



Arrangements for:

**SQA Level 2 Certificate in Highways Maintenance —
Excavation and Reinstatement Operations
(Construction) (QCF)**

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1 Introduction

This is the Arrangements Document for the Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations (Construction). This document includes: background information on the development of the Certificate, its aims, guidance on access, details of the Rule of Combination (RoC) and guidance on delivery.

This qualification at Qualification and Credit Framework (QCF) Level 2 is designed, as a stand-alone qualification, to equip learners with the Knowledge and Understanding required for employment, or for progression to further academic and/or professional qualifications.

The Certificate is aimed at learners who are interested in pursuing a career in any occupation related to the above area, but who do not necessarily have any prior experience. The progression diagram in Section 5.1 shows how the qualification sits with other qualifications for the sector.

The Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations (Construction) is a component of the Intermediate Level Apprenticeship in Construction Civil Engineering (England) and the Foundation Apprenticeship framework for Construction Civil Engineering non-statutory (Wales). As indicated by ConstructionSkills¹, the Apprenticeship also consists of the following elements:

England	Wales
A relevant NVQ	A relevant NVQ
Functional Skills/GCSE/Key Skills	Essential Skills Wales/Key Skills*
Personal Learning and Thinking Skills	Employee Rights and Responsibilities
Employee Rights and Responsibilities	Industry specific training
Industry specific training	

* Learners in Wales who have already achieved A/AS/GCSEs in English and Maths are **not** exempt from undertaking Essential Skills/Key Skills.

It is intended that this qualification will satisfy the industry-specific training requirement of the Apprenticeship.

As required in the Specification of Apprenticeship Standards for England (SASE), and the Specification of Apprenticeship Standards for Wales (SASW), this qualification is based on the relevant NOS for Highways Maintenance.

¹ Apprenticeship Framework for Construction Civil Engineering, issued by ConstructionSkills.

2 Rationale

Construction is a labour-intensive industry that relies heavily on the skills of its workforce to continually adapt to different projects, teams and changing site conditions, so attracting and retaining a high-quality, qualified workforce is essential.

As the majority of workers lack formal qualifications, this Certificate will aim to bridge that gap by contributing to the up-skilling of the sector. Gaining such a qualification also enables workers to obtain a card from the Construction Skills Certification Scheme (CSCS) or other affiliated scheme.

The Certificate is not designed to train people to full industrial competence, but the qualification is aimed at those who do not necessarily have any prior experience of the construction industry and are therefore classed as 'new entrants'.

Learners can then build on the skills and knowledge gained from achievement of this qualification when working towards achieving an NVQ, should they wish to do so. This approach aligns with the goal of the sector qualification strategy for construction to ensure that there is a clear differentiation between training for experienced workers and new entrants².

It is intended that the Certificate will allow learners to develop a broad appreciation of topics based on accepted and recognised industrial practices. The Certificate will provide a sound basis for working in the subject area for a range of potential learners (please see Section 3.3 on target learner groups).

The diagram on page 10 illustrates how this qualification fits within other, existing qualifications for the Construction industry at a range of levels. Progression routes between qualifications are also identified.

² ConstructionSkills, Construction Qualification Strategy (CQS) Action Plan- England, February 2007.

2.1 Objectives

This qualification at QCF Level 2 will provide structured opportunities for learners to experience work and enterprise activities whilst still enjoying the benefits of close contact with their training/education provider.

The Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations is designed to provide:

- ◆ Detailed common standards and Learning Outcomes which are recognisable to centres, learners, employers and professional bodies
- ◆ A structure appropriate to the main career disciplines of Highways Maintenance (and reflective of the corresponding NVQ)
- ◆ Compatibility with progression qualifications, such as NVQs and other QCF qualifications at Level 3
- ◆ A response to changing training and educational needs
- ◆ Preparation for employment
- ◆ A contribution to the Knowledge and Understanding required to underpin relevant National Occupational Standards (NOS)
- ◆ A focus on the development of learners' Knowledge and Understanding which underpins performance in the workplace

2.2 Content of the Certificate

This qualification provides the underpinning knowledge that is valid and relevant for a career in Highways Maintenance.

Achievement of the Certificate stipulates a minimum of 280 guided learning hours and it consists of a core of generic, mandatory Units which introduce the learner to critical tasks such as health and safety and productive working practices. Other mandatory Units cover the operation of powered tools, searching for underground services, excavating holes and trenches and reinstatement operations.

The Certificate has been designed for learners to gain or develop their knowledge within Highways Maintenance by demonstrating their knowledge of the respective principles, legislation and specifications, as well as developing their ability to carry out given practical tasks in specialised construction related areas.

