Assessor's Guidelines for the SVQ2 and 3 Land-based Engineering SCQF levels 5 and 6

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About this guide

This guide provides some practical examples of how to assess your candidates for the **SVQ2 and 3 Land-based Engineering SCQF level 5 and 6**. You may be able to think of other ways of assessing your candidates and recording your decisions about their competence.

Using assessments based on these examples does not guarantee successful verification — it is still your responsibility to ensure that internal quality assurance procedures are followed.

Introduction

This introduction provides a brief overview of SVQs and how they are assessed in the workplace. If you are already familiar with the concept of SVQs, you may wish to go to the next section.

About SVQs and the SCQF

Scottish Vocational Qualifications (SVQs) are work-based qualifications which set the level of occupational competence for each sector of the economy and are usually delivered in the workplace or in partnership with a college or other training provider. The qualifications have been designed by standards-setting bodies made up of experienced practitioners who represent employers, professional bodies, trade unions, education and voluntary organisations.

Each standards-setting body is responsible for developing national standards which define *what* employees (or potential employees) must be able to do, *how well*, and *in what circumstances*, to show that they are competent in their work.

Each SVQ which a standards-setting body develops has to fit into a broad framework which allows qualifications in the UK and throughout Europe to be compared.

There are SVQs for nearly all occupations in Scotland and they are available at SVQ levels 1–5. SVQs are currently notionally placed in the SCQF as the individual SVQs may be at differing SCQF levels and have differing amount of credit points, depending on the structure and context of the SVQ. SVQs are a means of recognising the skills and knowledge people need in employment, ie job competence. Successful completion of an SVQ provides clear evidence that the learner works to nationally recognised occupational standards.

Each Unit defines one aspect of a job or work-role, and says what it is to be competent in that aspect of the job. To be awarded a full SVQ, candidates must achieve each of the SVQ Units which make it up by demonstrating that they are competent in that aspect of the job. The Units which make up the SVQ can also be taken as freestanding awards. Some SVQs or SVQ Units are incorporated into other awards or programmes including HNCs and Modern Apprenticeships.

Explanation of levels

SVQ1 (SCQF level 4)	Competence involves the application of knowledge and skills in the performance of a range of varied work activities, most of which may be routine or predictable.
SVQ2 (SCQF level 5)	Competence involves the application of knowledge and skills in a significant range of varied work activities, performed in a variety of contexts. At this level, there will be activities, which are complex or non-routine and there is some individual responsibility and autonomy. Collaboration with others, perhaps through membership of a work group or team, may often be a requirement.
SVQ3 (either SCQF level 6 or 7)	Competence involves the application of knowledge and skills in a broad range of varied work activities, most of which are complex and non-routine. There is considerable responsibility and autonomy, and control or guidance of others is often present.
SVQ4 (either SCQF level 8 or 9)	Competence involves the application of knowledge and skills in a broad range of complex technical or professional work activities, performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources is often present.
SVQ5 (SCQF level 11)	Competence involves the application of skills and a significant range of fundamental principles across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources feature strongly, as do personal accountability.

For further information on SCQF go to **www.scqf.org.uk**.

How are standards defined in SVQs?

All SVQs consist of standards which can be broken down into various parts.

Units define the broad functions carried out in the sector, and are made up of a number of Elements. These **Elements** describe the activities which employees have to perform, and will require candidates to demonstrate certain skills or Knowledge and Understanding.

The quality of performance in what people must be able to do — how well they have to perform — is described by **Performance Criteria**. These may also be called **statements of competence** or **what candidates should do**.

The section on **Knowledge and Understanding** says what candidates must know and understand, and how this knowledge applies to their jobs.

You may also come across standards containing statements on **scope**. These statements could, for example, list the equipment that candidates are expected to be familiar with and use in their occupational area.

Increasingly, you may see changes to this format as standards become more user-friendly and are written in plain English. For example, there may be some standards containing **Range Statements** or **Evidence Requirements**, but over time these should disappear. You may, however, find that information on the context, nature and amount of evidence which is required to prove competence (which used to be given in Range Statements and Evidence Requirements) is now defined in the **assessment guidance** for the qualification. Assessment guidance is drawn up by the awarding body and is packaged along with the standards to form the SVQ.

Who is involved in SVQs?

There are several roles:

- **the candidate** — the person who wants to achieve the SVQ (eg an employee)
- **the assessor*** — the person who assesses the candidates and decides if they are competent (eg supervisor)
- **the internal verifier*** — an individual nominated by the centre (eg a company) who ensures that assessors apply the standards uniformly and consistently (eg supervisor's line manager)
- **the External Verifier*** — an individual appointed by SQA who ensures that standards are being applied uniformly and consistently across all centres offering the SVQ

*Assessors and verifiers in centres will be asked by SQA to prove they have the appropriate occupational competence to assess and verify the SVQ. Occupational competence has been defined by the standards-setting body in the Assessment Strategy for this SVQ(s) — see SQA's website: **www.sqa.org.uk**.

Assessors and verifiers are also expected to obtain an appropriate qualification in assessment and verification — this can be the Learning and Development Units (the national standards for assessment and verification), or an alternative qualification which SQA also recognises.

The steps involved in assessing a candidate for an SVQ

In deciding whether a candidate should achieve an SVQ, you will go through these stages:

- planning for assessment
- generating and collecting evidence of the candidate's competence in the Units
- judging the evidence of the candidate's ability and making an assessment decision based on the evidence
- recording the assessment decision and the candidate's achievement

1 The SVQ2 and 3 Land-based Engineering SCQF level 5 and 6

The SVQs in **Land-based Engineering** have been developed by Lantra and are intended for people working on the service and repair of agricultural, arboriculture/ forestry and ground care machinery.

These people may be working as land-based service engineers on agricultural tractors and machinery, arboriculture/forestry machinery or ground care machinery. They will require skills and knowledge in:

- health, safety and environmental responsibilities
- safe working practices
- service and maintenance requirements of machines
- dismantling, repair and reassembly procedures
- diagnostic fault finding procedures
- workshop processes and associated welding procedures
- customer care and organisational procedures

The SVQs are designed to be assessed in the workplace, or in conditions of the workplace. Examples of the settings or centres in which the SVQs are likely to be delivered include:

- land-based Colleges
- repair workshops
- on-site repair locations

Candidates for the Land-based Engineering Operations award who opt to take the 'Land-based college' route for their qualification may complete the qualification as outlined in the following table.

