



Assessment Guidance: Diploma in Sewerage and Drainage Operations

- ◆ **Sewerage Investigative CCTV Operative
— GK3Y 45 (SCQF level 5)**
- ◆ **Sewerage Repair and Maintenance Operative
— GK40 45 (SCQF level 5)**
- ◆ **Water Jetting Operative — GK41 45
(SCQF level 5)**

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Contents

About this guide	1
National Occupational Standards (NOS) and qualification structures	1
Unit specification	2
Who is involved in this qualification?	4
The steps involved in assessing a candidate for this qualification	5
1 The Diploma in Sewerage and Drainage Operations	6
General evidence requirements	6
Coverage of full Unit and qualification requirements	7
Consistent competence over time	7
Varied evidence gathered from different work activities and situations	8
Evidence that occurs naturally	8
Using a realistic working environment (RWE)	9
Witness testimonies	9
Employer involvement and contribution to assessment process	9
Evidence from sewerage and drainage operational activities	10
Records storage	12
Observing the candidate	14
Using a realistic working environment (RWE)	14
Structure of the Diplomas	17
Why would people be interested in the qualification?	20
How do candidates begin?	20
Choosing the right qualification	20
2 Preparing to assess this qualification	21
Your role and your candidate's role	21
Planning	22
Structure of the Unit	23
Assessment plan	24
Selecting methods of assessment	26
Methods of assessment	27
Observation	27
Product evidence	27
Questioning	28
Other methods of assessment	28
Personal statements	29
Witness testimony	29
Witness credibility	30
Witness testimony content	31
Knowledge assessment	32
Approaches to collecting evidence: assessor or candidate-led	32
Types of evidence	33
Graphical items in performance evidence	33
Using generic workplace documentation	34
Recording candidates' evidence	35
The audit trail	35
Other sources of evidence	39

3	Generating evidence	40
	Observation.....	40
	Questions and candidate responses.....	43
	Candidate's personal statement	45
	Witness testimony.....	47
	Filling the gaps.....	49
	Guidance and support to candidates	49
	Judging candidate evidence and making an assessment decision.....	49
	Insufficient evidence	49
	Authenticating candidates' evidence	50
4	Recording achievement	51
	Using the index of evidence	52
	Completing the Unit progress record.....	54
	Completing the Learning Outcome Achievement Record	56
5	Further information.....	59
	What else should I read?	59
	Appendices.....	60
	Appendix 1: Types of evidence and associated risks.....	60
	Appendix 2: Sample assessor report form (generic)	72
	Appendix 3: Sample witness testimony pro forma	78
	Appendix 4: Recording Documents.....	80
	Diploma in Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative GK3Y 45	81
	Cover sheet	81
	Index of evidence	83
	Diploma in Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative GK40 45.....	85
	Cover sheet	85
	Index of evidence	87
	Diploma in Sewerage and Drainage Operations — Water Jetting Operative GK41 45	89
	Cover sheet	89
	Index of evidence	91
	Assessment Summary and Confirmation.....	93
	H8M9 04 Reduce Risks to Health and Safety in the Water Industry.....	93
	H8MA 04 Customer Service for Sewerage and DrainageOperations	102
	H8MC 04 Sewerage and Drainage Essential Knowledge.....	109
	H8MD 04 Set up and Prepare Water Jetting Equipment in the Workplace	118
	H8ME 04 Remove Materials or Deposits from Sewers or Drains by Water Jetting.....	129
	H8MF 04 Inspect Asset using CCTV Equipment.....	143
	H8MG 04 Work Safely on Sites in Utilities Network Construction....	150
	H8MH 04 Inspect and Maintain Sewers and Ancillaries	161
	H8MJ 04 Restore Sewers and Ancillaries to a Working Condition	172
	H8MK 04 Install Equipment for Working Safely on the Highway for Utilities Network Construction.....	183

H8ML 04 Locate, Mark and Avoid Supply Apparatus for Utilities
Network Construction197

History of changes

Version number	Date	Description
02	January 2016	Minor text amends to sections 'Evidence from sewerage and drainage operational activities' and 'Observing the candidate' (Pages 11-13).

About this guide

This guidance for the Diplomas in Sewerage and Drainage Operations is designed to provide assessment centres with information on the content, structure and delivery of the Diplomas.

This document provides both general guidance, applicable across the Diplomas, and more detailed information on each qualification, including general and specific Assessment Requirements. If you or your centre have any queries relating to the Diplomas or delivery, please contact either your allocated External Verifier (EV) or SQA contact.

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.

Assessment Requirements for the Units in the qualifications can be found in this assessment guidance and 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 Diplomas in Sewerage and Drainage Operations derive from the National Occupational Standards (NOS) in Sewerage Maintenance, developed by Energy & Utility Skills, and from subsequent qualifications development activity, undertaken with an industry working group comprising representatives from sewerage and drainage contractors and from water companies.