2.3 National Occupational Standards

The National Occupational Standards (NOS) for all construction trades are developed and owned by the Sector Skills Council, ConstructionSkills. They detail the standards of knowledge and performance that practitioners are expected to meet in order to be considered competent in their job role. They form the basis of vocational qualifications, which have in turn been used as a foundation for the development of this Certificate.

The NOS therefore act as a useful benchmark against which to measure occupational competence and for the assembly of a range of development tools, including qualifications.

The QCF Units in the Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations are designed to develop and assess defined sets of skills and knowledge in each subject area.

2.4 Development

The procedures involved in this development have included the writing, vetting and editing of QCF Units to meet the regulatory requirements of the qualifications regulator, Ofqual.

A number of organisations were contacted as part of the development process, some providing training materials, and/or reviewing the qualification Units and RoC in their respective specialist subject areas. The organisations included private training providers and Further Education colleges who deliver and assess construction related programmes; employers, trade bodies and the Sector Skills Council.

Following the drafting of the Units and RoC the proposed documentation was circulated to the above organisations for review and comment and was made available for consultation via an online facility. A brief questionnaire was developed to capture feedback on the drafts. The centres contacted offer a mixture of taught and assessed provision, with respondents drawing on their industry experience and knowledge of delivery in contributing to the development of the Certificate.

The findings were overall positive, revealing that the RoC and the Units were clear, achievable and appropriate.

2.5 Sector Skills Council — ConstructionSkills

ConstructionSkills is the Sector Skills Council with strategic responsibilities for education and training in the construction industry. It has been a strong supporter of the development of recognised vocational and pre-vocational qualifications and has endorsed the development of this Certificate. This qualification has been subject to the process of Early Dialogue with the SSC, and has been reviewed and approved by the SSC's Standards and Qualification Validation Group (S&QVG).

ConstructionSkills is an employer-led organisation, which means that it identifies and responds to the needs of the industry, acting as an employer voice. ConstructionSkills is leading the way in the development of the Level 2 Apprenticeships for the Construction industry in England and Wales, having identified a clear requirement and demand from the sector for their introduction.

Industry experts at the Sector Skills Council have contributed to the development of the qualification, ensuring that it meets the needs of the industry and that it is aligned with the corresponding National Occupational Standards, and the NVQ.

3 Aims of the Certificate

The Certificate is a vocationally-related qualification which will provide the underpinning knowledge for developing skills that are valid and relevant to the work environment.

This Certificate has been developed at Level 2 in order to fill identified gaps in the qualifications framework for the sector, to link to the appropriate NVQ and form a component part of the respective Level 2 Apprenticeship in Highways Maintenance.

This means it is comparable with other provision on the QCF at the same level in terms of the demands made on learners and the effort required to achieve it.

3.1 Principal aims of the Certificate

The Certificate will develop learners’:

- ◆ employability
- ◆ problem-solving ability
- ◆ transferable skills, eg punctuality, appropriate workplace behaviour
- ◆ ability to work with others and be flexible
- ◆ responsibility for own learning
- ◆ planning, organising and evaluating skills
- ◆ health and safety awareness
- ◆ awareness of sustainability issues and zero/low carbon
- ◆ basic technical skills
- ◆ oral, written and communication skills
- ◆ numerical and graphical skills
- ◆ resource management ability
- ◆ flexibility, knowledge, skills and motivation, as a basis for progression

3.2 General aims of the Certificate

The Certificate will:

- ◆ prepare learners for careers in the construction sector
- ◆ provide introductory knowledge and skills which are directly relevant to Highways Maintenance jobs including preparing and operating machinery and carrying out excavation work
- ◆ enable learners to make an immediate contribution in employment in the construction environment they are training in, at the same time as being employed
- ◆ provide opportunities for progression within the QCF
- ◆ form a component part of the Level 2 Apprenticeship in Highways Maintenance

3.3 Target learner groups

The Certificate is suitable for:

- ◆ workers wishing to progress into a supervisory position
- ◆ adults returning to education
- ◆ learners in employment who wish to enhance their career prospects
- ◆ learners not in employment who wish to enhance their job prospects
- ◆ apprentices
- ◆ learners who have completed a Level 1 qualification in a relevant discipline

3.4 Employment opportunities

The Certificate can lead to employment within the construction industry, particularly when it is taken as a component of the Level 2 Apprenticeship in Highways Maintenance. There are a large number of Level 2 Apprentices in the construction sector and each year brings a significant increase in the number of apprentice registrations. All available research and projections indicate that this trend will continue in the foreseeable future.