Stage	Training	Practical Skills	Underpinning Knowledge
1st Year of Apprenticeship	Block release to college	Formative Skill Assessment level 2	Mainly level 2
2nd Year of Apprenticeship	Block release to college	Formative Skills Assessment level 2	Mainly level 2
Level 2 Complete			
3rd Year of Apprenticeship	Block release to college	Formative Skill Assessment level 3	Level 3
	Work-based	Summative assessment of level 2 by Task Sheets	

4th Year of Apprenticeship	Work-based	Summative Assessment of level 3 by Task Sheets	Level 3
Level 3 Complete			
Improver Period	Work-based		Complete

Candidates who undertake this route may use the college-produced logbook as a basis for their portfolio. Details of this document are available from the local college.

Structure of the SVQs

This section lists the Units which form the SVQ2 and 3 Land-based Engineering.

SVQ2 Land-based Engineering (Agriculture) — GK44 22
SVQ2 Land-based Engineering (Arboriculture/Forestry) — GK42 22
SVQ2 Land-based Engineering (Ground Care) — GK43 22

Mandatory Units

SQA Ref	SCQF level	SSC Ref	Title
H50P 04	5	LANCS2	Monitor and Maintain Health, Safety and Security
H515 04	5	LANCS4	Establish and Maintain Working Relationships with Others
F9EA 04	5	LANLEO4	Core Land-based Engineering Principles: Mechanical Principles
F9EC 04	5	LANLEO5	Core Land-based Engineering Principles: Tools and Equipment
F9ED 04	5	LANLEO6	Core Land-based Engineering Principles: Material Preparation, Shaping and Assembling
F9EE 04	5	LANLEO8	Core Land-based Engineering Principles: Servicing and Maintenance
F9EF 04	5	LANLEO9	Core Land-based Engineering Principles: Thermal Joining Processes
F9EG 04	5	LANLEO10	Core Land-based Engineering Principles: Cooling and Lubrication
F9EH 04	6	LANLEO22	Service and Repair Electrical Systems on Land-based Equipment

Section 1 Optional Units — all candidates must complete four Units

SQA Ref	SCQF level	SSC Ref	Title
F9EJ 04	6	LANLEO12	Service and Repair Clutches, Fluid Flywheels and Torque Converters on Land-based Equipment
F9EK 04	5	LANLEO13	Service and Repair Mechanical Transmission on Land-based Equipment
F9EL 04	5	LANLEO14	Service and Repair Braking Systems on Land-based Equipment
F9EM 04	5	LANLEO15	Service and Repair Wheeled and Tracked Steering Systems on Land-based Equipment
F9EN 04	5	LANLEO16	Service and Repair Tyres and Tracks on Land-based Equipment

Section 2 Optional Units

SVQ2 Land-based Engineering (Agriculture) — GK44 22
Candidates must complete three Units. One Unit can be from Section 1 if not already undertaken.

SVQ2 Land-based Engineering (Arboriculture/Forestry) — GK42 22
Candidates must complete three Units. One Unit can be from Section 1 if not already undertaken.

SVQ2 Land-based Engineering (Ground Care) — GK43 22
Candidates must complete two Units. One Unit can be from Section 1 if not already undertaken.

SQA Ref	SCQF level	SSC Ref	Title
F9GE 04	5	LANLEO17	Service and Repair Land-based Cutting and Mowing Equipment
F9GF 04	5	LANLEO18	Service and Repair Land-based Harvesting and Processing Equipment
F9GG 04	5	LANLEO19	Service and Repair Land-based Soil Preparation, Cultivation and Plant Establishment Equipment
F9GH 04	5	LANLEO20	Service and Repair Land-based Transport, Handling and Storage Equipment

Additional Optional Unit — this Unit is not compulsory but can be undertaken if required.

SQA Ref	SCQF level	SSC Ref	Title
F9GL 04	5	LANLEO2	Organisational Procedures in Land-based Engineering

SVQ3 Land-based Engineering (Agriculture) — GK47 23
SVQ3 Land-based Engineering (Arboriculture/Forestry) — GK45 23
SVQ3 Land-based Engineering (Ground Care) — GK46 23

Mandatory Units

SQA Ref	SCQF level	SSC Ref	Title
H50H 04	5	CFABAA625	Agree How to Manage and Improve Own Performance in a Business Environment
F9GJ 04	6	LANLEO1	Recognise and Reduce Hazards in the Land-based Engineering Work Area
F9GL 04	5	LANLEO2	Organisational Procedures in Land-based Engineering
F9GM 04	5	LANLEO3	Customer Care in Land-based Engineering
F9GN 04	6	LANLEO7	Core Land-based Engineering Principles: Calculations
F9GV 04	6	LANLEO11	Service and Repair Engines on Land-based Equipment
F9GR 04	6	LANLEO24	Service and Repair Hydraulic Systems and Components on Land-based Equipment
F9GT 04	7	LANLEO30	Inspect and Test Land-based Equipment

Section 1 Optional Units — all candidates must complete two Units

SQA Ref	SCQF level	SSC Ref	Title
F9GP 04	7	LANLEO23	Service and Repair Electronic Control and Monitoring Systems on Land-based Equipment
F9GW 04	6	LANLEO26	Service and Repair Powershift, Hydrostatic, CVT Transmissions on Land-based Equipment
F9H2 04	7	LANLEO29	Monitor the Handover and Installation of Land-based Equipment

Section 2 Optional Units — all candidates must complete three Units. One Unit can be from Group 1 if not already undertaken.

SQA Ref	SCQF level	SSC Ref	Title
F9GX 04	5	LANLEO21	Service and Repair Suspension Systems on Land-based Equipment
F9GY 04	6	LANLEO25	Service and Repair Pneumatic Systems and Components on Land-based Equipment
F9H0 04	5	LANLEO27	Refrigerant Handling
F9H1 04	7	LANLEO28	Service and Repair Land-based Air Conditioning/ Refrigeration Equipment

An Assessment Strategy for the SVQ

As part of their review of the SVQ(s), the standards-setting body Lantra has developed an Assessment Strategy which defines a range of requirements:

- the occupational expertise of assessors and verifiers
- a definition of simulation
- definition of the workplace
- information on a model of independent assessment or external quality control

The relevant parts of the Assessment Strategy are published on SQA's website (**www.sqa.org.uk**), and both SQA and centres must comply with these requirements.