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 sewerage or drainage engineer or technician working in the water industry. 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 & 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 qualifications. 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	Sewerage and Drainage Operations		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>			OPTIONAL
Unit purpose and aim(s) <i>This provides a succinct summary of the Learning Outcomes of the Unit.</i>			
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 Strategies apply to these qualifications:

- ◆ Energy & Utility Skills Final Assessment Strategy for Vocational Qualifications — http://www.sqa.org.uk/sqa/files_ccc/General_Assessment_Strategy_Waste_8.4.pdf
- ◆ Energy & Utility Skills Water Sector Specific Requirements to Final Generic Assessment Strategy (Appendix E) — http://www.sqa.org.uk/sqa/files_ccc/EU_Skills_Appendix_E_AS20121212.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 Sewerage and Drainage Operations

The Diploma in Sewerage and Drainage Operations covers the skills required by sewerage or drainage engineers or technicians, whose role it is to carry out water jetting, CCTV investigation or repair and maintenance operations on the waste water network. This Diploma is based on national occupational standards developed by Energy & Utility Skills, the Sector Skills Council for the energy and utilities industries.

The majority of candidates' evidence for this Diploma must be generated from real work activities. This means that any candidate undertaking the Diploma in Sewerage and Drainage Operations must be working in the water industry and undertaking different operational activities on the waste water network, on a regular basis. Assessors must ensure that sufficient evidence of workplace performance is provided before recommending certification.

This section provides guidance on the collection, assessment and recording of evidence that applies across the Diploma in Sewerage and Drainage Operations. The general Evidence Requirements detailed below must be observed in addition to any qualification- or unit-specific requirements.

General evidence requirements

The Diploma in Sewerage and Drainage Operations 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 total evidence must show current competence (ie 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 Diplomas in Sewerage and Drainage Operations:

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
- ◆ You 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. The awarding body 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. You must remember, though, that the candidate 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. This 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 jetting activities, this will generate evidence for Units H8MD 04 and H8ME 04, but they are likely also to produce some evidence towards Unit H8M9 04).
- ◆ 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. 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 site situation would have health and safety implications, assessors should ensure, if possible, that their candidates also provide evidence of workplace performance from their daily sewerage and/or drainage work.
- ◆ Situations could arise where candidates have difficulty producing performance evidence from the workplace for 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). If a RWE has been used (in line with the scheme 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 & Utility Skills.
- ◆ More detailed notes on witness testimony are provided, 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. Please ensure that you read the notes on witness testimony, to ensure that robust procedures are put in place for its use, before you ask your candidates to provide some evidence from managers or colleagues.

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 most likely will be through the use of witness testimonies or other reports from candidates' managers and colleagues.
- ◆ Evidence from managers or colleagues can provide a useful confirmation of candidates' work as part of a team and to show that their work meets the requirements of their organisation.

Evidence from sewerage and drainage operational activities

- ◆ To gain a full Diploma in Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative SCQF level 5 (GK3Y 45), candidates must complete five mandatory Units. To gain a full Diploma in Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative SCQF level 5 (GK40 45), candidates must complete six mandatory Units. To gain a full Diploma in Sewerage and Drainage Operations — Water Jetting Operative SCQF level 5 (GK41 45), candidates must complete five mandatory Units. For all three Diplomas, there are also two additional optional Units (H8MK 04 and H8ML 04) which cover activities that may be related to sewerage and drainage operations, but which do not contribute to the completion of a full diploma.
- ◆ 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 each individual Unit.
- ◆ Candidates' 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 waste water 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 sewerage and/or drainage activities undertaken (hard copy or electronic)
 - records (eg photographs) from operational activities
 - marked-up plans, sketches or photographs of the waste water network and its configuration
 - amended plans or other records to reflect updates from sewerage or drainage operational activities
 - waste water network data and information
 - e-mails, or other records of correspondence, either with the candidate's own department, other departments, or with customers
 - 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 candidates' other qualifications (eg evidence from assessments for Street Works qualifications to confirm coverage of some of the network construction operations activities covered in Units H8MK 04, H8ML 04 and H8MG 04).

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 candidates' regular work activities, as they occur.

The Diplomas in Sewerage and Drainage Operations are designed for candidates who work as sewerage or drainage technicians or engineers on the waste water network. The majority of evidence for the qualifications **must** come from real work activity, where the candidate has undertaken operational sewerage or drainage activities on the waste water network. Where possible, candidates should provide performance evidence from their regular operational activities, which occurs naturally as a result of their work.

Assessors delivering the Diploma in Sewerage and Drainage Operations may observe candidates working on site, so some of the assessment activity (particularly observation) may take place in a location other than the assessment centre. The centre could use its facilities for assessor: candidate meetings, but its main purpose is likely to be for assessment team meetings and records storage. However, centres must be aware that External Verifiers will need, over time, to watch assessments taking place, which could require site visits.

Evidence from assessor observations conducted in a realistic working environment (RWE) may be used to contribute to the total evidence for the following Units:

- ◆ H8M9 04 Reduce Risks to Health and Safety in the Water Industry
- ◆ H8MA 04 Customer Service for Sewerage and Drainage Operations

If the centre wishes to use a realistic working environment in delivering this qualification, it must meet the requirements detailed below. Evidence from observations conducted in a realistic working environment cannot be the only type of evidence produced for any single unit, and it must not form the majority of the evidence for the qualification. Where a RWE is used, the assessment team must ensure that the candidate can also provide evidence of undertaking similar activities in their workplace.