As well as the area of civil engineering related disciplines, this qualification will provide invaluable knowledge to learners who aspire to the more technical and managerial professions which exist in construction, such as construction site management, for example.

This Certificate is based on existing National Occupational Standards and has been developed in order to ensure that UK-wide companies can access suitable and appropriate provision nationally.

3.5 Recommended access

Access to the qualification is at the discretion of the centre. There are no specific entry requirements for prior qualifications, knowledge and skills and/or previous experience. It is assumed that the level of experience of those undertaking the qualification is that of a 'new entrant'.

However, when the qualification is taken as a component of the Level 2 Apprenticeship the learner must be in active employment.

The assessments for this qualification will be challenging and meaningful, but nonetheless still achievable for all learners. They are designed to familiarise learners with a culture of attainment where assessments will challenge them, but do not put unreasonable obstacles between them and successful completion.

For all Units, assessment is based primarily on practical activities and, where possible, holistic assessment is encouraged — particularly the integration of assessment for the core mandatory Units covering health, safety and welfare, productive working practices, with other mandatory Units.

4 Rule of Combination

Qualification title	Level 2 Certificate in Highways Maintenance — Excavation and Reinstatement Operations (Construction) GD3T 54				
Credit value	28				
Minimum credit to be achieved at, or above, the Level of the qualification					28
Guided learning hours (GLH)	280				
Mandatory Units (credit value: 28)					
SQA code	Title	Ofqual code	Level	Credits	GLH
FV1V 60	Workplace Health, Safety and Welfare	L/503/4252	2	4	40
FV1W 60	Conform to Productive Work Practices	R/503/4253	2	4	40
FV37 60	Sign, Light and Guard the Work Area	M/503/4325	2	4	40
FV21 60	Operate a Powered Tool and Equipment	M/503/4311	2	2	20
FY77 54	Reinstatement Excavation and Highways Surfaces	T/503/4326	2	4	40
FV39 60	Search for Underground Services	H/503/4323	2	2	20
FV3A 60	Install Street Ironwork	F/503/4281	2	4	40
FV3C 60	Excavate Holes and Trenches	D/503/4269	2	4	40

