



Assessment Guidance Diploma in Water Distribution Control (SCQF level 5) — (GL2G 45)

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About this guide

This guide provides some practical examples of how to assess your candidates for the Diploma in Water Distribution Control.

It explains requirements applicable to the whole qualification or a number of Units in the qualification, where appropriate.

You may be able to think of other ways of assessing your candidates and recording your decisions about their competence. For example, while it is a requirement for all Assessment Criteria in each Unit to be assessed; there is still the option for holistic assessment across Units, where appropriate.

The assessment guidance contains some general examples of assessment practice that are typical to most job roles. Assessment Requirements for the Units in this qualification may be found in the appendix to this assessment guidance and/or can be accessed from SQA's website (www.sqa.org.uk).

Centres are reminded that it is their responsibility to ensure that assessments are appropriate and that quality assurance procedures are followed.

National Occupational Standards (NOS) and qualification structures

The content and structure of the Diploma in Water Distribution Control derive from the National Occupational Standards (NOS), developed by Energy and Utility Skills.

Each NOS was developed into a Unit specification. The Unit specifications are in turn combined into a qualification structure that reflects the job role of a water industry distribution control engineer or technician. The qualification was developed using the recommended structure and in line with the Sector Skills Council's assessment strategy. The Unit and qualification development process involved consultation with representatives from water companies, contractors, industry training providers and other industry stakeholders.

The National Occupational Standards can be obtained from the UK NOS website (nos.ukces.org.uk) or from Energy and Utility Skills (www.euskills.co.uk). Updates to the content of the NOS may be made incrementally to keep pace with industry practice, and these may lead to updates to the units or qualification. In this case, centres will be advised of revisions in advance of implementation, and provided with appropriate updated qualification guidance and materials.

If the assessment team identifies any queries or issues with the content of the units or the qualification structure, the centre should contact the External Verifier or SQA in the first instance. SQA can then provide advice on the most suitable course of action and consult further with EU Skills or the regulatory authorities, as necessary.

Unit specification

A standard Unit specification template is used in this qualification. The template contains both mandatory and optional sections. The latter may only be required in certain developments.

The Unit specification template is explained below:

Title	<i>This is the accredited Unit title.</i>	MANDATORY
Learning Outcomes	Assessment Criteria	
<i>Learning Outcomes set out what a candidate is expected to know, understand or be able to do as the result of a process of learning.</i>	<i>Assessment Criteria specify the standard a candidate is expected to meet to demonstrate that the Learning Outcomes of that Unit have been achieved.</i>	
	<i>All Assessment Criteria must be achieved.</i>	
Additional information about the Unit <i>Appropriate additional information may be added here.</i>		
Unit purpose and aim(s) <i>This provides a succinct summary of the Learning Outcomes of the Unit.</i>		OPTIONAL
Details of the relationship between the Unit and other standards or curricula <i>This will only be completed where there are relevant other professional standards or curricula.</i>		
Assessment requirements specified by a sector or regulatory body <i>This will only be completed where a particular approach to assessment is required to meet the requirements of one or more qualifications.</i>		

Assessment (evidence) Requirements:

This section outlines the types of evidence that candidates must produce, how much evidence is required and where applicable, any restrictions on the way in which the evidence must be produced, ie the conditions of assessment, to meet the requirements of the Assessment Criteria.

Guidance on Instruments of Assessment:

Instruments of Assessment should be selected to meet the evidence required by the Assessment Criteria within the Unit. In this section, some Instruments of Assessment may be suggested. However, their use is not mandatory.

Who is involved in this qualification?

There are several roles:

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

Requirements specific to this qualification

Different Units may require different assessment approaches, for example, some Units will have knowledge-based assessments, whereas others may have performance-based approaches.

In some qualifications, we must also apply any requirements specified by the relevant Sector Skills Council (SSC) or Standard Setting Body (SSB) in their Assessment Strategy which outlines the way in which Units are assessed.

The following Assessment Strategy applies to this qualification:

Energy and Utility Skills Final Assessment Strategy for Vocational Qualifications – http://www.sqa.org.uk/sqa/files_ccc/General_Assessment_Strategy_Waste_8.4.pdf

Energy and Utility Skills Water Sector Specific Requirements to Final Generic Assessment Strategy (Appendix E) – http://www.sqa.org.uk/sqa/files_ccc/WaterSectorSpecificGenericAssessmentStrategyDec15.pdf

The steps involved in assessing a candidate for this qualification

In deciding whether a candidate should get a qualification, you will go through these stages:

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

1 The Diploma in Water Distribution Control

The Diploma in Water Distribution Control has been developed by Energy & Utility Skills and has been designed for candidates who work as water distribution technicians or engineers on the water supply network.

The majority of candidate's evidence for the qualification must come from real work activity, where the candidate has undertaken operational distribution control activities on the water network. Where possible, candidates should provide performance evidence from their regular operational activities, which occurs naturally as a result of their work.

General Evidence Requirements

The Diploma in Water Distribution Control is a competence-based qualification, which includes Units that combine assessment criteria covering skills/performance and knowledge requirements. The majority of evidence that the candidate produces for the qualification must come from real work activities, carried out in their workplace.

Assessors should seek to identify five key qualities in candidates' evidence:

Term	Explanation
Valid	The evidence demonstrates competence against the qualification requirements.
Authentic	The evidence is demonstrably the candidate's own work. (If it relates to a team activity, the candidate should be able to confirm what their role was within the team).
Reliable	The total evidence must show genuine and sustained competence against the qualification requirements (not a single occasion: you should be confident that they could demonstrate the same skill levels on a different occasion if required).
Sufficient	There must be enough evidence available against the qualification requirements for you to make an assessment decision.
Current	The evidence in total must show current competence (ie it must not be so old that its presence would lead you to query whether the candidate can still perform a task).

The following general Evidence Requirements apply when assessing the Diploma in Water Distribution Control:

Coverage of full Unit and qualification requirements

- ◆ The total evidence for each Unit must cover all learning outcomes and assessment criteria, the scope of the evidence, and must meet any Unit-specific Evidence Requirements.
- ◆ The assessor must be confident that all of the Unit requirements are covered before assessing the candidate as 'competent'.

Consistent competence over time

- ◆ The candidate's evidence for each Unit must show that they meet the qualification requirements **consistently** in their work, **over a period of time**.
- ◆ The dates of the evidence provided (whether an observation report, witness testimony or other evidence from the workplace) must allow the assessor to confirm that the candidate has carried out the required tasks on several different occasions.
- ◆ It is helpful if the diverse pieces of evidence are taken from dates that are days, weeks or months apart, to show that the candidate's competent performance is not a singular or unusual occurrence.

*(**Please note:** Assessors may ask how many pieces of evidence are sufficient to show consistent competence. SQA recommends that each candidate's competence is judged on its own merits.)*

It is likely that different candidates will have different amounts of evidence available to satisfy particular Unit requirements, depending upon their job roles. It is your job as an assessor to decide when a candidate has provided sufficient evidence of competence, and this will vary between candidates.

As a guideline, candidates could consider providing evidence of at least three occasions of performance against the assessment criteria. Candidates must cover all of the requirements including the relevant range/scope of evidence identified, and this could require evidence taken from more than three occasions).

Varied evidence gathered from different work activities and situations

- ◆ Candidate's performance and knowledge evidence must come primarily from their own work activities.
- ◆ Evidence should be **varied** and must arise from **different workplace situations** (ie different activities, undertaken at different times, which demonstrate their ability to meet the standard on a regular basis within their job role, rather than on a single assessment occasion).
- ◆ The mix of evidence must be provided from various sources and assessment methods, which, taken holistically, can be used to determine competence. The diversity will reflect the candidate's job role and act as a measure of authenticity.
- ◆ Assessors and candidates must not rely on a single type or source of evidence for any one Unit: providing diverse evidence is a robust way of demonstrating consistent competence over time, and confirming authenticity.

Evidence that occurs naturally

- ◆ Assessors should make use of candidate's evidence as it occurs naturally. This applies to documentary or product evidence, but also to evidence from observations, line managers'/supervisors' reports, and witness testimonies.
- ◆ One work task undertaken by a candidate can generate evidence for a number of Units. Assessors should be aware of this, and be able to identify where a candidate's evidence can be cross-referenced to different Unit or qualification requirements (eg where the candidate undertakes water mains disinfection, this will generate evidence for Unit HC3Y 04 (Disinfect Water Mains), but it is likely also to provide some evidence towards Unit HC3R 04 (Operate Safely on the Water Distribution Network)).
- ◆ The more opportunity that an assessor can identify for candidates to use one piece of evidence towards a number of Units, the less chance there is that unnecessary repetition of assessment activity or evidence gathering will occur. Where possible, assessors should try to use this kind of holistic approach, and should encourage candidates to think about how the different tasks they do during the day can relate to different parts of their qualification.

Using a realistic working environment (RWE)

- ◆ The requirements for using observation in a realistic working environment are outlined in this document, and apply to all Units in the Diploma in Water Distribution Control, with the exception of Unit HC3T 04 (Address and Resolve Customers' Water Distribution Related Enquiries). These requirements must be met, and prior approval sought, before the centre uses a realistic working environment for assessment.
- ◆ In situations where a RWE is used because undertaking those tasks in a real life situation would have health and safety implications, assessors should ensure, if possible, that their candidates also provide evidence of workplace performance from their daily distribution control work.

- ◆ Situations could arise where candidates have difficulty producing performance evidence from the workplace or particular skills, because they occur very rarely, and/or because there are health and safety implications to assessing them in the workplace (eg emergency situations, dangerous occurrences; increasingly, using portable traffic control signals in Unit HC3R 04 Operate Safely on the Water Distribution Network). If a RWE has been used (in line with the qualification requirements) to produce the primary performance evidence in this instance, and candidates cannot produce further performance evidence from their workplace, the assessor may use detailed discussion and questioning to explore the candidate's performance further against the Unit content.

Witness Testimonies

- ◆ Assessors should consider the potential for witness testimony to provide a valuable contribution to the candidate's total evidence. This is particularly useful to confirm employer contribution to the assessment process, which is recommended for all qualifications based on NOS developed by Energy and Utility Skills.
- ◆ More detailed notes on witness testimony are provided in this document, but assessors must ensure that witness testimonies are subjected to the same level of assessment as any other piece of evidence.
- ◆ There are risks associated with the use of witness testimony as evidence of competence, and assessors must be aware of these. Assessors must read notes on witness testimony, to ensure that robust procedures are put in place for its use, before you ask candidates to provide some evidence from managers or colleagues, to ensure that robust procedures are put in place for its use.

Employer involvement and contribution to assessment process

- ◆ Centres should ensure, where possible, that there is employer contribution to the assessment process.
- ◆ This can be demonstrated in different ways, although the principal evidence of employer involvement may be through witness testimonies or other reports from managers or colleagues.
- ◆ Evidence from managers or colleagues can provide a useful confirmation of candidate's work as part of a team and to show that their work meets the requirements of their organisation.

Evidence from water distribution control activities

- ◆ To gain the Diploma in Water Distribution Control, candidates must complete seven Units in total. Four Units are mandatory and the candidate must complete a further three optional Units.
- ◆ Candidates must provide evidence of carrying out the activities that they cover in the qualification consistently over a period of time. This means that the evidence produced for each Unit should be provided from a number of different jobs undertaken on different occasions (ie not during the same shift, for example, but from work undertaken days, weeks or months apart, to confirm consistency). The candidate's evidence must be sufficient to meet the full evidence requirements for the qualification, outlined in the Unit requirements.
- ◆ The individual observation and other assessment requirements for each Unit are identified in this document.
- ◆ Candidate's evidence should be generated from their normal work activities, which will facilitate demonstration of consistent competence over time against the qualification requirements. The total evidence for the qualification should show that the candidate is carrying out operational activities on the distribution network consistently over a period of several months. It is likely to include both assessor observations and other workplace evidence arising naturally from the candidate's work. (**NB:** The assessor can decide when to carry out observations on site, and/or in a realistic working environment, as these may be subject to logistical or practical constraints).
- ◆ In addition to observation reports (either from an assessor or in the form of a report/witness testimony by a line manager), evidence to show consistent competence over time can be gathered from other sources, including:
 - company records of distribution control activities undertaken (hard copy or electronic)
 - records (eg photographs) from operational activities
 - marked-up plans, sketches or photographs of the network and its configuration
 - amended plans or other records (eg mains records, valve operation records, records of mains cleansing or disinfection) to reflect updates from water distribution control activities
 - records of leakage detection activities that the learner has undertaken
 - records of sampling activities that the candidate has undertaken, including any deviations from set sampling procedures or from expected results
 - records of network data and information (eg system pressure and flow data, graphs and charts)
 - e-mails, or other records of correspondence, either with the learner's own department, other departments, or with customers (eg regular customer contact records, customer emergency notices)
 - witness testimonies
 - work records and reports
 - assessor questioning and discussion, etc.

Assessors and candidates should decide together which sources of evidence are most appropriate to confirm competence, and should consider, where possible, the use of evidence from candidate's other qualifications (eg the National Water Hygiene Scheme, to confirm knowledge and understanding).

Please note: There is no requirement for assessors to observe specific assessment criteria. This means that there is flexibility in the way that observation can be used, and it can be combined with other assessment methods to produce the total mix of evidence. The key is to ensure that observation takes place to cover candidate's regular work activities, as they occur.

Using a realistic working environment (RWE)

Centres may use evidence from observation of the candidate in a realistic working environment (RWE) for the following Units in this qualification:

HC3R 04	Operate Safely on the Water Distribution Network
HC3V 04	Carry out Valve Operations on the Water Distribution Network
HC3W 04	Determine the Exact Location of Water Loss using Acoustic Listening Techniques
HC3X 04	Cleanse Water Mains
HC3Y 04	Disinfect Water Mains
HC40 04	Carry out Sampling Operations: Bacteriological, Chemical Spot and Flush
HC41 04	Measure System Performance using Flow and Pressure Equipment
HC42 04	Provide and Maintain Emergency Water Supplies

While a RWE can be used for these Units, evidence must also be provided from the workplace to confirm the candidate's competence in these activities. Workplace evidence can include, but is not limited to, witness testimonies, workplace records, and assessor questioning and discussion to show how they carry out these activities in their real work. The majority of the evidence produced must come from real work activities, carried out by the candidate in their own workplace, and the assessment team must take this into consideration when planning assessments and discussing sources of evidence with candidates.

