

# Trailblazer Apprenticeship Standard - Highways Maintenance Skilled Operative Level 2

## 1. Occupation

The occupation covered by this standard deals with reactive and planned highway maintenance/repairs of the highway. Essential is the skill to keep the traffic flowing and safe by competently setting out temporary traffic management. Apprentices will work outside in all weathers and may be required to work at all times of the day and night at various locations. Working on highways maintenance can be dangerous so apprentices need plenty of common sense and a high level of safety awareness together with a disciplined and responsible approach whilst working with others. Understanding health and safety and environmental control will be essential. All work must meet nationally recognised specifications and quality expectations.

## 2. Occupational Profile – The main duties and tasks of a highway maintenance operative are to:

- Install, maintain and 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
- Carry out repairs on all road categories and types laying new or replacement surfaces to specification
- Locate underground services for example gas and power cables and work safely around them
- Carry out maintenance and repairs to the highway to keep the roads safe and traffic flowing – efficiently, effectively and safely
- Complete practical tasks carefully and in a timely fashion to ensure a project runs to time, within budget, without affecting the quality of the finished work
- Work with a wide range of hand / power tools and plant to repair potholes, cut, replace and reinstate pavements / kerbs, lay new surfaces using a variety of products and excavate materials to ensure roads and pathways are suitable for driving of vehicles or pedestrians to walk safely upon
- Be able to read technical information in order to understand what works needs to be completed
- Apply appropriate health, safety and environmental procedures to avoid injury and incidents
- Apprentices may drive plant equipment to complete highways works and load vehicles to clear snow
- **Optional - Winter Service operations apprentices may be involved in the clearing of snow and ice from the highway, using salt to treat the roads to prevent ice forming and felling trees which could obstruct the highway**

## 3. Requirements: Knowledge, Skills (and Behaviours)

Knowledge	What is required
<b>Civil engineering methods and construction technology</b>	Understand the structure of the highway, civil engineering methods, construction technology and provide solutions to problems and improve working practices. Gain knowledge of different road categories and types, construction materials and working methods. Know how to work in accordance with the National Highway Sector Schemes, industry Codes of Practice, the New Roads & Street Works Act and all other guidance relevant to the occupation.
<b>Health, Safety and Environment</b>	Understand the employer's health, safety and environmental requirements and apply these to your own work. To understand how to identify/reduce hazards and risks in line with legislation and safe systems of work, to avoid injury to you, the public and work colleagues. Report any potential hazards and risk.
<b>Planning and organising works</b>	To be able to read drawings, plans and specifications in order to identify what works are required. Be able to operate hand / power tools and direct plant, knowing their limitations so they can be safely operated. Know how to identify, locate and excavate around underground services to avoid strikes and the loss of services. Adapt working methods to reflect changes in working environments. Carry out works using tried and tested methods under the guidance of an experienced craft person to the required standards of workmanship
<b>Communicate effectively</b>	Understand the employer's requirements, and how to communicate effectively. Be courteous and polite to get on with others, and maintain effective working relationships. Communicate verbally or in writing effectively. Have a good understanding of information technology
<b>Quality</b>	Understand and apply internal and external quality control systems to avoid increased costs and carrying out works on more than one occasion due to defective workmanship
<b>Cost control</b>	Know the importance of systems which record and measure costs; be aware of how costs are incurred and the impact of any changes on the progress of the works. Gain knowledge of the principles of measurement and how to apply them.
<b>Additional</b>	As the actual work carried out varies depending on the seasons of the year apprentices will

<b>knowledge</b>	need to fully understand how to clear hedgerows, cut grass, and remove all types of rubbish from the highway including the disposal of dead animals knocked down by vehicles.
<b>Optional knowledge required</b>	<b>In the autumn/winter months apprentices could be asked to assist in the removal of snow and ice control and will therefore need to understand the various winter service operations and products such as the use of salt to prevent frost forming on road surfaces.</b>
<b>Skills</b>	
<b>Excavation and reinstatement of the highway</b>	Apprentices will need to be able to excavate and reinstate a variety of surfaces and ancillary equipment in different applications whilst complying with legislation and control and operating hand/power tools.
<b>Clearing and maintaining the highway</b>	The individual must be able to maintain the highway including clearing hedgerows, cutting grass, removing rubbish and disposing of dead animals whilst complying with current legislation.
<b>Temporarily Controlling Traffic</b>	Apprentices must be able to erect and dismantle temporary traffic management in line with Sector Scheme requirements.
<b>Optional Skills required</b>	<b>As an option apprentices must be able to clear the highway of ice and snow in order to maintain traffic flow whilst complying with legislation.</b>
<b>Behaviours</b>	
<b>What is required</b>	
<b>Health, Safety &amp; Environment</b>	Demonstrate safety conscious behaviours and promote a positive health, safety and environmental culture by personal example. Work safely, identify and avoid risks. Report any unsafe practices and hazards which could endanger you and your colleagues and always work in a safe efficient manner.
<b>Work in Teams</b>	Be able to work with others in a collaborative and non-confrontational way and listen to instruction
<b>Personal Effectiveness</b>	Be able to work on their own initiative to solve problems, seek out critical information to plan and organise work activities. Apprentices need to be flexible in their approach and know when to seek advice.

4. **Duration / Level** – The typical duration of this Level 2 Apprenticeship is 24 months and is equivalent to 5 GCSE's Grades A-C.
5. **Entry Requirements** – Employers will set their own entry requirements when selecting candidates.
6. **Qualifications** – Apprentices will be expected to attain Level 1 Skills in Maths and English as part of this Apprenticeship. In addition, Apprentices will be required to work towards level 2 and sit the examination for English & Maths. Completion of the Apprenticeship will result in attainment of a Level 2 NVQ Diploma in Highway Maintenance

Due to Highways Regulations and to comply with legislation / Industry standards, Individuals who wish to work on a highway network must complete and gain the following qualifications, certificates of training, statutory licences and health and safety approved competency cards in order to be permitted to do so:

Certificates of training in first aid, abrasive wheel, banks man for vehicle movements and if involved in tree felling or clearing hedgerows a certificate for chainsaw crosscut and maintenance. Qualifications in traffic management and street works together with further Certificates of Training for health and safety manual handling, fire safety awareness, location of underground services)

Apprentices will be required to pass successfully the Construction Industry Occupational health and safety tests and can then apply and be issued with their Level 2 Skilled Operatives Construction Skills Certification Scheme (CSCS) Competency Card resulting in a licence to practice and work in the industry.

7. **Links to Professional Registration** – Currently there is no professional recognition at this level but this will be looked at in the future. However upon the successful completion of this apprenticeship Apprentices should consider the Highways Maintenance Supervisor Level 3 Apprenticeship which may well in the future provide them with progression towards membership as an apprentice with the Institute of Highways Engineers.
8. **Review Date** – No more than three years after approval of the Standard.