Candidate Guidance and Portfolio for the SVQs in Heating and Ventilating level 3

In the context of:

Heating and Ventilating Ductwork Planning and Installation (G9X9 23)
Heating and Ventilating Industrial and Commercial Installation (G9X8 23)
Service, Maintain and Commission Building Engineering Services (G9XE 23)
Install, Commission and Maintain Refrigeration Systems (GD7L 23)
Install, Commission and Maintain Air Conditioning Systems (GD7N 23)

Candidate name:

Publication code: Z0283

Note

The National Occupational Standards which form the basis of this award were developed by SummitSkills. This document is for candidate use only and should not be used as a substitute for the National Occupational Standards.

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Section 1 — General information about SVQs

Introducing SVQs

The qualification you are undertaking is a Scottish Vocational Qualification (SVQ).

SVQs are work-based qualifications which assess the skills and knowledge people have and need to perform their job role effectively. The qualifications are designed using National Occupational Standards.

For each industry sector there is a Sector Skills Council (SSC) which is made up of representatives from the industry or profession and it is the SSC's responsibility to develop the National Occupational Standards.

These standards define what employees, or potential employees, must be able to do, how well and in what circumstances to show they are competent in their work.

The Sector Skills Council for Heating and Ventilating level 3 is: SummitSkills

Access to SVQs is open to all and you can be assessed either against a particular Unit(s) or against the full SVQ. There are no entry requirements, no prescribed method of delivery, and no time constraints for completion or age limits.

SVQs are available at five levels of achievement which reflect the various technical and supervisory skills, knowledge, and experience which employees should have as they progress in their industry.

Who offers SVQs?

An organisation which offers SVQs is called a centre. This may be a school, college, university, employer, training provider or a combination of these. The centre has responsibility for the quality of the qualification and is required to work within an awarding body's policies and guidelines.

The Scottish Qualifications Authority (SQA) is your awarding body for this SVQ. This means that we are an organisation approved by government to design qualifications and awards. An awarding body endorses candidates' certificates so that an employer can be sure the qualification has gone through a rigorous and effective assessment process. SQA provides qualifications throughout the world and was formed by the merger of the Scottish Examinations Board (SEB) and the Scottish Vocational Education Council (SCOTVEC).

What is the structure of an SVQ?

All SVQs have a common structure and consist of standards which can be broken down into various parts:

Units and Elements	**Units** define the broad functions carried out in your particular job and are made up of a number of **Elements**. Each **Element** describes a specific work activity which you have to perform and may relate to skills or to the demonstration of Knowledge and Understanding.
Performance Criteria	The level and quality of how you should carry out these activities is determined by a number of statements called **Performance Criteria**. **Performance Criteria** are used to judge your competence.
Range/Scope Statements	A **Range Statement** tells you in what circumstances you must be able to prove your competence and allows you to demonstrate that you can carry out tasks in different circumstances. Items included in the Range Statements must not be treated as optional. **Range Statements** are also called **Scope** in some National Occupational Standards.
Evidence Requirements	The **Evidence Requirements** specify the amount and type of evidence which you will need to provide to your assessor to show that you have met the standards specified in the Performance Criteria and in all the circumstances defined in the Range Statements.
Knowledge and Understanding	The section on **Knowledge and Understanding** states what you must know and understand and how this knowledge applies to your job.

If you are not yet clear about how we define standards — just remember that the standards have been developed by experts within your industry or profession and that all candidates aiming for this particular SVQ are being assessed against the same standards.

You will find an example of an SVQ Element overleaf.

An example of an SVQ Element

UNIT: (1) Working safely in an engineering environment

This is the UNIT title — it describes a role and task.

Element 1 Comply with statutory regulations and organisational requirements

This is the **ELEMENT** title. It describes part of the main role and task.

Performance Criteria

PERFORMANCE CRITERIA set out the standard of performance you need to demonstrate consistently to claim competence in a particular **Element**.

You must ensure that you:

1 Describe your duties and obligations (as an individual) under the Health and Safety at Work Act 1974.
2 Comply with Statutory Regulations at all times.
3 Comply with organisational safety policies and procedures at all times.

Range

This means you need to cover:

1 Relevant sections of the Health and Safety at Work Act 1974 (eg with regard to your duties to work in a safe manner, not to interfere with remove or misuse equipment provided for the safety of yourself and others, not to endanger others by your acts or omissions).

The **RANGE** defines the various circumstances in which you must be able to prove you are competent.

You must cover all of the items in the **Range** Statement.

Evidence Requirements

The things you must prove that you can do*:*

You need to demonstrate that you understand your duties and obligations under both statutory regulations and organisational requirements and you can do this by:

1 Giving an adequate explanation of the duties and responsibilities of every individual as described in the Health and Safety at Work Act 1974.
2 Ensuring that whilst carrying out your work and/or visiting other areas of the working environment you are aware of the specific safety requirements and regulations governing your activities.

Knowledge and Understanding

You must prove that you know and understand:

1 The roles and responsibilities of yourself and others under the Health and Safety at Work Act 1974.
2 The general regulations that apply to you being at work.
3 The specific regulations which govern your work activities.

The **KNOWLEDGE AND UNDERSTANDING** Requirements state what you must know and understand and how this knowledge applies to your job.

How are SVQs achieved?

When you consistently meet the standards described in the Elements and show that you have the required skills and knowledge across the Range, you can then claim that you are *competent* in each Unit. You can claim certification for single Units or whole awards. Your centre will register your claim to competence through the awarding body. The awarding body you are registered with for this SVQ is the Scottish Qualifications Authority (SQA).

Scottish Qualifications Authority
The Optima Building
58 Robertson Street
Glasgow
G2 8DQ

The process of gaining an SVQ is flexible and depends on your needs. At the beginning of the process your assessor will review your existing competence in relation to the standards and identify the most suitable SVQ. The level you start at will depend on the type and breadth of your current job role together with your past experience, skills and any relevant prior learning.

To achieve an SVQ, or a Unit of an SVQ, you must:

- Demonstrate you meet the requirements of the Performance Criteria by collecting appropriate evidence as specified by the Evidence Requirements. This evidence is assessed against the national standards by a qualified assessor, who will be allocated to you by your centre. This will usually be someone who knows you, such as a manager or supervisor.

Evidence may come from:

- the **accreditation of prior learning** — where evidence relates to past experience or achievements
- **current practice** — where evidence is generated from a current job role
- a **programme of development** — where evidence comes from assessment opportunities built into a learning/training programme whether at or away from the workplace
- a combination of these

How are SVQs assessed?

Assessment is based on what you can do and involves you, your assessor, an internal verifier and an External Verifier — see 'Who does what in SVQs' on the following page.

You will be asked to prove you are competent by providing evidence which shows:

- you can perform all the specified tasks consistently to the required standard **(Performance Criteria)**
- you understand why you are doing things **(Knowledge and Understanding)**
- you can apply the required skills in different ways **(Range)**

Assessment is flexible and you can be certificated for each Unit you successfully achieve, even if you do not complete the full SVQ. There is no set period of time in which you need to complete a Unit. However, you and your assessor should still set target dates for completing

each Unit, otherwise your qualification could go on forever. Be realistic though, as there are many factors such as your previous experience, demands within your workplace and an availability of resources which will affect how quickly you are able to achieve the qualification.

Who does what in SVQs?

A number of individuals and organisations have parts to play in SVQ assessment. Their roles have been designed to guarantee fair, accurate and consistent assessment.

	Who are they?	What is their role?
Candidates	The person who wants to achieve the SVQ — in this case, you.	Need to show they can perform to National Occupational Standards in order to be awarded an SVQ or Unit(s).
Assessors*	An experienced person in the same area of work as the candidate eg supervisor.	Judge the evidence of a candidate's performance, knowledge and understanding against the National Occupational Standards. Decide whether the candidate has demonstrated competence. Provide guidance and support to the candidate. Assist with planning assessments, giving feedback and recording candidate progress.
Internal Verifiers*	Individuals appointed by an approved centre to ensure the quality of assessment within the centre.	Advise assessors and maintain the quality of assessment in a centre. Systematically sample assessments to confirm the quality and consistency of assessment decisions.
Approved Centres	Organisations approved by awarding bodies to co-ordinate assessment arrangements for SVQs.	Manage assessment on a day-to-day basis. Must have effective assessment practices and internal verification procedures. Must meet criteria laid down by awarding bodies and be able to provide sufficiently competent assessors and internal verifiers.
External Verifiers*	Individuals appointed by the awarding body to ensure that standards are being applied uniformly and consistently across all centres offering the SVQ.	Check the quality and consistency of assessments, both within and between centres, by systematic sampling. Make regular visits to centres to ensure they still meet the criteria to deliver SVQs.

***** Assessors and internal and External Verifiers are required to have occupational expertise in the SVQs which they are assessing/verifying. They must also have, or be working towards, an appropriate qualification in assessment and verification.

What is evidence?

To claim competence for an SVQ Unit you need to gather evidence which shows you have met the standards. It is important that your evidence is easily understood so that it can be checked against the standards, by both your assessor, your centre and the awarding body.

Evidence can take many forms including:

- direct observation of your performance by your assessor
- products of your work
- authenticated statement — witness testimony
- personal statement
- outcomes from questioning
- outcomes from simulation
- case studies
- assignments or projects
- Accreditation of Prior Learning (APL) — evidence from the past

It is important that your evidence is:

- **valid** — it relates to the SVQ standard you are trying to prove
- **authentic** — the evidence, or an identified part of it (eg a report) was produced by ***you***
- **consistent** — achieved on more than one occasion
- **current** — usually not more than two years old
- **sufficient** — covers all the performance and knowledge requirements laid down in the standards

Your evidence may be collected through a range of sources, such as employment, voluntary work, training programmes and interests/activities which you perform outside your work. It can also be produced in various formats, eg your own reports; testimonies from colleagues, supervisors or members of the public; projects; models; audio tapes, photographs; videos.

When you first begin your SVQ, you and your assessor should identify all the Units and Elements where you can use **integration of assessment**. Further details about integration of assessment can be found on page 10.

Demonstrating knowledge, understanding and skills

In order to meet the standards, you may also be required to prove Knowledge and Understanding. Each Unit contains a list summarising the knowledge, understanding and skills a candidate must possess. Evidence of how these have been achieved and applied could be included in the performance evidence as one or all of the following:

- descriptions of why a particular approach was used
- personal reports about the learning process
- reflective reports which include how a theory or principle was applied
- assessment interviews
- assessment tests
- responses to questioning

These should be included in your portfolio.

How will my assessor check I have the knowledge and understanding listed in the standards?

For some Units, it will be clear to your assessor that you have the required knowledge and understanding from how you carry out your work. This is often referred to as *knowledge and understanding apparent from performance*. There will be other occasions though, when your assessor will be unsure if you know why, for example, it is important to give information to clients in certain situations. This could be because your assessor has not had the opportunity to observe all the Performance Criteria and Range during assessment. In these situations, your assessor may wish to assess your knowledge and understanding by asking you some questions. These questions can be given orally or in writing, but will be recorded in your portfolio as evidence.

Your assessor could also check you have the required level of knowledge and understanding by asking you to produce personal statements or to complete a project or assignment.

What if I have previous experience and knowledge and understanding from work and other qualifications?

If you have previous work experience, skills, and knowledge and understanding which you feel is relevant to your SVQ, you should tell your assessor about it. Your assessor may ask you for more proof in the form of letters from previous employers/training providers or details about any courses you have completed.

For example, you may have achieved an HNC in a relevant subject in which case your assessor may feel that you already have some of the knowledge and understanding required for the SVQ.

The process of matching your previous experience and learning is often referred to as the Accreditation of Prior Learning (APL). The purpose of this process is to try and give you some credit towards your SVQ for things you can already do to the national standard. Your assessor judges the evidence available and matches it against the requirements of the SVQ. This means that your assessor should not have to assess you for these things all over again.

However, the success of this process depends on ***you*** telling ***your assessor*** what previous work experience or knowledge and understanding you have and how you think it is relevant to your SVQ. The more information you can supply to support your claims, the easier it should be to convince your assessor that you are competent.

When can simulation be used?

Throughout your SVQ, the emphasis is on you being able to carry out real work activities so assessment will normally be carried out in the workplace itself.

There may be times, however, when it might not be appropriate for you to be assessed while you are working. For example your SVQ might require you to carry out emergency or contingency procedures (for safety or confidentiality reasons) or your job role may not cover all aspects of the qualification. In such instances, when you have no other means of generating evidence, **simulation** might be appropriate.

Simulation is any structured exercise involving a specific task which reproduces real-life situations. Care must be taken though to ensure that the conditions in which you are assessed *exactly* mirror the work environment ie it is a **realistic working environment**.

You and your assessor should check the assessment strategy for your SVQ carefully to find out the Sector Skills Council (SSC's) view of what constitutes a realistic working environment. Some SSC's stipulate the specific elements which are suitable for this approach.

Integration of assessment

It is not necessary for you to have each Element assessed separately — doing so could result in assessment which takes too long and places too great a burden on you and your assessor.

There will be instances when you will be able to use one piece of evidence to prove your competence across different Elements or Performance Criteria. You may even find that evidence is relevant for different Units — this is called **integration of assessment**.

When you first begin your SVQ, you and your assessor will spend time looking at the standards, planning how much time you are both able to devote to the qualification and drawing up an action plan.

At this stage, you should identify any activities which relate to more than one Unit or Outcome and arrange for the best way to collect a single piece of evidence which satisfactorily covers all the Performance Criteria.

If you are going to integrate assessments, make sure that the evidence is cross-referenced to the relevant Units. Details of how to cross reference your evidence can be found in Section 2 'How to compile your portfolio'.

