



Smart Awards Level 2 SA022 Safe Location and Avoidance of Underground Services Specification



Version Number	Date	Purpose of Change	Classification	Sign Off
V1.0		Original release		
V2.0	08/07/26	Full review and update	Public	Marc Henson

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Unit F8A | Holly Farm Business Park | Honiley Road | Kenilworth | CV8 1NP

T: 02476 421125

E: info@smartawards.co.uk

W: www.smartawards.co.uk

Company Number 9079735 | VAT Number 216 7632

Introduction

This qualification covers 1 (one) module:

Safe location and avoidance of underground services

This qualification prepares learners in the safe location and avoidance of underground services. It provides learners with the skills and knowledge of the hazards and potential risks when using avoidance tools (CAT and Genny). This includes working to a safe system of work, physical identification methods of underground services, site visual surveys, interpretation of asset owner documentation, risk assessments, and permits. This qualification tests learners' knowledge, skills, and understanding of dangers associated with these works and the safety precautions required while working to locate underground services. Services include gas, electricity, mains water, sewage, telecommunications

Key Information	
Name	Safe Location and Avoidance of Underground Services
Accreditation	This qualification is approved by: • Ofqual: Qualification number: 610/7724/0
Level	2
Duration	2 days
Guided Learning Hours (Ofqual)	9
Total Qualification Time	13
Credit	1
Age	This accreditation is available to anyone over the age of 16
Qualification Type	Vocationally Related Qualification
Smart Awards Product Area	Safety Qualifications
Sector Subject Area	6.1ICT practitioners
Certification	This qualification is valid for a period of three (3) years from the date of certificate issue. To remain compliant and eligible to work on telecommunications networks, individuals must renew their qualification before the expiry date.
Network Operative Passport Scheme (NOPS)	This qualification is fully aligned with the requirements of the Network Operative Passport Scheme (NOPS). Successful completion of this qualification is recorded within the NOPS system, ensuring operatives are visible and verifiable to employers and site access systems across the industry.
Prerequisites and Entry Requirements	There are no formal entry requirements and Smart Awards will not restrict access on the grounds of prior academic attainment, employment, geographic location, or any other grounds. There are no barriers that restrict access or progression, thereby promoting equality. It is expected however that learners will have a level of literacy adequate to cope with both the theory and practical assessments. Please Note:

	Those working on the highway, the New Roads, and Street Works Act 1991(NRSWA) requires at least one person on site to hold a Street Works card to work on the highway. This Smart Awards accreditation is based on a pre-requisite that any work on the highway requires appropriate Street Works accreditation to be held by an individual working on site, and that this individual is qualified to check that the planned provision of footways, traffic lanes and safety zones determined by the site survey meets with the requirements of the site location and approved procedures and practices required by the NRSWA 1991. Some companies' policies may vary where more than one person on site is required to hold a valid Street Works card. This accreditation <u>does not</u> provide the qualification required to comply with the New Roads and Street Works Act 1991.
Mandatory units and optional routes to completion.	Learners must complete the Safe Location and Avoidance of Underground Services unit in full to achieve this qualification. No optional units or routes are available.
Additional requirements to achieve this qualification.	None
Methods of Assessment	This qualification will be assessed through a practical and theory test. The aim of the assessment is to ensure successful learners have adequate knowledge and understanding of Safe Location and Avoidance of Underground Services. Assessment guidance, assessor requirements and additional qualification documentation is supplied to approved Smart Awards centres via Quartz.
Theory test	Learners are required to pass a 25-question multiple-choice test, with questions randomly selected from a secure question bank to ensure comprehensive coverage of all assessment criteria. The test is timed, and learners will have 35 minutes to complete it. All multiple-choice tests are conducted online via the Smart Awards online assessment platform.
Practical assessment	During the practical assessment, the learner will demonstrate competency when performing all pre works checks and undertake safe location and avoidance of underground services. The learner will have 60 minutes to complete the practical assessment.
Grading	Learners will be graded (Fail or Pass) on an achievement or non-achievement basis. The final grade will be determined by collective performance in the two assessment tools (theory and practical). Learners are required to achieve both the theory and practical assessments to achieve the qualification. • Theory - To achieve a pass, 80% or more is required • Practical - If one major fault is given the learner will automatically fail • Learners must receive fewer than six minor faults to pass the practical assessment If there are major health and safety failures due to learners' actions or understanding, the assessment MUST be stopped. The learner should be

	taken to a suitable area so the reasons for stopping the assessment can be explained and notified that the assessment is deemed as failed. Guidance on the major failures that should result in stopping the assessment are provided in the practical assessment.
Reasonable adjustments and special considerations	Smart Awards approved centres that have learners with specific requirements should refer to the Smart Awards Reasonable Adjustments and Special Considerations Policy and Procedure. This document outlines the support available to ensure fair access to assessments. It can be found on the Smart Awards website at www.smartawards.co.uk.
Recognition of Prior Learning	Smart Awards is committed to supporting Recognition of Prior Learning (RPL) and has established a dedicated policy and set of procedures to guide and assist approved centres in its implementation. The full policy is available on the Smart Awards website at www.smartawards.co.uk.
Required resources and site requirements for delivering this Qualification	To ensure a safe and effective learning and assessment environment, the following site requirements must be met for the delivery of SA022 Safe Location and Avoidance of Underground Services. The practical assessment area must be approved by Smart Awards prior to qualification and must be separate from the training area. The area requires: • A minimum of three buried apparatus traceable up to a minimum of 15 metres, two traceable with the CAT and signal generator, and one traceable with the Sonde (buried duct). At least one apparatus must have a change of direction. • There must be a fixed feature (lamp column) or access chamber to expose the service to secure signal generator leads or clamp to. • The assessment area must be safe with approved risk-assessed control measures implemented.