A realistic working environment may be used to assess this qualification where there is a demonstrable need to do so (if, for example, there is particular difficulty sourcing appropriate evidence from the workplace, where situations occur only rarely, are exceptional in some way, or have health and safety implications).

For example: In Unit HC3R 04 Operate Safely on the Water Distribution Network, candidates must demonstrate that they can maintain the health and safety of themselves and others. This includes a requirement to 'take relevant action in the event of a dangerous occurrence'. A candidate may not encounter dangerous occurrences on a regular basis or while their assessor is observing them. Neither is it acceptable to set up a dangerous situation in the candidate's own workplace purely for assessment purposes.

It is, equally, possible, that some operational activities are not readily accessible to the candidate while they are with their assessor, due, for instance to job schedules or shift patterns.

In such circumstances, the centre may choose to seek approval of a realistic working environment to allow assessors to observe candidates working and gather some evidence towards the Diploma. A RWE is a controlled environment that reflects the real work setting.

The RWE for the Water Distribution Control Diploma must meet the following requirements:

- 1 The assessment must be managed as a real work situation, and the time constraints, methods and work pressures applied to the activity must be realistic and consistent with normal working practice.
- 2 The volume of work completed during the assessment must be comparable to that expected in the equivalent normal work situation.
- 3 The tools, equipment, materials and facilities used are consistent with those found in the candidate's workplace.
- 4 The candidate must interact with the range of personnel and contractors found within the normal industry workplace.
- 5 If a work network is being replicated, it must meet the following requirements:
 - ◆ the pipework must be pressurised to a level consistent with that found in the workplace,
and
 - ◆ the network must contain a suitable substance that replicates that contained in the water network.
 - ◆ For Unit HC3V 04 (Carry Out Valve Operations on the Water Distribution Network), a variety of valves must be used with different status settings and different types of valve covers.
 - ◆ For Unit HC3W 04 (Determine the Exact Location of Water Loss Using Acoustic Listening Techniques), the network used for leakage detection activities must include metallic and non-metallic pipework with a variety of surface fittings, including valve covers, hydrant covers and meter chambers. The RWE pipework must have various leak locations, which are set in different configurations with no patterns between and amongst any group of candidates.
 - ◆ For Unit HC3X 04 (Cleanse Water Mains), the candidate must be required to cleanse a length of the main that they would typically cleanse in the workplace. It must have the same types of complexities and must cover a range of different fittings.
 - ◆ For Unit HC3Y 04 (Disinfect Water Mains), the candidate must use a real disinfectant, of the type that could be available for use in their workplace.
 - ◆ For Unit HC42 04 (Provide and Maintain Emergency Water Supplies), the activity observed must include the use of a communal emergency water supply of the type that the candidate would typically use in their workplace.

- 6 The assessment must require the candidate to take into account the typical ambient conditions they would encounter in their normal workplace. (If this cannot be covered using the facilities provided, the centre must use questioning and discussion to meet this requirement).
- 7 The assessment must take into account (and require the candidate to be aware of any use where appropriate) the legislation, regulations, codes of practice, etc that they would use in their workplace.

Please ensure that the centre requests and obtains approval for using a RWE before assessing candidates in this way.

If a centre wishes to use a realistic working environment in line with the qualification requirements, it is recommended, for good practice, that the team develops alternative exercises using the RWE, where possible, to provide variety for use in assessments.

Structure of the Diploma

This section lists the Units which form the Diploma in Water Distribution Control at SCQF level 5.

Diploma in Water Distribution Control at SCQF level 5 (GL2G 45)

Mandatory Units

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
HC3R 04	5	7	EUSDC 01	Operate Safely on the Water Distribution Network
HC3T 04	5	10	EUSDC 02	Address and Resolve Customers' Water Distribution Related Enquiries
HC3V 04	6	7	EUSDC 03	Carry out Valve Operations on the Water Distribution Network
HC3W 04	5	10	EUSDC 04	Determine the Exact Location of Water Loss Using Acoustic Listening Techniques

Optional Units — candidates must complete three Units

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
HC3X 04	5	5	EUSDC 05	Cleanse Water Mains
HC3Y 04	6	8	EUSDC 06	Disinfect Water Mains
HC40 04	5	5	EUSDC 07	Carry out Sampling Operations; Bacteriological, Chemical Spot and Flush
HC41 04	6	7	EUSDC 08	Measure System Performance using Flow and Pressure Equipment
HC42 04	6	4	EUSDC 09	Provide and Maintain Emergency Water Supplies

Why would people be interested in the qualification?

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

How do candidates begin?

Choosing the right qualification

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

2 Preparing to assess this qualification

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

Your role and your candidate's role

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

Your role

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

Candidate's role

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

Planning

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

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

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

To help you plan for assessment, we have produced an assessment plan which covers a typical health and safety Unit. This Unit is not part of this qualification. It is included as guidance only. Examples relevant to this Unit are used throughout the rest of this assessment guidance.

Structure of the Unit

Unit	Promote a Culture of Health and Safety in the Workplace	
Learning Outcome — the candidate will:	Assessment Criterion — the candidate can:	
1 Be able to develop plans to promote a health and safety culture in the workplace.	1.1 Identify where improvements and changes may be necessary. 1.2 Identify how information on health and safety instructions and regulations are currently communicated. 1.3 Identify current level of understanding and support for health and safety instructions and procedures. 1.4 Develop a plan based on findings to include performance measures, review dates and resources. 1.5 Include in the plan opportunities for promoting the advantages and legal necessity of following health and safety procedures.	
2 Implement the plan to promote a health and safety culture in the workplace.	2.1 Present the plan to the responsible people for the workplace to gain their support. 2.2 Identify those in the workplace who will require advice about the plan to promote a health and safety culture in the workplace. 2.3 Ensure that relevant information and advice is provided at a timely way and provide opportunities for encouraging ideas on good practice. 2.4 Measure the effectiveness of the plan against past and present performance.	

Assessment plan

Unit	Promote a Culture of Health and Safety in the Workplace				
Learning Outcomes	1 Be able to develop plans to promote a health and safety culture in the workplace. 2 Implement the plan to promote a health and safety culture in the workplace.				
Activities	Assessment Criteria	Method of assessment/Sources of evidence	Date of assessment	Evidence already available	Links to other Units (Assessment Criteria)
Conduct a review of currently available health and safety documentation and procedures to ensure understanding (ie staff handbooks, induction information, etc).	1.2	Review documentation (product evidence) Question and Answer	By 24/01/14 09/02/14 (first review)		
Conduct a review of the working environment.	1.2	Observation of review Question and Answer	21/01/14 21/01/14		
Devise a questionnaire for all staff to identify current level of understanding and support. Staff complete questionnaire.	1.3	Questionnaire (product evidence)	By 24/01/14		
Attend health and safety meetings.	1.2	Personal statement	By 24/01/14		
Develop a plan based on findings.	1.1, 1.4, 1.5, 2.2	Plan	By 18/02/14		

Assessment plan (cont)

Activities	Assessment Criteria	Method of assessment/Sources of evidence	Date of assessment	Evidence already available	Links to other Units (Assessment Criteria)
Present plan to the responsible people.	2.1	Observation of presentation. Witness testimony of those 'presented' to.	22/02/14		
Run focus groups with staff to ensure relevant information and advice is provided.	2.3	Observation of focus group.	16/03/14		
Staff complete questionnaire to compare against previous findings. Conduct a re-review of working environment.	2.4	Findings of completed questionnaire compared to previous results (product evidence).	By 20/03/14		
Use performance measures as indicated in plan (such as % of dangerous occurrences) to measure effectiveness of plan.	2.4	Report on performance measure comparisons (product evidence).	By 20/03/14		

Assessor's signature	<u>Peter Hoskins</u>	1st review due	<u>09/02/14</u>
Candidate's signature	<u>Paul Lee</u>	2nd review due	<u>16/03/14</u>
Date of agreement	<u>05/01/14</u>	Date of completion	<u>01/04/14</u>

Selecting methods of assessment

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

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

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

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

The benefits might be:

- ◆ familiarity with working environment
- ◆ familiarity between candidate and assessor
- ◆ assessment supports valid work practices

The challenges might be:

- ◆ staff co-operation to complete required documentation/provide information
- ◆ time commitments

Example

You could agree with a candidate working in an engineering firm who has to ensure that relevant information and advice on health and safety is provided in a timely way that this will be carried out by **observation** when situations arise. If you are an assessor who is working alongside the candidate you should be well placed to observe the candidate's performance, perhaps using a prepared checklist, and to question the candidate about the situation afterwards.

Methods of assessment

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

Observation

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

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

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

Example

Observation could be used for assessment of this Unit in a variety of ways such as:

- ◆ Assessor could observe the candidate undertaking a review of the work environment. The candidate is undertaking this review to identify how information on health and safety instructions and regulations are currently communicated. The assessor can note if the candidate 'misses' any key factors to support this Assessment Criteria and can also use question and answer techniques alongside this observation to see what the candidate did/did not notice.
- ◆ Assessor could observe the candidate presenting the plan resulting from the findings of the review to the responsible people. The structure and the clarity of this presentation would be important for the assessor to observe.

Product evidence

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

Example

- ◆ The plan to promote a health and safety culture.
- ◆ A questionnaire for all staff to identify how information on health and safety instructions and regulations are currently communicated.
- ◆ Report on performance measures comparison (past and present performance) to review the effectiveness of the plan.

Questioning

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

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

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

Example

Oral questioning examples for this Unit:

- Q** Whilst observing you undertaking your review of the workplace, I noticed you referenced a trip hazard as a potential problem. Could you explain how you would provide support/information to promote a culture of health and safety so that such a hazard is removed?
- A** I would talk to the staff about both short and long-term solutions to the problem, asking them why the trip hazard is there in the first place. If it needs to stay there, then in the short-term they need to look at adequate signage, but in the long-term there needs to be a solution that removes the trip hazard, this may involve moving equipment, adding extra plug sockets, etc.
- Q** Having completed your review, how would you rate the way health and safety information is currently communicated to the workforce within your organisation?
- A** I'd say that currently the communication with regard to health and safety is adequate; there are some good practices, but there are also plenty of opportunities for improvement.

Other methods of assessment

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

Personal statements

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

Example

A personal statement could be used as part of the assessment methodology for this Unit to provide an opportunity for the candidate to 'write up'/evaluate his attendance at the health and safety meeting. The candidate could be asked to include this in their personal statement showing how the meeting contributed to the plan. Similarly following the focus groups a personal statement could provide evidence of findings and why the candidate then suggested particular activities within the plan.

Witness testimony

Witness testimony can contribute significantly to the candidate's mix of evidence and provide external confirmation of different aspects of their work. Each testimony, statement or report from a witness can, additionally, provide evidence for several Units, and can be used to confirm current competence or consistency over time, or to provide supporting evidence for workplace documents and records.

Witness testimonies are not assessments, and must be subjected to the same assessment process as any other type of performance evidence.

This guidance is designed to address the particular risks attached to witness testimony as a type of evidence. Assessors should be aware of these risks, and be able to take action to minimise them.

In discussing requirements for and potential sources of witness testimony with a candidate, the assessor should ensure that they are briefed on good practice, so that they know what features the assessor will seek in the witness testimonies they provide.

Witness credibility

The credibility of the witness is vital to the value of witness testimony. Witnesses can be drawn from a variety of sources, including:

- ◆ the candidate's line manager or supervisor
- ◆ a senior manager with experience of the candidate's work
- ◆ a colleague or associate from their team or another part of the business, or a related business (eg a project manager on site)
- ◆ someone who reports to the candidate
- ◆ a client — either internal or external to the business

The choice of suitable witnesses varies between candidates, and some will have more access than others to this type of evidence.

The key is to ensure that the witness:

- ◆ understands the context and operations of the candidate's job role
- ◆ can contribute detailed and credible information at the appropriate level about the candidate's activities described in a context that is familiar to them

For example:

- ◆ a water network manager could provide considerable information on the operational distribution control activities that the candidate undertakes during usual work activities
- ◆ a colleague could have useful information about how they interact with others and carry out their role as part of a team, and/or when interacting with customers

It is up to assessors and candidates to identify witnesses who can provide sufficient detail against specific performance requirements. One witness testimony can provide evidence for several Units.

It is important to ensure that the witness is working at a level or in a context where they will be able to report meaningfully on the candidate's activities: in an operational context, this means that they are likely to be working at least at the same level as the candidate, although a line manager or supervisor could provide useful information about the candidate's work.

Witness testimony content

Assessors must be able to validate and authenticate the content of a report or statement. This means that the witness testimony should:

- ◆ Include clear information on the witness's name, job title, relationship to the candidate, and date (and be signed or otherwise authenticated by the witness).
- ◆ Include the witness's contact details, to allow for follow-up or authentication of the evidence (the candidate's permission should be sought before contacting a witness).
- ◆ Refer to the candidate by name
- ◆ Give a meaningful statement that can be used as evidence: ie it must include suitable detail about specific work activities (time, date, location, job instructions, etc) that are witnessed, and must be a statement of fact. A supervisor or line manager may be qualified to comment on the candidate's competent performance in terms of meeting operational and company requirements, for instance, but they should not be asked for an opinion on whether the candidate has met the qualification requirements: that is the assessor's role.

There should be sufficient detail in a witness testimony to ensure that the report or statement refers to specific activities that the witness saw that particular candidate undertaking. This enhances witness credibility and provides a potential source of validation (eg through job records showing that the candidate was working in the stated location at the time the activities were witnessed).

Assessors must ensure that, in accepting witness testimonies, they check that sufficient detail is provided, and that testimonies reflect, specifically, the actions of the candidate. Even when working under supervision or as part of a team, the candidate will have a specific contribution to make, and a robust witness statement should be able to identify and confirm the candidate's own activities. It is not a robust approach for a witness to provide testimony for several candidates, which is identical in each case.