Why would people be interested in the SVQ?

People will take SVQs for a variety of reasons: to gain promotion, to prove their job competence, or for personal development. There will be other reasons too. One of the first things to do is to find out why your candidates want to do the SVQ, and to advise them of the appropriateness of the qualification. If anyone is acting as a coach or mentor to your candidates, they might help you to do this.

How do candidates begin?

Choosing the SVQ

You should make sure that candidates get guidance before starting out on an SVQ — they need advice to ensure that their existing job remit, skills, experience, and their plans for progression, are matched to the SVQ selected. It does not have to be you as the assessor, who carried out the matching process, but whoever has responsibility for this should ensure that the assessment opportunities available to the candidate are also considered.

Example

Whilst at school Matthew attended a period of work experience with an agricultural engineering company. After leaving school this experience led to a six month trial period and after successful completion an offer of a position with the company as an agricultural engineering apprentice. The workshop manager had ensured that during a formal induction week Matthew had completed a mandatory training day on the company's Health and Safety procedures. During a two day stores familiarisation period Matthew was involved with sales to customers, parts procurement and became familiar with the company's environmental procedures for the disposal of waste oil and packaging. During his trial period Matthew worked under the close supervision of a time served engineer mainly on the routine servicing and maintenance of tractors. In addition he had been helping with the repair of a tracked excavator that required a major overhaul of its track assembly.

The Workshop Manager arranged for an assessor from the local Land-based College to enrol Matthew on a Land-based Engineering Modern Apprenticeship and during an induction block at the College Matthew was provided with guidance on how to collect evidence and construct a portfolio to achieve the required Units.

When the College assessor along with the Workshop's Work-based Assessor matched Matthew's job role, existing skills and experience with the SVQ, it emerged that Matthew would be suitable to be enrolled on the Land-based Engineering (Agriculture) SVQ. Suitable optional Units that evidence could be generated for during the normal working routine were chosen and it was established that he should already be able to generate sufficient evidence to meet the requirements of the following SVQ Units:

- Service and Repair Braking Systems on Land-based Equipment
- Service and Repair Tyres and Tracks on Land-based Equipment

Matthew also had some experience in relation to three further Units. However, some planning was required in order to provide him with the opportunity to demonstrate competence in these areas.

The Units were:

- Core Land-based Engineering Principles: Servicing and Maintenance
- Core Land-based Engineering Principles: Tools and Equipment
- Core Land-based Engineering Principles: Cooling and Lubrication

The Workshop Manager arranged for the assessor to observe and orally assess Matthew completing a major service on a tractor for the first of these Units. Depending upon the additional faults found during the inspection Matthew will be carrying out on the tractor, some evidence could be generated that will cover some elements of the second and third Units. Plans would then be drawn up to assess the remaining scope of the second and third Units.

Matthew had no experience of the areas covered by the final 11 Units, which were:

- Core Land-based Engineering Principles: Mechanical Principles
- Core Land-based Engineering Principles: Material Preparation, Shaping and Assembling
- Service and Repair Electrical Systems on Land-based Equipment
- Establish and Maintain Working Relationships with Others
- Monitor and Maintain Health, Safety and Security
- Core Land-based Engineering Principles: Thermal Joining Processes
- Service and Repair Land-based Soil Preperation, Cultivation and Plant Establishment Equipment
- Service and Repair Clutches, Fluid Flywheels and Torque Convertors on Land-based Equipment
- Service and Repair Mechanical Transmission on Land-based Equipment
- Service and Repair Land-based Cutting and Mowing Equipment
- Service and Repair Land-based Transport, Handling and Storage Equipment

Since Matthew's job remit would not cover all these areas of the SVQ arrangements were made for him to attend a local FE college on a block release basis to cover the knowledge and understanding parts of the SVQ Units, with assessment being carried out on live jobs in the workplace under the supervision of the Work-based assessor.

All these arrangements were agreed by everyone involved and then written up in an assessment plan for Matthew.

2 Preparing to assess the SVQ

This section offers practical advice on how to begin to go about assessing your candidates for the SVQ. This advice is offered as examples of good practice — you may develop your own approaches to assessing your candidates which also work well.

Your role and your candidate's role

Assessing the SVQ will involve several stages. Both you and the candidate should be clear on your roles in the assessment process before you begin.

Your role

- ensure candidates understand what is to be assessed and how it is to be assessed
- ensure the conditions and resources required for assessment are available
- help candidates to identify and gather evidence
- observe and record candidates carrying out the activities described in the standards — records should say what has been observed, how it was carried out, and what it demonstrates
- assess products of the candidate's own work
- question candidates and record results
- help candidates to present evidence
- authenticate the evidence candidates provide
- judge evidence and make assessment decisions
- identify gaps or shortfalls in candidates' competence
- provide feedback to candidates throughout the assessment process
- record achievement

Candidates' role

- prepare for assessment — become familiar with the standards, what is to be assessed and how it is to be assessed
- help to identify sources of evidence and how these could be assessed
- carry out activities, and/or produce products of own work, and/or answer questions
- gather and present evidence
- receive and act on feedback from the assessor

Planning

In planning for assessment, you will find it helpful to meet with your candidate and plan what is to be assessed, in what way, and when and where the assessment is to take place. This discussion can be confirmed in the form of an agreed assessment plan between you and your candidate.

You should treat assessment plans as working documents — they can be updated and changed as you review progress with your candidate.

As you are planning assessment, don't forget to make the most of opportunities to *integrate* assessment. This means planning to assess an activity which draws on the contents of different Units or Elements. It can be a practical and cost-effective way of assessing your candidate's competence.

If you are a new assessor working towards your Learning and Development Units (the national standards in assessment and verification) you will need copies of completed assessment plans as part of your evidence.

To help you plan for assessment, we have produced an assessment plan which covers Unit(s) F9EE 04 — Core Land-based Engineering Principles: Servicing and Maintenance.

You will notice that we have included spaces to enter dates when the assessment plan has been reviewed. Any gaps identified during these reviews should be discussed with your candidates and noted for action in the assessment plan.

