NOS:</b>	This unit is directly linked to the GoSkills Rail Engineering NOS Unit P33 - Ensure that the track is fit for operational purposes
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by Go Skills
<b>Aim:</b>	The purpose of this unit is for learners to demonstrate occupational competency in ensuring that the rail track is fit for operational purposes

<b>Learning outcome</b>
The learner will: 1. Be able to ensure that the rail track is fit for operational purposes following engineering activity
<b>Assessment criteria</b>
The learner can: 1.1 Set up a safe system of work in line with organisational procedures and work to the system 1.2 Confirm that everyone involved accepts the asset is in a satisfactory condition for the hand-over to take place 1.3 Identify and confirm any unusual features of the condition of the asset 1.4 Make the hand-over and obtain agreement between everyone involved on the precise moment of transfer of responsibility 1.5 Make sure that clear, accurate and complete records of the hand-over are made in line with organisational procedures 1.6 Deal effectively with problems within the limits of own authority in line with organisational procedures 1.7 Report the problems that cannot be resolved to the appropriate person in line with organisational procedures.

<b>Learning outcome</b>
The learner will: 2. Know how to ensure that the rail track is fit for Operational purposes following engineering activity
<b>Assessment criteria</b>
The learner can: 2.1 List the organisation's procedures that define the appropriate safe system of work for the activity 2.2 Describe how to source and interpret engineering specifications as approved by own organisation 2.3 Explain the hand-over procedures as approved by own organisation 2.4 Explain the procedures and systems for records and documentation as approved by own organisation 2.5 Describe own organisation's methods and techniques for effective communication including the appropriate method for communicating changes 2.6 Describe the relevant reporting lines and procedures as approved by own organisation 2.7 Describe the likely impact of own work on the operations of other departments and the impact of their work on the activity 2.8 Explain the limits of own authority and responsibility and those of others involved.



## **Unit 301            Ensure that the rail track is fit for operational purposes following engineering activity**

### Supporting information

The scale of the work could range from minor maintenance to major renewal/repair activities. This may include as appropriate:

- Raising/removing speed restrictions
- Temporary and permanent situations
- Major geometrical repair
- Removal of environmental hazards
- Maintenance works or inspections
- Track infrastructure
- Emergency inspections

When assessing the unit the following points should be covered as appropriate:

#### **Assessment criterion 2.1**

- The organisation's safety management system
- Relevant sections of the health and safety at work act
- Control of substances hazardous to health (COSHH)
- Track access restrictions
- Track work instructions
- Task risk control sheets
- Current rule book
- Regulations for working under overhead line equipment (OHLE) and in vicinity of direct current (DC) lines
- Manual handling regulations
- Reporting of injuries, diseases and dangerous occurrences regulations (RIDDOR)
- Safety sign regulations
- Personal protective equipment (PPE)
- Health and safety at work act (HASWA)

#### **Assessment Criterion 2.3**

the situations include as appropriate:

- Raising/removing speed restrictions
- Temporary and permanent situations
- Major geometrical repair
- The removal of environmental hazards

## Unit 325

## Implement and monitor safe working systems for permanent way activities as a protection master

<b>UAN:</b>	R/502/6394
<b>Level:</b>	3
<b>Credit value:</b>	8
<b>GLH:</b>	40
<b>Relationship to NOS:</b>	This unit is directly linked to the GoSkills Rail Engineering NOS Unit P27 - Implement and Monitor Safe Working Systems for Permanent Way Maintenance or Renewal Activities
<b>Endorsement by a sector or regulatory body:</b>	This unit is endorsed by Go Skills
<b>Aim:</b>	The purpose of this unit is for learners to demonstrate occupational competency in implementing and monitoring safe working systems for Permanent Way activities