Recording witness testimony

Formats for recording witness testimony vary between witnesses and between centres: some assessment teams have a preferred proforma that they issue, while others choose to leave the content and expression entirely up to the witness. An example of a witness testimony proforma is in Appendix 3. A copy is available in MS Word, for centres to use and adapt.

If developing a more specific witness testimony form for this qualification, the centre should bear in mind that a witness should not be given a list of statements with which they must agree or disagree. It is preferable to include open questions, which require them to think of specific examples of the candidate's work. The witness testimony must be subject to assessment, in the same way as any other type of evidence.

Knowledge assessment

The assessment team must have a strategy for assessing the knowledge and understanding requirements for the Diploma in Water Distribution Control. This is likely to involve a combination of evidence generated from performance, during discussions with the assessor, and from assessor questioning (either in written or oral format). The candidate may produce evidence to meet the knowledge requirements in assessor discussions and oral questioning, during the course of observed assessments or assessment meetings, but it is also possible to use written questions if the centre considers this a suitable approach. Where a candidate demonstrates during assessment that they have knowledge that applies to more than one Unit, the assessor should record this coverage, to avoid unnecessary repetition of assessment activity.

For an assessor to confirm competence, the candidate must provide evidence against all of the knowledge and understanding requirements for a Unit, so any areas that are not initially identified as correct must be revisited elsewhere in the candidate's total evidence. All question banks and/or written questions used for assessment must be stored securely in the centre, and candidates must not leave the assessment meeting or test situation with any materials that are used for knowledge assessment in controlled circumstances (question banks, test papers, etc).

In the Units, specific learning outcomes relate to knowledge and understanding (they will, typically, have a title that begins, *Demonstrate knowledge and understanding of...*). The assessment criteria in these learning outcomes provide a useful template for compiling questions and model answers to be used during assessment.

Approaches to collecting evidence: assessor or candidate-led

Some candidates will relate more easily than others to qualifications terminology, evidence-gathering and matching the tasks they do in their daily work to the learning outcomes and assessment criteria. This depends upon their individual aptitudes and preferences, their job role, the amount of responsibility they have within their organisation, and the amount of evidence that they can typically generate from their work activities. Assessment approaches will vary between candidates or groups of candidates, and individuals will require different levels of support and advice while undertaking the qualification.

Candidates working on the Water Distribution Control Diploma are likely to carry out their job role under their own initiative, but the tasks undertaken could be relatively routine. It is also possible that there is only limited scope to provide workplace evidence (documents or products) to supplement assessor and line manager observations, discussions and witness testimonies.

Assessors may need to be more proactive in this case, in identifying the evidence available and in cross-referencing it to the Units.

Candidates may be able to provide workplace evidence (documents or products) to supplement assessor observations, discussions and witness testimonies, and some will be happy to adopt a more proactive approach to identifying their own potential sources of evidence for the Diploma. Others will be more comfortable with the assessor leading this process, and either approach is acceptable, providing the qualification requirements are met.

Candidates must be advised of their registration with SQA, and must be made aware of the qualification requirements and what is expected of them. They should understand the progress they are making through their qualification, but it is up to the assessor and the candidate together to decide how the candidate's evidence will be gathered and cross-referenced to the qualification requirements.

Types of evidence

Candidates working towards the Diploma in Water Distribution Control will provide evidence from various sources. Assessors should look for a variety of diverse evidence to provide a complete picture of an individual's skills.

A table showing the various different types of evidence, their advantages, risks and potential solutions for managing the risks can be found at Appendix 1. This could be useful to assessors in planning and carrying out assessments.

The advantages and risks associated with different assessment methods and types of evidence vary, so it is useful to combine a variety of evidence types in assessing any Unit or qualification. This approach:

- ◆ allows evidence to be produced from several different sources, and in different forms, against the qualification requirements
- ◆ ensures that candidates have the opportunity to maximise the use of evidence across the assessment criteria for a number of Units
- ◆ allows them to use the full range of evidence that is available to them in their workplace

In planning assessments with candidates, assessors should encourage them to consider as many sources of evidence as possible, and to refer to the assessor if they are unsure about the validity of evidence, rather than assuming that it will have no value.

Graphical items in performance evidence

As part of this qualification, candidates may produce marked up plans, graphs etc, showing the network and metered areas on which they are working, or readings and performance data from equipment encountered during their water distribution control work. These are particularly useful to provide additional and detailed information relating to specific locations and jobs covered, so they can be used to reinforce authenticity.

As stated at Appendix 1, the risk associated with these types of evidence is that they are not meaningful for the qualification unless the candidate can explain their relevance (either in a note or through assessor questioning).

The candidate must be able to show how this kind of material relates to their job role and specific work activities, and the assessor must ensure that they satisfy themselves of its authenticity and validity against the Unit requirements. For example, they should be able to confirm that a plan or photograph relates to a specific job, or that a set of system pressure and flow data is used to support requirements for, or confirm the successful completion of, specific water distribution control activities. The evidence can be corroborated, if necessary, with reference to other records (eg records on company systems, job reports, etc).

Using generic workplace documentation

Candidates may have access to a variety of generic workplace documentation, produced either by their employer or at customer premises (eg company risk assessment formats, Health and Safety policies, HSE forms, Health and Safety induction details or policies produced at third party premises).

This documentation is valuable as evidence only if a candidate can show how it relates to their particular job role or specific activities, and the assessor must ensure that they review generic documentation on this basis. It is not sufficient for candidates to include generic material amongst their evidence without any explanation of its relevance.

For example

It is more credible if:

- ◆ a candidate provides a generic company risk assessment form that they completed while undertaking a job
- ◆ a candidate can show how they used any information received during a Health and Safety induction on-site during their water distribution control work

Most types of evidence are acceptable for any Unit, and candidates should make use of as much evidence as possible that arises naturally from their work activities. The Unit content confirms the skills that are covered within each Unit, and identify any particular evidence that is required.

Recording candidates' evidence

Assessors must ensure that sufficient records are produced to provide an audit trail for the assessment process.

Assessors' records must show:

- ◆ how they confirmed the candidate's competence against each of the qualification requirements and assessment criteria
- ◆ that the assessment process is applied consistently to all of their candidates (assessors are likely to work with other assessors and IVs at the centre to develop systems and processes that allow this to be done)
- ◆ a clear audit trail

It is vital that assessment records are robust, as they provide the starting point for Internal and External Verifiers to sample records and monitor the assessment process. Assessors must ensure that their records allow the IV and EV to follow the audit trail through the assessment processes and allow them, during the verification sampling process, to drill down into the detail of assessment decisions.

The audit trail

The assessor must ensure that their records show their involvement in the different stages of qualifications delivery. These will include:

- ◆ Candidate induction and registration — candidates must be made aware that they have been registered with the awarding body, and the induction or first assessment meeting is commonly used to conduct skills scans or otherwise identify how the candidate's job role relates to the qualification and the Units that they will undertake. It is also important, if possible, to identify any particular assessment requirements (eg personal needs relating to language or literacy issues or physical disabilities that could limit access to premises) at this stage, so that the team can plan to meet the candidate's needs.

Candidates undertaking competence-based qualifications need the opportunity to provide evidence in line with the qualification requirements. The majority of this evidence must be generated from their regular work activities, although, in some cases, the candidate's employer may be able to provide them with opportunities to cover activities that they encounter only rarely. During the induction process, it is very important that the assessment team reviews the candidate's current job role and operational activities against the qualification requirements. This will identify activities and situations that are likely to generate evidence for the qualification, and/or pinpoint any areas where the candidate could find it more difficult to produce evidence.

If the assessment team identifies potential gaps in a candidate's ability to provide evidence against specific qualification requirements, either at the point of induction or later in the assessment process, the assessor should discuss with the candidate how they can provide evidence to meet the requirements. In some cases, the centre may seek to discuss with a candidate's employer whether opportunities exist for the candidate to be allocated work activities that will allow them to complete their qualification in full, or whether further training is required to support the candidate.

- ◆ **Assessment planning** — the assessment team should have systems in place for assessment planning, relating both to the planning of the assessment process, and more detailed assessment planning with individual candidates (which is likely to be reviewed at the end of each assessment meeting, so that assessors and candidates know what is expected at the next assessment).
- ◆ **Observations and assessment meetings** — each meeting with a candidate should generate some form of assessment record. The type of report can differ according to the assessment activity. If the assessor observes a candidate, they may prefer to use a tailored observation report form that allows them to focus on the tasks that they observe, while a discussion-based meeting could use a more generic template (see the sample generic report at Appendix 2).

As candidates for the Diploma in Distribution Control need to show evidence of specific distribution control activities undertaken on site to meet the evidence requirements, it is important that assessor reports (and particularly records of observations), line managers' reports, witness testimonies or other job records confirm details of the job location and specific work undertaken. This is useful for assessors to ensure that the evidence is authentic and reflects the candidate's job role, and for internal and external verifiers to validate assessment records during the sampling process.

A tailored observation report could be more suitable to align the distribution control activities with the qualification requirements, but a more generic report is useful for general assessment discussions and meetings.

- ◆ **Coverage of the Unit requirements** — it is important that there is a record of how candidates' evidence covers the Unit requirements. This allows assessors to:
 - ensure that any mandatory types of evidence are provided
 - show how far the candidate has progressed for any Unit
 - identify gaps in the evidence and plan how further evidence can be provided
- ◆ **Unit sign off to confirm coverage** — assessors need to confirm when the Unit requirements are met, so that they can recommend Unit (and, eventually, full qualification) certification. It could be helpful to provide a cover sheet or overview of how the assessment decision was reached, that can also require the candidate to confirm that the evidence is their own work. This could also act as the starting point for an IV or EV during sampling.

The assessment and verification team must identify how each unit will be signed off and confirmed.

- ◆ **Feedback to candidates and action planning** — this should be covered in the assessment reports, or through correspondence records between assessors and candidates, but it is an important part of the ongoing assessment process, as candidates need to be aware of their current progress, and to know what further action they must take to complete the Unit or award. Candidates should also be given the opportunity to provide feedback to their assessors (see sample assessment report, Appendix 2).

Using the sample recording format

Sample evidence recording documents were produced for each Unit, after consulting with existing assessment centres and EVs. These are available in separate files (in MS Word format) to accompany this guidance. Each Unit document reproduces the Unit requirements and includes a cover sheet tailored to each Unit, for the assessor to confirm how it is covered. There is also a cover sheet for the full Diploma in Water Distribution Control.

The Unit evidence tables list the skills and competencies, knowledge and understanding items and range or scope of evidence for each Unit, so that assessors can use them without referring to a separate document.

If using this format, assessors can either:

- ◆ provide a brief description of or reference to the evidence (under 'Evidence or File X-Ref/Description'), including a file reference if applicable (if the candidate is keeping an evidence file or portfolio), marking where the evidence meets the unit requirement,
or
- ◆ maintain a separate master list of evidence, giving each piece of evidence a reference number which is then inserted into the table against specific unit requirements as necessary.

The tables are designed to provide an at-a-glance indication for assessors and candidates of the candidate's progress through their Units. Assessors can initial against each requirement when they feel that it is covered, but they must ensure that the evidence that they cross-reference to each requirement is clearly relevant. Internal and External Verifiers will sample the cross-referencing of evidence as part of their monitoring activity.

The assessor can use the cover sheet to confirm that all evidence requirements are met, and both candidate and assessor sign on completion of the Unit. The IV and EV can also sign to show where they have sampled.

Please note: The purpose of the tables is to provide a record of the candidate's progress through the qualification, and it is up to the assessor to confirm completion of a Unit. Some candidates will be happy to use the recording tables, but it is not mandatory for a candidate to complete any or all of this information on their own.

Centres may use the samples exactly as provided (in MS Word), adapt them for the use of their own assessment team, or use their own formats and templates, according to their requirements. Centres may also use e-portfolios if preferred.

If the centre wishes to use a different format or e-portfolio, the EV will need to see sample material that the team intends to use at the point of centre approval for this qualification, to ensure that the proposed recording mechanism shows how the Unit and evidence requirements are met. If a centre wishes to transfer to an e-portfolio or other different recording format part of the way through their delivery of the qualification, the team should liaise with the external verifier to ensure that the transition is as smooth as possible.

It is not mandatory for candidates to maintain an evidence file or portfolio, but there must be a clear record of the location of each piece of evidence, either in the evidence recording documents or in a separate master list. Some candidates and centres prefer to use a portfolio or evidence file system, as the supporting evidence is held in one place, but it may not be appropriate for all candidates or situations. If alternative evidence storage methods are used, the centre must maintain a robust record of the evidence location(s), as the IV and EV may require access to the original evidence when sampling.

Please note: The sample recording formats are produced with a view to their use at centres, and on the basis of feedback provided during delivery of previous water industry competence qualifications. The joint awarding bodies would like to receive any suggestions from centres about the format of assessment records and reports and how they can be improved, and may update the sample materials during the lifetime of the qualification, in response to centre comments. Please advise the External Verifier or contact SQA/CABWI in order to feed back on the sample recording formats.

In using or adapting the sample format, the centre must not change the content of the Unit. The Unit is the benchmark that assessors use to ascertain candidates' competence. If it is altered, the candidate's competence may not be fully confirmed.

Simulation

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

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

More information on the use of simulation and the description of a realistic working environment can be found in the 'Requirements specific to this qualification' section on page 4 of this assessment guidance.

Other sources of evidence

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

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

3 Generating evidence

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

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

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

Observation

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

Observation record

Unit/Learning Outcome(s)	Promote a Culture of Health and Safety in the Workplace
Candidate	Paul Lee
Evidence index number	4
Date of observation	21/01/14

Skills/activities observed	Assessment Criteria covered
<p>A thorough review of the workplace environment was carried out by Paul. This review included the observation of current posters, signage, etc that was displayed in the environment. Paul also spoke to several employees to ask them about how information on instructions and regulations was communicated to them.</p> <p>Paul made comprehensive notes during the review.</p>	<p>1.2 Identify how information on health and safety instructions and regulations are currently communicated.</p> <p>1.3 Identify current level of understanding and support for health and safety instructions and procedures.</p>

Knowledge and understanding apparent from this observation

Current communication strategies in respect of health and safety

Paul completed a thorough review which will support the development of a plan to promote a health and safety culture within the organisation.