Section 2 — How to compile your portfolio (with worked examples)

General information

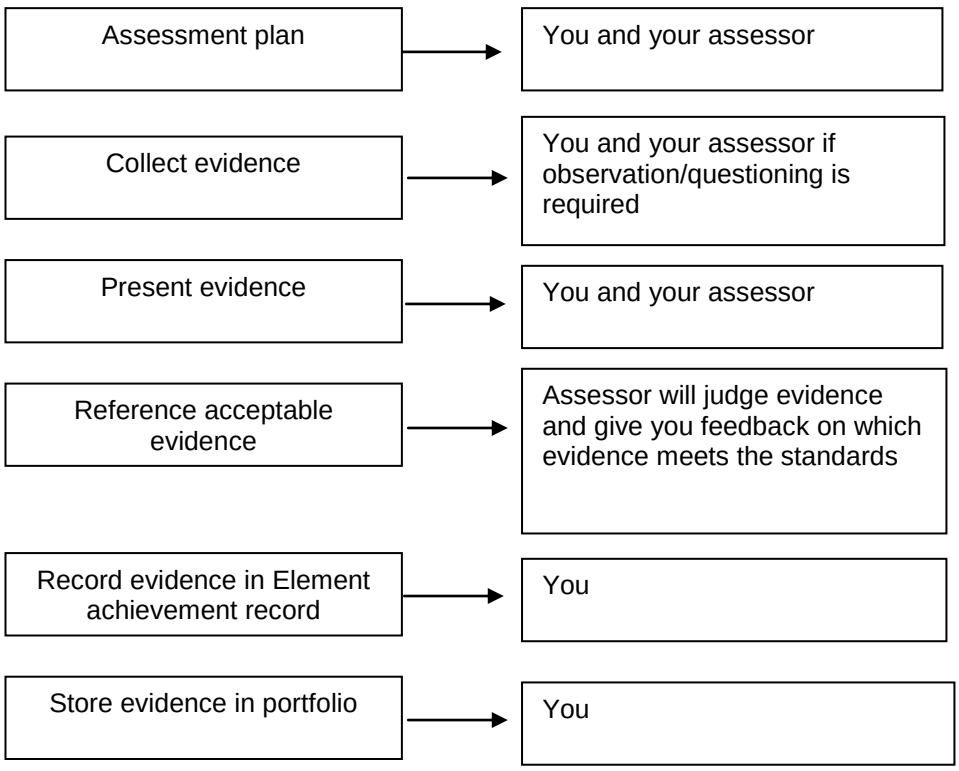
A portfolio, like a log book, is a way of recording evidence of your achievements. It is a collection of different items of evidence which indicates that you have the required skills, knowledge and understanding to support your claim to a qualification.

The production of a well organised, clearly labelled portfolio which relates each piece of evidence to the relevant outcomes and Performance Criteria requires a careful methodical approach. When your assessor looks through your portfolio, they will find the task of making judgements about your competence much easier if the information in it is presented in a logical sequence.

You will need to present your evidence in a format that is easy to read and in which materials can be added or taken away. This section gives suggestions on how to lay out and present your evidence and includes worked examples. There are also forms and matrices which will assist you to chart your progress through the award.

You do not have to lay out your evidence in the way suggested but you may find it helpful to do so. Each portfolio will be different in content but all should include information about you (the candidate), the organisation where you are undertaking your qualification, the assessor and so on.

Evidence Collection Process



Planning your portfolio

Start by carefully reading through the standards and, together with your assessor, decide which Units you might like to work on first. You do not have to do the Units in order. There may be some Units that relate to tasks which you carry out on a regular basis, therefore making it easier to collect evidence right away. Alternatively, there may be activities in other Units which you only undertake now and again, these can be left until the opportunity arises for you to collect evidence.

Before you start looking for different kinds of evidence and deciding if they should be included in your portfolio, you will find it helpful to plan how you will carry out the tasks and how long they are going to take.

The plan is usually referred to as an '**assessment plan'**. It should be produced in discussion with your assessor and will set out the different stages in developing your portfolio. You will probably want to produce a plan for each Unit.

It is unlikely that you will be able to complete all of the Units straightaway and you should therefore think about starting with those Units where you have a lot of experience and in which you work well. You should also remember to identify any opportunities for **integration of assessment**.

We have provided you with a '**Unit progress record'** — see Example 2. Each time you complete a Unit, your assessor should sign and date the relevant section on the form. At this stage, it might be a good idea to check that all your evidence and recording documents have been completed correctly and can easily be located. You can then circle the reference number of that Unit in the checkboxes at the top of the form so that you can see at a glance what stage you are at in your SVQ.

Starting your portfolio

Make sure that you clearly label your portfolio (or disk if you are recording your evidence electronically) with your name together with the title and level of the award.

Your portfolio will need a *title page* and a *contents page.* You should also complete a *Personal Profile* which records details about yourself and your job as well as providing information about your employer, training provider or college. Blank samples of these forms are provided in Section 4.

We recommend that you compile your portfolio in the following order:

Contents checklist

You might also find it useful to complete the following checklist as you work your way through your portfolio. This will help you to see if you have included all the relevant items. Once you have completed your portfolio, you will be able to use this checklist again as a contents page, by inserting the relevant page or section numbers in the right hand column.

	Completed?	Page/Section number
Title page for the portfolio	☐	
Personal profile		
♦ your own personal details	☐	
♦ a brief CV or career profile	☐	
♦ description of your job	☐	
♦ information about your employer/training provider/college	☐	
Unit Assessment Plans	☐	
Unit progress record	☐	
Completed Element achievement records for each Unit		
♦ signed by yourself, your assessor and the internal verifier (where relevant)	☐	
♦ Evidence reference numbers included	☐	
Index of evidence (with cross-referencing information completed)	☐	
Evidence (with reference numbers)		
♦ observation records	☐	
♦ details of witnesses (witness testimony sheets)	☐	
♦ personal statements	☐	
♦ products of performance	☐	

Collecting your evidence

All of the evidence which you collect and present for assessment must be relevant to your SVQ. Your assessor will help you choose which pieces of evidence you should include.

We have provided blank forms in Section 4 of this document, which you can photocopy to help you record and present your evidence. Although we have provided you with sample forms, your centre may have their own recording documents which they would prefer you to use.

Some of these forms, eg **observation records** and the **record of questions and answers** will be completed by your assessor. Other forms (**witness testimonies**) will be used by people other than your assessor to testify that they have observed you doing your job, and there is one for you to complete called a **personal statement**.

Explanations are given below about how and when these forms should be used.

Observation record (Example 5)

The observation record is used by your assessor to record what tasks you have performed and to what standard. There is also a section for your assessor to note which other Units or Outcomes are covered by this evidence ('integration of assessment').

The assessor will discuss with you which Performance Criteria and Range you have successfully achieved and give you feedback. This form should then be given a reference number and included in your portfolio as part of your evidence.

Witness testimony (Example 6)

There may be occasions when your assessor is not available to observe you carrying out certain aspects of your job. In such instances, it may be appropriate for another person to comment about your performance by completing a statement called a 'witness testimony'.

Witness testimony should only be used as supporting evidence and should:

- be provided by a person, not related to you, who is in a position to make a valid comment about your performance, eg supervisor, line manager or possibly a client/customer
- contain comments which specifically relate your performance to the standards
- be authenticated by the inclusion of the witness's signature, role, address, telephone number and the date

It is unlikely that your assessor would make an assessment decision based on witness testimony alone. They would normally supplement this type of evidence with questioning.

Record of questions and candidate's answers (Example 7)

This form is used to record any questions which your assessor may ask, to establish whether you have the required level of Knowledge and Understanding associated with each Unit. There is also space on the form for your answers to be noted.

Personal statement (Example 4)

There will be times when you need to put a piece of your evidence in context for your assessor so that they can decide if it is relevant to your SVQ. You can complete personal statements to help you do this — these can relate either to the pieces of evidence or to each Outcome or Unit.

For example, you may refer to paperwork which is often used in your organisation to help you pass on information to a colleague. It may not be clear to an assessor why you are communicating to your colleague in this way and a brief explanation of the paperwork and why it is relevant to a particular part of your SVQ may be required.

A personal statement might also be used to record your experience of something, such as, how you handled a specific situation. This can be documented in your personal statement and should be a description of what you did, how you did it and why you did it. It will also allow you to include the people who were present and either assisted you or witnessed your actions. This, in turn, might identify who you should approach for 'witness testimony'. In your personal statement you could also refer to product evidence that you have produced (eg reports, notes, completed forms), these can also be included as evidence in your portfolio.

The personal statement can be a piece of evidence in itself and should therefore be included in your portfolio.

Presenting your evidence

It is important to present all of your evidence in a clear, consistent and legible manner. Your assessor will then find it much easier to make appropriate judgements about the quality, sufficiency and currency of the materials you are putting forward for consideration.

It is not necessary to produce all of your evidence in typewritten format — some hand-written pieces of evidence, such as notes, will be perfectly acceptable.

There may also be items of evidence which you cannot physically include in your portfolio. This might be for confidentiality reasons or it could be that something which you have produced as part of your day-to-day work is normally kept in a filing cabinet or stored electronically in a PC.

In compiling your portfolio, we suggest that anything you produce as part of your day-to-day work is kept in its normal location, but those pieces of evidence which have been produced specifically for your SVQ, eg witness testimony statements or personal statements, are filed in your portfolio. However, assessors and verifiers should be able to locate and access your evidence at all times. It is, therefore, very important that you clearly reference every item of evidence.

Referencing your evidence

Your assessor, as well as the internal and External Verifiers, will need to find their way around your portfolio, so you should give each piece of evidence a number.

Remember, that where you have used 'integration of assessment', you need to give details of all the Units and Elements which are linked to a specific piece of evidence. The links should be noted on the pieces of evidence themselves as well as on the index of evidence (cross-referencing).

How to complete the Index of evidence (Example 1)

You should complete an index of evidence sheet and file it immediately before the actual pieces of evidence in your portfolio.

The index of evidence should be completed by:

- entering the evidence number in the first column
- giving a brief description of each piece of evidence in the second column
- explaining where the evidence can be found in the third column

You must make sure that the information contained in the evidence index is accurate when you give your portfolio to your assessor, particularly in relation to where the evidence can be located.

Completing the Element achievement records (Example 3)

There is an Element achievement record for every Element within this portfolio. These records have been designed to allow you to record the evidence you have gathered for each Element. Each record has boxes across it which represents the Performance Criteria, Range Statement, Evidence Requirements and Knowledge and Understanding statement, these will differ from Element to Element so it is important to make sure you are using the right one. Whilst collecting your evidence you should use these grids to display the Performance Criteria, Range, Knowledge and Understanding and Evidence Requirement that piece of evidence relates to. In the first box write the evidence index number you have given to that piece of evidence. In the second box give a brief description of the evidence, then tick against the relevant Performance Criteria, Range, Evidence Requirements and Knowledge and Understanding.

Worked examples

To give you a clearer picture of how to compile your portfolio, you will find worked examples of the various forms over the next few pages. You should ask your assessor for further advice and support if you are still unsure about how to use the forms and who should complete them.

Index of evidence (Example 1)

SVQ title and level: Using IT at level 3

Evidence number	**Description of evidence**	**Included in portfolio (Yes/No) If no, state location**	**Sampled by the IV (initials and date)**
1	Action plan identifying customer requirements	Yes	
2	Personal statement	Yes	
3	Witness testimony	Yes	
4	Record of questions and answers	Yes	
5	Log of configuration details and errors	Yes	
6	Observation checklist	Yes	
7	Procedure for shutting down system	Yes	
8	Company media storage policy	No. Can be found with General Manager.	

Unit progress record (Example 2)

Qualification and level: **Using IT at level 3**

Candidate: Anne Thomas

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

Unit Checklist — circle the reference number of each Unit as you co

Circle the reference numbers as you complete each Unit. You can then easily see what stage you have reached in your SVQ.

Mandatory	206	301	302	303	308					
Optional	305	306	311	312	326	327				

Mandatory Units

Unit Number	Title	Assessor	Date
206	Ensure your own actions reduce risks to H&S		
301	Select and enable IT for use	P Jones	28/4/2000
302	Maintain the Software Environment	P Jones	28/4/2000
303	Develop and maintain the effectiveness of the IT working environment	P Jones	8/4/2000
308	Develop your own effectiveness and professionalism		

This section of the form is for your assessor to sign each time you successfully achieve a Unit.

Optional Units

305	Design and produce documents using WP software		
306	Design and produce spreadsheets		
311	Design and use databases		
312	Design and produce documents using graphics		
326	Design and produce presentations using IT		
327	Control the use of electronic communication		

Element achievement record (Example 3)

Unit title: **Select & enable IT for use**

Element: **301.1 Select and configure equipment for use**

Evidence Index No	Description of Evidence	Performance Criteria								Range			Knowledge and Understanding				
		a	b	c	d	e	f	g	h	1	2	3	K1	K2	K3	K4	K5
1	*Action Plan*	4	4			4				4							
2	*Personal Statement*	4	4			4				4							
3	*Copy of Legislation*			4	4							4					
5	*Record of Questions & Answers*	4	4	4		4				4	4	4					
6	*Log of Configuration Details*						4	4	4		4						

These numbers relate to your Evidence Index and will allow your assessor to find your evidence easily.

Give a brief description of the evidence you are offering for assessment against each Performance Criteria, Range and piece of Knowledge and Understanding.

As you collect your evidence for assessment you should tick the relevant boxes. There is a box which represents each Performance Criteria and Range in the Element.

Candidates should enter which areas of Knowledge and Understanding that piece of evidence covers.

Candidate: _____ Assessor: _____ IV: _____

Date: _____ Date: _____ Date: _____

Personal statement (Example 4)

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Units, Elements, PCs, and Range covered
4/4/00	1	Statement that I know and understand customer requirements. Names of customer and software and hardware requirements in portfolio. Statements that I understand how to set up, equipment, configure software that met customer requirements. Details of equipment and software with dates are listed in portfolio.	1	301.1.a,b,e Range 1

Candidate's signature: *Anne Thomas*

Date: *2/4/2010*

Observation Record (Example 5)

Unit/Element(s): (301) Select and Enable IT for Use

Candidate: *Anne Thomas* Date of observation: *28/4/2010*

Evidence index number: 8

Skills/activities observed:	**PCs and Range covered:**
Saving and storing files	Element 301.3 PCs: a-f Range: **materials** (consumables, removable storage media), **regulations** (current legislation, manufacturer's instructions, organisational procedures), **system** (application software, hardware, system software).