The arrangements for assessments conducted using a realistic working environment must be approved by the External Verifier **before use**. Please ensure that details of proposed realistic working environments are provided to SQA Awarding Body at the earliest opportunity, in case the EV needs to inspect any facilities before endorsing their use. If the centre is approved without seeking to use a RWE, but later needs to add this to their scheme delivery process, please ensure that the centre co-ordinator or internal verifier contacts SQA Awarding Body to arrange approval of the proposed activities and facilities, before they are used for assessment.

Please note: All of the performance evidence produced for the following units in this qualification must come from the candidate's real work activities:

- ◆ H8MD 04 Set up and Prepare Water Jetting Equipment in the Workplace
- ◆ H8ME 04 Remove Materials or Deposits from Sewers or Drains by Water Jetting
- ◆ H8MF 04 Inspect Asset using CCTV Equipment
- ◆ H8MH 04 Inspect and Maintain Sewers and Ancillaries
- ◆ H8MJ 04 Restore Sewers and Ancillaries to a Working Condition
- ◆ H8MK 04 Install Equipment for Working Safely on the Highway for Utilities Network Construction
- ◆ H8MG 04 Work Safely on Sites in Utilities Network Construction
- ◆ H8ML 04 Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

Evidence produced from observations using simulated activities or in a realistic working environment may not be used for units.

NB — If a RWE is used for assessment without prior EV approval; this could affect candidate certification, and may lead to a requirement for re-assessment or other remedial action.

Records storage

All qualification records must be stored securely, and centres must maintain records of:

- ◆ candidates
- ◆ assessments and assessment decisions
- ◆ internal verification

The records must be:

- ◆ sufficient to provide an audit trail
- ◆ retained for at least three years, to allow for monitoring (by the awarding body or the regulatory authorities) to take place

Some records will include candidates' personal information (subject to the Data Protection Act) and others may include details of written or oral underpinning knowledge questions asked during assessment, which must not be freely available to

candidates. It is vital that these records are held **securely** by the centre. Secure storage facilities will be verified by the external verifier during centre approval.

Observing the candidate

The Diplomas in Sewerage and Drainage Operations require candidates to demonstrate their competence in undertaking operational sewerage or drainage activities on the network. While these activities may generate some documentary evidence or other records (eg from the employer's job recording systems), it is possible that the scope for providing documentary evidence will be limited.

An assessor observation of the candidate is required for each of the following Units:

- ◆ H8M9 04 Reduce Risks to Health and Safety in the Water Industry
- ◆ H8MA 04 Customer Service for Sewerage and Drainage Operations
- ◆ H8MD 04 Set up and Prepare Water Jetting Equipment in the Workplace
- ◆ H8ME 04 Remove Materials or Deposits from Sewers or Drains by Water Jetting

The candidate must be observed either by an assessor (generating an observation report), or by their line manager or supervisor (which will generate a witness statement or report that is subject to assessment), for each of the following Units:

- ◆ H8MF 04 Inspect Asset using CCTV Equipment
- ◆ H8MH 04 Inspect and Maintain Sewers and Ancillaries
- ◆ H8MJ 04 Restore Sewers and Ancillaries to a Working Condition
- ◆ H8MG 04 Work Safely on Sites in Utilities Network Construction
- ◆ H8MK 04 Install Equipment for Working Safely on the Highway for Utilities Network Construction
- ◆ H8ML 04 Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

The instances in which observation is used may vary according to individual candidates' circumstances and locations, and the assessment requirements for the Diplomas have been designed to allow as much flexibility as possible in the selection of assessment methods. Assessors must refer to the relevant sections of this guidance and the individual Unit specifications for further details of the observation requirements relating to particular Units.

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 the qualifications:

- ◆ H8M9 04 Reduce Risks to Health and Safety in the Water Industry
- ◆ H8MA 04 Customer Service for Sewerage and Drainage Operations

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 the candidate carries out their work. The majority of the performance evidence produced for any unit, and across the full diploma, 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 these qualifications where there is a demonstrable need to do so (if, for example, there is particular difficulty in sourcing appropriate evidence from the workplace, where situations occur only rarely, are exceptional in some way, or have health and safety implications).

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 used for the Sewerage and Drainage Operations Diplomas must meet the following requirements:

- ◆ 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
- ◆ the volume of work completed during the assessment must be comparable to that expected in the equivalent normal work situation
- ◆ the tools, equipment, materials and facilities used are consistent with those found in the candidate's workplace
- ◆ the candidate must interact with the range of personnel and contractors found within the normal industry workplace
- ◆ if a 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 what is contained in the workplace network
- ◆ 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)
- ◆ 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 Diplomas

This section lists the Units which form the Diplomas in Sewerage and Drainage Operations.