Assessment plan

Units	**Units:** F9EE 04 — Core Land-based Engineering Principles: Servicing and Maintenance				
Elements	1, 2, 3, 4, 5, 6.				
Activities	**Performance Criteria (PC)**	**Method of assessment/ sources of evidence**	**Date of assessment**	**Evidence already available**	**Links to other Units (PC and range)**
1 Prepare machinery and the working area prior to carrying out service and maintenance operations.	a, b, c, f, h, k.	Direct observation, oral questioning, witness testimony.	15/10/15	None	F9EC 04 (6, 8) K&U a. F9EG 04 (1)
2 Service land-based engineering vehicles and machinery to manufacturer's schedules.	a, b, c, e, f, g, h, i, j.	Direct observation, oral questioning, witness testimony, job cards/customer records.	15/10/15	One Completed PDI record.	F9EC 04 (2, 3, 5) K&U d. H515 04 F9EG 04 (3) K&U d, f.
3 Reinstate the machine to correct operational condition following a service.	g, h, j, l.	Direct observation, oral questioning, witness testimony.	15/10/15	None	
4 Access land-based vehicles and machinery for service and maintenance requirements.	b, c, d, k.	Direct observation, oral questioning, witness testimony, customer records.	04/03/16	None	F9EG 04 (2) K&U c, j. CU5 (2)

Activities	Performance Criteria (PC)	Method of assessment/ sources of evidence	Date of assessment	Evidence already available	Links to other Units (PC and range)
5 Carry out inspections and assessments of land-based machinery for conformity to manufacturer's specifications, eg unauthorised modification, excessive loading, poor maintenance, incorrect operator settings.	a, i, j.	Direct observation, oral questioning, witness testimony, job cards/customer records.	16/05/16	None	
6 Carry out performance and operational tests on completion of service and maintenance tasks, eg deceleration, power, pressure, flow, related to the work that has been performed on the machine.	d, l.	Direct observation, oral questioning, witness testimony, job cards/testing result sheets.	15/04/16	None	F9EL 04 K&U g
Questioning for Knowledge and Understanding not apparent from performance to be identified from 2nd review					

Assessor's signature	T Mehlor	**1st review due**	20/10/15
Candidate's signature	M Taylor	**2nd review due**	15/02/16
Date of agreement	14/08/15	**Date of completion**	27/05/16

Selecting methods of assessment

The methods of assessment you use should be valid, reliable and practicable.

- By *valid* we mean that the assessment method should be appropriate to the standards.
- By *reliable* we mean that the assessment method should ensure consistent results when used with different candidates, different assessors and on different occasions.
- By *practicable* we mean that the method ensures that the assessment makes best use of available resources, equipment and time.

Before you assess a candidate, you must make sure that the methods of assessment you have chosen to use, along with any assessment materials (such as questions and sample answers) have been agreed within your centre through its system of internal quality assurance. This system is often called *internal verification* — its purpose is to help to ensure that assessment methods are valid, reliable and practicable.

There are both benefits and challenges when you are assessing SVQs in the workplace, or in conditions of the workplace. When you select methods of assessment, you should try to offer the candidate the benefits of workplace assessment and minimise any potential difficulties.

The benefits might be:

- assessment progress at candidate's own pace of learning
- familiarity with equipment and surroundings
- assessment of competences can be spread over a number of repair/servicing operations
- integration of assessments can be more easily achieved

The challenges might be:

- familiarity with Work Based Assessor
- time pressures to complete allocated jobs
- workshop loadings incompatible with assessment requirements
- some naturally occurring repair/maintenance activities are seasonal

Example

You might agree with a candidate working in a Machinery Dealership, who has to demonstrate how to detect and eliminate a fuel leakage on a customer's tractor engine, that this will be carried out by **observation** as and when such situations arise. If you are an assessor who is working alongside the candidate you should be well placed to observe the candidate's performance, perhaps using a prepared checklist, and to question the candidates about the completed table afterwards.

Methods of assessment

Assessment may involve a range of assessment methods. For SVQs, some of the most commonly used methods are observation, product evidence, and questioning.

Observation

Observation by an assessor is considered to be the most valid and reliable method of assessment. It can be organised in a variety of ways:

- working alongside the candidate
- arranging to visit when naturally-occurring activities are carried out by the candidate
- arranging for activities to take place

Observation by the assessor can often be supplemented by other types of assessment methods such as questioning. For example, it may be appropriate to ask oral questions of candidates as they carry out naturally-occurring activities.

For example assessor observation would be used in *Core Land-based Engineering Principles — Servicing and Maintenance* to determine if the candidate has prepared an item of machinery and the working area prior to carrying out service and maintenance operations, or used during the service of a vehicle climate control system to ensure the candidate has serviced the air conditioning unit in a manner that minimises the risk of any refrigeration emissions.

Product evidence

As candidates work towards achieving the SVQ, they will produce evidence in the form of products of their work. The nature of this evidence can vary widely depending on what the candidate's job entails, but examples of product evidence include:

- fabrication from a set of plans of a welded bracket or other component.
- unpacking and assembly of a new agricultural crop sprayer and subsequent pre-delivery inspection (PDI).

Questioning

Candidates have to show that they can meet the knowledge specifications for the SVQs. For these SVQs, Knowledge and Understanding is specified for each Unit. Much of a candidate's knowledge and understanding will be apparent from what they do or produce as part of their work, but this will not always be the case, and questioning can be a useful way of confirming what candidates know and understand.

Questions can be asked in a variety of forms, such as oral questions, short answer written questions, and multiple choice.

You should be careful that the method of questioning does not go beyond the competence required for the SVQ and become a barrier to fair assessment. For example, some candidates will feel more comfortable with oral questions than written.

In the level 3 *Service and Repair Land-based Air Conditioning/Refrigeration Equipment* Unit oral questioning could be used to confirm the candidate's knowledge and understanding of the operating principles of systems and their components.

Q What is the purpose of the receiver dryer on a thermal expansion valve air conditioning system?

A Filter the refrigerant, dry the refrigerant, store liquid refrigerant

Q What is the function of the fixed orifice tube on an air conditioning system?

A It atomises and regulates the amount of refrigerant entering the evaporator.

Other methods of assessment

These methods, like questioning, are often used for authentication. See Section 3 for more about authenticating candidates' evidence.