Knowledge and Understanding apparent from this observation:

Candidate can save and organise files. She can delete unwanted files and can shut down system according to organisation's procedures and manufacturer's instructions.

Other Units/Elements to which this evidence may contribute:

302.1.b,c Range 1,3

Assessor comments and feedback to candidate:

I can confirm the candidate's performance was satisfactory.

Assessor's signature: *Peter Jones* Date: *28/4/2010*

Candidate's signature: *Anne Thomas* Date: *28/4/2010*

Witness testimony (Example 6)

SVQ title and level: Using IT level 3

Candidate name: *Anne Thomas*

Evidence index no: 4

Where applicable, evidence number to which this testimony relates:

Element(s): 301.2 **Range:** 1

Date of evidence: 8/4/2000

Witness name: **Ian Cummings**

Designation/relationship to candidate: Line manager

Details of testimony:

I can attest that I observed Anne Thomas following company and national regulations in the use of software. She understands and has knowledge of these regulations and I observed her following them when selecting and configuring software.

I can confirm the candidate's evidence is authentic and accurate.

Witness signature: *Ian Cummings*

Name: **Ian Cummings**

Date: **8/4/2010**

Please tick the appropriate box:

☑ **A1/A2 or D32/D33 Award**

☑ **Familiar with the SVQ standards to which the candidate is working**

Record of questions and candidate's answers (Example 7)

Unit: 301 Select and enable IT for use	**Element(s)**: 1
Evidence index number: 5	

Circumstances of assessment:

As part of the staff induction scheme IT staff are regularly interviewed and asked about their knowledge and skills. Anne Thomas was interviewed on the 21 March 2010 and below is a summary of the interview where it relates to her knowledge of resources and problem solving.

List of questions and candidate's responses:

Q: If a member of staff asked you for a particular piece of equipment, what procedures would you follow?

A: I would ensure that a hardware requisition form has been filled out with the rational for needing such equipment, countersigned by their line and general managers. If approved, next step would be to ask the member of staff if they need specific training. Pc 301.1.a, b, e and Range 1,2,3.

Q: You discover that a member of staff has installed a piece of software on their workstation PC. What do you do?

A: If they installed it themselves then this is a serious breach of company regulations and I would inform the IT manager. I would then remove the software. Pc 301.1.c and Range 2, 3.

Assessor's signature:	*Davinder Singh*	Date:	21/3/2010
Candidate's signature:	*Anne Thomas*	Date:	21/3/2010

Section 3 — The Units and recording documents for your SVQ

Unit Progress Record

Qualification and level: Heating and Ventilating Ductwork Planning and Installation level 3

Candidate: _____

To achieve the whole qualification, you must prove competence in all **eight mandatory** Units.

It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

In a change to the previous system of one NOS Unit to one SVQ Unit, the SSC have introduced 'bite-sized' NOS. This means the SQA Unit number may not correspond to just one NOS Unit, but in some cases will correspond to a number of combined NOS Units. As a result each SSC NOS Unit does have a corresponding SQA Unit number. The table below indicates each SQA Unit and code before listing the NOS Units and codes that are required to complete it.

Mandatory Units ***(all Units in bold should be completed)***

SSC Unit Number	Title	Assessor	Internal Verifier	Date
Apply Health and Safety Legislation and Working Practices (Mechanical Services) — F9H3 04				
M1	Apply Health Safety Legislation and Working Practices			
Apply Environmental Legislation, Working Practices and Principles (Mechanical Services) — F9KH 04				
M2	Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)			

Prepare Work Locations — F9MR 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
Maintain Working Relationships and Oversee Work Activities — F7G2 04				
M3	Maintain Effective Working Relationships			
M4	Provide Relevant People with Technical and Functional Information			
M5	Oversee the Work Environment			
M6	Organise the Working Environment			
Install, Test and Pre-commission Ductwork Systems and Components — F9NE 04				
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M27	Commission Mechanical Systems			
Install, Test and Pre-commission Air Handling and Extraction Units — F9NF 04				
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M27	Commission Mechanical Systems			

Carry Out Work on Electrical Systems for the Control (and Supply) of Mechanical Services (Limited Scope) — F9H7 04				
M32	Establish Electrical Control (and Supply) of Mechanical Building Services Systems			
General Service and Maintenance of Ductwork Systems and Components — F9NG 04				
M24	Service and Maintain Ductwork Systems, Equipment and Components			

Unit Progress Record

Qualification and level: Heating and Ventilating Industrial and Commercial Installation level 3

Candidate: _____

To achieve the whole qualification, you must prove competence in all **eight mandatory** Units plus **one of four optional** Units.

It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

In a change to the previous system of one NOS Unit to one SVQ Unit, the SSC have introduced 'bite-sized' NOS. This means the SQA Unit number may not correspond to just one NOS Unit, but in some cases will correspond to a number of combined NOS Units. As a result each SSC NOS Unit does have a corresponding SQA Unit number. The table below indicates each SQA Unit and code before listing the NOS Units and codes that are required to complete it.

Mandatory Units *(all Units in bold should be completed)*

SSC Unit Number	Title	Assessor	Internal Verifier	Date
Apply Health and Safety Legislation and Working Practices (Mechanical Services) — F9H3 04				
M1	Apply Health Safety Legislation and Working Practices			
Apply Environmental Legislation, Working Practices and Principles (Mechanical Services) — F9KH 04				
M2	Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)			
Prepare Work Locations — F9MR 04				
M7	Prepare to Carry Out Work			
Maintain Working Relationships and Oversee Work Activities — F7G2 04				
M3	Maintain Effective Working Relationships			
M4	Provide Relevant People with Technical and Functional Information			

M5	Oversee the Work Environment			
M6	Organise the Working Environment			
Install, Test and Commission Hot and Cold Water Systems — F9NH 04				
M8	Identify Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M27	Commission Mechanical Systems			
Install, Test and Commission Larger Bore Heating Systems and Associated Plant and Equipment — F9NJ 04				
M8	Identify Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
Install, Test and Commission Chilled Water Services — F9NK 04				
M8	Identify Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			

Carry Out Work on Electrical Systems for the Control (and Supply) of Mechanical Services (Limited Scope) — F9H7 04				
M32	Establish Electrical Control (and Supply) of Mechanical Building Services Systems			

Optional Units: ***(candidates must achieve 1 of the following 4 Units which are in bold)***				
Install, Test and Commission Fuel Supply Systems — F9NL 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			
Install, Test and Commission Steam Systems — F9NM 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			

Install, Test and Commission Compressed Air Systems — F9NN 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			
Prepare and Undertake Specialist Pipe Jointing Methods and Proprietary Installation Systems — F9NP 04				
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M30	Prepare Resources for Pipe Jointing Activities			
M31	Connect Pipework			

Additional Extra Units (Optional)				
Install Test and Commission Fire Protection Systems — F9NR 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			
Install Test and Commission Warm Air Heating Systems — F9NT 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
M21	Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components			
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			

Unit Progress Record

Qualification and level: Service, Maintain and Commission Building Engineering Services level 3

Candidate: _____

To achieve the whole qualification, you must prove competence in all **five mandatory** Units plus any **three of five optional** Units.

It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

In a change to the previous system of one NOS Unit to one SVQ Unit, the SSC have introduced 'bite-sized' NOS. This means the SQA Unit number may not correspond to just one NOS Unit, but in some cases will correspond to a number of combined NOS Units. As a result each SSC NOS Unit does have a corresponding SQA Unit number. The table below indicates each SQA Unit and code before listing the NOS Units and codes that are required to complete it.

Mandatory Units *(all Units in bold should be completed)*

SSC Unit Number	Title	Assessor	Internal Verifier	Date
Apply Health and Safety Legislation and Working Practices (Mechanical Services) — F9H3 04				
M1	Apply Health Safety Legislation and Working Practices			
Apply Environmental Legislation, Working Practices and Principles (Mechanical Services) — F9KH 04				
M2	Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)			
Prepare Work Locations — F9MR 04				
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			

Maintain Working Relationships and Oversee Work Activities — F7G2 04				
M3	Maintain Effective Working Relationships			
M4	Provide Relevant People with Technical and Functional Information			
M5	Oversee the Work Environment			
M6	Organise the Working Environment			
Diagnose and Rectify Faults on Heating and Ventilating Electrical Systems — F9MW 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			

Optional Units: ***(candidates must achieve 3 of the following 5 Units which are in bold)***				
Diagnose and Rectify Faults on Hot and Cold Water Systems — F9MX 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
Diagnose and Rectify Faults on Heating Systems — F9MY 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			

M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
Diagnose and Rectify Faults on Ventilation Systems — F9N0 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			
Diagnose and Rectify Faults on Air Conditioning Systems — F9N2 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M27	Commission Mechanical Systems			
M19	Identify and Rectify Faults in Cooling Systems, Equipment and Components			
Diagnose and Rectify Faults on Fuel Supply Systems — F9N3 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M26	Decommission Heating and Ventilating Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			
M27	Commission Mechanical Systems			

Unit Progress Record

Qualification and level: Install, Commission and Maintain Refrigeration Systems level 3

Candidate: _____

To achieve the whole qualification, you must prove competence in all **eleven mandatory** Units.

It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

In a change to the previous system of one NOS Unit to one SVQ Unit, the SSC have introduced 'bite-sized' NOS. This means the SQA Unit number may not correspond to just one NOS Unit, but in some cases will correspond to a number of combined NOS Units. As a result each SSC NOS Unit does have a corresponding SQA Unit number. The table below indicates each SQA Unit and code before listing the NOS Units and codes that are required to complete it.

Mandatory Units *(all Units in bold should be completed)*

SSC Unit Number	Title	Assessor	Internal Verifier	Date
Apply Health and Safety Legislation and Working Practices (Mechanical Services) — F9H3 04				
M1	Apply Health Safety Legislation and Working Practices			
Apply Environmental Legislation, Working Practices and Principles (Mechanical Services) — F9KH 04				
M2	Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)			
Maintain Working Relationships and Oversee Work Activities — F7G2 04				
M3	Maintain Effective Working Relationships			
M4	Provide Relevant People with Technical and Functional Information			
M5	Oversee the Work Environment			

Plan and Prepare Work Locations — FY1V 04				
M6	Organise the Work Environment			
M7	Prepare to Carry Out Work			
M8	Identify Systems, Equipment and Components			
Install Refrigeration Systems and Components — FY1N 04				
M16	Fit and Fix Cooling Systems, Equipment and Components			
M18	Decommission Cooling Systems, Equipment and Components			
M19	Commission Cooling Systems, Equipment and Components			
Maintain Refrigeration Systems and Components — FY1T 04				
M17	Service and Maintain Cooling Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			
Safe Handling of Refrigerants — FY1X 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M18	Decommission Cooling Systems, Equipment and Components			
Prepare and Undertake Pipe Jointing — FY1W 04				
M30	Prepare Resources for Pipe Jointing Methods			
M31	Connect Pipework			

Carry Out Safe Electrical Working Practices — FY1F 04				
M33	Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems			
Inspect and Test Refrigeration Systems and Components — FY1K 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M20	Identify and Rectify Faults in Cooling Systems, Equipment and Components			
Identify and Rectify Faults in Refrigeration Systems, Equipment and Components — FY1H 04				
M20	Identify and Rectify Faults in Cooling Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			

Unit Progress Record

Qualification and level: Install, Commission and Maintain Air Conditioning Systems level 3

Candidate: _____

To achieve the whole qualification, you must prove competence in all **eleven mandatory** Units.

It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

In a change to the previous system of one NOS Unit to one SVQ Unit, the SSC have introduced 'bite-sized' NOS. This means the SQA Unit number may not correspond to just one NOS Unit, but in some cases will correspond to a number of combined NOS Units. As a result each SSC NOS Unit does have a corresponding SQA Unit number. The table below indicates each SQA Unit and code before listing the NOS Units and codes that are required to complete it.

Mandatory Units *(all Units in bold should be completed)*

SSC Unit Number	Title	Assessor	Internal Verifier	Date
Apply Health and Safety Legislation and Working Practices (Mechanical Services) — F9H3 04				
M1	Apply Health Safety Legislation and Working Practices			
Apply Environmental Legislation, Working Practices and Principles (Mechanical Services) — F9KH 04				
M2	Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)			
Maintain Working Relationships and Oversee Work Activities — F7G2 04				
M3	Maintain Effective Working Relationships			
M4	Provide Relevant People with Technical and Functional Information			
M5	Oversee the Work Environment			
Maintain Air Conditioning Systems and Components — FY1P 04				

M17	Service and Maintain Cooling Systems, Equipment and Components			
M12	Service and Maintain Mechanical Systems, Equipment and Components			
Plan and Prepare Work Locations — FY1V 04				
M7	Prepare to Carry Out Work			
M6	Organise the Work Environment			
M8	Identify Systems, Equipment and Components			
Install Air Conditioning Systems and Components — FY1L 04				
M16	Fit and Fix Cooling Systems, Equipment and Components			
M18	Decommission Cooling Systems, Equipment and Components			
M19	Commission Cooling Systems, Equipment and Components			
Inspect and Test Air Conditioning Systems and Components — FY1J 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M20	Identify and Rectify Faults in Cooling Systems, Equipment and Components			
Safe Handling of Refrigerants — FY1X 04				
M25	Inspect and Test Mechanical Systems, Equipment and Components			
M18	Decommission Cooling Systems, Equipment and Components			
Prepare and Undertake Pipe Jointing — FY1W 04				
M30	Prepare Resources for Pipe Jointing Methods			
M31	Connect Pipework			
Carry Out Safe Electrical Working Practices — FY1F 04				

M33	Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems			
Identify and Rectify Faults in Air Conditioning Systems, Equipment and Components — FY1G 04				
M20	Identify and Rectify Faults in Cooling Systems, Equipment and Components			
M28	Identify Faults in Mechanical Systems, Equipment and Components			
M29	Rectify and Modify Mechanical Systems, Equipment and Components			

Glossary of terms

Advisor	A person who carries out, either singly or in combination, the functions of advising a candidate, collecting evidence of his or her competence on behalf of the assessor and authenticating the work candidates have undertaken. A mentor might also provide witness testimony.
Assessment	The process of generating and collecting evidence of a candidate's performance and judging that evidence against defined criteria.
Authentication	The process by which an advisor or assessor confirms that an assessment has been undertaken by a candidate and that all regulations governing the assessment have been observed.
Candidate	The person enrolling for an SQA qualification.
Centre	The college, training organisation or workplace where SQA qualifications are delivered and assessed.
Element of competence	Statements which define the products of learning. The statements describe the activities that the candidate needs to perform in order to achieve the Unit. They contain Performance Criteria and sometimes statements on Range and evidence. (see Outcome).
Evidence	Materials the candidate has to provide as proof of his or her competence against specified Performance Criteria.
Evidence Requirements	Specify the evidence that must be gathered to show that the candidate has met the standards laid down in the Performance Criteria.
External Verifier	The person appointed by the SQA who is responsible for the quality assurance of a centre's provision. An external verifier is often appointed on a subject area basis or for cognate groups of Units.
Instrument of assessment	A means of generating evidence of the candidate's performance.
Internal verifier	The person appointed from within the centre who ensures that assessors apply the standards uniformly and consistently.