Diploma in Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative SCQF level 5 (GK3Y 45)

Mandatory Units

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
H8M9 04	5	9	EUS SD1	Reduce Risks to Health and Safety in the Water Industry
H8MA 04	5	5	EUS SD2	Customer Service for Sewerage and Drainage Operations
H8MC 04	5	9	EUS SD3	Sewerage and Drainage Essential Knowledge
H8MF 04	5	11	EUS SD6	Inspect Asset using CCTV Equipment
H8MG 04	5	3	EUS SD7	Work Safely on Sites in Utilities Network Construction

Additional Units — Candidates may also take any or both of the additional Units below, but they do not contribute to the achievement of the full Diploma.

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
H8MK 04	5	4	EUS SD10	Install Equipment for Working Safely on the Highway for Utilities Network Construction
H8ML 04	5	4	EUS SD11	Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

Diploma in Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative SCQF level 5 (GK40 45)

Mandatory Units

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
H8M9 04	5	9	EUS SD1	Reduce Risks to Health and Safety in the Water Industry
H8MA 04	5	5	EUS SD2	Customer Service for Sewerage and Drainage Operations
H8MC 04	5	9	EUS SD3	Sewerage and Drainage Essential Knowledge
H8MH 04	5	9	EUS SD8	Inspect and Maintain Sewers and Ancillaries
H8MJ 04	5	10	EUS SD9	Restore Sewers and Ancillaries to a Working Condition
H8MG 04	5	3	EUS SD7	Work Safely on Sites in Utilities Network Construction

Additional Units — Candidates may also take any or both of the additional Units below, but they do not contribute to the achievement of the full Diploma.

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
H8MK 04	5	4	EUS SD10	Install Equipment for Working Safely on the Highway for Utilities Network Construction
H8ML 04	5	4	EUS SD11	Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

**Diploma in Sewerage and Drainage Operations — Water Jetting Operative
SCQF level 5 (GK41 45)**

Mandatory Units

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
H8M9 04	5	9	EUS SD1	Reduce Risks to Health and Safety in the Water Industry
H8MA 04	5	5	EUS SD2	Customer Service for Sewerage and Drainage Operations
H8MC 04	5	9	EUS SD3	Sewerage and Drainage Essential Knowledge
H8MD 04	5	11	EUS SD4	Set up and Prepare Water Jetting Equipment in the Workplace
H8ME 04	5	12	EUS SD5	Remove Materials or Deposits from Sewers or Drains by Water Jetting

Additional Units — Candidates may also take any or both of the additional Units below, but they do not contribute to the achievement of the full Diploma.

SQA ref	SCQF level	SCQF credit points	SSC ref	Title
H8MK 04	5	4	EUS SD10	Install Equipment for Working Safely on the Highway for Utilities Network Construction
H8ML 04	5	4	EUS SD11	Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

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 the Diplomas in Sewerage and Drainage Operations. **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		

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

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 competence or consistency over time, or to provide supporting evidence for workplace documents or records.

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

This specific 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, you should ensure that they are briefed on good practice for witness testimonies, so that they know what characteristics you are seeking when assessing any witness testimonies that they provide.

Witness credibility

The credibility of the witness is vital to the value of witness testimony as robust evidence. 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 candidates will have access to more supporting evidence of this kind than others.

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 network manager could provide considerable information on the operational sewerage or drainage activities that the candidate undertakes during usual work activities

Or

- ◆ 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. Assessors should also consider that 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 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 should be alert to the potential for insufficient detail to be provided, or for situations where a witness provides testimony for several candidates, which is identical in each case. Even when working under supervision or as part of a team, the candidate will have a specific contribution to make, and a robust witness testimony should be able to identify and confirm the candidate's own activities.

Recording witness testimony

Formats for recording witness testimony vary between witnesses and between centres — some assessment teams have a preferred pro forma that they issue to witnesses, while others choose to leave the content and expression entirely up to the witness. An example of a witness testimony pro forma is at **Appendix 3**. A copy is available in Word for centres to adapt as required for their own use.

As a guideline, in developing a more specific witness testimony form for this qualification, the centre should bear in mind that it is not recommended that a candidate's manager or other potential witness is 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 and provide more detailed responses about the candidate's own role and activities.

Knowledge assessment

You (or your centre) must have a strategy for assessing the Knowledge and Understanding requirements for the Diplomas in Sewerage and Drainage Operations. 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).

The Diplomas in Sewerage and Drainage Operations include one mandatory Unit that covers knowledge only: H8MC 04, Sewerage and Drainage Essential Knowledge. This Unit covers the essential knowledge and understanding that is required of individuals working in sewerage and drainage operations, and the centre may choose to deliver and assess the Unit requirements in a formal setting, or less formally, through the candidate's work-based operational training and assessments, according to centre and candidate preference and requirements. Some centres may prefer to deliver this Unit at the start of the assessment programme, to confirm the candidate's underpinning knowledge before their on-site operational competence is assessed; however, there is flexibility within the assessment requirements of the diploma to allow for different approaches to be used to assess this content.

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 Sewerage and Drainage Operations Diplomas 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.

