# SA101 Smart Awards Light Fibre Cabling Underground

## QUALIFICATION SPECIFICATION

SMART AWARDS
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# Introduction

This qualification covers the installation of a light fibre cable or small diameter sub duct and associated equipment into the underground network. Learners are provided with the knowledge and skills to identify the hazards and potential risks involved in working safely on or in proximity to underground structures whilst performing cabling activities.

This qualification particularly is aimed at those individuals who undertake work in a telecommunication (or similar utility) environment. This qualification tests learners' knowledge, skills and ability when installing fibre cables in the underground infrastructure, using pulling hand techniques. The module covers the dangers associated with working underground and the safety precautions required while working with fibre cables.

Installation of large diameter heavy cables and sub ducts which require advanced cabling techniques and equipment are not covered in this qualification

This qualification does not qualify an individual to enter a confined space. Those individuals who need to enter confined spaces MUST hold appropriate qualifications to enter confined spaces. Any references made in this material to confined spaces are for information only and to make learners aware of the risks and presence of gases that may also be present in confined spaces.

| Key Information | |
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| Name | SA101 Smart Awards Light Fibre Cabling Underground |
| Accreditation | This qualification is approved by:<br>• Industry qualification SA101 |
| Level | 2 |
| Duration | 1 day |
| Guided Learning Hours (Ofqual) | 8 hours |
| Time/Notional Learning Hours (SQA Accreditation) | |
| Ofqual Total Qualification | |
| RQF - Ofqual Credit - Credit value represents the size of a unit which is determined by the learning time. One credit = 10 hours of notional learning. | 1 |
| Age | 16 Plus |
| Qualification Type | Vocationally Related Qualification |
| Smart Awards Product Area | Safety and Craft Qualifications |
| Sector Subject Area | 5.2 - Building and construction |

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| 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 | Learners MUST have completed either SA002 Underground Safety or SA006 Safe working in civils in advance of this qualification.<br>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.<br><br>Learners must have a basic understanding of the English language for regulated qualifications that are approved by Ofqual of SQA Accreditation.<br><br>**Please note:**<br>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.<br><br>Some companies' policies may vary where more than one person on site is required to hold a valid Street Works card. |
| Mandatory units and optional routes to completion. | Learners must complete the Smart Awards Light Fibre Cabling Underground 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 Light Fibre Cabling Underground.<br>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 20-question multiple-choice test, with questions randomly selected from a secure question bank to ensure |

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| | comprehensive coverage of all assessment criteria. The test is timed, and learners will have 30 minutes to complete it.<br><br>All multiple-choice tests are conducted online via the Smart Awards online assessment platform. |
| Practical assessment | Learners will be required to demonstrate their practical skills through a series of tasks set by Smart Awards. These will be assessed by direct observation of the learner performing the task under assessment conditions. The assessment area must be equipped sufficiently so that the learner can be assessed in their competencies safely and without anyone providing guidance to help the learner.<br><br>Assessor Role: To observe, record performance, question learners where clarification is needed, and verify competence against set criteria.<br>Assessors should evaluate learners against the following categories:<br><br>• Learners must be assessed individually, even in a team simulation.<br>• Use Smart Awards standardised observation checklist for consistency.<br>• Ensure opportunities for questioning are built into the simulation, particularly regarding reasoning behind technique and decision-making.<br>• In cases of unsupervised elements, probe for ownership of work through reflective questioning.<br>• Provide a brief debriefing session after the assessment to give feedback and confirm understanding.<br><br>The learner will have 4 hours to complete the practical assessments. |
| Grading | Learners will be graded (Fail or Pass) on an achievement or non-achievement basis.<br><br>The final grade will be determined by collective performance in the two assessment tools (theory and practical).<br>Learners are required to achieve both the theory and practical assessments to achieve the qualification.<br><br>Theory – to achieve a pass 80% or more is required<br><br>Practical<br>• If one major fault is given the learner will automatically fail.<br>• If 7 or more minor faults are given the learner will fail.<br>• The learner needs to achieve 6 minor faults or less to pass.<br><br>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 to be explained the reason for stopping the assessment and that his assessment is deemed as failed.<br><br>Guidance on the major failures that should result in stopping the assessment is provided in the practical assessment. |