Observation	A means of assessment in which the candidate is observed carrying out tasks that reflect the Performance Criteria given in Outcomes.
Outcome	Statement which defines the products of learning. They describe the activities the candidate has to perform to achieve the Unit, and contain Performance Criteria and sometimes, statements on Range and evidence (see Elements of Competence).
Performance Criteria	Statements which describe the standard to which candidates must perform the activities which are stated in the Outcome.
Portfolio	A compilation of evidence which can form the basis for assessment. The portfolio is commonly used in SVQ awards and in alternative routes to assessment such as APL and credit transfer.
Product evaluation	A means of assessment which enables the quality of a product produced by the candidate, rather than the process of producing it, to be evaluated.
Range/Scope	A statement in the Unit which specifies the different contexts in which the activities described in the Outcome have to be demonstrated. Where they appear, Range/Scope Statements are mandatory.

Units for the SVQs in Heating and Ventilating level 3

UNIT M1 Apply Health and Safety Legislation and Working Practices

Unit Summary

This Unit is about maintaining a healthy and safe working environment across the range of installation or maintenance work, this involves being able to use safe procedures when working with others and use safe working practices.

The person carrying out this work must possess the skills and knowledge to ensure that their own actions do not create any health and safety risks, they do not ignore hazards with significant risk in the workplace and that they take sensible action to put things right.

There are many potential hazards within our industry. This Unit is designed to ensure that those that work within it are aware of the potential dangers, likely hazards and where to source: safety information, appropriate regulations and apply them to the workplace and the people who operate within it.

This Unit is about identifying the hazards and risks that are associated with the job. Typically these will focus on the working environment, the tools and equipment that are used, materials and substances that are used, working practices that do not follow laid-down procedures, and manual lifting and carrying techniques.

UNIT M1 Apply Health and Safety Legislation and Working Practices

Performance Criteria

The person carrying out this work must show that they:

1 Identify which workplace health and safety procedures are relevant to their working environment and ensure that they comply with their duties and obligations as defined by current, relevant legislation.
2 Present themselves in the workplace suitably prepared for the activities to be undertaken.
3 Where appropriate, produce a risk assessment and method statement for the work to be carried out.
4 Review their own working practices and working environment for hazards which could cause serious harm, including the handling of potentially hazardous materials, tools and equipment.
5 Follow the workplace policies and suppliers' or manufacturers' instructions for the safe use and maintenance of tools, plant and equipment.
6 Control those health and safety hazards within their capability and job responsibility limits.
7 Report to the relevant persons responsible for health and safety in the workplace, those hazards which may present a high risk.
8 Ensure personal conduct around the workplace does not endanger the health and safety of themselves or other persons.
9 Follow correct procedures in the event of injuries to self and others.
10 Take remedial action(s) where work methods do not comply with risk assessment requirements.
11 Demonstrate work processes, production and installation processes which comply with health and risk assessment safety requirements.
12 Comply with hazard warning and prohibition notices.

UNIT M1 Apply Health and Safety Legislation and Working Practices

Knowledge and Understanding

The person carrying out this work must know, understand and apply as appropriate:

(a) The roles and responsibilities of themselves and others under the Health and Safety at Work Act 1974 and other current legislation (eg The Management of Health and Safety at Work Regulations; Workplace Health and Safety and Welfare Regulations; Personal Protection at Work Regulations; Manual Handling Operations Regulations; Provision and Use of Work Equipment Regulations; Display Screen at Work Regulations; Construction (Design and Management) Regulations; Control of Noise at Work Regulations; Control of Asbestos Regulations 2006).

The person carrying out this work must know and understand:

(b) The particular health and safety risks which may be present in their own job role (the tools, materials and equipment that they use, not reporting accidental breakages of tools or equipment and not following laid-down working practices and procedures) and the requirements of current health and safety legislation for the range of work operations.
(c) How to recognise potential asbestos containing materials in the workplace.
(d) The procedures for dealing with a suspected presence of asbestos in the workplace.
(e) Public health concerns associated with their workplace.
(f) Safe practices when carrying out work.
(g) How to locate relevant health and safety information for their tasks, and the sources of expert assistance when help is needed.
(h) What constitutes a hazard in the workplace (such as electricity, slippery and uneven surfaces, dust and fumes, handling and transporting, contaminants and irritants, fire, working at height, environment, dangerous occurrences, hazardous malfunctions, improper use and storage of tools and equipment).
(i) The importance of remaining alert to the presence of hazards in the whole work place.
(j) The responsible persons to whom to report health and safety matters.
(k) Emergency procedures in the workplace, including procedures for summoning emergency services and the information they require, alarm and evacuation procedures, escape routes and fire fighting procedures.
(l) The first aid facilities that exist within their work area and within the organisation in general, and the procedures to be followed in the case of accidents involving injury.
(m) How to read, understand and work to, or produce, general risk assessments and method statements and how to apply them in the workplace.

Knowledge and Understanding (cont)

(n) The warning signs for the seven main groups of hazardous substances defined by Classification, Packaging and Labelling of Dangerous Substances Regulations.
(o) Safety precautions including the protective clothing and equipment that is available for their areas of activity.
(p) The methods of protecting customer's property within the types of locations in which installation or maintenance work is carried out and how to report damage arising from work operations, should this arise.

Important note: According to the Health and Safety at Work Act:

Employers must safeguard so far as is reasonably practicable, the health, safety and welfare at work of all the people who work for them and 'other persons'. This applies in particular to the provision and maintenance of safe plant and systems of work, and covers all machinery, equipment and substances used.

Employees also have a duty under the Act to take reasonable care to avoid harm to themselves or to others by their working practices, and to co-operate with employers and others in meeting statutory requirements. The Act also requires employees not to interfere with or misuse anything provided to protect their health, safety or welfare in compliance with the Act.

The Health and Safety at Work Act 1974 is the main piece of legislation under which nearly all the other regulations are made. It is for this reason that only this piece of legislation is specifically referred to in this Unit.

UNIT M1 Apply Health and Safety Legislation and Working Practices

		Performance Criteria												Knowledge and Understanding															
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	12	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

UNIT M1 Apply Health and Safety Legislation and Working Practices

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M2 Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)

Unit Summary

The Unit covers a key area which focuses on the need for the person carrying out the work to adopt a positive attitude to using practices and procedures which protect the environment and promote efficient use of resources.

The person carrying out this work should be aware of the implications for the environment of work processes, and procedures, and where the job specification permits, should ensure that materials used minimise risks to the environment.

The person completing the work should also be aware of appropriate environmental technologies and should be able to advise on how such technologies could be utilised.

They should be aware of how their work relates to the environment and that all waste materials produced as a result of their work and which are their responsibility to dispose of, are dealt with according to current, relevant legislation.

UNIT M2 Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)

Performance Criteria

The person carrying out this work must show that they:

1 Apply work procedures which are environmentally friendly.
2 In accordance with organisational procedures, identify and report materials, products or equipment that could potentially cause damage to the environment.
3 Ensure that relevant people are advised of all system or component operating procedures that are intended to protect the environment.
4 Handle potentially hazardous materials in a manner which complies with health and safety requirements.
5 Follow workplace procedures and current, relevant legislation for the safe handling, storage and disposal of hazardous materials and products.
6 Identify working practices that may harm the environment.

UNIT M2 Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)

Knowledge and Understanding

The person carrying out this work must know, understand and apply as appropriate:

(a) The current, relevant legislation for dealing with waste (eg The Controlled Waste Regulations; Packaging Regulations; The Waste Electrical and Electronic Equipment Regulations (WEEE); The Special Waste Regulations; The Hazardous Waste Regulations).

The person carrying out the work must know and understand:

(b) Where relevant, the Building Regulations (including energy efficiency requirements for new dwellings), the Code for Sustainable Homes, Water Supply Regulations.
(c) The potential implications for the environment of the work procedures used in installing or maintaining systems or components.
(d) Prefabrication and installation methods that reduce material wastage.
(e) The legislation or recommendations governing the safe use and disposal of hazardous materials.
(f) The materials and products that are classed as hazardous to the environment and how to identify them.
(g) Organisational procedures for the handling and disposal of hazardous materials and products.
(h) The materials and products that are classed as recyclable, how to identify them, and organisational procedures for dealing with them.
(i) The importance of reporting hazards to the environment that arise from work procedures within the scope of their area of responsibility and of ensuring that appropriate actions are taken.
(j) All relevant environmentally friendly materials, products and procedures.
(k) The possible uses and basic operating principles of environmental technologies including underfloor heating, solar hot water heating, heat pumps (ground and air source), biomass, combined heat and power (CHP), combined cooling heat and power (CCHP), rainwater harvesting, grey water recycling.
(l) The possible uses of other environmental technologies such as solar photo voltaic, wind energy systems, micro hydro.
(m) Where appropriate, the planning requirements for the integration of environmental technology within systems in new build situations and as additions to existing buildings.
(n) The importance of energy, and where relevant, water, efficiency considerations when selecting systems, equipment or components.
(o) The relevant information that needs to be passed to relevant people to ensure the correct and economical use of energy dependant systems.
(p) The general advice that can be given on methods of reducing waste of resources, and effecting savings, including environmental technologies.

UNIT M2 Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)

		Performance Criteria						Knowledge and Understanding															
No	**Description of Evidence**	1	2	3	4	5	6	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

UNIT M2 Apply Environmental Legislation, Working Practices and Principles (Mechanical Services)

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M3 Maintain Effective Working Relationships

Unit Summary

This Unit identifies the competences needed to contribute to the development and maintenance of positive working relationships with other people, in accordance with organisational requirements. It is about being positive and constructive in dealings with others, keeping others informed about work plans and activities that affect them by using effective communication skills.

This Unit covers the responsibilities required to comply with any policies of the organisation such as contributing to and maintaining positive working relationships with other people.

The person carrying out this work should know how they can develop and maintain positive working relationships with relevant people and understand the importance of appearance and behaviour, the feelings and expectations of others, including customers, and effective communications.

UNIT M3 Maintain Effective Working Relationships

Performance Criteria

The person carrying out this work must show that they:

1 Establish and maintain productive working relationships with relevant people, including dealing with disagreements in an amicable and constructive way, so that good relationships are maintained.
2 Identify and confirm the needs and expectations of their colleagues and, where appropriate, customers.
3 Greet others in an appropriate way that makes them feel valued and respected.
4 Keep others informed about work plans or activities which affect them or their work.
5 Respond effectively to requests for job information from relevant people.
6 Seek assistance from others in a polite and courteous way without causing undue disruption to normal working activities.
7 Respond promptly and willingly when others ask for help or information which fall within the limits of their own job responsibilities and capabilities, referring to the appropriate person when requests for assistance fall outside their area of responsibility.
8 Where appropriate, contribute actively to effective team working by co-operating with colleagues, using appropriate methods of communication.
9 Identify conflicts which may cause problems to productivity and promptly seek solutions from the responsible person.
10 Meet their organisation's standards for appearance and behaviour.

UNIT M3 Maintain Effective Working Relationships

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) Legislation regarding health and safety, data protection, equal opportunities and regulations that affect the way that products and services are delivered to customers.
(b) Industrial, organisational and professional codes of practice and ethical standards that apply.
(c) The actions that are necessary to begin, develop and maintain good working relationships.
(d) The principles of good working relationships, reasons why working relationships may break down and the action to take to resolve this.
(e) The importance of developing positive working relationships with relevant people and maintaining productivity — the effect on morale, productivity and company image.
(f) How to deal with problems that could have an adverse effect on relationships.
(g) How to respond to those with physical disabilities, learning difficulties and language differences (including dialects and accents).
(h) Their organisation's standards for appearance and behaviour.
(i) Their customers' rights including any contractual agreements they have with their organisation.
(j) The limits of their own authority, and when they need to seek agreement or permission from others, the roles and responsibilities of different individuals and the management structures within different organisations employing labour.
(k) Any organisational targets relevant to their job, their role in meeting them, and the consequences for their organisation if those targets are not met.
(l) How to communicate in a clear, polite, confident way, why this is important and the lines of communication that are available to them.
(m) The importance of considering and accepting the views and opinions of other people.
(n) The implications for their work and organisation of their own actions.
(o) The implications for their organisation of not being able to communicate effectively with others, including customers.
(p) The types of job information that may be required by others in the workplace, including, where relevant, the need to keep colleagues informed about their work when it might impact on theirs.
(q) How to use the key principles of good communication in work situations, including methods of confirming that the communication has been understood.