<b>Learning outcome</b>
The learner will: 1. Be able to implement and monitor safe working systems for permanent way activities as a protection master
<b>Assessment criteria</b>
The learner can: 1.1 Set up a safe system of work in line with organisational procedures and work to the system 1.2 Source and interpret approved system procedures and information relating to the work area/site 1.3 Identify and set access controls to meet agreed and approved system procedures 1.4 Check that the requirements for safe access meet own organisation's requirements 1.5 Ensure the requirements for safe access to work are implemented 1.6 Ensure that system records are accurate, up-to-date and complete and are stored correctly in line with organisational procedures 1.7 Advise other person(s) as required of the requirements for safe access 1.8 Communicate system requirements and the responsibilities of individuals to the appropriate person in line with organisational procedures

- |   |
|---|
| <p>1.9 Review systems operations regularly and forward suggestions for improvement to the appropriate person in line with organisational procedures</p> <p>1.10 Deal with problems within own control promptly and report those that can not be resolved in line with organisational procedures</p> |
|---|

<p><b>Learning outcome</b></p>
--------------------------------

<p>The learner will:</p>
--------------------------

- |  |
|--|
| <p>2. Know how to implement and monitor safe working systems for permanent way activities as a protection master</p> |
|--|

<p><b>Assessment criteria</b></p>
-----------------------------------

<p>The learner can:</p>
-------------------------

- |   |
|---|
| <p>2.1 List the organisation's procedures that define the appropriate safe system of work for the activity</p> <p>2.2 Explain how to source and interpret own organisation's approved system procedures and information relating to the work area/site</p> <p>2.3 Explain own organisation's methods and techniques for conducting safety assessments</p> <p>2.4 Explain own organisation's procedures and guidelines for obtaining resources for permanent way activities</p> <p>2.5 Explain own organisation's procedures for setting access controls and how to monitor these are in place</p> <p>2.6 Explain how to monitor safe working systems during maintenance or renewal activities</p> <p>2.7 Explain the implications of not implementing and monitoring a safe working system</p> <p>2.8 Explain how to present relevant information using set proformas and templates as used by own organisation</p> <p>2.9 Explain the relevant reporting lines and procedures as approved by own organisation</p> <p>2.10 Explain the limits of own authority and responsibility and those of others involved in the activity.</p> |
|---|

## **Unit 325            Implement and monitor safe working systems for permanent way activities as a protection master**

### Supporting information

The learner is protecting other people from the effects of the engineering work and from the movement of rail vehicles. The type and complexity of the environment will be that associated with being on or about the permanent way and must take account of, as appropriate:

- Lines open/closed to operational traffic
- Maintenance or renewals activities
- Requirements for depots, sidings, and the mainline including bi-directional operations
- Day/night working
- Noise
- Weather

The learner will know and understand the level and extent of their responsibility, including both their own safety and that of work colleagues. Where necessary, authorisation must be obtained before work is carried out and the learner will be expected to work within their organisation's procedures and specifications

When assessing the unit the following points should be covered as appropriate:

#### **Assessment criterion 2.1**

- The organisation's safety management system
- Relevant sections of the health and safety at work act
- Control of substances hazardous to health (COSHH)
- Track access restrictions
- Track work instructions
- Task risk control sheets
- Current rule book
- Regulations for working under overhead line equipment (OHLE) and in vicinity of direct current (DC) lines
- Manual handling regulations
- Reporting of injuries, diseases and dangerous occurrences regulations (RIDDOR)
- Safety sign regulations
- Personal protective equipment (PPE)
- Health and safety at work act (HASWA)



## Appendix 1 Relationships to other qualifications

### Literacy, language, numeracy and ICT skills development

This qualification can develop skills that can be used in the following qualifications:

- Functional Skills (England) – see [www.cityandguilds.com/functionalskills](http://www.cityandguilds.com/functionalskills)
- Essential Skills (Northern Ireland) – see [www.cityandguilds.com/essentialskillsni](http://www.cityandguilds.com/essentialskillsni)
- Essential Skills Wales – see [www.cityandguilds.com/esw](http://www.cityandguilds.com/esw)



## Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on [www.cityandguilds.com](http://www.cityandguilds.com).

**Centre Manual - Supporting Customer Excellence** contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

**Our Quality Assurance Requirements** encompasses all of the relevant requirements of key regulatory documents such as:

- Regulatory Arrangements for the Qualifications and Credit Framework (2008)
- SQA Awarding Body Criteria (2007)
- NVQ Code of Practice (2006)

and sets out the criteria that centres should adhere to pre and post centre and qualification approval.