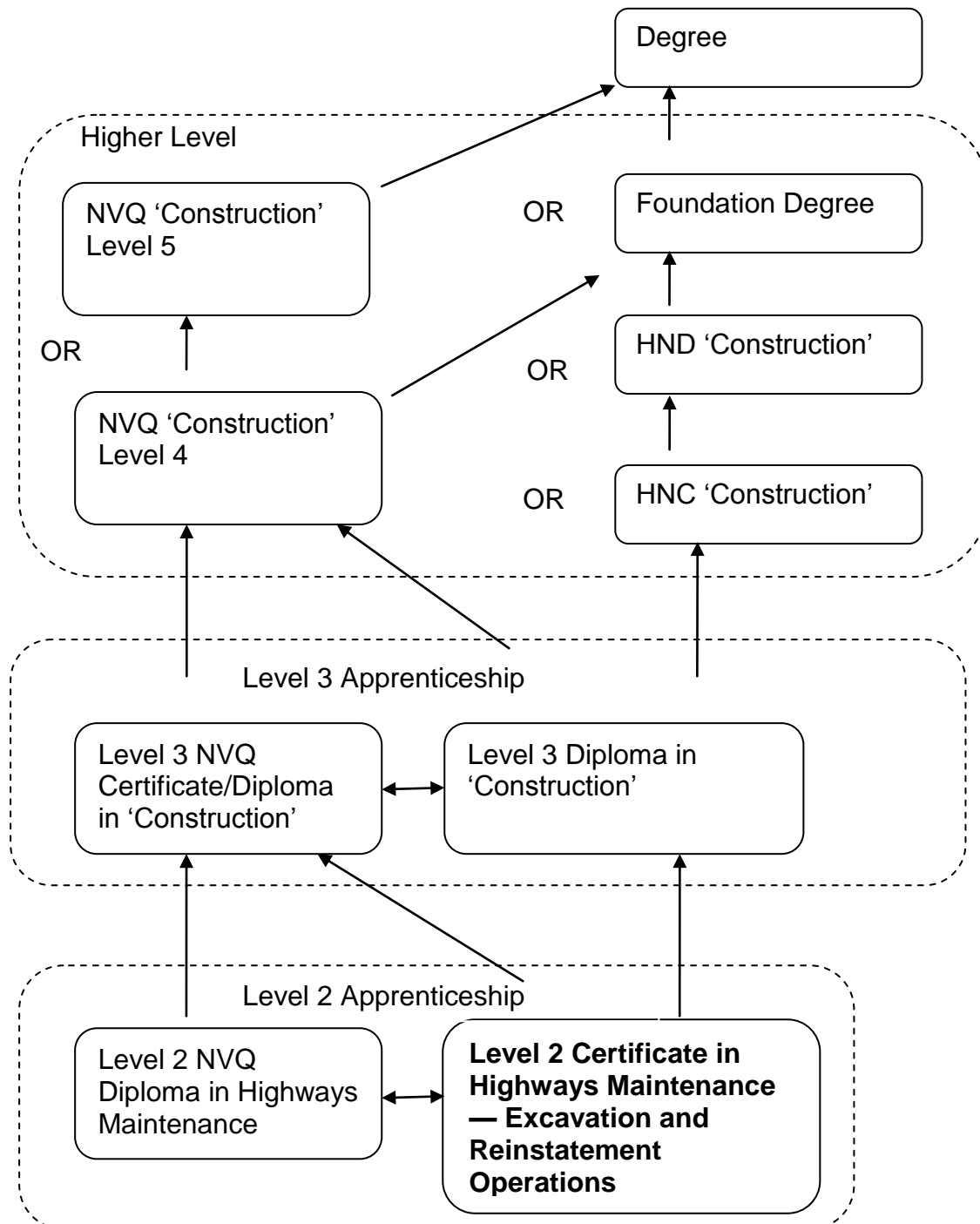
4.1 Mapping Information

QCF Unit title	Status in qualification	NOS Title	ConstructionSkills NOS reference
Workplace Health, Safety and Welfare	M	Conform to general workplace health, safety and welfare	VR641
Conform to Productive Work Practices	M	Conform to productive work practices	VR642
Sign, Light and Guard the Work Area	M	Segregate the area for highways works	VR365
Operate a Powered Tool and Equipment	M	Operate specialised powered tools and equipment	VR400
Reinstate Excavation and Highways Surfaces	M	Reinstate excavation and highway surfaces	VR374
Search for Underground Services	M	Locate and protect utilities apparatus and sub-structures	VR372
Install Street Ironwork	M	Install street ironwork	VR366
Excavate Holes and Trenches	M	Excavate holes and trenches	VR373

5 Progression

Learners may progress from the Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations to a range of supervisory qualifications at QCF Level 3 and above, including the Level 3 QCF Diploma in Occupational Work Supervision, for example.

5.1 Progression diagram



* The term 'construction' is used here in a general sense.

6. Approaches to delivery and assessment

6.1 Content and context

This Certificate is designed to equip students with the knowledge, understanding and skills required for success in employment within the construction industry. It is aimed at learners who are interested in pursuing a career in Highways Maintenance.

This qualification is not designed to train people to full industrial competence, however there is an emphasis on developing the underpinning knowledge to achieve competence in this area of work. Learners can then build on these skills when working towards achieving an NVQ.

The Certificate should be delivered in the context of familiarisation with terminology, basic concepts and working practices and disciplines, including Health & Safety and Sustainability. It is intended that the Certificate will develop a broad appreciation of topics based on accepted construction related practices.

Learners may go on to work as highways maintenance operatives or specialist highways operatives. They will require skills and knowledge in general workplace safety, productive working methods, signing, lighting and guarding the work area, operating and powered tool, searching for underground services, installing street ironwork, excavating holes and reinstating highway surfaces.

6.2 Delivery

It is recommended that each teaching/training session should be of a reasonable duration.

This Certificate could be offered on a full-time, part-time, block-release, day-release or evening basis. Combination of delivery is also a possibility. Such combined study may enable learners to complete the qualification within a shorter time period.

There are many opportunities for integrated delivery of Units within the qualification. Teaching and learning for health, safety and welfare, and productive working practices should always be integrated with technical/practical Units as much as possible, and assessment should be encouraged to be within the application of these technical/practical Units. The Unit specifications will identify specific opportunities for integration with other Units.

It is recognised that the Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations focuses on the development of learners' skills and knowledge and there may be opportunities for the introduction of e-learning during the teaching and delivery of the Certificate. The learning and assessments of the knowledge-based Learning Outcomes can be conducted either by using e-learning methods (this could also be used for teaching) or else by traditional teaching techniques. For example, formal assessments may make use of IT systems and facilities when available, or alternatively can also use the standard mode of supervising learners during classroom paper-based assignments.

It is also recognised that health and safety considerations and the lack of experience of learners may present a challenge to centres. However, in order that the quality and integrity of assessments are maintained, centres are reminded that all practical assessments should take place in a realistic training environment with appropriate use of simulation where health and safety considerations are key.