Personal statements

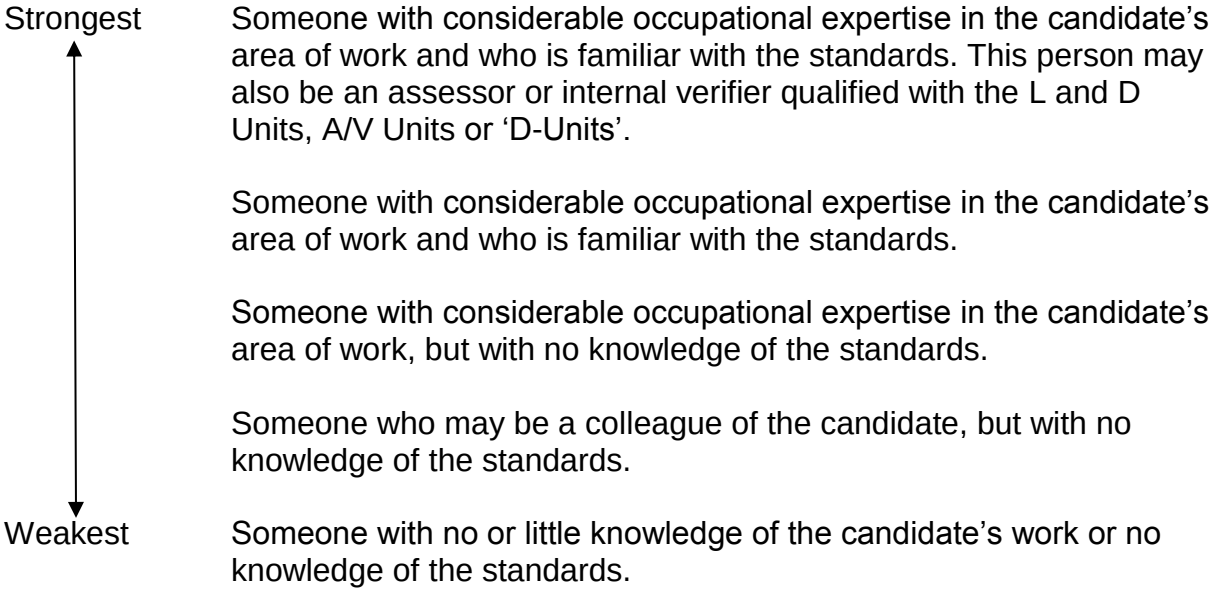
You might sometimes find it helpful to ask a candidate to give an account of why they did an activity in a certain way or how they produced a product of their work. This is often referred to as a *personal statement*. You should take care to ensure that by asking candidates to produce such statements, you are not asking them to demonstrate competence beyond what is required by the standards. You should also be selective in the use of personal statements, and make sure they have not been produced as a substitute to a more valid, reliable and practical method of assessment.

A personal statement could be used after a diagnostic test procedure has been undertaken on an electronic machine control system to confirm the candidate's knowledge and understanding of the diagnostic flow path used to determine the fault present on the system.

Witness testimony

For practical reasons, you may not be able to observe all the activities carried out by your candidates, but might feel that other people may be able to provide a statement on what your candidates have been doing or producing as part of their work. Statements of this kind are called *witness testimony*, and are often used to support other evidence produced by candidates. If witness testimony is used, you should, ideally, identify witnesses and opportunities for using their testimony as part of assessment planning.

You should bear in mind that the weight of the evidence will vary, depending on the knowledge and expertise of the person providing the witness testimony. You will have to take these factors into account as you make your judgement.



Witness testimony is unlikely to be sufficient in itself for a decision about the candidate's competence, and would normally be supplemented by questioning candidates.

This method is used extensively by the candidates mentor, when candidates have completed practical tasks at the work placement and may be used when available product and process evidence lacks the required breadth as specified in the Units.

Simulation

Simulation is any structured assessment exercise involving a specific task which reproduces real-life situations.

On some occasions, it may not be practical to assess a candidate in real work. Examples might be where the standards require candidates to carry out emergency or contingency procedures, or where client confidentiality is an issue, or where a candidate's job role does not cover all aspects of the qualification.

Lantra has defined what it regards as simulation, and has specified in the standards when simulation is and is not acceptable. The standards also state when candidates must demonstrate competence in the workplace.

For more details on simulation and what constitutes performance in the workplace, look at the Assessment Strategy on SQA's website: **www.sqa.org.uk**.

Some examples of acceptable simulation are:

- The use of a mannequin when demonstrating first aid measures.
- The methods used when dealing with disagreements or complaints in the work place.

Other sources of evidence

Other sources of evidence can be previous experience or learning, case studies or assignments.

SQA's *Guide to Assessment* (see section 5) has more advice on methods of assessment and how to ensure that your assessment is valid, reliable and practicable.

3 Generating evidence

The methods of assessment you use should generate sufficient evidence to demonstrate the candidate's competence.

We described earlier the circumstances in which you might choose to use different methods of assessment. Starting on the next page, this section gives you examples of forms which you can use to record and present evidence of:

- observation (by the assessor)
- questions and candidate responses
- personal statement (produced by the candidate)
- witness testimony

There are blank forms which you can copy and use in assessment in Appendix 1.

Observation

For observation, note that the form asks you to record the skills and activities observed. This helps you to make a judgement on how the activity was carried out and what it demonstrates.

Observation record

Unit/Element(s) F9EG 04 Core Land-based Engineering Principles: Cooling and Lubrication

Candidate M Taylor

Evidence index number F9EG 04 Cooling 1

Date of observation 15/10/15

Skills/activities observed	Performance Criteria covered
'Communication Skills' Instructions were received from Foreman. The proposed service actions were checked as appropriate and a job card issued. **'Practical & Diagnostic Skills'** Machine moved to a suitable location. System visually inspected. Cooling system pressure tested. Coolant Specific Gravity (SG) tested. Thermostat removed and tested. **'Communication Skills'** Foreman asked for a decision on replacement of components and coolant. Replacement Components and antifreeze collected from stores. **'Health, Safety and Environmental Protection Skills'** PPE worn when blowing dust/debris from radiator. Unserviceable coolant disposed of inline with procedures. **'Numeracy Skills'** Antifreeze and water mixed by ratio. **'Practical Skills'** Thermostat and gasket replaced. Coolant added and system tested for correct operation. **'Health, Safety and Environmental Protection Skills'** Work area cleaned and tester returned to store. Unserviceable components and packaging placed in recycling bins.	1 Select coolants against required specifications for stated applications 3 Test, maintain and adjust cooling systems, their circuits and components

Skills/activities observed	Performance Criteria covered
'Communication Skills' Job card completed and passed to Foreman.	