UNIT M3 Maintain Effective Working Relationships

		Performance Criteria										Knowledge and Understanding																
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q

UNIT M3 Maintain Effective Working Relationships

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M4 Provide Relevant People with Technical and Functional Information

Unit Summary

This Unit is for people who pass on technical or functional information relating to equipment and components on which they have been working. It is about supplying technical and functional information accurately on appropriate occasions or at handover with the right amount of detail, bearing in mind the level of awareness of the person receiving the information.

It is about identifying who should receive such information, at what level of detail.

It requires that the person carrying out the work complies with, and works within, the policies and procedures of their organisation, and reports any problems to an appropriate person, seeking guidance and instructions from others when necessary.

This Unit is about understanding the equipment and/or components and their operation to a depth adequate for carrying out effective familiarisation and demonstration procedures to the required standard.

It includes understanding the needs of a customer and assessing the customer's ability to operate the product. It is important that, where relevant, any Health & Safety aspects are explained to the customer, both for their own protection and for the safe operation of the equipment or components including how to isolate the equipment in the case of emergency and the appropriate contact details should they need further advice or help.

UNIT M4 Provide Relevant People with Technical and Functional Information

Performance Criteria

The person carrying out this work must show that they:

1 Identify the relevant people, such as customers, that need to be supplied with technical and functional information and ensure they have any other necessary information, such as safety information, how to isolate the product in case of emergency and the person's address or contact details for further advice or help.
2 Discuss, with the relevant people, the information they need in order for the systems, equipment or components to be operated safely and effectively.
3 Obtain from appropriate sources current and relevant information required for the work.
4 Pass on information in a timely, courteous and professional manner and in accordance with organisational procedures.
5 Confirm that the supplied product or equipment is the correct one or suitable for the purpose, working to its given specifications, meets the customers expectations and meets all the required safety standards.
6 Where relevant, explain and demonstrate the operation of the product to the customer.
7 Where relevant, ensure that the customer is able to operate the product and is aware of the necessary health and safety information and advice.
8 Clearly identify any unusual features of the condition of the system, equipment or component.
9 Where necessary, confirm that relevant people involved accept that the system or equipment is in a satisfactory condition for handover to take place.

UNIT M4 Provide Relevant People with Technical and Functional Information

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) Sources of technical and functional information such as the manufacturer, supplier or own organisation.
(b) Responsibilities and limitations in their job role with respect to supplying technical and functional information.
(c) The technical and functional information that they are providing and its implications for the operation of equipment and components.
(d) The organisational policy regarding the handover and demonstration of a product or equipment.
(e) Where appropriate, customer relations methods and procedures.
(f) Work site requirements (eg structural, services and ventilation).
(g) Product or equipment operation, controls, settings and adjustments.
(h) Waste disposal procedures at the work site.
(i) Alternative systems or equipment that could be more appropriate to the relevant person's needs.
(j) Which situations warrant written technical and functional information.
(k) The importance of providing information clearly, courteously and professionally.
(l) The safety implications and functional consequences of supplying inaccurate or incomplete information to the relevant person.
(m) Methods of checking the relevant person's understanding of the technical and non-technical information provided, including Health and Safety information.
(n) Where necessary, the organisational procedures for confirming and recording handover.

UNIT M4 Provide Relevant People with Technical and Functional Information

		Performance Criteria									Knowledge and Understanding													
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f	g	h	i	j	k	l	m	n

UNIT M4 Provide Relevant People with Technical and Functional Information

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M5 Oversee the Work Environment

Unit Summary

This Unit is about overseeing the work environment, which in some cases might involve overseeing the work other operative and/or contractors. The person carrying out this work is responsible for ensuring that the work is effectively co-ordinated in order to complete the work on time and to the specification.

The person carrying out this work should know the extent of their role and responsibilities, including understanding how best to motivate and communicate with others.

UNIT M5 Oversee the Work Environment

Performance Criteria

The person carrying out this work must show that they:

1 Produce a risk assessment and method statement for the work to be carried out.
2 Ensure the risk assessment and method statement includes others working in the area including work colleagues and any other operatives.
3 Where appropriate, allocate duties and responsibilities to operatives to make best use of their competence.
4 Where relevant, instruct the operatives about their duties and responsibilities clearly and concisely.
5 Ensure that all their communications are clear, accurate and appropriate to the situation.
6 Where relevant, ensure effective co-ordination with the work of other contractors.
7 Where relevant, monitor that the work of operatives is in accordance with working practices and is:
- ♦ safe and fit for purpose
- ♦ cost-effective
- ♦ within the programme of work and complies with industry standards

8 Ensure that safe and appropriate action is taken promptly where a non-compliance is identified during the programme of work.
9 Ensure that all documentation is in accordance with the operations and organisational requirements and is legible, accurate and timely.
10 Liaise with the responsible person to resolve issues which are outside the scope of their job role.
11 Ensure that the work on completion is safe, complies with both the work specification and industry standards.

UNIT M5 Oversee the Work Environment

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) Their role and responsibilities (eg Health and Safety) towards other staff, employer, customers, any sub-contractors and, where appropriate, when supervising others.
(b) Safety requirements with regard to others and their ability to re-schedule work to co-ordinate with their requirements.
(c) How to interpret a risk assessment, apply a method statement, and monitor changing conditions in the workplace.
(d) Different styles of supervision, how to best motivate others and, where appropriate, oversee the work of operatives for whom they are responsible.
(e) Where relevant, how to identify the competence of the operatives for whom they are responsible.
(f) Where relevant, how to plan the work allocations, duties and responsibilities of operatives for whom they are responsible.
(g) How to communicate with others including operatives and, where appropriate, other staff, employer, customers and any sub-contractors.
(h) How to be effective when communicating with and responding to others.
(i) The scope for carrying out the work whilst maintaining safety, cost effectiveness and remaining within the programme of work.
(j) The relevant industry standards for work carried out in operations.
(k) Organisational requirements for completing the necessary documentation and how to ensure clarity, accuracy and completion within schedule.
(l) How to identify that the operation on completion is safe and complies with industry standards.

UNIT M5 Oversee the Work Environment

		Performance Criteria											Knowledge and Understanding											
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	a	b	c	d	e	f	g	h	i	j	k	l

UNIT M5 Oversee the Work Environment

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M6 Organise the Working Environment

Unit Summary

This Unit is about managing the working environment. It involves discussing with the relevant people a programme of work and estimating the amount of time the work should take to complete.

The person carrying out the work should identify and organise the appropriate resources for the work to be carried out, including identifying suitable alternatives when the most appropriate resources are not available. It also involves ensuring that equipment and components are in a condition fit for the installation or maintenance to be carried out.

This Unit also covers ensuring that work is carried out safely and in accordance with the programme of work and industry standards, and making sure that all relevant documentation is completed accurately.

UNIT M6 Organise the Working Environment

Performance Criteria

The person carrying out this work must show that they:

1 Identify from the work specification what resources (such as materials, plant, vehicles or equipment) are required in order to carry out the work efficiently and, where necessary, identify suitable alternatives.
2 Discuss and agree a programme of work which includes, where necessary, effective co-ordination with the work of other contractors and make an accurate estimate of the time the job should take to complete.
3 Ensure that all their communications are clear, accurate and appropriate to the situation.
4 Confirm that the required amount and type of materials are available for work to commence and be completed cost effectively.
5 Ensure that all resources are delivered on time and undamaged by transportation.
6 Where appropriate, ensure that there is sufficient and appropriate provision for the safe storage of materials and equipment in the work location.
7 Ensure that all documentation is completed in accordance with the operations and organisational requirements and is legible, accurate and timely.
8 Liaise with the responsible person to resolve issues which are outside the scope of their job role.
9 Ensure that the work on completion is safe, complies with both the work specification and industry standards.

UNIT M6 Organise the Working Environment

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) Their responsibilities to their employer and to their customer.
(b) The scope, purpose and requirements of the work operations with which they are involved and for which they are responsible.
(c) How to interpret a method statement, a risk assessment and monitor changing conditions in the workplace.
(d) How to interpret the work specification to identify the required resources (such as materials, plant, vehicles or equipment).
(e) How to estimate the amount of time for completion of the work and the factors to take into account.
(f) How to identify and agree a programme of work from the work specification.
(g) How to communicate with others clearly and concisely.
(h) The material schedule and how to confirm they have the right type and quantity for work to commence and be completed cost-efficiently.
(i) Suitable alternative resources (such as tools, materials, equipment and components).
(j) The transport and storage requirements for all materials and how to manage the available storage in the work location.
(k) Organisational requirements for completing the necessary documentation and how to ensure clarity, accuracy and completion within schedule.
(l) The relevant industry standards for work carried out in operations.
(m) The scope for carrying out the work whilst maintaining safety, cost effectiveness and remaining within the programme of work.
(n) The possible consequences of not carrying out the work within the estimated time and to the programme of work.
(o) Their job role and its scope and when to involve someone with higher responsibilities.
(p) How to identify that the operation on completion is safe and complies with industry standards.

UNIT M6 Organise the Working Environment

		Performance Criteria									Knowledge and Understanding															
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

UNIT M6 Organise the Working Environment

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M7 Prepare to Carry Out Work

Unit Summary

This Unit is for people who make the preparations prior to work being conducted and is relevant to those who prepare for both installation and service and maintenance work.

The person carrying out this work must review the work location to ensure that it is safe for the work to be carried out and that all of the necessary checks and tests have been conducted. This includes checking the work location for any existing damage or defects prior to commencement of the work.

The person carrying out this work must ensure that all the necessary preparations are made so that the work can take place safely and in accordance with current industry standards and regulations.

UNIT M7 Prepare to Carry Out Work

Performance Criteria

The person carrying out this work must show that they:

1 Carry out a review of the work location and identify factors which will impact on the work.
2 Ensure that job information and documentation is current and relevant and that, where relevant, their plant, instrument, equipments, tools and data are fit for purpose, and are of the correct quantity, and size.
3 Identify from job information the point(s) within the work process where liaison with other persons will be necessary and identify whom these persons will be.
4 Confirm that the relevant people have job information on all key aspects of the work process.
5 Seek authorisation from the relevant person(s) prior to commencing work that it is safe to undertake the work as specified.
6 Ensure that safety provisions within the immediate work location, including access to it, conform to the requirements of health and safety legislation.
7 Report to the job supervisor, or line manager any pre-work damage or defects to existing equipment or building features and confirm that this existed prior to the work commencing.
8 Wear suitable personal protective equipment throughout preparation activities.
9 Check the external condition of materials for any damage and the quantity against relevant paperwork.
10 Carry out preparatory work as necessary.

UNIT M7 Prepare to Carry Out Work

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The legal duties of employers and employees for health and safety as required by the Health and Safety at Work Act 1974 and other relevant legislation appropriate to the work location (eg EAWR, Wiring Regulations, COSHH, CDM and Building Regulations).
(b) The regulations and working practices that will affect the work activity such as regulations governing design, installation, operation and routine maintenance, and their intended function.
(c) How to carry out an assessment of risks and plan a safe system of work with regard to the work activity.
(d) The importance of checking that the work location is safe with regard to access, others working in that location and that permits to work are provided where required.
(e) The importance of carrying out visual inspections and tests as well as reviewing the work location for planning purposes to determine the work requirements.
(f) The importance of wearing appropriate personal protective equipment (PPE).
(g) How to ensure that the customer is fully briefed on all aspects of the work programme.
(h) The importance of protecting property prior to starting work and identifying pre-existing damage to property and building fabric.
(i) Whether tools are fit for purpose and that they have a current calibration certificate.
(j) How to calculate resource requirements for materials, tools and other equipment.
(k) Secure storage procedures for tools, equipment, materials and components — basic stores procedures to ensure security and to minimise loss or wastage.
(l) The implications of different working conditions on the equipment and components and/or system.

UNIT M7 Prepare to Carry Out Work

		Performance Criteria										Knowledge and Understanding											
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	a	b	c	d	e	f	g	h	i	j	k	l

UNIT M7 Prepare to Carry Out Work

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M8 Identify Systems, Equipment and Components

Unit Summary

This Unit is about dealing with a customer identifying their requirements and providing commercially acceptable solutions to them. It covers making changes and alterations required by the customer throughout the work.

It is about assessing the implications, impact and feasibility of alterations and changes to the system.

This Unit is also about recognising when variations to the work programme are necessary and knowing how to go about agreeing these, and the relevant people with which to liaise.

UNIT M8 Identify Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Identify and record the customer job requirements.
2 Obtain and record information on the work location and features.
3 Identify any areas of the proposed system or components where compliance with industry requirements is necessary.
4 Identify alternative system options, including environmental technologies, and taking into consideration factors such as efficiency (eg energy or water).
5 Explain clearly to relevant people system options which meet identified requirements and those which offer additional benefits such as energy or water efficiency.
6 Obtain customer agreement to the proposal.
7 Carry out and apply relevant calculations to determine system component requirements.
8 Present the system proposal in a manner which enables customer agreement.
9 Confirm that the completed system meets requirements.
10 Inform the relevant person(s) immediately when changes are necessary before work can commence.
11 Record and agree with the relevant person, necessary changes to the work that have cost implications and act on those changes as appropriate.

UNIT M8 Identify Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) How to obtain information from site drawings and plans.
(b) How to carry out a review of the location.
(c) The range of documentation detailing industry requirements.
(d) How to identify possible proposals which meet the following: customer requirements, site structures and features, and industry requirements.
(e) The range of environmentally friendly materials, products, procedures and energy saving devices applicable to their work and the benefits of their use.
(f) How to obtain agreement from the customer to progress a selected system proposal.
(g) The range of job information that is required to develop proposals for work on new buildings and existing properties.
(h) Positioning requirements for components within systems and standard system layouts.
(i) How to calculate the requirements of system components — size and specification.
(j) Methods of presenting information to customers through the use of drawings, specifications and quotations.
(k) The authority and organisational procedures at the site relevant to work plans and changes to the work plans.
(l) How to negotiate variations to work programmes, under what circumstances this might be necessary and the need to obtain written acceptance to major work or material variations and the organisational requirements for reporting changes.