6.3 Transferable Skills

Where this qualification is delivered as a component part of a Level 2 Apprenticeship in Highways Maintenance there is a requirement to achieve transferable skills in English and Mathematics at QCF Level 1. This will be through either:

England	Wales
achievement of Functional Skills qualifications	achievement of Essential Skills Wales in Communication and Application of Number
prior achievement of Key Skills (achieved before September 2012 and within the five years immediately prior to starting an Apprenticeship)	achievement of Key Skills in Communication and Application of Number
achievement of A Level or AS Level qualifications (achieved before September 2012, otherwise at any time prior to starting the Apprenticeship)	
achievement of GCSEs with enhanced functional content	

6.4 Assessment

The Assessment Strategy for the Certificate is designed to ensure an appropriate level of rigour whilst not imposing excessive demands on centres or learners. The design principles for the Certificate encourage an holistic approach to assessment, and this has been adopted in each QCF Unit.

Centres can decide the order in which Units are delivered, based on learner recruitment patterns, mode of delivery, resource issues and logical progression dictated by topics and Unit content and level.

Throughout all Units, emphasis should be placed, where appropriate, on the application of Health & Safety. Safe working practices should be followed in accordance with current safety codes of practice and regulations.

7 General information for centres

Disabled learners and/or those with additional support needs

The additional support needs of individual learners should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Internal and external verification

All methods of assessment used within this qualification should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment and Quality Assurance for Colleges of Further Education* (www.sqa.org.uk).

8 General information for learners

The Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations is a knowledge-based qualification that requires you to spend the majority of your time in a training environment. It is designed to give you the knowledge, understanding and skills to gain employment in the construction industry, or to move onto further qualifications such as to the NVQ in Highways Maintenance at QCF Level 2.

Occupations are available with a wide variety of construction companies within the construction industry. If you wish to investigate career opportunities in the construction industry you can contact ConstructionSkills at www.cskills.org

In order to complete the Level 2 QCF Certificate in Highways Maintenance — Excavation and Reinstatement Operations you must achieve a minimum of 28 credits. The Rule of Combination details the Units that you must take to complete the qualification.

You will be assessed on your knowledge and skills developed in each Unit. The assessment may take a number of forms, including multiple choice questions, practical tasks with checklists, and other activities when working in teams.

9 Glossary of terms

QCF: The Qualifications and Credit Framework (QCF) is a system for recognising skills and qualifications in England, Wales and Northern Ireland. The QCF allows achievements to be recognised and recorded through the award of credits and qualifications. It supports the accumulation and transfer of credits and the easy identification of each achievement's level and size. In this way, learners have maximum flexibility and range of opportunities and can be reliably recognised for their achievements. For further information on the QCF visit the Ofqual website: <http://www.ofqual.gov.uk/qualifications-assessments/89-articles/145-explaining-the-qualifications-and-credit-framework>

QCF credits: The number of credits indicates the number of hours the average learner will take to achieve a Unit or a qualification. One credit is equal to 10 hours of learning.

QCF Award/Certificate/Diploma: The type of QCF qualification is determined by its size — or how many credits it contains. There are three types of QCF qualification:

Awards	(1 to 12 credits)
Certificates	(13 to 36 credits)
Diplomas	(37 credits or more)

QCF Levels: The QCF covers eight levels of learning. The level of a Unit or qualification denotes its difficulty. As a comparison, GCSEs (grade A*—C) are Level 2, GCE A Levels are Level 3, and a PhD is Level 8.

Rule of Combination (RoC): A RoC sets out what a learner is required to do in order to achieve a qualification. A RoC specifies the credits that need to be achieved, through the completion of particular Units, in order for a qualification to be awarded.

Functional Skills (England only): Functional Skills are practical skills in English, Maths and Information and Communications Technology (ICT). They are qualifications that are available to all learners aged 14 and above. They involve taking separate tests and will count towards the achievement of an Apprenticeship.

Essential Skills Wales: Essential Skills Wales are the only practical skills qualifications offered in Wales from September 2010. They are available in Communication, Working with Numbers and Information and Communications Technology (ICT) and are a requirement for all Apprenticeships in Wales.

National Occupational Standards (NOS): A Standard is a set of statements that describe the standards of performance and knowledge that are expected of a competent individual in a certain job role. They are used in lots of different ways — including for the development of qualifications.

Specification of Apprenticeship Standards for England (SASE): This document sets out the minimum requirements to be met in recognised English Apprenticeship frameworks.

Specification of Apprenticeship Standards for Wales (SASW): This document sets out the minimum requirements to be met in recognised Welsh Apprenticeship frameworks.