Knowledge and Understanding apparent from this observation
F9EG 04 K&U a, b, c, e, f

Other Units/Elements to which this evidence may contribute
F9EE 04 Scope 1, 2, 3. K&U b, f, g, h, j, k F9GJ 04 Scope 1, 2, 3, 4, 5, 6, 7. K&U c, d, g, r, t, u, w F9GN 04 Scope 3. K&U a, i

Assessor's comments and feedback to candidate
The candidate followed the company's procedures to minimise risks to himself and the environment. He successfully demonstrated the correct procedures used to service a liquid cooling system + diagnose and replace faulty components. He was informed no opportunities had arisen to assess his ability to service an air cooling system and was advised should the opportunity arise to keep a copy of his job card and enter a personal statement in his training profile which would be checked at a later date.

I can confirm the candidate's performance was satisfactory.

Assessor's signature T Mehlor **Date** 15/10/15

Candidate's signature M Taylor **Date** 15/10/15

Questions and candidate responses

This form can be used to record any questions you might ask the candidate to establish what they know and understand. You should note the candidate's responses on this form too.

Note that there is a space near the top of the form for you to record when, where, how and why you asked the questions.

Where you want to give the candidate written questions, this form could also be used.

Record of questions and candidate's answers

Unit	**F9H1 04 — Service and Repair Land-based Air-conditioning/Refrigeration Esquipment**
Element(s)	K&U a, b
Evidence index number	F9H1 04 (a, b)
Circumstances of assessment	
Supplementary questions relating to knowledge and understanding. Questioning carried out during routine service of an air conditioning system fitted to a combine harvester.	
List of questions and candidate's responses	
Q	What is the state of the refrigerant leaving the compressor?
A	High temperature, high pressure vapour.
Q	What is the purpose of the thermal expansion valve?
A	The TXV valve controls the amount of refrigerant entering the evaporator.
Q	When an air conditioning system containing an expansion valve is operating correctly, in which state is the refrigerant between the evaporator and the compressor?
A	Low pressure vapour.
Q	On a thermal expansion valve circuit, name the components and the order of these components in the air conditioning circuit in an agricultural motor vehicle.
A	Compressor, condenser, receiver dryer, thermal expansion valve, evaporator.
Q	State three ways heat can be transferred.
A	Conduction, convection, radiation.
Q	What is the purpose of a suction accumulator?
A	To filter, dehydrate and act as a reservoir for vapour refrigerant.

Assessor's signature T Mehlor **Date** 14/04/17

Candidate's signature M Taylor **Date** 14/04/17

Candidate’s personal statement

If a personal statement is being used as evidence, it should be completed by the candidate. The statement should record what they did, how and why they chose to carry out an activity or produce work in a certain way. Where other people may have been present during an activity and they may be able to provide witness testimony, the candidate should record how the statement links to other evidence in the column provided.

Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Unit, Elements, Performance Criteria, Performance statements, scope covered
05/06/17	F9GX 04 Sheet 3	Whilst out on a farm completing a service on an ATV the customer asked me to replace the seat on his tractor. I phoned my supervisor and asked him for permission to do it and if I should add the job to my work card. Having got permission I replaced the seat and set the sprung weight of the seat to suit the operators weight. Then drove the tractor for a test, it was OK so then got the operator to drive the tractor to confirm the seat was adjusted to suit him.	H515 04	F9GX 04 2ii K&U 1 (a)

Candidate's signature M Taylor **Date** 07/06/17

Witness testimony

Remember when you begin to use witness testimony that it must be capable of being authenticated — even if the testimony itself is being used to authenticate a candidate's claim to competence.

To make sure the witness testimony is genuine, you must ensure that you have a record of who is acting as a witness, their relationship to the candidate (eg supervisor, client) address, telephone number and the date. There are spaces for this information in the form.

Witness testimony

SVQ title and level	**SVQ2 Land-based Engineering (Agriculture)**
Candidate's name	Matthew Taylor
Evidence index no	F9EH 04 sheet 5
Index no of other evidence which this testimony relates to (if any)	
Element(s)	F9EH 04 Scope 4 K&U fiii
Date of evidence	13/07/16
Name of witness	A Easton
Designation/relationship to candidate	Work Based Recorder

Details of testimony

I observed Matthew using the correct test procedures to test the operation of a self-propelled forage harvester's alternator. He then compared his test results with the manufacturer's specification and came to the correct conclusion that the alternator is unserviceable.

He then replaced the alternator, assembled the drive belt mechanism ensuring that the belt self adjuster was working correctly and retested the charging system to confirm the battery is being charged.

All testing on the running engine was carried out with due regard for safe working practices and the unserviceable alternator returned to the stores as per the service exchange policy.

I can confirm the candidate's performance was satisfactory.

Witness's signature *A Easton* **Date** *13/07/16*

Witness (please select the appropriate box)**:**

☐ Holds L and D Unit 9D/9D1, A1/A2 or D32/D33 qualifications

☑ Is familiar with the SVQ standards to which the candidate is working

Filling the gaps

There may come a time when your candidate has provided evidence for most of the Unit (or SVQ), but there are some gaps. For example, you may find that certain situations, such as handling contingencies, have not arisen during assessment. Often these will relate to dealing with health and safety issues, or unexpected problems with workflow like delays in receiving information from another part of the organisation.

In this SVQ, such gaps are likely to occur in generating evidence for:

- the candidate having to implement procedures safely, correctly and without delay in an emergency situation.
- using appropriate fire fighting equipment.

You may be able to overcome these by

- simulating an emergency situation, such as getting the candidate to demonstrate how to correctly shut down oxy-acetylene welding equipment as if a blowback has occurred.
- having the candidate attend a fire awareness course where he would use a fire extinguisher.

Guidance and support to candidates

At all times during the assessment process — from planning through to making your assessment decision — feedback should be ongoing, clear and constructive. Feedback should be given against the national standards by relating it to the evidence provided, including the knowledge specifications.

Where there are any shortfalls in a candidate's competence, you should discuss these with your candidate and make plans for re-assessment.

Judging candidate evidence and making an assessment decision

In judging candidate evidence, you must be satisfied that your candidates can work consistently to the required standard, and that the evidence they have produced is their own. You must consider whether your candidate understands and applies the knowledge evidence and how this links to performance evidence.