**Access to Assessment & Qualifications** provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information such on such things as:

- **Walled Garden:** how to register and certificate candidates on line
- **Qualifications and Credit Framework (QCF):** general guidance about the QCF and how qualifications will change, as well as information on the IT systems needed and FAQs
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

**Centre Guide – Delivering International Qualifications** contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve ‘approved centre’ status, or to offer a particular qualification. Specifically, the document includes sections on:

- The centre and qualification approval process and forms
- Assessment, verification and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Frequently asked questions.

**City & Guilds**  
Believe you can



[www.cityandguilds.com](http://www.cityandguilds.com)



## Useful contacts

---

### UK learners

General qualification information

T: +44 (0)844 543 0033

E: [learnersupport@cityandguilds.com](mailto:learnersupport@cityandguilds.com)

---

### International learners

General qualification information

T: +44 (0)844 543 0033

F: +44 (0)20 7294 2413

E: [intcg@cityandguilds.com](mailto:intcg@cityandguilds.com)

---

### Centres

Exam entries, Certificates,  
Registrations/enrolment, Invoices,  
Missing or late exam materials,  
Nominal roll reports, Results

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: [centresupport@cityandguilds.com](mailto:centresupport@cityandguilds.com)

---

### Single subject qualifications

Exam entries, Results, Certification,  
Missing or late exam materials,  
Incorrect exam papers, Forms  
request (BB, results entry), Exam  
date and time change

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

F: +44 (0)20 7294 2404 (BB forms)

E: [singlesubjects@cityandguilds.com](mailto:singlesubjects@cityandguilds.com)

---

### International awards

Results, Entries, Enrolments,  
Invoices, Missing or late exam  
materials, Nominal roll reports

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: [intops@cityandguilds.com](mailto:intops@cityandguilds.com)

---

### Walled Garden

Re-issue of password or username,  
Technical problems, Entries,  
Results, e-assessment, Navigation,  
User/menu option, Problems

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: [walledgarden@cityandguilds.com](mailto:walledgarden@cityandguilds.com)

---

### Employer

Employer solutions, Mapping,  
Accreditation, Development Skills,  
Consultancy

T: +44 (0)121 503 8993

E: [business@cityandguilds.com](mailto:business@cityandguilds.com)

---

### Publications

Logbooks, Centre documents,  
Forms, Free literature

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

If you have a complaint, or any suggestions for improvement about any of the services that we provide, email: [feedbackandcomplaints@cityandguilds.com](mailto:feedbackandcomplaints@cityandguilds.com)

## **About City & Guilds**

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

## **City & Guilds Group**

The City & Guilds Group operates from three major hubs: London (servicing Europe, the Caribbean and Americas), Johannesburg (servicing Africa), and Singapore (servicing Asia, Australia and New Zealand). The Group also includes the Institute of Leadership & Management (management and leadership qualifications), City & Guilds Land Based Services (land-based qualifications), the Centre for Skills Development (CSD works to improve the policy and practice of vocational education and training worldwide) and Learning Assistant (an online e-portfolio).

## **Copyright**

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute and may not be copied, reproduced or distributed without prior written consent. However, approved City & Guilds centres and candidates studying for City & Guilds qualifications may photocopy this document free of charge and/or include a PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching candidates working towards a City & Guilds qualification, or for internal administration purposes
- candidates may copy the material only for their own use when working towards a City & Guilds qualification

The *Standard Copying Conditions* (see the City & Guilds website) also apply.

Please note: National Occupational Standards are not © The City and Guilds of London Institute. Please check the conditions upon which they may be copied with the relevant Sector Skills Council. Published by City & Guilds, a registered charity established to promote education and training

## **City & Guilds**

**1 Giltspur Street**

**London EC1A 9DD**

**T +44 (0)844 543 0000**

**F +44 (0)20 7294 2413**

**[www.cityandguilds.com](http://www.cityandguilds.com)**

**WW-04-7597**