Current level of understanding and support for health and safety instructions and procedures

Through his insightful discussions with employees as he conducted his review Paul was able to identify the current level of understanding and support for health and safety within the organisation which will all make a valuable contribution to the development of his plan.

Other Units/Learning Outcomes to which this evidence may contribute

Assessor's comments and feedback to candidate

The review and supporting notes you have completed, Paul clearly demonstrated that you can:

- ◆ identify how instructions and regulations are currently communicated and where improvements and changes may be necessary

Well done.

I can confirm the candidate's performance was satisfactory.

Assessor's signature Peter Hoskins **Date** 21/01/14

Candidate's signature Paul Lee **Date** 21/01/14

Questions and candidate responses

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

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

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

Record of questions and candidate's answers

Unit	Promote a Culture of Health and Safety in the Workplace
Learning Outcome(s)	
Evidence index number	6
Circumstances of assessment	
<p>First review session with candidate.</p> <p>(Considering Assessment Criteria: 1.2 and 1.3 in particular)</p>	
List of questions and candidate's responses	
Q	Having completed your review of the workplace how would you rate the way health and safety information is currently communicated to the workforce within your organisation? Can you support your view?
A	I'd say that currently the communication with regard to health and safety is adequate, there are some good practices, but there are also plenty of opportunities for improvement.
Q	Having completed your review, spoken to employees and collated the results of your questionnaire what would you say is the current level of understanding and support for health and safety instructions and procedures?
A	Generally the understanding of health and safety instructions and procedures is good. All employees remembered the information they had been given at induction, they could show me the relevant sections within the staff handbook and they were aware of the importance of health and safety. However in some of the operational areas there are instances where standards have begun to slip and shortcuts are being made. When I develop my plan I will need to focus on opportunities for promoting the advantages and legal necessity of following health and safety procedures. I'm sure management will support me with this.

Assessor's signature Peter Hoskins **Date** 16/03/14

Candidate's signature Paul Lee **Date** 16/03/14

Candidate's personal statement

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

Personal statement

Date	Evidence index number	Details of statement	Links to other evidence (enter numbers)	Unit, Learning Outcomes, Assessment Criteria covered
24/01/14	5	<p>Having attended the health and safety meeting today, I have been able to identify further how information on health and safety instructions and regulations are currently communicated. I think the meeting also improved my awareness of the current level of understanding and support for health and safety. Clearly the management team is very supportive of all health and safety issues and this was highlighted in a report discussed at the meeting about an incident at another factory.</p> <p>The meeting has also clarified my thoughts on providing opportunities to promote the advantages and legal necessity of following health and safety procedures. Having attended the meeting I feel more able to include these in my plan.</p>	4 and 6	1.2

Candidate's signature Paul Lee Date 24/01/14

Witness testimony

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

To make sure the witness testimony is genuine, you must ensure that you have a record of who is acting as a witness, their relationship to the candidate (eg supervisor, client) address, telephone number and the date. There is space for this information in the form. A witness testimony pro forma for the Diploma in Water Distribution Control at SCQF level 5 has been included in this document as Appendix 3.

Witness testimony

Qualification title and level	Promote a Culture of Health and Safety in the Workplace
Candidate's name	Paul Lee
Evidence index no	7
Index no of other evidence which this testimony relates to (if any)	
Learning Outcome(s)	
Date of evidence	18/02/14
Name of witness	Dave Mulvaney (on behalf of senior management team)
Designation/relationship to candidate	Senior manager responsible for health and safety, line manager of Paul Lee
Details of testimony	
<p>Paul has provided a very insightful and detailed plan to support the promotion of a culture of health and safety within the organisation. Paul has made some good recommendations about how the communication of health and safety information could be improved; he has based this on some sound research, including a detailed audit, discussions with staff and the results of a staff questionnaire. Paul has clearly used his knowledge and understanding of health and safety and the organisation to include within his plan new and innovative opportunities for promoting health and safety within the organisation.</p> <p>The senior management team has agreed Paul's plan and recommended that he takes this forward.</p>	

I can confirm the candidate's performance was satisfactory.

Witness's signature Dave Mulvaney **Date** 24/02/14

Witness (please select the appropriate box):

- Holds appropriate qualifications
- Is familiar with the Units to which the candidate is working

Filling the gaps

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

You may be able to overcome this by extending the time period for the overall completion of the Unit, so that the candidate has adequate time to provide relevant information and advice when it is needed. If acceptable, evidence may be gathered through simulation or opportunities to take on different roles within the organisation.

Guidance and support to candidates

At all times during the assessment process — from planning through to making your assessment decision — feedback should be on-going, clear and constructive. Feedback should be given against the Units relating it to the evidence provided.

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

Judging candidate evidence and making an assessment decision

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

Evidence must:

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

Insufficient evidence

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

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

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

Authenticating candidates' evidence

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

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

Example

For this Unit, the 'responsible people' in the organisation are in the best position to make observations regarding the content and suitability of the health and safety plan produced by the candidate. Questioning the candidate about approaches to developing the plan would also help to authenticate the evidence produced.

4 Recording achievement

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

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

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

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

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

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

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

- ◆ Using the evidence index
- ◆ Completing the Unit progress record
- ◆ Completing the Learning Outcome achievement record

Using the index of evidence

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

The index of evidence should be completed by entering:

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

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

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

If the index of evidence is not completed with an accurate description and location of the evidence, there is a risk that an internal verifier or External Verifier might be unable to confirm your assessment decisions. An Index of Evidence for the Diploma in Water Distribution Control at SCQF level 5 has been included in this document as Appendix 4.

Completing the Unit progress record

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

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

Unit progress record

Qualification and level _____

Candidate Paul Lee

To achieve the whole qualification, you must complete all 13 credits from the mandatory Units.

Unit Checklist

Mandatory	FG89 04							
-----------	---------	--	--	--	--	--	--	--

Mandatory Units achieved

Unit number	Title	Assessor's signature	Date
FG89 04	Promote a Culture of Health and Safety in the Workplace	<i>Peter Hoskins</i>	01/04/14

Completing the Learning Outcome Achievement Record

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

- ◆ entering the evidence index number in the first column
- ◆ giving a brief description of the evidence in the second
- ◆ ticking the relevant boxes for the Assessment Criteria

If integrated assessment is used (linking Assessment Criteria and Learning Outcomes across different Units) the evidence should be cross-referenced back to the relevant Units.

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

Learning Outcome Achievement Record

Unit Promote a Culture of Health and Safety in the Workplace

Learning Outcome(s) Be able to develop plans to promote a health and safety culture in the workplace

Evidence Index No	Description of Evidence	Assessment Criteria					
		1.1	1.2	1.3	1.4	1.5	2.1
4	Observation record of workplace review		✓	✓			
5	Personal statement reflecting on health and safety meeting		✓				
6	Record of questions and answers		✓	✓			
7	Witness testimony of responsible people	✓	✓	✓	✓	✓	✓

Unit Promote a Culture of Health and Safety in the Workplace

Learning Outcome(s) Be able to develop plans to promote a health and safety culture in the workplace

Notes/Comments

Paul has worked conscientiously on this Unit and produced some very good evidence that will benefit both himself and the organisation.

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

Candidate's signature Paul Lee **Date** 04/04/14

Assessor's signature Peter Hoskins **Date** 04/04/14

Internal verifier's signature Sharon Moore **Date** 04/04/14

5 Further information

What else should I read?

SQA has developed a wide range of generic guidance on assessment, verification, quality assurance, etc. Details of these and other SQA publications are available on our website at www.sqa.org.uk on the 'Publications, Sales and Downloads' section. They can be ordered from SQA's Business Development and Customer Support Team — telephone 0303 333 0330. Please note that there may be a charge for some of these publications.

Assessor/Verifier Units: assessment guidance

External Verification: A Guide for Centres

Guide to Assessment

Introduction to Assessment Arrangements for Schools and Colleges

SQA's Quality Framework: a guide for centres

Operational Help Centre

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

Appendix 1: Types of evidence and associated risks

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
1 Direct assessor observation in the workplace	<ul style="list-style-type: none"> ◆ The most direct form of assessment. ◆ Assessor can observe the candidate carrying out daily work activities. ◆ Observation likely to result in evidence for several Units at once. 	<ul style="list-style-type: none"> ◆ Logistical difficulties — labour and time intensive for assessors. ◆ Candidates may not work at a single site and may be called away to other sites at short notice (difficult to plan and carry out). 	<ul style="list-style-type: none"> ◆ Use of simulated activities in a realistic working environment (see below). ◆ Use of robust witness testimony from candidate's line manager. ◆ Limit mandatory observation and require diverse supporting evidence from workplace.
2 Direct assessor observation (simulated activities/ realistic working environment)	<ul style="list-style-type: none"> ◆ Allows direct assessor observation. ◆ The centre has more control over the location and tasks covered: can ensure coverage of qualification requirements. ◆ Can be used to assess activities encountered rarely, or where there are practical or safety considerations (eg H&S issues; emergency procedures). 	<ul style="list-style-type: none"> ◆ Potential for simulated situation not to reflect the candidate's working practice accurately. ◆ Does not provide evidence from real work activities. 	<ul style="list-style-type: none"> ◆ Robust controls required for the realistic working environment and tasks to be assessed. ◆ Requires robust supporting performance evidence from the workplace. ◆ May need further questioning to establish underpinning knowledge, particularly if candidate has difficulty meeting specific performance criteria with other workplace evidence (eg responding to emergencies).

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
3 Witness testimony	<ul style="list-style-type: none"> ◆ Useful record of candidate’s work activity, provided by someone who has watched them working. ◆ Variety of potential sources can be identified, depending on the skills the candidate needs to cover (eg manager; colleague; associates from other departments; customers — internal or external to employer organisation) — allows for diversity of evidence. ◆ Allows candidate to focus on the work activity, in a familiar environment, without the presence of an assessor observing them. ◆ Can support direct assessor observation evidence by showing consistency over time. 	<ul style="list-style-type: none"> ◆ Is the witness credible? Do they understand what is required, and do they have the skills and knowledge to provide an accurate witness testimony? ◆ Risks to objectivity of witness: what is their relationship to the candidate? ◆ Need for witnesses to ensure they provide a statement of fact, not an opinion on competence against the qualification requirements. ◆ Insufficient detail provided in reports: risk of statements being too generic. 	<ul style="list-style-type: none"> ◆ Need to record details of witnesses, and how their relationship to candidates. ◆ Centres need to brief witnesses clearly on what they should provide in a witness testimony. ◆ Centres may use proforma, to prompt witnesses to provide an appropriate level of detail about the specific candidate or work activity. ◆ The use of witness testimonies from more than one source is recommended, as above. ◆ All witness testimonies must be subject to assessment by an A1 assessor.

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
4 Documentary evidence or product from the workplace	<ul style="list-style-type: none"> ◆ Useful to confirm detail of jobs undertaken for consistent competence, or varied work activities and to meet qualification requirements in full. ◆ Workplace documentation may provide confirmation of jobs completed, and also of coverage of qualification requirements on completion of appropriate records. ◆ Can be used to corroborate information provided in other sources of evidence (eg witness testimonies or reports, candidate's own accounts during discussions with assessors). ◆ Use of products to confirm technical skills (eg beads from completed PE fusion joints). 	<ul style="list-style-type: none"> ◆ Authenticity: is this a genuine record that can be verified against other types of evidence or workplace records? ◆ Storage: impracticality of storing large quantities of documentation or workplace products with evidence records. ◆ Availability of records: some job records are held electronically in employer's IT system, and need to be available to assessors. 	<ul style="list-style-type: none"> ◆ Assessors check the authenticity and validity of evidence, by questioning the candidate or corroborating against other records relating to the same job (eg observation reports, witness testimonies). ◆ Centres need to have robust evidence recording system where it is not appropriate to store items of evidence with assessment records, etc. (must state location of evidence). ◆ Evidence (including IT records) must be capable of being produced for IV and EV review, until candidate certification is confirmed (otherwise it could be declared invalid).

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
5 Assessment meetings with candidates (general informal discussions)	<ul style="list-style-type: none"> ◆ Direct evidence from assessor. ◆ Can be used to confirm or discuss candidate's evidence and identify gaps remaining for future action. ◆ Oral questions can be asked of candidates, to confirm performance or knowledge evidence. 	<ul style="list-style-type: none"> ◆ Sufficient detail must be recorded to confirm qualification/unit coverage — particularly if a variety of different Units and requirements are being covered in one meeting. ◆ May confirm candidate's knowledge more readily than performance: how does the assessor ensure that the candidate can apply their knowledge in a workplace situation. 	<ul style="list-style-type: none"> ◆ Assessors can use a proforma for assessment discussions as required. ◆ Use of audio and video records for assessors to confirm the detail of qualification/unit coverage — and they can be made available for IV/EV sampling (centre will need to have arrangements for storing audio or video evidence once assessed). ◆ Assessors can use a variety of different types of questions depending on the circumstances, to confirm candidate's performance as well as knowledge (eg questions revolving around a 'What if...?' scenario, or asking the candidate to describe particular work they have previously undertaken).