Evidence must:

- be relevant to the SVQ
- be authentic
- show current competence
- be sufficient to help you form a decision about the candidate's competence

Insufficient evidence

You have to judge whether the candidate has produced enough evidence required by the standards for you to reach a decision about their evidence.

Where there is insufficient evidence, you should say this to your candidate. You should tell them that it is not that they are not yet competent — there is simply not enough evidence on which to make a decision.

In this situation, your feedback to your candidates must help them produce more evidence and/or plan for further assessment.

Authenticating candidates' evidence

Authentication is required where you have not observed candidates' performance at first hand.

You can check whether a candidate has produced evidence which they claim shows their competence by questioning them or, if this is appropriate, asking them to produce a personal statement, using witness testimony, or seeking peer reports from other colleagues of the candidate.

Example

The assessor may not be present when certain situations occur, such as diagnosing a fault in a tractor. In this case, witness testimony from a supervisor, supported by oral questioning may be used to authenticate evidence produced by the candidate.

4 Recording achievement

You should retain all evidence — clearly referenced — for internal and external verification.

The candidate's evidence is normally kept in a file, often called a *portfolio*. These documents help you and your candidates to collect, present and cross-reference the evidence to the national standards. They are also a means of recording your assessment decisions, and they tell an External Verifier what stage a candidate has reached in achieving the SVQ.

Recording documents do not need to be paper-based — it is possible to use an electronic format for collecting and structuring the evidence. Whatever format you and your candidates choose to use, the documents must show what evidence was generated, the assessment decisions you made, how the evidence meets the standards, and where the evidence can be located. You should avoid photocopying items simply to put them in a portfolio — a clear explanation of where the evidence can be found (for example, in a filing cabinet) may be sufficient for the External Verifier to follow it up and include it in the visit.

There are various reasons why record-keeping is so important:

- it provides a way of tracking a candidate's progress in achieving an SVQ
- it helps candidates to make claims for certification of their competence
- internal verifiers and External Verifiers use the records to sample assessment decisions
- it helps us to monitor the quality assurance of our qualifications

If your candidates' evidence is incomplete, or cannot be located, or if there is inaccurate cross-referencing to the standards, there is a risk that an internal verifier or External Verifier will be unable to confirm your assessment decisions.

To help you and your candidate present evidence and record your assessment decision, we have provided examples of the forms which you and your candidate might use to compile the portfolio.

- Completing the Unit progress record
- Using the evidence index
- Completing the Element achievement record

These forms are also used in SQA's portfolio.

Completing the Unit progress record

You should complete this form each time your candidate achieves a Unit from the SVQ by adding your signature and the date next to the relevant Unit.

At this stage, candidates should make sure they have completed the recording documents correctly and that their evidence can be easily located. Only then should they circle the relevant Unit number at the top of the form. This enables both of you to see at a glance what stage the candidate is at in their SVQ.

Unit progress record

Qualification and level SVQ2 in Land-based Engineering (Agriculture)

Candidate Matthew Taylor

To achieve the whole qualification, you must prove competence in nine **mandatory** Units,four **optional** Units from Section 1 and three **optiona**l Units from Section 2 (one can be taken from Section 1 if not already undertaken).

Unit checklist

Mandatory	F9EA	F9EC	F9ED	F9EE ✓	F9EF	F9EG ✓	F9EH	H515	H50P
Optional Section 1	F9EJ	F9EK	F9EL ✓	F9EM	F9EN ✓				
Optional Section 2	F9GE	F9GF	F9GG	F9GH					
Additional Optional Unit	F9GL								

Mandatory Units achieved

Unit Number	**Title**	**Assessor's Signature**	**Date**
H50P 04	Monitor and Maintain Health, Safety and Security		
H515 04	Establish and Maintain Working Relationships with Others		
F9EA 04	Core Land-based Engineering Principles: Mechanical Principles		
F9EC 04	Core Land-based Engineering Principles: Tools and Equipment		
F9ED 04	Core Land-based Engineering Principles: Material Preparation, Shaping and Assembling		
F9EE 04	Core Land-based Engineering Principles: Servicing and Maintenance	*T Mehlor*	*21/05/16*
F9EF 04	Core Land-based Engineering Principles: Thermal Joining Processes		
F9EG 04	Core Land-based Engineering Principles: Cooling and Lubrication	*T Mehlor*	*10/01/16*
F9EH 04	Service and Repair Electrical Systems on Land-based Equipment		

Optional Units achieved Section 1

Unit number	Title	Assessor's signature	Date
F9EJ 04	Service and Repair Clutches, Fluid Flywheels and Torque Converters on Land-based Equipment		
F9EK 04	Service and Repair Mechanical Transmission on Land-based Equipment		
F9EL 04	Service and Repair Braking Systems on Land-based Equipment	T Mehlor	14/09/15
F9EM 04	Service and Repair Wheeled and Tracked Steering Systems on Land-based Equipment		
F9EN 04	Service and Repair Tyres and Tracks on Land-based Equipment	T Mehlor	14/09/15

Optional Units achieved Section 2

Unit number	Title	Assessor's signature	Date
F9GE 04	Service and Repair Land-based Cutting and Mowing Equipment		
F9GF 04	Service and Repair Land-based Harvesting and Processing Equipment		
F9GG 04	Service and Repair Land-based Soil Preparation, Cultivation and Plant Establishment Equipment		
F9GH 04	Service and Repair Land-based Transport, Handling and Storage Equipment		

Using the index of evidence

The purpose of the index of evidence is to help you locate and work through the candidate's evidence. It should give you a summary of what evidence the candidate has collected, and where (eg in a portfolio) it can be found.

The index of evidence should be completed by entering:

- the index number for each piece of evidence
- a description of each piece of evidence
- the place or location where it can be found
- the initials of the internal verifier and the date (if they have sampled the candidate's evidence)

Ideally, it should be candidates themselves (with your support and encouragement) who complete the index.

You must make sure that the information in the evidence index is accurate when your candidates' portfolios are presented for assessment and verification — particularly the information about where the evidence can be located. This is important because we suggest that anything which has been produced as day-to-day work is kept in its normal location, but anything which has been produced through assessment for the SVQ, eg observation checklists, is filed in the candidate's portfolio. In this way, your candidate can avoid having to photocopy work products just for the sake of including them in a portfolio. It also means that evidence produced as a result of assessment is kept safely in a central file.

If the index of evidence is not completed with an accurate description and location of the evidence, there is a risk that an internal verifier or External Verifier might be unable to confirm your assessment decisions.