Qualification Structure

The Level 2 Safe Location and Avoidance of Underground Services qualification consists of one mandatory unit, which learners must complete to achieve the qualification. Attainment at Level 2 demonstrates the learner's ability to apply relevant knowledge, skills, and procedures to carry out clearly defined tasks and resolve straightforward problems with appropriate direction or supervision.

Smart Awards level Safe Location and Avoidance of Underground Services Ofqual: Qualification number: 610/7724/0								
Minimum TQT for this pathway = 13 Minimum number of credits = 1 Minimum number of units = 1			Minimum number of GLH = 9 Minimum number of assessment time = 1.5 Other learning time = 4					
Unit Number	Unit title	Level	M/O	GLH	ASS	OTHER LEARNING	TQT	CREDITS
D/652/2526	Safe Location and Avoidance of Underground Services	2	M	9	1.5	4	13	1

Learner Support and Assessment Conditions

Learners will have access to support throughout the training period via their trainer. Trainers are responsible for ensuring that each learner is adequately prepared and competent before presenting them for assessment. No support or assistance may be given to the learner during either the theory or practical assessments, to maintain the integrity and validity of the qualification.

Qualification objectives and requirements

This qualification confirms that the learner has demonstrated the required competence to safely locate and avoid underground services. To successfully obtain this qualification, the learners will need to demonstrate the knowledge and ability requirements set out in the learning outcomes and assessment criteria.

Unit of assessment

Unit Title:	SA022 SAFE LOCATION AND AVOIDANCE OF UNDERGROUND SERVICES
Unit Reference Number:	D/652/2526
Learning outcomes	Assessment criteria
The learner will:	The learner can:
1. Know the main principles of health and safety legislation relating to the safe location and avoidance of underground services.	1.1. Outline safe working and environmental practices in accordance with health and safety regulations and environmental legislation. 1.2. Outline the range and use of personal protective equipment (PPE) for the work. 1.3. Explain what is meant by a safe system of work. 1.4. Outline the requirements of a risk assessment before commencing operations. 1.5. Explain reasons why excavations take place. 1.6. State typical locations and depths of the usual range of underground supply apparatus. 1.7. Describe consequences of an underground service strike. 1.8. State client responsibilities when commissioning work on underground services. 1.9. State contractor responsibilities working on or near underground services. 1.10. Explain the different types of emergency situations that can occur when locating underground services and utilities. 1.11. Outline the type of hazard associated with different utility supplies and the actions to take in the event of damage. 1.12. State the principles of operation and method of use of electronic detection equipment.
2. Be able to plan for safe location and avoidance of underground services.	2.1. Carry out risk assessments on the work location 2.2. Interpret provided documentation for different services. 2.3. Select and use required safety equipment including PPE. 2.4. Inspect and prepare tools and equipment to complete work activities in accordance with work instructions and equipment specifications. 2.5. Select and confirm calibration of required equipment. 2.6. Apply control measures for faulty equipment. 2.7. Follow processes and procedures used to report problems with tools and equipment. 2.8. Store tools and equipment on completion of work activities.

3. Be able to carry out safe operation of cable avoidance tools safely and effectively in order to locate and/or avoid installed underground services.	3.1. Conduct system checks in accordance with operating procedures. 3.2. Determine the content and sequence of tasks needed to complete the work activity. 3.3. Plan and carry out work in line with work procedures and safety regulations. 3.4. Demonstrate methods of visually locating and identifying underground supply apparatus, including markers, signs, surface features and the use of existing records. 3.5. Use cable avoidance tools to locate buried apparatus and services in accordance with work instructions and equipment specifications. 3.6. Use operational modes to carry out sweep searches of the identified area using location equipment. 3.7. Use operational modes to pinpoint services using location equipment. 3.8. Use operational modes to trace services using location equipment. 3.9. Mark out service locations using measures appropriate to the location. 3.10. Confirm location results prior to excavation. 3.11. Dispose of waste materials and hazardous substances in accordance with procedures. 3.12. Leave the work area in a condition that is safe and in line with good practice.
4. Be able to read and correctly interpret site plans.	4.1. Identify types of drawings for different services. 4.2. Describe types of inaccuracies that may be found in service drawings. 4.3. Interpret data and detail on service drawings. 4.4. Record the position of buried apparatus and services on utility plans and associated documentation in accordance with work instructions.
5. Know methods of safe excavation of underground services	5.1. Describe safety considerations when excavating. 5.2. Explain methods of safe exposure of services when excavating. 5.3. Describe methods of identifying exposed services and their limitations. 5.4. Describe reporting procedures for the discovery of unexpected services. 5.5. Identify potential service indicators that may be found during excavation.