UNIT M8 Identify Systems, Equipment and Components

		Performance Criteria											Knowledge and Understanding											
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	a	b	c	d	e	f	g	h	i	j	k	l

UNIT M8 Identify Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M12 Service and Maintain Mechanical Systems, Equipment and Components

Unit Summary

This Unit is about what is required to service and maintain a range of systems and components in order to satisfy industry requirements.

The person carrying out this work must be able to undertake servicing of appliances for the different systems.

They are expected to establish the service and maintenance requirements for the systems and components and carry out service and maintenance of systems and components.

They must be able to service and maintain a range of systems and components, follow instructions and job information, and complete accurate service and maintenance records and schedules.

UNIT M12 Service and Maintain Mechanical Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Carry out service and maintenance activities using procedures which comply with industry requirements.
2 Service and maintain system components to ensure continued effective operation of the system.
3 Complete records to provide an accurate history of the service and maintenance of system components.

UNIT M12 Service and Maintain Mechanical Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) How to use performance specifications for systems and components, and maintenance procedures necessary to restore or maintain the continued performance of systems and components.
(b) The maintenance procedures necessary to ensure compliance with industry requirements for routine and non-routine service and maintenance activities.
(c) How to complete records and reports of the maintenance of systems and components.
(d) The action to take when the system or component does not work to full performance specification.

UNIT M12 Service and Maintain Mechanical Systems, Equipment and Components

		Performance Criteria			Knowledge and Understanding			
No	**Description of Evidence**	1	2	3	a	b	c	d

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M16 Fit and Fix Cooling Systems, Equipment and Components

Unit Summary

This Unit is about assembling, fitting and fixing cooling systems, equipment and components and involves the ability to make on site decisions, in some cases involving the work of others.

The person carrying out this work must follow industry requirements when conducting the installation activity and ensure that they take the appropriate precautions to avoid causing damage and the customer's property.

This Unit is also about working with different types of customer and liaising with clients.

UNIT M16 Fit and Fix Cooling Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Confirm that the materials, tools and equipment required for the installation processes are fit for their intended purpose.
2 Ensure that arrangements are in place for accessing the work area safely.
3 Assemble system components using work methods that conform to industry requirements.
4 Position system components to conform to the system design requirement.
5 Fix system components using methods that conform to industry requirements.
6 Connect system components to systems and input services using methods that meet industry requirements.
7 Install systems, equipment or components including control and safety equipment in the correct position.
8 Adjust, as appropriate, safety and control features.
9 Carry out the installation processes following industry requirements while minimising damage to customer property and building features.
10 Carry out a visual and manual inspection of the system in accordance with relevant standards.
11 Report to the immediate job supervisor, line manager (or customer) circumstances that affect the progress of the installation in line with industry requirements.
12 Take precautionary actions to prevent the unauthorised use of un-commissioned systems and components.

UNIT M16 Fit and Fix Cooling Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) How to measure and record installation and site details for prefabrication purposes.
(b) The industry practices and work standards for fabricating and installing system components.
(c) The positioning and fixing requirements for system components which conform to the system design and intended functions.
(d) How to safely access the work area.
(e) The procedures required for connecting to input services or connecting pipework into existing systems.
(f) Methods of working which protect the building décor, customer property and existing systems or components.
(g) Job management structures and methods of reporting and recording job progress or problems delaying progress.
(h) The care and maintenance requirements of tools and equipment, and checks for safe conditions.
(i) The range of tests used to confirm the soundness of systems and components and how to use the range of soundness testing equipment.
(j) The precautionary actions required during installation and testing.
(k) The basic operation of the system and equipment and the risks of leakage associated with it.
(l) The potential leakage points in systems equipment.
(m) The function and operation of the main components in the system and their role and importance for refrigeration leakage prevention and identification.
(n) Basic ISO standards relevant to the system or installation.
(o) Basic theory of refrigeration and/or air conditioning systems including thermodynamics.
(p) The requirements of EU and UK regulation concerning refrigeration and air conditioning, such as F Gas.

UNIT M16 Fit and Fix Cooling Systems, Equipment and Components

		Performance Criteria												Knowledge and Understanding															
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	12	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

UNIT M16 Fit and Fix Cooling Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M17 Service and Maintain Cooling Systems, Equipment and Components

Unit Summary

This Unit is about carrying both planned maintenance and breakdown service. It involves carrying out the work in a variety of contexts and taking on site decisions. In some situations the person carrying out the work will be responsible for the work of others.

UNIT M17 Service and Maintain Cooling Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Confirm that the information necessary to service and maintain systems and components is available, read and understood.
2 Identify the activities that make up the maintenance schedule for the systems and components.
3 Plan service and maintenance work on the systems and components to minimise the disruption of system operation.
4 Confirm that all materials, tools and equipment necessary for the service and maintenance activities will be available as required.
5 Liaise with other persons at appropriate points within the maintenance activities to minimise disruption to work routines.
6 Confirm that maintenance activities comply with industry requirements and use procedures in line with these requirements.
7 Carry out a visual and manual inspection of the system in accordance with relevant standards.
8 Examine equipment records to check for leakage and identify relevant information on any repeating or problem areas.
9 Use tables and diagrams to monitor the performance of the system and check for indirect leaks.
10 Identify any problems in the functioning of the equipment that could damage the system or lead to refrigerant leakage, should no action be taken.
11 Service and maintain system and components to ensure continued effective operation of the system.
12 Adjust, as appropriate, safety and control features.
13 Complete records to provide an accurate history of the service and maintenance of system components.

UNIT M17 Service and Maintain Cooling Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The range of information that should be available on the routine and non-routine service and maintenance requirements of systems and components.
(b) The basic operation of the system and equipment and the risks of leakage associated with it.
(c) The potential leakage points in systems equipment.
(d) The function and operation of the main components in the system and their role and importance for refrigeration leakage prevention and identification.
(e) Basic ISO standards relevant to the system or installation.
(f) Basic theory of refrigeration and/or air conditioning systems including thermodynamics.
(g) The requirements of EU and UK regulation concerning refrigeration and air conditioning, such as F Gas.
(h) The service and maintenance procedures across the range of systems and components.
(i) How to plan service and maintenance procedures to minimise interference with system operation and customer routines.
(j) How and when to liaise with others during service and maintenance activities.
(k) The materials required for routine maintenance and the sources of information on the materials required for structured servicing operations.
(l) The tools and equipment required for routine maintenance and structured servicing operations.
(m) How to use performance specifications for systems and components and the service and maintenance procedures necessary to restore or maintain the continued performance of systems and components.
(n) The service and maintenance procedures necessary to ensure compliance with industry requirements for routine and non-routine service and maintenance activities.
(o) How to complete records and reports on the service and maintenance of systems and components.
(p) The action to take when the system or component does not work to full performance specification.

UNIT M17 Service and Maintain Cooling Systems, Equipment and Components

		Performance Criteria													Knowledge and Understanding															
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	12	13	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M18 Decommission Cooling Systems, Equipment and Components

Unit Summary

This Unit is about decommissioning systems and involves making arrangements with the persons responsible for the work location for the safe recovery and disposal of system fluids and components. The person carrying out the work must be aware of the effect isolating part of a system has on the full system.

UNIT M18 Decommission Cooling Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Liaise with other persons at appropriate points within the commissioning process to minimise disturbance to work routines.
2 Check that conditions within the systems or components will permit safe de-commissioning.
3 Identify any problems in the functioning of the equipment that could damage the system or lead to refrigerant leakage, should no action be taken.
4 Decommission systems or components using tests and procedures that comply with industry requirements.
5 Take precautionary actions to ensure that decommissioned systems or components do not prove a safety hazard.

UNIT M18 Decommission Cooling Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The importance of confirming the system design, specification, functions and outcomes of suspending the operation of the system.
(b) The basic operation of the system and equipment and the risks of leakage associated.
(c) The potential leakage points in systems equipment.
(d) The function and operation of the main components in the system and their role and importance for refrigeration leakage prevention and identification with it.
(e) Basic ISO standards relevant to the system or installation.
(f) Basic theory of refrigeration and/or air conditioning systems including thermodynamics.
(g) The requirements of EU and UK regulation concerning refrigeration and air conditioning, such as F Gas.
(h) The need to liaise with others whose procedures or routines may be affected by the suspension of the system operation.
(i) The potential hazards that could arise from de-commissioning activities and the checks to be carried out before de-commissioning takes place.
(j) De-commissioning procedures for temporary and permanent de-commissioning of systems.
(k) The precautions to ensure that de-commissioned systems do not prove a safety hazard — measures to prevent systems being brought into operation — safety and warning notices.
(l) How to safely collect and dispose of system contents that may be hazardous to health or the environment.
(m) How to complete systems de-commissioning records.

UNIT M18 Decommission Cooling Systems, Equipment and Components

		Performance Criteria					Knowledge and Understanding												
No	**Description of Evidence**	1	2	3	4	5	a	b	c	d	e	f	g	h	i	j	k	l	m

UNIT M18 Decommission Cooling Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M19 Commission Cooling Systems, Equipment and Components

Unit Summary

This Unit is about checking that components are installed correctly, bringing the system into operation and ensuring that it operates effectively. It applies to a range of contexts that will in some cases involve responsibility for the work of others.

UNIT M19 Commission Cooling Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Ensure that the design requirement on the system or component performance is available.
2 Liaise with other persons at appropriate points within the commissioning process to minimise disturbance to work routines.
3 Carry out a visual and manual inspection of the system in accordance with relevant standards.
4 Check the correct function of system or components against performance requirements.
5 Carry out relevant tests to check the strength and tightness of the system, using appropriate methods and equipment.
6 Adjust, as appropriate, safety and system controls to establish system or component meet design specification.
7 Start up and shut down the system and check that the system or equipment is functioning correctly.
8 Provide the customer with information necessary to the continuing operation of the system or component.

UNIT M19 Commission Cooling Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The sources of information on the performance of systems or components.
(b) The basic operation of the system and equipment and the risks of leakage associated.
(c) The potential leakage points in systems equipment.
(d) The function and operation of the main components in the system and their role and importance for refrigeration leakage prevention and identification with it.
(e) Basic ISO standards relevant to the system or installation.
(f) Basic theory of refrigeration and/or air conditioning systems including thermodynamics.
(g) The requirements of EU and UK regulation concerning refrigeration and air conditioning, such as F Gas.
(h) The procedures for establishing correct system or component performance and checking against the design specification.
(i) The routines and sequences for commissioning systems or components.
(j) The points in the commissioning process where co-operation and liaison with other trades and customers may be required.
(k) Sources of user information appropriate to different systems and components.
(l) How to complete commissioning documentation confirming the safe commissioning of systems and components.
(m) System handover procedures and demonstrating the operation of systems and components to end-users.
(n) The actions to take when components being commissioned do not meet design requirements.

UNIT M19 Commission Cooling Systems, Equipment and Components

		Performance Criteria								Knowledge and Understanding													
No	**Description of Evidence**	1	2	3	4	5	6	7	8	a	b	c	d	e	f	g	h	i	j	k	l	m	n

UNIT M19 Commission Cooling Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M20 Identify and Rectify Faults in Cooling Systems, Equipment and Components

Unit Summary

This Unit is about identifying and rectifying faults in a range of systems. It involves diagnosing mechanical faults with the systems and electrical faults within the main systems including both the main electrical isolator and electronic components.

It will involve liaising with different types of customer and a range of clients.

UNIT M20 Identify and Rectify Faults in Cooling Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Diagnose faults in systems or components using procedures that comply with industry requirements.
2 Liaise with other persons to agree fault rectification procedures which will minimise disruption to work routines.
3 Rectify faults in systems to restore the systems or components function to performance specification.
4 Take precautionary actions to prevent the unauthorised use of unsafe systems or components.

UNIT M20 Identify and Rectify Faults in Cooling Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) How to interpret information on system or component performance in order to locate faults, including feedback from users, visual inspections, checks or diagnostic tests.
(b) The work procedures for the rectification of faults in systems or components, which will ensure minimum disruption to customers and routines.
(c) How to liaise with others to ensure co-operation in the fault rectification process.
(d) The work actions and sequences required to rectify faults in systems and components.
(e) The measures to ensure that systems do not present a safety hazard to potential users, or damage the workplace environment, when carrying out rectification procedures.
(f) The actions to be taken when the system or component cannot be restored to full performance.
(g) How to isolate unsafe systems and components.

UNIT M20 Identify and Rectify Faults in Cooling Systems, Equipment and Components

		Performance Criteria				Knowledge and Understanding						
No	**Description of Evidence**	1	2	3	4	a	b	c	d	e	f	g

UNIT M20 Identify and Rectify Faults in Cooling Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M21 Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components

Unit Summary

This Unit is about installing heating systems and components and involves conducting the appropriate soundness testing of systems and components, and the appropriate specified testing procedures during or after the installation of components.

The person carrying out the work must understand how various components relate to each other within the systems being installed.

UNIT M21 Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Confirm that the customer is aware that job information on all key aspects of the installation process is available.
2 Confirm that all materials, tools and equipment necessary for the installation process will be available as required.
3 Arrange safe storage provision for materials, tools and equipment, which meet industry requirements.
4 Confirm that all preparatory work to meet the installation requirements of systems and components has been carried out.
5 Confirm that the materials, tools and equipment required for the installation processes are fit for their intended purpose.
6 Assemble system components using work methods that conform to industry requirements.
7 Position system components to conform to the system design requirement.
8 Fix system components using methods that conform to industry requirements.
9 Connect system components to systems and input service connections using methods that meet industry requirements.
10 Carry out the installation processes in line with industry requirements, minimising damage to customer property and building features.
11 Report to the immediate job supervisor, line manager or customer in accordance with industry requirements any circumstances that affect the progress of the installation.
12 Confirm the integrity of the installed system using specified testing procedures.
13 Take precautionary actions to prevent the unauthorised use of un-commissioned systems and components.