Types of evidence

Candidates working towards the Diploma in Sewerage and Drainage Operations 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 Appendix1. 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, and 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 sewerage and drainage activities. 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 Appendix1, 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 and location, or that records from CCTV inspections relate to specific sewerage maintenance 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 documents on this basis, and that there is a record of how this evidence meets the qualification requirements. 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 sewerage and drainage activities

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 Diploma 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 Sewerage and Drainage Operations need to show evidence of specific sewerage or drainage 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 individual candidate's work activities with the qualification requirements, but a more generic reporting format 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 (Appendix 4). 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.

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 Ref/Description’), including a file reference if applicable (eg 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 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 where each piece of evidence is located, either in the evidence recording documents or in a separate master list of evidence. 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, in order to validate the evidence and confirm authenticity.

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.

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

The examples provided are based on a typical health and safety Unit. This Unit is not part of the Diplomas in Sewerage and Drainage Operations.

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's name Paul Lee

Evidence index number 4

Date of observation 21/01/4

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.

Assessor's comments and feedback to candidate

The review and supporting notes you have completed Paul clearly demonstrate 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	
First review session with candidate. (Considering Assessment Criteria: 1.2 and 1.3 in particular)	
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.

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.

Index of evidence

Qualification title and level			
Evidence number	Description of evidence	Included in portfolio (Yes/No) If no, state location	Sampled by the IV (initials and date)
4	Observation record of workplace review	Yes — Section 1, page 4	SM — 04/04/14
5	Personal statement reflecting on health and safety meeting	Yes — Section 1, page 5	SM — 04/04/14
6	Record of questions and answers	Yes — Section 1, page 6	SM — 04/04/14
7	Witness testimony of responsible people	Yes — Section 1, page 7	SM — 04/04/14

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								
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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. The following publications provide additional information which would be beneficial in implementing the qualifications. 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

Appendices

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 the candidate has difficulty meeting specific Performance Criteria with other workplace evidence (eg responding to emergencies).

Type of evidence	Advantages	Risks/disadvantages	Suggested solutions
<p>3 Witness testimony.</p>	<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 is to candidates. ◆ Centres need to brief witnesses clearly on what they should provide in a witness testimony. ◆ Centres may use pro forma, 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
<p>4 Documentary evidence or product from the workplace.</p>	<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 a 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
<p>5 Assessment meetings with candidates (general informal discussions).</p>	<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 pro forma 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 mainlaying or servicelaying work they have previously undertaken).

Type of evidence	Advantages	Risks/disadvantages	Suggested solutions
<p>6 Professional discussion interview.</p>	<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 discussion 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 pro forma 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
<p>7 Recognition of prior learning (RPL).</p>	<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
<p>8 Written answers to knowledge questions.</p>	<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 all of the 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
<p>9 Records of oral questioning and answers given.</p>	<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.
<p>10 Audio or video evidence, and photographs.</p>	<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. 	<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. 	<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.

Type of evidence	Advantages	Risks/disadvantages	Suggested solutions
10 Audio or video evidence, and photographs (continued).	<ul style="list-style-type: none"> ◆ 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"> ◆ 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"> ◆ 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). ◆ 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.)

Type of evidence	Advantages	Risks/disadvantages	Suggested solutions
10 Audio or video evidence, and photographs (continued).			<ul style="list-style-type: none"> ◆ 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).
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. 	<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? 	<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.

Type of evidence	Advantages	Risks/disadvantages	Suggested solutions
11 Use of electronic storage media for candidates' evidence (continued).	<ul style="list-style-type: none"> ◆ 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"> ◆ 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 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. ◆ 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 the 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	
		Question
		Candidate's response
		Question
		Candidate's response
		Question
		Candidate's response
		Question
		Candidate's response
		Question
		Candidate's response

SQA Unit Ref	Learning Outcome ref	
		Question
		Candidate's response
		Question
		Candidate's response
		Question
		Candidate's response
		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 water network construction 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 sheets

Index of evidence

Assessment Summary and Confirmation

Diploma in Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative GK3Y 45

Cover sheet

Candidate's name		Candidate's SQA Number	
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Date registered for qualification		Assessment Centre	
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Job role/location, or other information relevant to this qualification	
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Unit completion

Unit title	SQA Ref	Mandatory/Optional	Assessor	Date of final assessment	Internal Verifier
Reduce Risks to Health and Safety in the Water Industry	H8M9 04	Mandatory			
Customer Service for Sewerage and Drainage Operations	H8MA 04	Mandatory			
Sewerage and Drainage Essential Knowledge	H8MC 04	Mandatory			
Inspect Asset using CCTV Equipment	H8MF 04	Mandatory			
Work Safely on Sites in Utilities Network Construction	H8MG 04	Mandatory			
Install Equipment for Working Safely on the Highway for Utilities Network Construction	H8MK 04	Additional Unit			

Unit title	SQA Ref	Mandatory/ Optional	Assessor	Date of final assessment	Internal Verifier
Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction	H8ML 04	Additional Unit			