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| 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 | Site Requirements<br><br>• You will need a safe area with a minimum of 3 joint boxes which have at least one duct 54 (96.5mm outside diameter) between them for assessment purposes.<br>• Recommended at least 10m of duct between each box.<br>• The ducts and chambers should be populated with existing components such as cables, joints, brackets and block terminals to replicate a real-life scenario.<br>• Signing and guarding equipment<br>• Checked/calibrated gas testing and cover lifting equipment<br><br>Practical Equipment<br><br>The following equipment must be available and in safe working condition for the practical assessment. Use of the specific tools and equipment issued by the learner's employer or utility is encouraged and may be required, depending on operational policy:<br><br>• 3 x Footway box, frame and cover over chamber to suitable depth with duct entry<br>• At least one duct 54 (96.5mm outside diameter) between each box.<br>• Channels and bearers within the chamber<br>• Gas detection unit (GDU)<br>• Gate guards<br>• Roller bar and cover lifter<br>• Water test kit<br>• Water pump and hosing<br>• Rod – Sectional or Continuous<br>• Draw rope<br>• Cable grip<br>• Small diameter fibre cable or sub duct.<br>• Cable dispenser/A frame/reel/X board<br>• Mounting brackets<br>• Flat bars and Support kit<br>• Pivot arms<br>• Cable ties, tape and any other consumables required for the activity. |

## Qualification Structure

The Level 2 Award in Light Fibre Cabling Underground 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 Light Fibre Cabling Underground** | | | | | | | | |
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| Minimum TQT for this pathway = 8<br>Minimum number of credits = 1<br>Minimum number of units = 1 | | | Minimum number of GLH = 8<br>Minimum number of assessment time = 4.5<br>Other learning time = 0 | | | | | |
| **Unit Number** | **Unit title** | **Level** | **M/O** | **GLH** | **ASS** | **OTHER LEARNING** | **TQT** | **CREDITS** |
| | Light Fibre Cabling Underground | 2 | M | 8 | 4.5 | 0 | 8 | 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 perform Light Fibre Cabling Underground. 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 Title: | Smart Awards Light Fibre Cabling Underground |
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| Unit Reference Number: | SA101 |

| Learning outcomes | Assessment criteria |
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| The learner will: | The learner can: |
| 1. Be able to work safely | 1.1. Identify the hazards and risks associated with the working area and the proposed work.<br>1.2. Work in a way which maintains health and safety and is consistent with relevant legislation and industry good practice.<br>1.3. Use correct personal protective equipment (PPE).<br>1.4. Undertake equipment and tool safety checks.<br>1.5. Carry out work to minimise environmental damage.<br>1.6. Demonstrate safe and effective manual handling techniques throughout the activity to minimise |

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| | the risk of injury, including musculoskeletal (MSK) disorders. |
| 2. Be able to Safely enter underground chambers or structures | 2.1. Perform site specific risk assessment.<br>2.2. Set out appropriate signing, lighting and guarding<br>2.3. Perform gas and water test safely.<br>2.4. Use correct tools and methods to safely remove and replace joint box covers. |
| 3. Know how to safely install a light fibre cable or sub duct into the underground network. | 3.1. Describe how to set up the site correctly for safe and efficient cabling.<br>3.2. Describe safe working practices for rodding a duct length, including the correct manual handling techniques to minimise the risk of musculoskeletal (MSK) injuries and ensure safe use of hand rodding equipment.<br>3.3. List how to move or support existing network where appropriate before cabling commences.<br>3.4. Recognise a cable grip and describe its purpose.<br>3.5. State how to safely pull a fibre cable or sub duct in by hand.<br>3.6. Describe how to support and restrain cables within underground structures and why it is required.<br>3.7. Describe the importance of not compromising a cables minimum bend radius<br>3.8. State how to leave cable ready for jointing or further cabling activities.<br>3.9. Describe how to mount and install equipment into an underground chamber without causing damage to existing components or infrastructure. |
| 4. Be able to safely install a light fibre cable or sub duct into the underground network. | 4.1. Set up the site correctly for safe and efficient cabling<br>4.2. Manage or support existing network where appropriate.<br>4.3. Use an appropriate cable dispenser.<br>4.4. Use a cable grip to attached cable to draw rope or rods<br>4.5. Undertake cabling activity without causing damage to existing components or infrastructure<br>4.6. Demonstrate Safe fleeting of light fibre cable or sub-duct, ensuring correct handling, minimal cable twist and without causing damage.<br>4.7. Demonstrate how to support and restrain cables in the chambers without compromising a cables minimum bend radius<br>4.8. Create an appropriate coil for jointing.<br>4.9. Perform cable labelling within each chamber. |
| 5. Be able to install associated fibre equipment into an underground | 5.1. Apply the correct procedure and standards when installing mounting brackets |

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| chamber, safely and to a quality standard. | 5.2. Demonstrate how to install fibre equipment onto a mounting bracket.<br>5.3. Perform labelling of equipment. |