UNIT M21 Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) How to measure and record site details for installation purposes.
(b) The industry practices and work standards for installing system components.
(c) The positioning and fixing requirements for system components which conform to the system design and intended functions.
(d) The procedures required for connecting to input services or connecting into existing systems.
(e) Methods of working which protect the building fabric, customer property and existing systems or components.
(f) Job management structures and methods of reporting and recording job progress or problems delaying progress.
(g) The care and maintenance requirements of tools and equipment, and the checks required to confirm they are in a safe condition.
(h) The range of tests used to confirm the soundness of systems and components and how to use the range of specified testing procedures.
(i) What precautionary actions are required during installation and testing.

UNIT M21 Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components

		Performance Criteria													Knowledge and Understanding								
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	12	13	a	b	c	d	e	f	g	h	i

UNIT M21 Install Industrial and Commercial Heating and Ventilating Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M24 Service and Maintain Ductwork Systems, Equipment and Components

Unit Summary

This Unit is about what is required to service and maintain ductwork systems and components in order to satisfy industry requirements.

It involves the cleaning and maintenance of ductwork and ductwork ancillaries.

The person carrying out the maintenance must be able to maintain a range of systems and components, following instructions and job information, and complete accurate maintenance records and schedules.

UNIT M24 Service and Maintain Ductwork Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Carry out maintenance activities using procedures which comply with industry requirements.
2 Service and maintain system components to ensure continued effective operation of the system.
3 Complete records to provide an accurate history of the maintenance of system or component.

UNIT M24 Service and Maintain Ductwork Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) How to use performance specifications for systems and components and the service and maintenance procedures necessary to restore or maintain the continued performance of systems and components.
(b) The service and maintenance procedures necessary to ensure compliance with industry requirements for routine and non-routine service and maintenance activities, including:
- ♦ the function of turning fan blades and operating fire dampers
- ♦ requirements for checking and maintaining turning valves

(c) How to complete records and reports of the service and maintenance of systems and components.
(d) The action to take when the system or component does not work to full performance specification.
(e) The importance of minimising disruption to the customer.

UNIT M24 Service and Maintain Ductwork Systems, Equipment and Components

		Performance Criteria			Knowledge and Understanding				
No	**Description of Evidence**	1	2	3	a	b	c	d	e

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M25 Inspect and Test Mechanical Systems, Equipment and Components

Unit Summary

This Unit is about carrying out pre-commissioning checks and tests on systems.

The person carrying out the work must be able to undertake the various checks and tests necessary before the system is brought into operation.

They are required to check the operation and correct position of components. They must also carry out tests to ensure there are no leaks and undertake cleaning or flushing of the system.

In the case of ductwork, there is a specified, permissible level of air leakage.

It is important that they are aware of the effect that isolating part of a system has on the full system.

UNIT M25 Inspect and Test Mechanical Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Confirm that the system or components installation complies with industry requirements.
2 Check that input services to the system components are suited to their intended purpose.
3 Check system or components for soundness using procedures that comply with industry requirements.
4 Carry out pre-commissioning tests and checks in accordance with industry requirements.
5 Check that the system cleanliness, additives and charging comply with industry requirements.

UNIT M25 Inspect and Test Mechanical Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The procedures, equipment and legislative requirements for applying specified tests to systems.
(b) The methods of establishing that input services adequately supply all components within the system.
(c) The methods of connecting components to systems.
(d) The actions to take where pre-commissioning checks or tests reveal basic or complex system or component defects.
(e) How to complete pre-commissioning documentation confirming the safe pre-commissioning of systems and components.

UNIT M25 Inspect and Test Mechanical Systems, Equipment and Components

		Performance Criteria					Knowledge and Understanding				
No	**Description of Evidence**	1	2	3	4	5	a	b	c	d	e

UNIT M25 Inspect and Test Mechanical Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M26 Decommission Heating and Ventilating Systems, Equipment and Components

Unit Summary

This Unit is about de-commissioning systems, ready for further work or long-term isolation. If the system is to be permanently de-commissioned, this may involve the removal of components.

The person carrying out the work is also required to make arrangements with users of the work location and ensure their safety throughout the process.

UNIT M26 Decommission Heating and Ventilating Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Liaise with other persons at appropriate points within the de-commissioning process to minimise disturbance to work routines.
2 Check that conditions within the systems or components will permit safe de-commissioning.
3 De-commission systems or components using tests and procedures which comply with industry requirements.
4 Take precautionary actions to ensure that de-commissioned systems or components do not prove a safety hazard.
5 Check that the de-commissioned systems and components are left safe, in line with industry requirements.

UNIT M26 Decommission Heating and Ventilating Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The importance of confirming the system functions, and the outcomes of suspending the operation of the system.
(b) The need to liaise with others whose procedures or routines may be affected by the suspension of the system operation.
(c) The potential hazards that could arise from de-commissioning activities and the checks to be carried out before de-commissioning takes place.
(d) De-commissioning procedures for temporary and permanent de-commissioning of systems, including organisational requirements.
(e) The precautions to ensure that de-commissioned systems do not prove a safety hazard, and the necessary measures to prevent systems being brought into operation, including using the correct safety and warning notices.
(f) How to safely collect and dispose of system contents that may be hazardous to health or harmful to the environment.
(g) How to complete systems de-commissioning records.
(h) System contents requiring recovery for re-use or disposal.
(i) The operating and working principles of the system to be decommissioned.
(j) What action to take when normal emptying or shut off mechanisms do not operate.

UNIT M26 Decommission Heating and Ventilating Systems, Equipment and Components

		Performance Criteria					Knowledge and Understanding									
No	**Description of Evidence**	1	2	3	4	5	a	b	c	d	e	f	g	h	i	j

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M27 Commission Mechanical Systems

Unit Summary

This Unit is about commission systems following the appropriate pre-commissioning tests and checks being carried out.

It is about bringing the system into operation and ensuring it operates effectively as intended.

The person carrying out this work is required to check that components are installed correctly, ensure there are no leaks and undertake cleaning and flushing.

For ductwork there is a specified permissible level of air leakage. It is not intended that they meet the demands of commissioning specialists. As a guide, they should be able to operate on heating systems with an input of up to 60kW for domestic installation and 150kW for industrial and commercial.

It is important that they are aware of the effect that isolating part of a system has on the full system.

UNIT M27 Commission Mechanical Systems

Performance Criteria

The person carrying out this work must show that they:

1 Ensure that the necessary information on the system or component performance is available.
2 Liaise with other persons at appropriate points within the commissioning process to minimise disturbance to work routines.
3 Check the correct function of systems or components against performance requirements.
4 Adjust system controls to establish that system components meet design specification.
5 Provide the customer with information necessary to the continuing operation of the system or component.

UNIT M27 Commission Mechanical Systems

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The sources of information on the performance of systems or components.
(b) The procedures for establishing correct system or component performance and checking against the job specification.
(c) The routines and sequences for commissioning systems or components.
(d) The points in the commissioning process where co-operation and liaison with other trades and customers may be required.
(e) Where to access user information appropriate to different systems and components.
(f) How to complete commissioning documentation confirming the safe commissioning of systems and components.
(g) System handover procedures and demonstrating the operation of systems and components to end-users.
(h) The actions to take when components being commissioned do not meet performance requirements.

UNIT M27 Commission Mechanical Systems

		Performance Criteria					Knowledge and Understanding							
No	**Description of Evidence**	1	2	3	4	5	a	b	c	d	e	f	g	h

UNIT M27 Commission Mechanical Systems

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M28 Identify Faults in Mechanical Systems, Equipment and Components

Unit Summary

This Unit covers the key areas of maintenance work involving diagnosing the cause of faults in systems and components. Diagnostic requirements in this unit apply only to system components. It does not include appliances.

The person carrying out this work should be able to locate simple faults in the system or component performance.

UNIT M28 Identify Faults in Mechanical Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Obtain clear and detailed information about the reported faults including any components which need to be replaced.
2 Advise the relevant people clearly and accurately about the potential disruption and consequences of carrying out a diagnosis of faults.
3 Locate faults in systems or system components using procedures that comply with industry requirements.
4 Report to the relevant person diagnosed faults in systems and components.
5 Liaise with other persons to agree fault rectification procedures which will minimise disruption to work routines.

UNIT M28 Identify Faults in Mechanical Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The necessary information for carrying out a successful fault diagnosis.
(b) How to interpret information on system or component performance, including advice from users, visual inspections or checks or diagnosis tests to locate faults.
(c) The potential disruption and consequences of carrying out a diagnosis of faults.
(d) How to liaise with others to ensure co-operation in the fault diagnosis process.
(e) The work action and sequences required to diagnose faults in systems and components.
(f) The measures to ensure that systems do not present a safety hazard to potential users, or the workforce, when carrying out diagnosis procedures.
(g) How to isolate unsafe systems and components.
(h) The procedures for reporting diagnosed faults in systems and components.
(i) How to interpret information on system or component performance, including advice from users, visual inspections, checks or performance tests to locate faults.
(j) The work procedures for the rectification of faults in systems or components which will ensure minimum disruption to customers and routines.
(k) How to identify common faults of principal components within systems.
(l) Component/principal components and system operation principles.
(m) The operating principles of gas, oil and solid fuel boilers and the differences between them for rectification purposes.
(n) Effects of component faults upon overall system performance and correct methods to ascertain component fault.
(o) How to access and interpret specifications, drawings and technical data relevant to system layout, design and component/principal components function.
(p) Organisational and maintenance contract procedures, their purpose and application.

UNIT M28 Identify Faults in Mechanical Systems, Equipment and Components

		Performance Criteria					Knowledge and Understanding															
No	**Description of Evidence**	1	2	3	4	5	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p

UNIT M28 Identify Faults in Mechanical Systems, Equipment and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M29 Rectify and Modify Mechanical Systems, Equipment and Components

Unit Summary

This Unit is about being able to rectify faults in systems and components, including modification and re-commissioning.

The person carrying out this work must demonstrate a sound knowledge and understanding of system operating principles and the main types of modifications and rectification activities applicable.

It is vital that the relevant electrical tests are carried out and that whilst undertaking diagnostic tasks, compliance with relevant recommendations and regulations is demonstrated. Mains supplies and energy sources must be traced, located and identified and **electrical connections must be safely isolated and disconnected at the appropriate stage in the process.**

The person carrying out this work must be aware of the effect isolating part of a system has to the full system status.

Systems are required to be rectified and/or modified using diagnostic skills to restore specified operational performance.

They must be able to undertake the required rectification or modification safely to meet the relevant recommendations, regulations and standards. Relevant documentation is to be completed and made available in line with company procedures if applicable.

For de-commissioning, they must make arrangements with users of the work location and ensure their safety throughout the process.

UNIT M29 Rectify and Modify Mechanical Systems, Equipment and Components

Performance Criteria

The person carrying out this work must show that they:

1 Carry out rectifying and modifying actions to minimise risk to individuals and the environment.
2 Carry out rectifying and modifying actions to minimise system downtime.
3 Carry out rectifying and modifying actions in agreement with the customer.
4 Isolate systems or partial systems from supply services in accordance with industry requirements.
5 Carry out rectifying and modifying actions appropriate to the systems and components.
6 Rectify effective system performance to industry requirements.
7 Implement rectification and modifying actions that maintain the overall specified system performance.
8 Complete documentation that is complete, accurate, and legible and made available to the customer.

UNIT M29 Rectify and Modify Mechanical Systems, Equipment and Components

Knowledge and Understanding

The person carrying out this work must know and understand:

(a) The source of information on the preparatory work necessary for the system or component rectification.
(b) The importance of minimising risks to individuals and the environment.
(c) How to carry out work efficiently, logically and in line with customer requirements.
(d) Why relaying information to the customer and gaining agreement is important.
(e) Correct methods and procedures for isolating mains supplies, energy sources and electrical connections.
(f) Correct methods and procedures for emptying systems or parts of systems.
(g) Working principles of systems within the range.
(h) The operating principles of gas, oil and solid fuel boilers and their differences in relation to rectifying and modifying systems.
(i) How to compare technical performance of replacement components to faulty components/principal components.
(j) Correct installation requirements and procedures for components/principal components of systems, implications of incorrect fixing and different methods of fixing and connecting.
(k) How to ascertain components/principal components are electrically safe.
(l) How to ensure that overall system performance is not impaired following rectification and modification works.

UNIT M29 Rectify and Modify Mechanical Systems, Equipment and Components

		Performance Criteria								Knowledge and Understanding											
No	**Description of Evidence**	1	2	3	4	5	6	7	8	a	b	c	d	e	f	g	h	i	j	k	l

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M30 Prepare Resources for Pipe Jointing Activities

Unit Summary

This Unit involves being able to prepare work areas, materials and equipment to undertake pipe jointing. It involves ensuring that others using the work area are safe and aware of possible disruption, and that the work area is properly protected.

The person carrying out this work must ensure that the equipment they are using is appropriate to the job, in correct operating order and set up correctly to carry out the required work.

Preparation of materials includes jointing consumables and pipework. This Unit is applicable to those preparing and aligning joints using cutting, expanding, flaring, hydraulic, compression and abrasive techniques, and propane, butane, oxy-acetylene and/or high temperature gas flame.

UNIT M30 Prepare Resources for Pipe Jointing Activities

Performance Criteria

The person carrying out this work must show that they:

1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
2 Ensure that the work environment is suitable for the work activities to be undertaken.
3 Obtain all the required equipment and materials and ensure that they are suitably prepared for the activities to be carried out.
4 In line with work requirements, prepare the work area for the storage of materials and finished products.
5 Ensure that all necessary service supplies are connected and ready for use.
6 Make sure that required safety arrangements are in place to protect other workers from activities likely to disrupt normal working.
7 Inform the appropriate people when preparations are completed.
8 Deal promptly and effectively with problems within their control and report those that cannot be solved.
9 Report completion of preparations in-line with organisational procedures.