Candidate declaration

I confirm that the evidence for this **Diploma in Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative** 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 Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative** 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 Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative**, 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 Sewerage and Drainage Operations — Sewerage Investigative CCTV Operative GK3Y 45

Candidate's name		Employer	
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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)

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

Diploma in Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative GK40 45

Cover sheet

Candidate's name		Candidate's SQA Number	
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Date registered for qualification		Assessment Centre	
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Job role/location, or other information relevant to this qualification	
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Unit completion

Unit title	SQA Ref	Mandatory/Optional	Assessor	Date of final assessment	Internal Verifier
Reduce Risks to Health and Safety in the Water Industry	H8M9 04	Mandatory			
Customer Service for Sewerage and Drainage Operations	H8MA 04	Mandatory			
Sewerage and Drainage Essential Knowledge	H8MC 04	Mandatory			
Inspect and Maintain Sewers and Ancillaries	H8MH 04	Mandatory			
Restore Sewers and Ancillaries to a Working Condition	H8MJ 04	Mandatory			
Work Safely on Sites in Utilities Network Construction	H8MG 04	Mandatory			

Unit title	SQA Ref	Mandatory/ Optional	Assessor	Date of final assessment	Internal Verifier
Install Equipment for Working Safely on the Highway for Utilities Network Construction	H8MK 04	Additional Unit			
Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction	H8ML 04	Additional Unit			

Candidate declaration

I confirm that the evidence for this **Diploma in Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative** 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 Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative** 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 Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative**, 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 Sewerage and Drainage Operations — Sewerage Repair and Maintenance Operative (GK40 45)

Candidate's name		Employer	
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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)

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

Diploma in Sewerage and Drainage Operations — Water Jetting Operative GK41 45

Cover sheet

Candidate's name		Candidate's SQA Number	
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Date registered for qualification		Assessment Centre	
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Job role/location, or other information relevant to this qualification	
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Unit completion

Unit title	SQA Ref	Mandatory/Optional	Assessor	Date of final assessment	Internal Verifier
Reduce Risks to Health and Safety in the Water Industry	H8M9 04	Mandatory			
Customer Service for Sewerage and Drainage Operations	H8MA 04	Mandatory			
Sewerage and Drainage Essential Knowledge	H8MC 04	Mandatory			
Set up and Prepare Water Jetting Equipment in the Workplace	H8MD 04	Mandatory			
Remove Materials or Deposits from Sewers or Drains by Water Jetting	H8ME 04	Mandatory			

Unit title	SQA Ref	Mandatory/ Optional	Assessor	Date of final assessment	Internal Verifier
Install Equipment for Working Safely on the Highway for Utilities Network Construction	H8MK 04	Additional Unit			
Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction	H8ML 04	Additional Unit			

Candidate declaration

I confirm that the evidence for this **Diploma in Sewerage and Drainage Operations — Water Jetting Operative** 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 Sewerage and Drainage Operations — Water Jetting Operative** 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 Sewerage and Drainage Operations — Water Jetting Operative**, 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 Sewerage and Drainage Operations — Water Jetting Operative GK41 45

Candidate's name		Employer	
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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)

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

Assessment Summary and Confirmation

H8M9 04 Reduce Risks to Health and Safety in the Water Industry

SCQF level	5	Credit Value	9
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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"/>			