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
6 Professional discussion interview	<ul style="list-style-type: none"> ◆ More formal, structured interview: allows the assessor to guide the discussion and to tailor the subjects covered to gaps in the candidate's evidence. ◆ Candidates have the opportunity to discuss their work in depth. ◆ Can generate a significant amount of evidence against various Units. ◆ Useful mechanism for generating evidence to meet the qualification requirements and fill in gaps towards the end of the assessment process, or complete a candidate's assessment. 	<ul style="list-style-type: none"> ◆ Requires assessor to conduct extensive preparation with close reference to the unit and qualification requirements and record detail of what is covered. ◆ Not suitable for all candidates, particularly if they become nervous in a more formal assessment environment, or do not respond well to pressure. ◆ Not suitable for all situations, eg at the start of the qualification/assessment process. Candidate may not be comfortable with a more formal, in depth discussions if they are not familiar with assessment processes. 	<ul style="list-style-type: none"> ◆ Robust and detailed recording mechanism is needed: audio or video records, combined with a written proforma or report could be useful here. ◆ This is not a mandatory form of evidence, but can be very useful: assessors should make sure they use this method with candidates who will benefit from it. ◆ The PDI, if used, should take place at a suitable stage in the assessment process: it is recommended that, if used with candidates who are new to the process, this is not their first experience of assessment. It can, though, be very effective in the later stages.

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
7 Recognition of prior learning (RPL)	<ul style="list-style-type: none"> ◆ Useful to confirm skills and knowledge that the candidate has already demonstrated (eg through gaining other qualifications). ◆ Useful to confirm experience of previous work undertaken. ◆ Has potential to reduce the assessment burden for both candidate and assessor. ◆ Can be used to request equivalence or exemptions for the qualification being undertaken. 	<ul style="list-style-type: none"> ◆ Requires assessor authentication. ◆ Evidence must be validated against the current qualification requirements. ◆ Age of the previous accreditation is important: it may not confirm the candidate's current competence. 	<ul style="list-style-type: none"> ◆ Centres wishing to use RPL must have a process for authenticating proposed RPL evidence and validating it against the current qualification requirements (including requesting the recognition of equivalence or exemption by the awarding organisation if appropriate). ◆ It is recommended that centres do not use RPL evidence that is too old to confirm current competence. ◆ Supporting evidence (eg witness testimony to confirm current competence) could be used in conjunction with RPL evidence to confirm current competence (depending on the age of the RPL). ◆ Any queries about validity of RPL should be raised with the IV and, if necessary, EV, before undertaking an extensive validation exercise, to agree a suitable solution.

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
8 Written answers to knowledge questions	<ul style="list-style-type: none"> ◆ Allows centre to assess the knowledge of larger numbers of candidates simultaneously and then concentrate on gaps in knowledge during future observations and assessments. ◆ Robust record of candidate's responses to knowledge questions, capable of being readily stored. 	<ul style="list-style-type: none"> ◆ Not an integrated form of knowledge assessment: a 'test' situation could inhibit candidates unused to academic assessment, and it may not enable candidates to apply knowledge requirements readily to workplace performance. ◆ Rigid format: does not allow assessors to probe a candidate's knowledge further. ◆ Risks to security: candidates must not have sight of question papers prior to assessment. ◆ Where large numbers of candidates may be involved, multiple versions of question papers could be required. 	<ul style="list-style-type: none"> ◆ It is not recommended as the only form of knowledge assessment used by centres. ◆ Candidates' evidence must cover of all knowledge and understanding requirements for each Unit taken. Marking schemes etc are not suitable for this situation, because the knowledge associated with any 'incorrect' answers will need to be confirmed through other means. ◆ If using written questioning, the centre will need to ensure that it has verifiable arrangements for the security of papers, for controlling assessment conditions, for providing for candidates unable to complete written question papers, and for provision of multiple question papers over time.

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
9 Records of oral questioning and answers given	<ul style="list-style-type: none"> ◆ Allows assessors to explore a candidate's knowledge freely depending upon responses to initial questions. ◆ The assessor is responsible for recording the responses and cross-referencing against unit and qualification requirements. ◆ Can be used during any assessment discussions or observation to support candidate's performance evidence. 	<ul style="list-style-type: none"> ◆ Logistical difficulties for assessors in recording questions and answers in written report form. ◆ Need to ensure consistency of approach to individual candidates in questioning (less obvious than using question papers). ◆ Need to ensure responses are cross-referenced to unit/qualification requirements. 	<ul style="list-style-type: none"> ◆ Assessors can use a combination of recording methods if required: audio, video and/or written reports. ◆ For written reports, a proforma covering questions asked and candidates' responses may be advisable. This can also cover cross-referencing to unit/qualification requirements as necessary.

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
10 Audio or video evidence, and photographs	<ul style="list-style-type: none"> ◆ Useful to confirm some aspects of authenticity, eg as a record of assessor discussions or interviews). ◆ Avoids need for quantities of physical evidence to be stored: digital storage mechanisms can be used on-site, and stored using IT systems, memory sticks, etc. ◆ Visual evidence in particular can be useful as a starting point for discussions with candidates etc. ◆ Evidence can readily be made available for IV and EV sampling. ◆ Allows assessor to revisit the evidence after recording to confirm the detail of the unit/qualification coverage if necessary. 	<ul style="list-style-type: none"> ◆ Some authenticity issues may be compromised by excessive use of visual (video and particularly photographic evidence) in particular — issues of being able to relate evidence directly to the candidate’s work activity. ◆ Secure storage arrangements may be needed to preserve integrity of audio or visual evidence. ◆ It is not sufficient for candidates to provide visual material without any elaboration. ◆ Evidence provided in audio form only (eg recorded discussion with the assessor) may be insufficient to confirm the detail of the physical activities undertaken by the candidate. ◆ Need to be able to relate evidence to the qualification requirements. 	<ul style="list-style-type: none"> ◆ Assessors to ensure evidence (particularly photographic evidence) can be authenticated. ◆ Discuss individual photographic or video evidence with the candidate to confirm how it relates to their work activities and the unit or qualification requirements. ◆ If the candidate intends to make use of video evidence or photographs, it is recommended that they take account of the need to establish a clear link with their own work activities (eg ensuring that the candidate is recorded undertaking their activities, so their involvement in the work situation is clear).

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
Audio or video evidence, and photographs (cont)			<ul style="list-style-type: none"> ◆ If assessors use audio or visual evidence, a robust audit trail is needed to show where the unit/qualification requirements are met, and confirm the assessment decision. (This could require some form of report or audit trail document in addition to the audio/visual record). ◆ For qualifications at levels 1 and 2, where candidates may have access to limited amounts of documentary evidence and records, and work in an environment that requires them to undertake 'hands-on' operational work, some visual record of performance — rather than audio only — is likely to be needed to meet the specific qualifications requirements (eg direct assessor observation and report, witness testimony, video recording, etc).

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
11 Use of electronic storage media for candidates' evidence	<ul style="list-style-type: none"> ◆ Avoids need for quantities of physical evidence to be stored: digital storage mechanisms can be used on-site and stored using IT systems, CDs, memory sticks, etc. ◆ Potentially allows quick communication of evidence between assessor and candidate (via e-mail). ◆ Allows the candidate to retain scanned or saved soft copies of job-related information easily where the originals may be required to be stored in a central function or elsewhere according to company or regulatory requirements. 	<ul style="list-style-type: none"> ◆ Authenticity issues: if this is a scanned document, can it be authenticated? Where is the original held? Is it evidence of the candidate's own work? ◆ Storage questions: need for candidates, assessors, IVs and EVs to be able to navigate through the stored evidence at different stages of qualifications delivery. 	<ul style="list-style-type: none"> ◆ Assessors to ensure that they validate and authenticate evidence during assessment activity. This could include requesting the original documents or records provided, and questioning the candidate in detail about the particular activities associated with the evidence, so that a decision is made regarding its relevance to the qualification requirements. ◆ Assessors must make the final decision about candidates' competence against the Unit and qualifications requirements: storage mechanisms such as e-portfolios could be very useful, but it is for the assessor to determine when the candidate is competent, and they must also have an audit trail to prove this.

Type of evidence	Advantages	Risks/Disadvantages	Suggested solutions
Use of electronic storage media for candidates' evidence (cont)			<ul style="list-style-type: none"> ◆ IVs and EVs to ensure that where electronic storage mechanisms are used for assessment, they incorporate authentication of the evidence records into sampling activities (eg by asking for copies of original documents produced by particular candidates to be made available for verification; by discussing some of these aspects in some detail with assessors and with candidates during verification).

Appendix 2: Sample assessor report form (generic)

Assessor report form

Assessment Report Number		
Candidate's name	SQA Candidate Number	Date of Assessment
Assessor's name	SQA Assessment Centre	Assessment Venue Time of Assessment
Description of what is to be assessed (together with Unit and Elements references)		
Summary of evidence seen (cross-referenced against Units and Elements)		
Feedback given to candidate		

Detail the outcome of the assessment

Candidate feedback/comments

Action points

Date, time and location of next assessment

What will be assessed

Has a copy of this form been given to the candidate for their evidence?	Yes/No
--	---------------

Internal Verifier informed of assessment decision?	Yes/No
---	---------------

Assessor's signature _____ **Date** _____

Candidate's signature _____ **Date** _____

If the internal verifier has sampled this report, please complete the details below:

Internal verifier's name _____

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

SQA Unit Ref	Learning Outcome Ref			
		<table border="1"> <tr> <td data-bbox="491 331 1402 472">Question</td> </tr> <tr> <td data-bbox="491 472 1402 607">Candidate's response</td> </tr> </table>	Question	Candidate's response
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Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 607 1402 748">Question</td> </tr> <tr> <td data-bbox="491 748 1402 887">Candidate's response</td> </tr> </table>	Question	Candidate's response
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Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 887 1402 1028">Question</td> </tr> <tr> <td data-bbox="491 1028 1402 1167">Candidate's response</td> </tr> </table>	Question	Candidate's response
Question				
Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 1167 1402 1308">Question</td> </tr> <tr> <td data-bbox="491 1308 1402 1447">Candidate's response</td> </tr> </table>	Question	Candidate's response
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Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 1447 1402 1588">Question</td> </tr> <tr> <td data-bbox="491 1588 1402 1718">Candidate's response</td> </tr> </table>	Question	Candidate's response
Question				
Candidate's response				

SQA Unit Ref	Learning Outcome Ref			
		<table border="1"> <tr> <td data-bbox="491 331 1402 472">Question</td> </tr> <tr> <td data-bbox="491 472 1402 607">Candidate's response</td> </tr> </table>	Question	Candidate's response
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Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 607 1402 748">Question</td> </tr> <tr> <td data-bbox="491 748 1402 884">Candidate's response</td> </tr> </table>	Question	Candidate's response
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Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 1162 1402 1303">Question</td> </tr> <tr> <td data-bbox="491 1303 1402 1440">Candidate's response</td> </tr> </table>	Question	Candidate's response
Question				
Candidate's response				
		<table border="1"> <tr> <td data-bbox="491 1440 1402 1581">Question</td> </tr> <tr> <td data-bbox="491 1581 1402 1720">Candidate's response</td> </tr> </table>	Question	Candidate's response
Question				
Candidate's response				

Appendix 3: Sample witness testimony pro forma

Witness Testimony

Name of the person for whom witness testimony is given:

What is your working relationship with this person?

Describe briefly what distribution control activities you have seen them undertaking, and how they undertook the work, giving examples of specific activities that you have witnessed where possible. (NB These activities may include operational water industry activities, or associated activities, such as minimising risks to health, safety and hygiene in the workplace, developing productive working relationships, etc)

I can confirm the candidate's performance was satisfactory.

Witness's name _____

Witness's job title _____

Witness's signature _____ Date _____

(this sheet can be printed on letter-headed paper)

Note to the assessment team

This is only an example of a witness testimony form. It can be tailored to particular competence requirements. For example, a question on this form could be, '*Give an example of how the candidate has...*', and you could put in a competence, for example, '*identified resource requirements*'. Alternatively, the appropriate Unit or qualification requirements could be photocopied and attached to this form (the competence or knowledge you would like the witness to comment on would need to be highlighted).

Appendix 4: Recording Documents

Cover sheet

Index of evidence

Assessment Summary and Confirmation

Diploma in Water Distribution Control — GL2G 45

Cover sheet

Candidate's name		Candidate's SQA Number	
-------------------------	--	-------------------------------	--

Date registered for qualification		Assessment Centre	
--	--	--------------------------	--

Job role/location, or other information relevant to this qualification	
---	--

Unit completion

Unit title	SQA Ref	Mandatory/Optional	Assessor	Date of final assessment	Internal Verifier
Operate Safely on the Water Distribution Network	HC3R 04	Mandatory			
Address and Resolve Customers' Water Distribution Related Enquiries	HC3T 04	Mandatory			
Carry out Valve Operations on the Water Distribution Network	HC3V 04	Mandatory			
Determine the Exact Location of Water Loss Using Acoustic Listening Techniques	HC3W 04	Mandatory			
Cleanse Water Mains	HC3X 04	Optional			
Disinfect Water Mains	HC3Y 04	Optional			

Unit title	SQA Ref	Mandatory/ Optional	Assessor	Date of final assessment	Internal Verifier
Carry out Sampling Operations; Bacteriological, Chemical Spot and Flush	HC40 04	Optional			
Measure System Performance using Flow and Pressure Equipment	HC41 04	Optional			
Provide and Maintain Emergency Water Supplies	HC42 04	Optional			

Candidate declaration

I confirm that the evidence for this Diploma in Water Distribution Control is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence for the Units from the Diploma in Water Distribution Control as listed previously.

Assessor's signature _____ **Date** _____

Internal verifier confirmation (if sampled)

I confirm that I am satisfied that the evidence has been produced in line with the qualification requirements for the Diploma in Water Distribution Control, and that the certificates may be claimed from SQA.

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

External Verifier's confirmation (if sampled)

External Verifier's signature _____ **Date** _____

Diploma in Water Distribution Control — GL2G 45

Candidate's name		Employer	
-------------------------	--	-----------------	--

Assessor's name			
Internal Verifier's name		Assessment centre	

Index of evidence

Evidence Ref	Description of evidence	Date produced	Location of evidence	Evidence assessed (assessor initials/date)

Assessment Summary and Confirmation

HC3R 04 Operate Safely on the Water Distribution Network

SCQF level	5	Credit value	7
------------	---	--------------	---

Candidate's name		Assessor's name	
------------------	--	-----------------	--

Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence.	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine.	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time.	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range.	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence.	<input type="checkbox"/>	<input type="checkbox"/>			

HC3R 04 Operate Safely on the Water Distribution Network

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

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

External verifier's name _____
External verifier's signature _____ **Date** _____

HC3R 04 Operate Safely on the Water Distribution Network

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Maintain safety of tools, equipment and the working environment	
1.1 Identify the hazards present in the working environment and determine how they will affect safe systems of work.	
1.2 Identify working methods, tools, equipment and hazardous locations that do not comply with health and safety specifications and safe systems of work and take relevant action .	
1.3 Maintain entrances to, and exits from, hazardous locations in accordance with relevant health and safety specifications.	
1.4 Maintain tools and equipment in safe and hygienic working condition.	
1.5 Ensure that the condition of the working environment meets statutory requirements and Codes of Practice.	
1.6 Keep accurate records to conform with health and safety specifications and safe systems of work.	
2 Maintain the health and safety of themselves and others	
2.1 Use lifting and handling practices that meet relevant guidance and safe systems of work.	
2.2 Use materials, tools and equipment in a safe and hygienic manner with due regard for their safety and the safety of others.	
2.3 Maintain and use personal protective equipment in accordance with safe systems of work and relevant Codes of Practice.	
2.4 Use and store safety clothing and equipment in line with safe systems of work and organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Maintain the health and safety of themselves and others (cont)	
2.5 Take relevant action in the event of a dangerous occurrence , in line with safe systems of work and organisational requirements.	
2.6 Work in a way that ensures their own safety and the safety of anyone who could be affected by their activities.	
2.7 Follow safe working practices in line with relevant procedures and statutory requirements.	
3 Sign, light and guard the work site	
3.1 Identify the safety and security requirements for the work site from instructions and specifications and in accordance with relevant Codes of Practice.	
3.2 Make plans for highways works that make satisfactory provision for: (a) the working area (b) access and movement of vehicles (c) access and movement of personnel	
3.3 Identify, in line with organisational requirements and relevant Codes of Practice: (a) the type of carriageway (b) category of works	
3.4 Set out and erect protection equipment in accordance with relevant Codes of Practice.	
3.5 Confirm that the positioning and condition of protection equipment meets the works requirements and relevant Codes of Practice.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Sign, light and guard the work site (cont)	
3.6 Position, adjust, maintain and control the traffic control equipment in line with relevant Codes of Practice and the progress of the work activity.	
3.7 Remove protection equipment and traffic control equipment in accordance with relevant codes of practice.	
3.8 Take relevant action where they identify problems with the equipment or the work site.	
3.9 Follow safe working practices for signing, lighting and guarding in accordance with relevant procedures and statutory requirements.	
4 Know and understand how to operate safely on the water distribution network	
4.1 Give examples of different types of working environments on the distribution network and their safety implications.	
4.2 Give examples of health and safety specifications and safe systems of work relating to tools, equipment and the working environment.	
4.3 Describe the action they would take, and the limits of their responsibility, when tools, equipment and the working environment do not meet safety requirements.	
4.4 Outline the hazards associated with working on the distribution network.	
4.5 Describe what constitutes a hazardous location .	
4.6 Describe the health and safety specifications for entrances to and exits from hazardous locations .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know and understand how to operate safely on the water distribution network (cont)	
4.7 Describe the maintenance requirements for tools and equipment including national water hygiene standards for cleaning and disinfecting tools and equipment.	
4.8 Give examples of safe working practices and related regulatory and statutory requirements for the working environment and the implications if they are not met.	
4.9 Describe the recording procedures used when operating safely on the distribution network.	
4.10 List the hazards that may be encountered on the network.	
4.11 Give examples of materials, tools and equipment used on the distribution network, including: (a) the hazards they may pose (b) how to use them safely	
4.12 Describe safe working practices and organisational requirements for safe use and storage of: (a) personal protective equipment (b) safety clothing (c) equipment	
4.13 Describe safe working practices that maintain their own health and safety and that of others.	
4.14 Explain how to respond to dangerous occurrences on the distribution network, including: (a) what constitutes a dangerous occurrence (b) the factors which contribute to dangerous occurrences on the distribution network (c) relevant procedures for dealing with dangerous occurrences	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know and understand how to operate safely on the water distribution network (cont)	
4.15 Outline what is covered by the Codes of Practice for working in the highway, including: <ul style="list-style-type: none"> (a) <i>Safety at Street Works and Road Works</i> (b) Department of Transport '<i>An introduction to the use of vehicle activated portable traffic signals</i>' (c) Chapter 8 of the <i>Traffic Signs Manual</i> 	
4.16 Explain the implications of incorrect signing, lighting, guarding and traffic control.	
4.17 List the different types of protection equipment and traffic control equipment that could be used on site.	
4.18 Give examples in the variations in signing, lighting, guarding and traffic control required for different situations, including single and dual carriageways.	
4.19 Explain the importance of using the correct sequence to set up and dismantle works.	
4.20 Describe the implications of poor maintenance of the layout and condition of protection and traffic control equipment .	
4.21 Explain the importance and purpose of personal protective equipment .	
4.22 Explain problems arising from signing, lighting and guarding the work site, including: <ul style="list-style-type: none"> (a) typical and unusual problems that could arise (b) their responsibility for dealing with problems 	
4.23 Outline safe working practices and related statutory requirements for signing, lighting and guarding the work site.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Hazards include:</p> <ul style="list-style-type: none"> ◆ flammable materials ◆ disinfectants ◆ confined spaces ◆ deep excavations ◆ lone working ◆ slips, trips and falls ◆ needle-stick injuries ◆ lifting and manual handling ◆ traffic 	
<p>2 Hazardous locations include:</p> <ul style="list-style-type: none"> ◆ water storage sites ◆ building sites ◆ highways ◆ commercial premises ◆ residential premises 	
<p>3 Relevant action taken with tools, equipment and hazardous locations that don't comply with health and safety specifications and safe working practices includes:</p> <ul style="list-style-type: none"> ◆ rectifying those which are within the candidate's responsibility ◆ reporting those what are outside the candidate's responsibility 	
<p>4 Dangerous occurrences include:</p> <ul style="list-style-type: none"> ◆ accidents ◆ near misses 	
<p>5 Type of carriageway includes:</p> <ul style="list-style-type: none"> ◆ single ◆ dual ◆ include footpaths 	
<p>6 Protection equipment includes:</p> <ul style="list-style-type: none"> ◆ signs ◆ lights ◆ guards ◆ traffic controls 	
<p>7 Traffic control equipment includes:</p> <ul style="list-style-type: none"> ◆ give and take signs ◆ priority signs ◆ stop/go boards ◆ portable traffic signals 	
<p>8 Personal protective equipment includes:</p> <ul style="list-style-type: none"> ◆ high visibility clothing ◆ that required by safe working practices 	

Assessment Summary and Confirmation

HC3T 04 Address and Resolve Customers' Water Distribution Related Enquiries

SCQF level	5	Credit value	10
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

**HC3T 04 Address and Resolve Customers' Water Distribution
Related Enquiries**

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC3T 04 Address and Resolve Customers' Water Distribution Related Enquiries

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Determine the details of the enquiry	
1.1 Respond to customer queries and complaints in a way that meets organisational requirements for customer contact.	
1.2 Treat the customer in a courteous and helpful manner and deal tactfully with specific enquiries .	
1.3 Identify, understand and acknowledge the customer's perception of the cause of the enquiry .	
1.4 Gather sufficient relevant information about the cause of the enquiry .	
1.5 Summarise and confirm their understanding of the cause of the enquiry .	
1.6 Provide the relevant person with the appropriate details where the enquiry is outside their responsibility, and inform the customer accordingly.	
2 Provide information and advice to customers	
2.1 Provide accurate information about legal obligations and organisational policies in response to specific enquiries .	
2.2 Confirm that the customer understands the information provided to them.	
2.3 Confirm that the customer understands what actions are required next and who will take those actions.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Provide information and advice to customers (cont)	
2.4 Respond to questions in a tactful manner and provide appropriate advice in accordance with organisational procedures.	
2.5 Refer appropriate details about specific enquiries to the relevant person where they cannot provide the information required, and inform the customer accordingly.	
2.6 Record relevant information according to organisational requirements.	
3 Agree a course of action to resolve customer concerns and enquiries	
3.1 Confirm their understanding and the details of the enquiry with the customer .	
3.2 Seek advice as required from appropriate sources to determine an effective response to the enquiry .	
3.3 Identify and confirm organisational procedures which provide an effective solution to the enquiry .	
3.4 Agree a suitable course of action with the customer to meet legal and organisational responsibilities and requirements and the timescales within which the follow on actions will be taken.	
3.5 Refer the matter as required if the customer refuses to accept the defined course of action, and advise them of the referral.	
3.6 Meet organisational requirements in their dealings with the customer .	
3.7 Record relevant information according to organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Agree a course of action to resolve customer concerns and enquiries (cont)	
3.8 Inform the relevant person in accordance with organisational procedures if they identify that the agreed course of action has not been carried out.	
3.9 Confirm with the customer what next steps will be taken to resolve the issue when agreed actions have been carried out but did not resolve the issue.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Customers include:</p> <ul style="list-style-type: none"> ◆ those with additional needs ◆ difficult customers ◆ customers with cultural expectations (this could include entry procedures to places of worship and appropriate times of entry, eg an awareness of potential Sabbath days, when visits may not be appropriate) 	
<p>2 Enquiries are about:</p> <ul style="list-style-type: none"> ◆ problems ◆ complaints ◆ general enquiries on services provided by the company ◆ advice on water regulations ◆ reports for insurance purposes (in case of water damage/seepage) ◆ network performance (including water quality, water flow rates, water supply, water pressure) ◆ service standards ◆ leakage on customer's premises (Customer Side Leakage policy) ◆ seepage of water into customer premises ◆ costs ◆ supply location and ownership ◆ metering ◆ property damage ◆ employee behaviour ◆ new and replacement supplies ◆ lead replacement policy 	
<p>3 Appropriate sources of advice and information include:</p> <ul style="list-style-type: none"> ◆ colleagues and supervisors ◆ company IT system ◆ records ◆ previous reports ◆ external sources ◆ regulatory and legislative requirements ◆ company specific policies and procedures 	

Assessment Summary and Confirmation

HC3V 04 Carry out Valve Operations on the Water Distribution Network

SCQF level	6	Credit value	7
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC3V 04 Carry out Valve Operations on the Water Distribution Network

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC3V 04 Carry out Valve Operations on the Water Distribution Network

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Assess the implications of valve operations.	
1.1 Receive and understand the risk assessment, impact plan and method statement for valve operations to be carried out.	
1.2 Identify the valve operations to be carried out from instructions received.	
1.3 Confirm the configuration of valves in accordance with the specified operation.	
1.4 Identify any unforeseen circumstances or anomalies in the configuration or in the instructions issued and resolve them or forward them for resolution by others.	
1.5 Take the relevant action where it is identified that the specified valve operations would cause unacceptable problems.	
1.6 Assess the potential risks of the specified valve operations on customers' supplies.	
1.7 Confirm that the operation will not contravene organisational quality limits.	
1.8 Plan the work to minimise the effect of the valve operations on water quality, water supply and to minimise possible discoloration.	
1.9 Check that customers and other departments who will be affected by the valve operations have been informed in line with organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Assess the implications of valve operations (cont)	
1.10 Select and if necessary test the equipment required to operate valves .	
1.11 Arrange alternative supplies where the valve operations make it necessary.	
2 Access and operate valves	
2.1 Identify the positions, sizes and types of valves and related fittings to be used in accordance with operational requirements.	
2.2 Determine an appropriate sequence of operation of identified valves and related fittings, taking account of: (a) the potential for contamination (b) the effect on water supply and quality (c) undue disturbance of the system	
2.3 Access valve chambers safely and establish the appropriate rotational direction for opening and closing valves .	
2.4 Operate specified valves correctly.	
2.5 Work in a safe manner that minimises risk to themselves and others affected by their actions.	
2.6 Identify problems with accessing and operating valves and take the relevant action .	
2.7 Follow safe working and hygiene practices for valve operations in accordance with current specifications and procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Restore the system to normal operations	
3.1 Identify an appropriate sequence and timing of valve and hydrant operations for the required flushing activity.	
3.2 Purge air from the system for the maximum length of the affected main.	
3.3 Dispose of flushed water in a safe manner, minimising the effect on the environment, in line with regulatory and organisational requirements.	
3.4 Use correct sampling procedures to confirm restoration of the supply to operational service levels.	
3.5 Confirm the time limits specified for the operation have been met.	
3.6 Identify problems restoring the system and take the relevant action .	
3.7 Confirm that the system has been returned to normal operational levels.	
3.8 Follow safe working and hygiene practices for restoring the system to normal operations in line with relevant procedures, regulatory and statutory requirements including appropriate disposal of chlorinated water.	
3.9 Record the changed status of valves and confirm that mains records are updated in line with organisational requirements.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Valve operations are for the purposes of:</p> <ul style="list-style-type: none"> ◆ isolating a section of the distribution system ◆ re-commissioning a section of the distribution system ◆ checking valve operability ◆ allowing transfer of water between zones 	
<p>2 Customers include:</p> <ul style="list-style-type: none"> ◆ internal and external customers ◆ those with additional needs ◆ large users and key accounts ◆ those outside an area to be isolated ◆ those inside an area to be isolated ◆ fire services ◆ other departments who might be affected 	
<p>3 Potential risks to the supply include:</p> <ul style="list-style-type: none"> ◆ water quality ◆ leakage ◆ water pressure and flow (loss and surges) ◆ loss of supply ◆ discolouration of the supply ◆ restoration of the supply ◆ disruption to monitoring equipment ◆ disruption to DMA/pressure zone monitoring and effects on leakage reporting 	
<p>4 Valves include:</p> <ul style="list-style-type: none"> ◆ soft-faced valves ◆ hard-faced valves ◆ clockwise opening valves ◆ anti-clockwise opening valves ◆ air valves ◆ fire hydrants/washouts ◆ mechanically operated valves ◆ customer service/communication pipe valves ◆ service main valves ◆ trunk main valves 	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>5 Problems with accessing and operating valves include:</p> <ul style="list-style-type: none"> ◆ equipment problems ◆ problems with the valves ◆ problems with the valve chambers ◆ problems with valve covers ◆ problems with network fittings (including hydrants) 	
<p>6 Relevant action taken to deal with problems includes:</p> <ul style="list-style-type: none"> ◆ follow relevant company procedures to resolve problems ◆ rectification of problems within their responsibility ◆ reporting of problems outside their responsibility 	
<p>7 The system includes:</p> <ul style="list-style-type: none"> ◆ customer supply ◆ network supply 	
<p>8 Problems restoring the system include:</p> <ul style="list-style-type: none"> ◆ problems with supply/water quality ◆ problems with supply flow and pressure ◆ problems with discoloured water ◆ leaks from packing glands ◆ valves broken shut/open ◆ surges causing bursts ◆ aeration incorrectly purged 	

A variety of valves must be used, with different status settings and different types of valve covers.

Assessment Summary and Confirmation

HC3W 04 Determine the Exact Location of Water Loss Using Acoustic Listening Techniques

SCQF level	5	Credit value	10
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC3W 04 Determine the Exact Location of Water Loss Using Acoustic Listening Techniques

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC3W 04 Determine the Exact Location of Water Loss Using Acoustic Listening Techniques

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Trace the route of water pipes and locate surface fittings	
1.1 Select the appropriate tracing technique and equipment in accordance with the type of water pipe being traced.	
1.2 Confirm the condition of tracing equipment in accordance with organisational requirements.	
1.3 Identify the location of utility apparatus accurately to prevent safety problems during pipe tracing activities.	
1.4 Identify the position of the water pipe and surface fittings from records, surface evidence and tracing techniques .	
1.5 Trace water pipes over the required distance to within specified limits in line with organisational requirements.	
1.6 Mark the position of the water pipe and surface fittings on the work site in accordance with organisational requirements.	
1.7 Record and report deviations in the position of water pipes and surface fittings in accordance with organisational requirements.	
1.8 Follow safe working and hygiene practices in accordance with relevant specifications and procedures.	
2 Identify the location of the leak	
2.1 Select appropriate equipment for the detection activity and confirm it is in working order and is safe to use.	
2.2 Set up the equipment to provide the hearing sensitivity needed to locate the leak.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Identify the location of the leak (cont)	
2.3 Identify and verify the location of the leak .	
2.4 Mark the position of the leak in accordance with organisational requirements.	
2.5 Dismantle, clean and return the equipment to storage in accordance with organisational requirements.	
2.6 Record and report the position of the leak in accordance with organisational requirements.	
2.7 Report relevant details to the required person for further investigation purposes where the location of the leak cannot be identified.	
2.8 Follow safe working and hygiene practices in accordance with relevant specifications and procedures.	
3 Know and understand how to locate leaks by using acoustic listening	
3.1 Describe the different types of tracing equipment used for different tracing techniques and their limitations.	
3.2 Outline how to check and use tracing equipment .	
3.3 Explain the importance of locating cables and other utility apparatus.	
3.4 Describe how to interpret records, plans and surface evidence of route of mains.	
3.5 State the procedures to be used when tracing water pipes and locating surface fittings .	
3.6 Describe the procedures for marking the route of mains.	
3.7 State the specified limits for tracing water pipes .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know and understand how to locate leaks by using acoustic listening (cont)	
3.8 Describe organisational reporting requirements relating to leak location.	
3.9 Outline the safety and hygiene specifications and procedures for locating leaks using acoustic listening techniques.	
3.10 Describe the implications of tracing activities for water quality.	
3.11 State the implications of not tracing prior to leak investigation.	
3.12 Explain the importance of checking the equipment .	
3.13 Describe the limitations of acoustic listening equipment .	
3.14 Outline how to use hand-held listening tools to locate leaks.	
3.15 Explain the importance of verifying the location of the leak .	
3.16 State the procedures for marking the location of leaks .	
3.17 Describe the procedures for dismantling, cleaning and storing equipment .	
3.18 Outline the recording and reporting procedures for locating leaks using acoustic listening techniques.	
3.19 Explain why it could be impossible to locate the leak and who should be informed.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Tracing techniques include:</p> <ul style="list-style-type: none"> ◆ visual techniques ◆ electronic techniques — induction, connection and radio ◆ measurement techniques 	
<p>2 Water pipes are:</p> <ul style="list-style-type: none"> ◆ metallic ◆ non-metallic 	
<p>3 Surface fittings are:</p> <ul style="list-style-type: none"> ◆ valve covers ◆ hydrant covers ◆ meter chamber covers 	
<p>4 Leakage detection equipment used is:</p> <ul style="list-style-type: none"> ◆ non-electronic ◆ electronic 	
<p>5 The candidate can identify the location of the leak on:</p> <ul style="list-style-type: none"> ◆ service pipes ◆ supply pipes ◆ water mains ◆ valves ◆ hydrants ◆ stop valves 	

Assessment Summary and Confirmation

HC3X 04 Cleanse Water Mains

SCQF level	5	Credit value	5
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC3X 04 Cleanse Water Mains

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC3X 04 Cleanse Water Mains

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Prepare the system for cleansing	
1.1 Identify the cleansing activity to be carried out and confirm customer notification, according to organisational requirements and procedures.	
1.2 Confirm the system is configured to enable the cleansing activity to be carried out.	
1.3 Take the relevant action to resolve problems which occur during preparation.	
1.4 Record relevant information in accordance with organisational requirements.	
1.5 Follow safe working and hygiene practices for preparing to cleanse mains according to relevant procedures, regulatory and statutory requirements.	
2 Carry out cleansing operations	
2.1 Select appropriate equipment for the cleansing method to be used.	
2.2 Confirm the equipment is in the required operational condition and is correctly installed in accordance with the manufacturer's specification and organisational requirements.	
2.3 Carry out cleansing procedures in accordance with organisational requirements.	
2.4 Dispose of discharged water in a safe manner, and to minimise the effect on the environment, according to regulatory and organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Carry out cleansing operations (cont)	
2.5 Confirm the effectiveness of the cleansing operation on water quality.	
2.6 Take the relevant action when problems arise with the cleansing operation.	
2.7 Inform relevant people of cleansing details in accordance with organisational requirements.	
2.8 Follow safe working and hygiene practices for cleansing mains in line with relevant procedures, regulatory and statutory requirements.	
3 Know and understand how to cleanse water mains	
3.1 Explain the reasons for cleansing and the need to cleanse mains.	
3.2 Explain why it may be inappropriate to cleanse mains.	
3.3 Describe the limitations of cleansing and of different cleansing methods .	
3.4 Outline the organisational procedures regarding customer notification.	
3.5 Describe the preparation procedures and calculations which may need to be carried out (eg flow velocities).	
3.6 Describe the implications of using flow velocities that are too high or too low.	
3.7 Describe typical and unusual problems which might occur when cleansing mains.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know and understand how to cleanse water mains (cont)	
<p>3.8 Outline recording and reporting procedures, including:</p> <ul style="list-style-type: none"> (a) recording requirements for cleansing (b) reporting procedures for problems (c) the information that is required (d) who to inform when cleansing has taken place 	
<p>3.9 Outline how to dispose safely of water used in cleansing.</p>	
<p>3.10 Describe the damage which can be caused by incorrect disposal of water.</p>	
<p>3.11 Describe the sampling procedures to be used in mains cleansing operations.</p>	
<p>3.12 State how to use equipment correctly and safely during mains cleansing.</p>	
<p>3.13 Outline the acceptable water quality parameters that should be confirmed following cleansing.</p>	
<p>3.14 Outline the safety and hygiene practices and regulatory and statutory requirements relating to:</p> <ul style="list-style-type: none"> (a) working in the public highway (b) use of tools and equipment (c) personal hygiene 	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Problems include:</p> <ul style="list-style-type: none"> ◆ problems with equipment ◆ problems with the distribution pipework ◆ problems with the cleansing process 	
<p>2 Action taken to resolve problems includes:</p> <ul style="list-style-type: none"> ◆ rectification of problems within your responsibility ◆ reporting of problems outside your responsibility 	
<p>3 Cleansing method is one of:</p> <ul style="list-style-type: none"> ◆ systematic flushing ◆ water scouring ◆ air scouring ◆ foam swabbing 	

Assessment Summary and Confirmation

HC3Y 04 Disinfect Water Mains

SCQF level	6	Credit value	8
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC3Y 04 Disinfect Water Mains

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC3Y 04 Disinfect Water Mains

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Prepare the system for disinfection	
1.1 Confirm the section of the system to be disinfected and the fittings and disinfection methods to be used, from instructions and information received.	
1.2 Check valve configuration to ensure the section to be disinfected is isolated in accordance with organisational requirements.	
1.3 Resolve any anomalies found where the instructions do not meet the conditions either by resolving on site or by forwarding for resolution by others.	
1.4 Follow guidance to ascertain the disinfectant to be used, the quantity, strength and exposure time and select the appropriate equipment for the task.	
1.5 Confirm that the equipment condition and installation meets the manufacturer's and company specifications.	
1.6 Take samples at appropriate intervals in the preparation process to measure current system operating conditions.	
1.7 Confirm that the required amounts of disinfectant have been added to produce the specified concentration at all necessary points on the system .	
1.8 Identify problems with the preparation work and can take the relevant action .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Prepare the system for disinfection (cont)	
1.9 Follow safe working and hygiene practices when preparing the system for disinfection , in line with relevant specifications and procedures.	
1.10 Ensure that all relevant people (including affected customers, colleagues and control centres) are informed of disinfection details according to organisational procedures.	
2 Carry out the disinfection operation	
2.1 Carry out disinfection procedures in line with organisational requirements.	
2.2 Take samples at appropriate intervals to measure the effectiveness of the disinfection process.	
2.3 Follow the appropriate procedure where samples indicate that the method of disinfection used has not been successful.	
2.4 Record all stages in the disinfection process.	
2.5 Keep customers, colleagues and control centres informed as necessary at all stages.	
2.6 Dispose safely of all water to minimise flooding, freezing and the effect on the environment, according to regulatory and organisational requirements.	
2.7 Dismantle, clean and store the equipment in accordance with organisational requirements.	
2.8 Confirm the effectiveness of the disinfection procedures on water quality.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Carry out the disinfection operation (cont)	
2.9 Take relevant action where problems are identified with the disinfection operation.	
2.10 Follow safe working and hygiene practices for disinfecting water mains in line with relevant procedures, regulatory and statutory requirements.	
3 Know and understand water mains disinfection	
3.1 Explain the importance of disinfecting water mains, including: (a) the reasons for disinfecting mains (b) how contamination can occur (c) how to use methods that avoid contamination	
3.2 Outline disinfection methods, including the different forms of disinfectants and when to use them for specified tasks.	
3.3 List the equipment required for mains disinfection and how to test, install and use it.	
3.4 Outline what is covered by the manufacturer's specification for equipment condition and installation.	
3.5 Describe the company specifications for disinfection procedures.	
3.6 Explain how to calculate volumes of water and appropriate disinfection dosages.	
3.7 Describe how to check that the main is correctly isolated in accordance with the plan, and the implications of ineffective isolation.	
3.8 Explain how to measure flow rates to ensure water flow carries the disinfectant through the pipe.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know and understand water mains disinfection (cont)	
3.9 Describe how to calculate volumes to ensure adequate flushing takes place.	
3.10 List the typical and unusual problems that could arise when disinfecting water mains, and confirm the limits of their responsibility for dealing with them.	
<p>3.11 Outline the safe working and hygiene procedures to follow while disinfecting water mains, covering:</p> <ul style="list-style-type: none"> (a) the handling, storage and use of disinfectants (b) personal hygiene (c) de-pressurising part of the system (d) use of personal protective equipment (e) use of hand tools and equipment (f) national water hygiene requirements for cleaning and disinfecting tools and equipment 	
3.12 Describe the organisational procedures for informing people of disinfection operations.	
3.13 Describe how to dispose of flushed water to minimise risk of flooding and freezing.	
<p>3.14 Describe how to dispose of chlorinated water, including:</p> <ul style="list-style-type: none"> (a) the damage that can be caused by incorrect disposal of chlorinated water (b) how to safely dispose of chlorinated water, including de-chlorination techniques 	
3.15 State how to use and store equipment for mains disinfection correctly and safely.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know and understand water mains disinfection (cont)	
3.16 Describe the sampling procedures to be used in mains disinfection operations.	
3.17 Outline the acceptable water quality parameters that should be confirmed following disinfection.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Disinfection is carried out: <ul style="list-style-type: none"> ◆ as a precautionary measure ◆ for reactionary purposes 	
2 Types of disinfection and their suitability for the task include: <ul style="list-style-type: none"> ◆ full contact disinfection for new or repaired mains ◆ surface/spray disinfection for repaired mains/fittings 	
3 Problems include: <ul style="list-style-type: none"> ◆ problems with equipment ◆ problems with the system ◆ problems with disinfectant 	
4 Relevant action taken to resolve problems includes: <ul style="list-style-type: none"> ◆ rectification of problems within your responsibility ◆ reporting of problems outside your responsibility 	

Assessment Summary and Confirmation

HC40 04 Carry out Sampling Operations; Bacteriological, Chemical Spot and Flush

SCQF level	6	Credit value	8
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC40 04 Carry out Sampling Operations; Bacteriological, Chemical Spot and Flush

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ Date _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ Date _____