UNIT M30 Prepare Resources for Pipe Jointing Activities

Knowledge and Understanding

The person carrying out this work must know and understand:

a) Health and safety legislation, regulations and safe working practices and procedures.
b) Work area preparation requirements and methods.
c) Types of equipment necessary to undertake jointing activities safely.
d) How to identify necessary materials and recognise defects.
e) Safe materials handling and preparation methods and techniques.
f) Tools and equipment care and control procedures.
g) Organisational reporting lines and procedures.

UNIT M30 Prepare Resources for Pipe Jointing Activities

		Performance Criteria									Knowledge and Understanding						
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	a	b	c	d	e	f	g

UNIT M30 Prepare Resources for Pipe Jointing Activities

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M31 Connect Pipework

Unit Summary

This Unit is applicable to those that join pipework by brazing, soldering, welding or mechanical means to meet specifications and establish compliance with pipework jointing specifications.

The person carrying out this work is required to undertake the jointing process for different types of joints, in various positions and to conduct visual inspections and checks of the completed work.

The activities involved include connecting pipework joints using cutting, expanding, flaring, hydraulic, compression and abrasive techniques, and propane, butane, oxy-acetylene and/or high temperature gas flame.

UNIT M31 Connect Pipework

Performance Criteria

The person carrying out this work must show that they:

1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
2 Follow the relevant joining procedures and job instructions for completion and checking of work.
3 Check that the joint preparation complies with the specification.
4 Check that joining and related equipment and consumables are as specified and fit for the purpose.
5 Make the joints as specified using the appropriate joining technique.
6 Produce joints of the required quality and of specified dimensional accuracy.
7 Where appropriate, shut down the equipment to a safe condition on completion of joining activities.
8 In line with approved and agreed procedures, deal promptly with excess and waste materials and temporary attachments.
9 Deal promptly and effectively with problems within their control and report those that cannot be solved.
10 Use all the correct tools and inspection equipment and check that they are in useable condition.
11 Carry out checks on completed work in an appropriate sequence using approved methods and procedures.
12 Identify and assess any defects or variations from the specification and take appropriate action.
13 Report completion of compliance activities in line with organisational procedures.

UNIT M31 Connect Pipework

Knowledge and Understanding

The person carrying out this work must know and understand:

a) Health and safety legislation, regulations, safe working practices and procedures relevant to the work being carried out.
b) Jointing specifications and joining procedures for the work being carried out.
c) How to interpret engineering drawings and related specifications.
d) Jointing processes and equipment relevant to the specification.
e) Safe material handling, preparation, finishing methods and techniques.
f) Appropriate materials and their joining characteristics.
g) Setting, operating and care procedures for the equipment being used.
h) Appropriate personal approval tests and how to conduct them safely.
i) Hazards arising from joining operations.
j) Appropriate compliance checking methods and techniques.
k) How to identify defects in products and assets.
l) Organisational reporting lines and procedures.
m) Organisational and regulatory quality control systems and documentation procedures.
n) Inspection equipment care and control procedures.

UNIT M31 Connect Pipework

		Performance Criteria													Knowledge and Understanding													
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	12	13	a	b	c	d	e	f	g	h	i	j	k	l	m	n

UNIT M31 Connect Pipework

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M32 Establish Electrical Control (and Supply) of Mechanical Building Services Systems

Unit Summary

This Unit is for people who are required to install, maintain and service electrical systems which are designed to control:

- refrigeration
- air conditioning
- heating
- ventilation
- hot and cold water

This Unit is about following the correct procedures for the installation, maintenance and servicing of mechanical building services systems and complying with the relevant regulations, codes of practice and industry approved standards.

They need to show an understanding of safe isolation procedures and risk assessment, wiring/cable systems, fault finding techniques, types and limitations of earthing and overcurrent protection systems and equipment, electrical supply systems, methods and limitations of functional testing and have the technical competence to interpret diagrams, drawings and specifications as appropriate.

By the very nature of the hazardous working environment and working conditions it is important to remember that the activities undertaken by the *operative* shall:

- be approved in accordance with accepted industrial practice and standards
- be to an appropriate specification as issued by the person responsible for the completion of the installation
- not involve testing and commissioning of the complete installation and its constituent parts
- have the authority to take decisions about the work they undertake such as the selection of suitable and safe *access equipment, tools and equipment* needed to complete the work they undertake
- have the responsibility for ensuring the work they undertake when completed, is as specified and in accordance with approved industrial practices and standards
- work on their own and have the responsibility for identifying, communicating and co-operating with, as necessary, technical and non-technical persons when appropriate

UNIT M32 Establish Electrical Control (and Supply) of Mechanical Building Services Systems

Performance Criteria

The person carrying out this work must show that they:

1 Confirm the existing electrical supply is compatible with the electrical control system and in accordance with relevant regulations, specifications and organisational procedures.
2 Follow agreed procedures to ensure the co-ordination of site services and the activities of other trades.
3 Identify and carry out isolation procedures to ensure a safe installation in accordance with electrical regulations and approved procedures as and when required.
4 Undertake relevant risk assessments and record the outcome in keeping with organisational procedures.
5 Install, terminate and connect identified cables and wiring systems in accordance with industry approved methods and practices.
6 Install and connect identified electrical control system components in accordance with industry approved methods and practices.
7 Identify and rectify faults in accordance with industry approved methods and practices and organisational procedures.
8 Identify and confirm fit for purpose instruments and equipment to undertake functional testing.
9 Undertake functional testing in accordance with industry approved methods and practices and organisational procedures.
10 Interpret diagrams, drawings, technical data and specifications as appropriate.
11 Provide technical and functional information to relevant people in accordance with organisational procedures.

UNIT M32 Establish Electrical Control (and Supply) of Mechanical Building Services Systems

Knowledge and Understanding

The person carrying out this work must know and understand:

a) IEE Wiring Regulations; Electricity at Work Regulations; Building Regulations, as relevant.
b) Procedures of safe isolation in accordance with current standards and regulations.
c) The types, application, strengths and limitations of wiring systems and cables.
d) The types, application, strengths and limitations of cable termination and connection methods.
e) The types, application, strengths and limitations of circuits and electrical supply for identified electrical control systems.
f) The types, application, strengths and limitations of earthing and overcurrent protection systems and components.
g) Methods and techniques of fault finding and rectification in accordance with industry approved standards and practices.
h) The types, application, strengths and limitations of equipment and instruments used for functional testing.
i) Methods and techniques of functional testing in accordance with industry regulations, procedures and practices.
j) The types and application of electrical drawings, diagrams and specifications.
k) The purpose and significance of relevant documentation in accordance with industry requirements.
l) The purpose and significance of following organisational and industry procedures when interpreting and providing relevant technical and functional information.

Health and Safety

m) The correct procedures for a safe isolation with regard to an assessment of safe working practice, the correct identification of circuits to be isolated, the correct test and proving instruments selected, the use of correct testing methods, and correct selection of devises for securing isolation.
n) The implications for relevant parties of carrying out an isolation.
o) The importance of using personal protective equipment and safe, appropriate tools for specific jobs.
p) The hazards associated with using electrical equipment and plant including their lifting, handling and fixing.

Principles and theory

q) IEE wiring regulations as specified in the latest British Standard for Electrical Installations relevant to types and uses of wiring systems, wiring enclosures and equipment.
r) Where to find out about the principles of electrical theory which allow for the safe installation of electrical wiring systems, wiring enclosures and equipment.

UNIT M32 Establish Electrical Control (and Supply) of Mechanical Building Services Systems

		Performance Criteria											Knowledge and Understanding																	
No	**Description of Evidence**	1	2	3	4	5	6	7	8	9	10	11	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r

UNIT M32 Establish Electrical Control (and Supply) of Mechanical Building Services Systems

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

UNIT M33 Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems

Unit Summary

This Unit is for people who are required to disconnect and/or dismantle systems and components with an electrical supply for:

- refrigeration
- air conditioning
- heating
- ventilation
- hot and cold water

This Unit is about following the correct procedures when making safe mechanical building services systems/components/equipment for disconnection from an electrical supply, using methods and practices compliant with the relevant regulations, codes of practice and industry approved standards.

They need to show an understanding of safe isolation procedures, risk assessment and methods of determining the presence or not of an electrical supply.

By the very nature of the hazardous working environment and working conditions it is important to remember that the activities undertaking by the operative shall:

- be approved in accordance with accepted industrial practice and standards
- not involve the installation and connection of electrical equipment and components
- not involve testing and commissioning of the complete installation and its constituent parts
- have the authority to take decisions about the work they undertake such as the selection of suitable and safe access equipment, tools and equipment needed to complete the work they undertake
- work on their own and have the responsibility for identifying, communicating and co-operating with, as necessary, technical and non-technical persons when appropriate

UNIT M33 Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems

Performance Criteria

The person carrying out this work must show that they:

1 Follow agreed procedures to ensure the co-ordination of site services and the activities of other trades as relevant.
2 Identify and carry out isolation procedures to ensure the safe installation of system and components in accordance with electrical regulations and approved procedures as and when required.
3 Undertake relevant risk assessments and record the outcome in keeping with organisational procedures.
4 Identify and confirm fit for purpose instruments and equipment for determining the presence or not of an electrical supply.
5 Confirm the presence or not of an electrical supply in accordance with electrical regulations and approved procedures.
6 Interpret relevant technical data and specifications as appropriate.

UNIT M33 Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems

Knowledge and Understanding

The person carrying out this work must know and understand:

a) IEE Wiring Regulations; Electricity at Work Regulations; Building Regulations as relevant.
b) Procedures of safe isolation in accordance with current standards and regulations.
c) The types, application, strengths and limitations of circuits and electrical supply for identified electrical control systems.
d) The types, application, strengths and limitations of equipment and instruments used for determining the presence or not of an electrical supply.
e) Methods and techniques of confirming the presence or not of an electrical supply in accordance with industry regulations, procedures and practices.
f) Types and application of electrical drawings, diagrams and specifications.
g) The purpose and significance of relevant documentation in accordance with industry practices and procedures.
h) The purpose and significance of following organisational and industry procedures when interpreting and providing relevant technical and functional information.

Health and Safety

i) The correct procedures for a safe isolation with regard to an assessment of safe working practice, the correct identification of circuits to be isolated, the correct test and proving instruments selected, the use of correct testing methods, and correct selection of devises for securing isolation.
j) The implications for relevant parties of carrying out an isolation.
k) The importance of using personal protective equipment and safe appropriate tools for specific jobs.
l) The hazards associated with using electrical equipment and plant including their lifting, handling and fixing.

Principles and theory

m) IEE wiring regulations as specified in the latest British Standard for Electrical Installations relevant to types and uses of wiring systems, wiring enclosures and equipment.
n) Where to find out about the principles of electrical theory which allow for the safe installation of electrical wiring systems, wiring enclosures and equipment.

UNIT M33 Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems

		Performance Criteria						Knowledge and Understanding													
No	**Description of Evidence**	1	2	3	4	5	6	a	b	c	d	e	f	g	h	i	j	k	l	m	n

UNIT M33 Carry Out Safe Electrical Working Practices on Electrical Control (and Supply) for Mechanical Building Services Systems

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____ **Date:** _____

Assessor: _____ **Date:** _____

Internal Verifier: _____ **Date:** _____

Section 4 — Blank recording forms

This section consists of the blank forms referred to in Section 2 for you to photocopy. You may find these useful when compiling your portfolio.

Portfolio title page

Your name: _____

Job title: _____

Name of Employer/
Training Provider/
College: _____

Their address: _____

_____

Telephone number: _____

SVQ: _____

level: _____

Units submitted for assessment:

Mentor: _____

(Please provide details
of Mentor's experience) _____

Assessor: _____

Date: _____

Personal profile

Name	
Address	
Postcode	
Telephone number	**Home:** **Work:**
Job title	

Relevant experience

Description of your current job	
Previous work experience	
Qualifications and training	

Continued overleaf ….

Qualifications and training (continued)	
Voluntary work/interests	
Name of Employer/Training Provider/College	
Address	
Postcode	
Telephone number	
Type of business	
Number of staff	
Structure of organisation (include chart or diagram if available)	

Contents checklist

You might also find it useful to complete the following checklist as you work your way through your portfolio. This will help you to see if you have included all the relevant items. Once you have completed your portfolio, you will be able to use this checklist again as a contents page, by inserting the relevant page or section numbers in the right hand column.

	Completed?	Page/Section number
Title page for the portfolio	☐	
Personal profile		
♦ your own personal details	☐	
♦ a brief CV or career profile	☐	
♦ description of your job	☐	
♦ information about your employer/training provider/college	☐	
Unit Assessment Plans	☐	
Unit progress record	☐	
Completed Element achievement records for each Unit		
♦ signed by yourself, your assessor and the internal verifier (where relevant)	☐	
♦ Evidence reference numbers included	☐	
Index of evidence (with cross-referencing information completed)	☐	
Evidence (with reference numbers)		
♦ observation records	☐	
♦ details of witnesses (witness testimony sheets)	☐	
♦ personal statements	☐	
♦ products of performance	☐	

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)

Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Units, Elements, PCs, and Range covered

Candidate's signature:_____ Date: _____

Observation record

Unit/Element(s):

Candidate: _____ **Date of observation:** _____

Evidence index number: _____

Skills/activities observed:	**PCs and range covered:**

Knowledge and Understanding apparent from this observation:

Other Units/Elements to which this evidence may contribute:

Assessor 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 name: _____

Evidence index number: _____

Where applicable, evidence no. to which this testimony relates: Element(s): _____ _____

Date of evidence: _____

Witness name: _____

Designation/relationship to candidate: _____

Details of testimony:

I can confirm the candidate's evidence is authentic and accurate.

Witness signature: _____

Name: _____

Date: _____

Please tick the appropriate box:

☐ **A1/A2 or D32/D33 Award**

☐ **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: Q: A:	
Assessor's signature:	Date:
Candidate's signature	Date: