

# Highways Maintenance Skilled Operative Apprenticeship at Level 2

## Trailblazer Apprenticeship

## On-Programme Training Specification

October 2018 Version 1

## Highways Maintenance Skilled Operative Apprenticeship at Level 2

### Occupational Brief

#### Introduction

Although the employer will decide the way that the apprentice is trained and by whom, in most cases the work-based element will be delivered by an accredited training centre that is approved to offer a Level 2 NVQ Certificate in Roadbuilding and Maintenance (Construction) The NVQ element can be achieved outside of the apprenticeship using evidence that has been generated within the apprenticeship if required.

Employers must ensure that any training delivery purchased, or delivered in-house, cover all knowledge and skills requirements detailed in the apprenticeship standard and that this Occupational Brief is a Mandatory requirement to gain a CSCS card for Highways Maintenance General Operative.

This brief is to give guidance and recommendations on the following:

- On programme training and duration
- Example Knowledge test questions
- Example Practical Assessment
- Example of a Critical Marking Sheet

#### On Programme Training Recommendation

The Apprentice should be enrolled at an approved Training Centre which is on the ESFA Register of Training Organisations. It is recommended that training is in blocks of two weeks and this Occupational Brief is a mandatory requirement.

- Foundation
- Intermediate
- Pre-assessment

Training	Content	Duration
Foundation	On completion the Highways Maintenance Skilled Operative will be able to:  Apply appropriate health, safety and environment procedures when working on the roads (COSVR641)  Conform to productive work practices (COSVR642)  Read, interpret and work to drawings, specifications and highways information. Highways information will include details on the use of safety	4 weeks

	<p>barriers, cones, traffic flows and safety zones to work in when working on the highway.  Use underground cable locators to identify buried water, gas or sewer lines, and once identified excavate by hand around the line to stop any damage and disruption to services.  (COSVR782)  Locate and excavate to expose buried utility services to given working instructions.  Apply safe working practise for moving, storing, lifting and handling of resources.  (COSVR643)  Move, handle or store occupational resources to meet product information and organisational requirements relating to at least three of the following</p> <ul style="list-style-type: none"> <li>• sheet material</li> <li>• loose material</li> <li>• bagged or wrapped material</li> <li>• fragile material</li> <li>• tools and equipment</li> <li>• components</li> <li>• liquids</li> </ul> <p>Prepare and operate powered tools or pedestrian plant, machinery or equipment for use on rural and urban roads this will include , machinery for generator's, pumps, pedestrian operated plant (example pushed roller), mixers, compressors and self-powered tools (pneumatic drill).  (COSVR400)  Operate and monitor powered unit, tools or pedestrian plant, machinery or equipment to given working instructions, relating to</p> <ul style="list-style-type: none"> <li>• continual running</li> <li>• closing down</li> <li>• cleaning</li> </ul> <p>Return powered units, tools or pedestrian plant, machinery or equipment to a safe operational condition on completion of work  Disassemble and/or clean powered unit, tools or pedestrian plant, machinery or equipment</p> <p>Work within temporary traffic management (using</p>	
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	<p>traffic lights, cones and barriers to section off elements of the road from vehicles and pedestrians) on urban and rural roads whilst excavating and re-instating the highway.</p>	
<p>Intermediate</p>	<p>On completion the Highways Maintenance Skilled Operative will be able to:</p> <p>Apply appropriate health, safety and environment procedures when working on the roads Plan and undertake work practice productively when carrying out repairs to potholes, pavements and kerbs, and laying new surfaces on rural and urban roads. (COSVR368)</p> <p>Lay kerbs and/or channels and/or combined drainage and kerb systems to given working instructions (COSVR375)</p> <p>lay flexible pavement materials to given working instructions relating to the following</p> <ul style="list-style-type: none"> <li>• unbound sub-base construction</li> <li>• prepare and form joints</li> <li>• flexible surface material</li> </ul> <p>Read, interpret and work to drawings, specifications and highways information. Highways information will include details on the use of safety barriers, cones, traffic flows and safety zones to work in when working on the highway. (COSVR365)</p> <p>Segregate the area for live highways works in compliance with recognised current legislation and official guidance and given working instructions relating to the following</p> <ul style="list-style-type: none"> <li>• access and egress to site</li> <li>• work activity and storage of resources</li> <li>• signs, cones, lighting and guarding, portable traffic signals for temporary traffic management control</li> </ul> <p>Excavation and reinstatement of the highway by carrying out maintenance and repairs. The excavation is the removal of material within the road or road side by using hand or power tools. Once the excavation is complete reinstatement of the area by using concrete, screeds, sub-base, aggregates or bituminous materials will be carried out. (COSVR373)</p>	<p>8 weeks</p>

	<p>Form and finish excavations manually to given working instructions. (COSVR374)</p> <p>Reinstate excavations and highway surfaces to given working instructions relating to at least two of the following</p> <ul style="list-style-type: none"> <li>• sub-grades, sub-bases, road-bases</li> <li>• cold lay bituminous</li> <li>• warm lay bituminous</li> <li>• hot lay bituminous</li> <li>• concrete</li> <li>• modular</li> </ul> <p>Install Street Ironworks to given work instructions relating to access covers and frames and gully gates situated on the road. (COSVR366)</p> <p>Install street ironwork (metal, plastic, concrete and composite materials) to new and/or reinstated pavements to given working instructions relating to the following</p> <ul style="list-style-type: none"> <li>• access covers and frames</li> <li>• gully grates and frames</li> </ul> <p>Prepare and operate powered tools or pedestrian plant, machinery or equipment for use on rural and urban roads this will include , machinery for generator’s, pumps, pedestrian operated plant (example pushed roller), mixers, compressors and self–powered tools (pneumatic drill). As above</p> <p>Work within temporary traffic management (using traffic lights, cones and barriers to section off elements of the road from vehicles and pedestrians) on urban and rural roads whilst excavating and re-instating the highway. As above</p>	
Pre-Assessment	<p>This week is to ensure that the apprentice is ready for the End Point Assessment by:</p> <ul style="list-style-type: none"> <li>• Employers agreement</li> <li>• Work-based evidence complete</li> <li>• English and maths level 1 complete and the knowledge test English and maths at Level 2 taken</li> </ul>	1 Week
End Point assessment	<p>The End Point Assessment has the following component parts ,</p> <ul style="list-style-type: none"> <li>• A knowledge test which must be taken within</li> </ul>	1 Week

	<p>one month of achieving the Gateway requirements</p> <ul style="list-style-type: none"> <li>• Practical Assessment over two days</li> <li>• Professional Discussion based on a work based Record of Evidence which is to be submitted to the EPAO a week before the End Point Assessment.</li> </ul> <p>Independent Assessment Organisation informs Apprentice, Employer and Training Provider of result.</p>	
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**Example Knowledge Test Questions (taken 1 month after reaching the Gateway requirements)**

The knowledge test questions are designed to ensure that the apprentice has a good underpinning knowledge of the work carried out for maintenance and repair on rural and urban roads. Below are some examples of multi-choice questions used in the knowledge test.

<p>Question 1 Following the delivery of Hot Rolled Asphalt materials to site, the material should be checked for what?</p> <ul style="list-style-type: none"> <li>a. To ensure the material is at the correct temperature</li> <li>b. It's suitability to use</li> <li>c. To identify any excess moisture</li> <li>d. Its cohesive characteristics</li> </ul>
<p>Question 2 What is the correct definition of a pavement?</p> <ul style="list-style-type: none"> <li>a. A footway with a permanent surface</li> <li>b. A walkway or cycleway constructed of tarmac</li> <li>c. An area within the highway that is paved</li> <li>d. The structure of the road</li> </ul>
<p>Question 3 What tool or piece of machinery would be used for tracing underground utility apparatus and sub structures</p> <ul style="list-style-type: none"> <li>a. Insulated shovel</li> <li>b. Genny only</li> <li>c. Pick axe</li> <li>d. CAT and genny</li> </ul>
<p>Question 4 A member of the team is injured on site and is taken to hospital for treatment. Who must the supervisor or employer inform</p> <ul style="list-style-type: none"> <li>a. HM coroner</li> <li>b. Highway Authority</li> </ul>

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| c. Police<br>d. Health and Safety Executive |
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## **Practical Assessment**

The assessment must take place in a controlled environment with appropriate equipment and materials for the assessment. An Independent Assessor provided by the Independent Assessment Organisation is to ensure all aspects for the end point assessment meet with the specification and briefing for the apprentice.

The end point assessment is based upon an apprentice carrying out a task to a given specification and briefing in a controlled environment. Tools and equipment must be selected to carry out the task which will be supplied by the training provider. The apprentice will carry out the task in their own defined area that is segregated from other apprentices, if manual handling requires a two man lift then a technician will be available from the training provider solely for this purpose.

The practical test will be based upon the Manual of Contract Documents for Highways Works.