Assessor's counter-signature (if appropriate) _____ Date _____

If sampled

Internal verifier's name _____

Internal verifier's signature _____ Date _____

External verifier's name _____

External verifier's signature _____ Date _____

HC40 04 Carry out Sampling Operations; Bacteriological, Chemical Spot and Flush

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Prepare for simple sampling	
1.1 Confirm the conditions for sampling are in accordance with laid down procedures.	
1.2 Select equipment and materials according to instructions.	
1.3 Check and ensure that materials and equipment are in serviceable condition and the equipment is in calibration.	
1.4 Prepare equipment and materials in accordance with standard operating procedures.	
1.5 Ensure that the required resources are available and appropriate.	
1.6 Follow safety systems and standard operating procedures correctly.	
2 Obtain representative sample	
2.1 Prepare the sampling point as necessary.	
2.2 Confirm the conditions for sampling are in accordance with the sampling plan.	
2.3 Record the conditions under which the sample is taken.	
2.4 Take the sample following standard operating procedures.	
2.5 Identify and correctly label the sample.	
2.6 Follow safe practices during sampling.	
2.7 Record any deviations from the set procedure or from anticipated results and take appropriate action.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Obtain representative sample	
2.8 Clean sampling equipment and materials appropriately which will be re-used.	
2.9 Dispose correctly of equipment and materials which will not be re-used.	
2.10 Confirm the sample taken meets the plan procedure.	
3 Maintain integrity of sample	
3.1 Record information about the sample to permit traceability.	
3.2 Maintain the condition of the sample according to instructions.	
3.3 Confirm the sample is protected from external sources of contamination.	
3.4 Take appropriate action in the event of abnormal occurrences affecting the sample condition.	
3.5 Follow safety, health and environmental requirements.	
4 Know and understand simple sampling operations	
4.1 Explain the purpose of sampling.	
4.2 Explain the reasons for using controlled conditions .	
4.3 Outline the procedures for taking samples and completing documentation and labelling systems to ensure traceability.	
4.4 Describe the equipment requirements for sampling, including: <ul style="list-style-type: none"> (a) appropriate sampling equipment to use (b) how to identify defective equipment (c) the action to take with defective equipment 	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know and understand simple sampling operations (cont)	
4.5 State the safety, health and environmental requirements and procedures for sampling, including any risk to the source.	
4.6 Explain what constitutes a suitable point from which to take a sample according to the sample plan.	
4.7 Describe the relevant features of the sampling plan, including what constitutes a suitable sample according to the sample plan.	
4.8 Outline how to use materials including: (a) dealing with materials (b) handling materials (c) materials storage (d) disposal of materials.	
4.9 Give examples of cleaning materials and how to use them.	
4.10 Outline safe lifting and moving techniques for sampling operations.	
4.11 Describe the information that needs to be recorded about samples.	
4.12 Describe the procedure for maintaining sample condition .	
4.13 Describe abnormal conditions that can affect sampling.	
4.14 Give examples of different types of sampling containers.	
4.15 Outline the procedure for arranging for samples to be collected or transported to laboratories.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Conditions include:</p> <ul style="list-style-type: none"> ◆ access ◆ location ◆ timing ◆ temperature ◆ sampling points ◆ duration ◆ safety ◆ health and environmental impact 	
<p>2 Resources required include:</p> <ul style="list-style-type: none"> ◆ equipment (including personal protective equipment) ◆ materials ◆ documentation 	
<p>3 Safe Practices include:</p> <ul style="list-style-type: none"> ◆ use of personal protective equipment ◆ safe materials handling ◆ safe lifting and moving techniques ◆ safe disposal and storage 	
<p>4 Information required about the sample includes:</p> <ul style="list-style-type: none"> ◆ time ◆ conditions ◆ location ◆ nature of sample ◆ known hazards ◆ required storage conditions ◆ possible contamination sources 	
<p>5 The candidate maintains the condition of the sample through:</p> <ul style="list-style-type: none"> ◆ preservation ◆ transportation ◆ packaging ◆ documentation 	

Assessment Summary and Confirmation

HC41 04 Measure System Performance using Flow and Pressure Equipment

SCQF level	6	Credit value	7
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC41 04 Measure System Performance using Flow and Pressure Equipment

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC41 04 Measure System Performance using Flow and Pressure Equipment

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Determine the nature and scope of an investigation	
1.1 Identify the available information regarding system performance.	
1.2 Interpret the information and determine the requirements of an investigation .	
1.3 Determine appropriate investigation methods.	
1.4 Inform relevant people of the investigation details.	
2 Use data measuring equipment	
2.1 Select appropriate equipment in accordance with the investigation to be carried out.	
2.2 Confirm that the equipment is in working order and is safe to use.	
2.3 Confirm that the equipment is calibrated in accordance with the manufacturer's specification.	
2.4 Select an appropriate test point(s) to apply the equipment .	
2.5 Prepare the test point to ensure safe and hygienic operation.	
2.6 Apply the equipment correctly and confirm that it is operating properly.	
2.7 Take the relevant action where they identify: <ul style="list-style-type: none"> (a) problems with the equipment or its use (b) problems with the test point 	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Use data measuring equipment (cont)	
2.8 Safely remove the equipment on completion of the investigation and return it in a suitable condition to its correct storage location.	
2.9 Follow safe working and hygiene practices for using data measuring equipment , in line with relevant procedures, regulatory and statutory requirements.	
3 Collect and evaluate data	
3.1 Identify data collection requirements from specified recording equipment .	
3.2 Collect the data in accordance with organisational requirements.	
3.3 Identify expected results and identify and record abnormal results and equipment malfunctions.	
3.4 Collate the data accurately.	
3.5 Evaluate the data and confirm that it meets the investigation needs.	
3.6 Determine appropriate recommendations from the data.	
3.7 Provide the results and any recommendations to the relevant person, in accordance with organisational requirements.	
4 Know and understand how to use flow and pressure equipment to measure system performance	
4.1 Explain the purpose of measuring system performance.	
4.2 Describe what constitutes “normal” operating conditions.	
4.3 Explain the purposes of investigations and how to carry them out.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know and understand how to use flow and pressure equipment to measure system performance (cont)	
4.4 List the different sources of information regarding system performance and how to use them.	
4.5 State how system performance can be measured.	
4.6 Describe how to interpret information about system performance.	
4.7 Outline the requirements for informing people about the investigation , including: (a) who requires information about the investigation (b) what investigation information must be provided	
4.8 Describe how to use different types of equipment for measuring system performance.	
4.9 Explain how to select the appropriate equipment for the location and investigation .	
4.10 Outline what is covered by manufacturers' specifications.	
4.11 Describe how to select a suitable test point, including: (a) what to consider to select a test point (b) the implications of using inappropriate test points	
4.12 Explain the correlation between measurements taken, flow rates and ground levels.	
4.13 Describe the interaction of flow and pressure when measured at the same point over a period of time.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know and understand how to use flow and pressure equipment to measure system performance (cont)	
4.14 Explain what factors can affect the accuracy of equipment , and the importance of accurate results.	
4.15 Describe typical and unusual problems with equipment and its use and the limits of their responsibility for resolving them.	
4.16 Confirm what constitutes a suitable condition for the equipment .	
4.17 State storage requirements for equipment .	
4.18 Outline the safety and hygiene practices and related regulatory and statutory requirements relating to: (a) the use of tools and equipment (b) working in the public highway (c) personal hygiene	
4.19 Explain how to minimise contamination, including: (a) the causes of contamination (b) the dangers posed by contamination (c) how to minimise the risk of contamination	
4.20 Describe the data collection methods for different types of recording equipment .	
4.21 Explain how to identify abnormal results and record them in line with organisational requirements.	
4.22 Outline what constitutes an equipment malfunction and the effects of faulty equipment being used.	
4.23 Give examples of the types of recommendations that would be indicated by different results.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Investigations relate to:</p> <ul style="list-style-type: none"> ◆ pressure on the mains network ◆ flow on the mains network ◆ pressure within customer premises ◆ flow within customer premises ◆ network performance investigations ◆ future planning investigations 	
<p>2 Information is generated from:</p> <ul style="list-style-type: none"> ◆ service levels ◆ customers ◆ records 	
<p>3 Data measuring equipment includes:</p> <ul style="list-style-type: none"> ◆ gauges ◆ recorders ◆ flow meters ◆ manometers ◆ loggers ◆ ultra sonic 	
<p>4 Relevant action taken to resolve problems includes:</p> <ul style="list-style-type: none"> ◆ rectification of problems within the candidate's responsibility ◆ reporting of problems outside the candidate's responsibility 	

Assessment Summary and Confirmation

HC42 04 Provide and Maintain Emergency Water Supplies

SCQF level	6	Credit value	4
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Candidate's name		Assessor's name	
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Types of evidence provided for this Unit (Please tick as appropriate)			
Assessor observation report	<input type="checkbox"/>	Witness testimony	<input type="checkbox"/>
Workplace records/products (includes job reports and documentation)	<input type="checkbox"/>	Record of assessor/candidate discussions	<input type="checkbox"/>
Professional discussion interview	<input type="checkbox"/>	Written knowledge questions	<input type="checkbox"/>
Records of oral questions and candidate's answers	<input type="checkbox"/>	RPL	<input type="checkbox"/>
Evidence from NRSWA assessment	<input type="checkbox"/>		

Evidence Requirements (please tick as appropriate)

	Yes	No		Yes	No
Has any evidence been produced from assessor observation of the candidate in a realistic working environment?	<input type="checkbox"/>	<input type="checkbox"/>	If a realistic working environment was used for observation, did it meet the qualification requirements?	<input type="checkbox"/>	<input type="checkbox"/>

The evidence is:

Valid: meets the qualification requirements and demonstrates competence	<input type="checkbox"/>	<input type="checkbox"/>	Authentic: is the candidate's own work and can be verified as genuine	<input type="checkbox"/>	<input type="checkbox"/>
Reliable: shows genuine sustained competence over a period of time	<input type="checkbox"/>	<input type="checkbox"/>	Sufficient: total evidence covers all Performance Criteria, Knowledge and Understanding and Range	<input type="checkbox"/>	<input type="checkbox"/>
Current: recent enough to show current competence	<input type="checkbox"/>	<input type="checkbox"/>			

HC42 04 Provide and Maintain Emergency Water Supplies

Candidate declaration

I confirm that the evidence listed is my own work, and I have collected my evidence in line with the qualification requirements.

Candidate's signature _____ **Date** _____

Assessor confirmation

I confirm that I have assessed the evidence produced and I am satisfied that the candidate has demonstrated competence against the qualification requirements.

Assessor's signature _____ **Date** _____

Assessor's counter-signature (if appropriate) _____ **Date** _____

If sampled

Internal verifier's name _____

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

External verifier's name _____

External verifier's signature _____ **Date** _____

HC42 04 Provide and Maintain Emergency Water Supplies

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Prepare and deploy emergency water supplies	
1.1 Determine the need to provide an emergency supply in accordance with the identified situation and organisational requirements.	
1.2 Ensure that any tanker or bowser to be used to contain the water is suitable for the purpose and has undergone required disinfection and sampling tests.	
1.3 Determine the quantity of water to be supplied.	
1.4 Choose a method of supply that is appropriate for the location and volume of the usual supply.	
1.5 Prepare the equipment for the emergency supply in accordance with organisational requirements.	
1.6 Provide the emergency supply within specified timescales.	
1.7 Advise relevant personnel and all affected parties of supply arrangements in accordance with organisational requirements.	
1.8 Position the emergency supply in accordance with organisational requirements.	
1.9 Confirm that information on availability and position of supplies is provided to customers in line with organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Prepare and deploy emergency water supplies (cont)	
1.10 Record relevant information in accordance with organisational requirements.	
1.11 Follow safe working and hygiene practices to prepare and deploy emergency supplies, in line with relevant procedures, regulatory and statutory requirements.	
2 Maintain emergency water supplies	
2.1 Monitor water usage and water quality at appropriate times in the required manner.	
2.2 Maintain required visual and operational condition of the equipment .	
2.3 Take the relevant action where problems are identified with maintaining emergency supplies.	
2.4 Promptly provide updated information about the supply situation to relevant personnel.	
2.5 Maintain the required condition and position of signs, lights and guards in accordance with relevant codes of practice.	
2.6 Confirm equipment is maintained and stored as required after use.	
2.7 Record relevant information in accordance with organisational requirements.	
2.8 Follow safe working and hygiene practices for maintaining emergency supplies, in line with relevant procedures, regulatory and statutory requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know and understand how to provide and maintain emergency water supplies	
3.1 Explain the importance of providing emergency supplies, in conjunction with the contingency plan.	
3.2 Outline the organisational requirements for providing emergency supplies.	
3.3 State the factors to consider when deciding how much water to supply.	
3.4 Describe different methods of supply and their appropriateness for different situations.	
3.5 Outline equipment preparation procedures.	
3.6 Explain the implications of failure to provide the supply within specified timescales.	
3.7 Describe the reporting process for providing and maintaining emergency supplies, including: (a) those who require information about the supply arrangements (b) those who require updates on the supply situation (c) procedures for providing information and updates	
3.8 Describe the requirements for positioning the supply and the dangers associated with positioning it incorrectly on the highway, including signing, lighting and guarding requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know and understand how to provide and maintain emergency water supplies (cont)	
3.9 Outline the recording requirements for providing and maintaining emergency water supplies.	
3.10 Outline the safety and hygiene practices and related regulatory and statutory requirements for providing and maintaining emergency water supplies.	
3.11 Describe the potential hygiene problems associated with temporary supplies.	
3.12 Describe the importance of monitoring water usage and quality and the monitoring methods used.	
3.13 Outline typical and unusual problems with providing and maintaining emergency water supplies and the limits of their responsibility for resolving them.	
3.14 Describe equipment maintenance and storage requirements for providing and maintaining emergency water supplies.	
3.15 Outline the safety and hygiene practices and related regulatory and statutory requirements for providing and maintaining emergency water supplies.	

Scope of evidence	Evidence or File X-Ref/Coverage
<p>1 Methods of supply include:</p> <ul style="list-style-type: none"> ◆ individual containers ◆ communal supplies ◆ riders laid while existing mains are being rehabilitated 	
<p>2 Equipment preparation and maintenance includes:</p> <ul style="list-style-type: none"> ◆ cleaning ◆ disinfection ◆ labelling ◆ sampling 	
<p>3 Problems include:</p> <ul style="list-style-type: none"> ◆ customer problems ◆ emergency supply problems ◆ vandalism 	
<p>4 Relevant action taken to resolve problems includes:</p> <ul style="list-style-type: none"> ◆ rectification of problems within the candidate's responsibility ◆ reporting of problems outside the candidate's responsibility 	