Index of evidence

SVQ title and level	SVQ2 Land-based Engineering (Agricultural) .

Evidence number	**Description of evidence**	**Included in portfolio (Yes/No) If no, state location**	**Sampled by the IV (initials and date)**
F9EG 04 Cooling 1	Observation of candidate diagnosing and replacing faulty components on a cooling system.	yes	IT 26/11/15
F9EH 04 sheet 5	Witness testimony — testing and replacing faulty alternator.	yes	IT 23/08/16
F9EE 04 (a, b)	Oral questioning on legal implications of modifying FOPS or ROPS systems. And the reasons for service and maintenance operations.	No. Held in locked filing cabinet in assessor's office	IT 13/04/17

Completing the Element achievement record

To help you and your candidates cross-reference the evidence to the standards of the SVQs, we have provided records similar to those produced in the SQA portfolio. Use one record for each Element. The grids should be completed by:

- entering the evidence index number in the first column
- giving a brief description of the evidence in the second
- ticking the relevant boxes for the Performance Criteria (or statements of competence as they are sometimes known)
- entering the areas of knowledge and understanding the piece of evidence covers

If integrated assessment is used (linking PC or Elements across different Units) the evidence should be cross-referenced back to the relevant Units.

We have provided a completed example to show how to use the record.

Element achievement record

Unit Service and Repair Suspension Systems on Land-based Equipment

Element Covers the suspension systems found on Land-based equipment and the maintenance repair of these systems.

Evidence index no	Description of evidence	PC/performance statements						Areas of Knowledge and Understanding/scope														
		1	2i	2ii	2iii	3		a	b	c	d											
F9GX 04 Sheet 1	Observation of candidate diagnosing and replacing faulty components on an axle system	✓			✓	✓																
F9GX 04 Sheet 2	Witness testimony — testing and replacing faulty axle control unit	✓			✓	✓																
F9GX 04 Sheet 3	Replace seat and associated suspension system	✓		✓																		
F9GX 04 Sheet 4	Oral questioning on the types, construction and operation of suspension assemblies					✓		✓	✓	✓	✓											
F9GX 04 Sheet 5	Observation and oral questioning of candidate diagnosing and replacing faulty components on a cab suspension system	✓	✓			✓			✓													
F9GX 04 Sheet 6	Witness testimony — testing and replacing faulty cab suspension system electronic module	✓	✓			✓																

Unit Service and Repair Suspension Systems on Land-based Equipment

Element Covers the suspension systems found on Land-based equipment and the maintenance repair of these systems.

Notes/comments
F9GX 04 Sheet 1 evidence cross references to Unit F9GJ 04 Recognise and Reduce Hazards in the Land-based Engineering Work Area.

The candidate has satisfied the assessor and internal verifier that the performance evidence has been met.

Candidate's signature M Taylor **Date** 22/10/18

Assessor's signature T Mehlor **Date** 22/10/18

Internal verifier's signature I Taylor **Date** 22/10/18

5 Further information

What else should I read?

The publications listed here provide additional information on how to implement SVQs. Details of these and other SQA publications are available on our website at **www.sqa.org.uk** on the 'Publications, Sales and Downloads' section. They can be ordered from SQA's Business Development and Customer Support Team — telephone 0303 333 0330. Please note that there may be a charge for some of these publications.

Assessor/Verifier Units: assessment guidance

External Verification: A Guide for Centres

Guide to Assessment

Introduction to Assessment Arrangements for Schools and Colleges

SQA's Quality Framework: a guide for centres

Operational Help Centre

The Operational Guide for Centres has been replaced by the online Operational Help Centre on **www.sqa.org.uk**

Appendix 1: Blank recording forms

Unit progress record

Qualification and level _____

Candidate _____

To achieve the whole qualification, you must prove competence in xx **mandatory** Units and xx **optional** Units.

Unit checklist

Mandatory							
Optional							

Mandatory Units achieved

Unit number	Title	Assessor's signature	Date

Optional Units achieved

Unit number	Title	Assessor's signature	Date

Index of evidence

SVQ title and level	

Evidence number	Description of evidence	Included in portfolio (Yes/No) If no, state location	Sampled by the IV (initials and date)

Element achievement record

Unit

Element

Evidence index no	Description of evidence	PC/performance statements						Areas of Knowledge and Understanding/scope													

Unit

Element

Notes/comments

The candidate has satisfied the assessor and internal verifier that the performance evidence has been met.

Candidate's signature _____ **Date** _____

Assessor's signature _____ **Date** _____

Internal verifier's signature _____ **Date** _____

Assessment plan

Units					
Elements					
Activities	**Performance Criteria (PC)**	**Method of assessment/ Sources of evidence**	**Date of assessment**	**Evidence already available**	**Links to other Units (Performance Criteria and Range)**
Questioning for Knowledge and Understanding not apparent from performance to be identified from 2nd review					

Assessor's signature _____ **1st review due** _____

Candidate's signature _____ **2nd review due** _____

Date of agreement _____ **Date of completion** _____

Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Unit, Elements, Performance Criteria, Performance statements, scope covered

Candidate's signature _____ **Date** _____

Observation record

Unit/Element(s) _____

Candidate _____

Evidence index number _____

Date of observation _____

Skills/activities observed	**Performance Criteria covered**

Knowledge and Understanding apparent from this observation

Other Units/Elements to which this evidence may contribute

Assessor's comments and feedback to candidate

I can confirm the candidate's performance was satisfactory.

Assessor's signature _____ **Date** _____

Candidate's signature _____ **Date** _____

Witness testimony

SVQ title and level	
Candidate's name	
Evidence index no	
Index no of other evidence which this testimony relates to (if any)	
Element(s)	
Date of evidence	
Name of witness	
Designation/relationship to candidate	
Details of testimony	

I can confirm the candidate's performance was satisfactory.

Witness signature _____ **Date** _____

Witness (please select the appropriate box)**:**

☐ Holds L and D Unit 9D/9D1, A1/A2 or D32/D33 qualifications

☐ Is familiar with the SVQ standards to which the candidate is working

Record of questions and candidate's answers

Unit	
Element(s)	
Evidence index number	
Circumstances of assessment	
List of questions and candidate's responses	
Q	
A	
Q	
A	
Q	
A	
Q	
A	
Q	
A	

Assessor's signature _____ **Date** _____

Candidate's signature _____ **Date** _____