H8M9 04 Reduce Risks to Health and Safety in the Water Industry

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** _____

H8M9 04 Reduce Risks to Health and Safety in the Water Industry

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to identify hazards and risks in the workplace in accordance with approved procedures and practices.	
1.1 Name and locate the person(s) with allocated responsibility for health and safety in the workplace .	
1.2 Identify relevant organisational policies relating to working practices.	
1.3 Identify working practices in own work activities which could harm to self or other persons.	
1.4 Identify potential hazards and risks in the workplace and respond to them in accordance with approved procedures and practices .	
1.5 Identify procedures for reporting potential hazards and risks to the persons responsible for health and safety in the workplace .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to reduce risks in the workplace in accordance with approved procedures and practices.	
2.1 Follow up to date organisational policies for own work activities	
2.2 Carry out work activities in accordance with approved procedures and practices.	
2.3 Respond to hazards and risks in accordance with approved procedures and practices.	
2.4 Ensure own conduct and personal presentation in the workplace does not endanger own health and safety or that of others in line with approved procedures and practices.	
2.5 Follow organisational policies and suppliers' or manufacturers' instructions for the safe use of equipment, materials and products.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand workplace policies and procedures relating to health and safety.	
3.1 Describe agreed working policies to be followed to control hazards and risks to health and safety.	
3.2 Describe own responsibilities for health and safety within own work activities.	
3.3 Name the responsible persons to whom health and safety matters are reported.	
3.4 Outline the legal duties for health and safety that apply in the workplace as required by relevant legislation.	
3.5 Provide the definitions of: (a) a hazard (b) a risk	
3.6 Describe types of hazards and risks that may exist in the workplace .	
3.7 Describe particular health and safety hazards and risks that could be present in own work activities and the relevant precautions to be taken.	
3.8 Explain the importance of being aware of changing circumstances in the working environment which could introduce potential hazards and risks .	
3.9 Explain the importance of responding to, and reporting, hazards and risks .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand workplace policies and procedures relating to health and safety (continued).	
3.10 Outline the requirements and guidance on precautions to be taken to control hazards and risks in the workplace .	
3.11 Describe specific organisational policies covering own work activities, including: (a) existing risk assessments (b) method statements (c) safe systems of work	
3.12 Describe suppliers' and manufacturers' instructions for the safe use of equipment, materials and products.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand own responsibilities for health and safety in the workplace.	
4.1 Describe safe working practices for own work activities.	
4.2 Explain the importance of personal presentation in maintaining health and safety in the workplace .	
4.3 Explain the importance of personal conduct in maintaining the health and safety of self and others.	
4.4 Explain personal responsibility for responding to hazards and risks in accordance with approved procedures and practices .	
4.5 Describe the procedures for making suggestions to reducing risks to health and safety within own work activities to the responsible persons.	
4.6 Describe how to report any differences between organisational policies and suppliers' or manufacturers' instructions as appropriate.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Workplace	
<ul style="list-style-type: none"> ◆ The workplace is the single or multiple areas in which the candidate carries out their work and where their work may impact upon others. 	
2 Hazard	
<ul style="list-style-type: none"> ◆ A hazard is something with potential to cause harm 	
3 Risk	
<ul style="list-style-type: none"> ◆ A risk is the likelihood of a hazard's potential being realized 	
4 Hazards and risks include:	
<ul style="list-style-type: none"> ◆ occupational health risks and diseases ◆ the use and maintenance of tools and equipment ◆ the use of materials or substances ◆ working practices which may not conform to laid down policies ◆ unsafe behaviour ◆ accidental breakages and spillages ◆ environmental factors ◆ working on the highway ◆ awareness of working in confined spaces 	
5 Personal presentation includes:	
<ul style="list-style-type: none"> ◆ personal hygiene ◆ use of personal protection equipment ◆ clothing and accessories suitable to the particular workplace 	

Scope of evidence	Evidence or File X-Ref/Coverage
6 Organisational policies cover:	
<ul style="list-style-type: none"> ◆ the use of safe working methods and equipment ◆ the safe use of hazardous substances ◆ smoking, eating, drinking and drugs ◆ what to do in the event of an emergency ◆ personal presentation ◆ generic risk assessments for the location of the work ◆ recognition of third party health and safety procedures 	
7 Approved procedures and practices are:	
<ul style="list-style-type: none"> ◆ statutory ◆ regulatory ◆ health, safety and environment compliance, including hygiene ◆ relevant company procedures (including third party health and safety policies) ◆ industry codes of practice ◆ emergency 	

Assessment Summary and Confirmation

H8MA 04 Customer Service for Sewerage and Drainage Operations

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"/>			

H8MA 04 Customer Service for Sewerage and Drainage Operations

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 _____

H8MA 04 Customer Service for Sewerage and Drainage Operations

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to receive, record and transmit information in accordance with approved procedures and practices.	
1.1 Establish and confirm: (a) the accuracy of received information (b) the meaning of received information	
1.2 Validate the source of received information .	
1.3 Record information in appropriate documentation in accordance with relevant company procedures.	
1.4 Select a method of communication for transmitting information from those available, to meet the needs of the receiver.	
1.5 Confirm the receiver understands the information .	
1.6 Resolve information inaccuracies including receiver misunderstandings.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to liaise with customers in accordance with company procedures.	
2.1 Check that information on proposed work is accurate and meets the needs of customers .	
2.2 Introduce and identify themselves in accordance with company procedures and explain the purpose of the visit.	
2.3 Communicate changes in work programmes to customers : (a) clearly (b) accurately (c) within required timescales	
2.4 Use the appropriate method of communication for the type and volume of information .	
2.5 Respond to requests for information in a timescale, which is acceptable to customers .	
2.6 Respond to customers in accordance with relevant company procedures on customer care, including: (a) resolving issues on site within own level of responsibility (b) resolving issues outside own level of responsibility by referral (c) reporting issues that cannot be resolved	
2.7 Assign customer communications outside own responsibility in accordance with relevant company procedures .	
2.8 Complete and disseminate records of customer contact in accordance with relevant company procedures .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand how to communicate information during sewerage maintenance operations in accordance with company procedures.	
3.1 Define own types of customers and customer groups, and own responsibilities in relation to each.	
3.2 Outline potential barriers to accurate reception and recording of information .	
3.3 Explain the importance of accuracy when communicating information .	
3.4 List potential problems that could arise with information transmission.	
3.5 Describe action to be taken in the event of failure of transmission method.	
3.6 Identify particular requirements to be met when responding to information relating to: (a) notifiable diseases (b) emergencies (c) accidents	
3.7 List the employer's customer care policies.	
3.8 Explain the undertaker's rights and obligations in relation to sewerage operations.	
3.9 Explain the employer's standards of service.	
3.10 Explain the legal background to public and private sewers.	
3.11 Identify where to find additional information when required.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand how to communicate information during sewerage maintenance operations in accordance with company procedures (continued).	
3.12 Explain the implications of presenting a poor public image.	
3.13 Explain the implications of giving incorrect or inaccurate information .	
3.14 Explain the implications of not resolving issues, including unwanted customer contact.	
3.15 Explain how to create a positive impression of the organisation.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Customers may be:	
<ul style="list-style-type: none"> ◆ domestic ◆ non-domestic ◆ internal ◆ client 	
2 Information includes:	
<ul style="list-style-type: none"> ◆ information relevant to the system ◆ other information 	
3 Methods of information include:	
<ul style="list-style-type: none"> ◆ verbal ◆ written ◆ displayed ◆ electronic 	
4 Proposed work may include:	
<ul style="list-style-type: none"> ◆ installation ◆ repair ◆ maintenance ◆ investigation 	
5 Relevant company procedures include:	
<ul style="list-style-type: none"> ◆ personal presentation ◆ correct identification 	

Assessment Summary and Confirmation

H8MC 04 Sewerage and Drainage Essential Knowledge

SCQF level	5	Credit Value	9
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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"/>			

H8MC 04 Sewerage and Drainage Essential Knowledge

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** _____

H8MC 04 Sewerage and Drainage Essential Knowledge

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Understand sewerage legislation and its impact on work activities in accordance with approved procedures and practices.	
1.1 Provide an acceptable definition of the term 'sewer'.	
1.2 Provide an acceptable definition of the term 'drain'.	
1.3 Outline the differences in sewerage legislation between different UK countries.	
1.4 Explain how the public or private ownership of sewers can affect work activities and responsibilities.	
1.5 Outline the requirements of environmental legislation in relation to working on sewers and drains.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Understand basic sewerage and drainage layouts, components and operational planning in accordance with approved procedures and practices.	
2.1 Describe key elements of different types of sewerage and drainage systems, including: (a) foul drainage (b) surface water drainage (c) combined drainage (d) culverted watercourse (e) land drainage (f) sustainable urban drainage systems (SUDS) (g) rising mains and pumped systems	
2.2 Describe different components that could be encountered while working with drainage systems.	
2.3 Outline the principles of septic tank operations.	
2.4 Describe general principles and process stages of wastewater treatment plant operations.	
2.5 Explain how carrying out sewerage maintenance work can impact on wastewater treatment works.	
2.6 Identify features of plans, drawings and symbols, in relation to: (a) asset numbering systems (b) company records (c) identification of other utilities and services	
2.7 Explain the importance of ensuring that asset plans and records are kept up to date.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Understand basic sewerage and drainage layouts, components and operational planning in accordance with approved procedures and practices (continued).	
2.8 Describe typical problems associated with failure mechanisms on drainage systems.	
2.9 Explain how and why work is planned to take account of: (a) traffic restrictions (b) traffic flows (c) sewer flows (d) site access (e) client or customer requirements	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand the hazards, controls and hygiene requirements associated with sewerage and drainage operations and approved procedures and practices.	
3.1 Describe safe working practices, including the use of risk assessments and method statements.	
3.2 Describe the hazards associated with the following, and the measures that can be taken to mitigate them: (a) working in confined spaces (b) dangerous atmospheres including noxious gases; explosive atmospheres; oxygen deficiency (c) aerobic and anaerobic conditions (d) working at heights (e) working in excavations (f) lone working (g) slips, trips and falls (h) increasing water levels (i) tidal flows (j) occupational health risks and diseases (k) water pressure injuries (l) industrial waste/trade effluent (m) sharps and needle stick injuries (n) working in public highways	
3.3 Describe personal hygiene measures that must be taken when working in sewerage and drainage operations.	
3.4 Describe hygienic working practices that apply to work in sewerage and drainage operations.	
3.5 Describe how to handle and store sewerage and drainage equipment in a hygienic way.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand the hazards, controls and hygiene requirements associated with sewerage and drainage operations and approved procedures and practices (continued).	
3.6 Describe the potential environmental impact of sewerage operations.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand basic sewerage and drainage techniques in accordance with approved procedures and practices.	
4.1 Describe different types of techniques that are used during sewerage and drainage operations, including: <ul style="list-style-type: none"> (a) rodding (b) jetting (c) CCTV inspection (d) excavation and repair (e) trenchless technology (f) tracing and surveying 	
4.2 Describe the differences between dig and 'no dig' techniques, and the circumstances in which it is appropriate to use each technique.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Understand how to use tools and equipment associated with sewerage and drainage operations in accordance with approved procedures and practices.	
5.1 Describe different types of tools and equipment that may be used during sewerage and drainage operations.	
5.2 Explain the limitations to the use of tools and equipment that can arise during specific circumstances, including those associated with: (a) material (b) size (c) shape (d) entry systems (e) site access (f) scope of work (g) tool and equipment compatibility	
5.3 Explain safe working practices that must be followed when using tools and equipment for sewerage and drainage operations.	

Assessment Summary and Confirmation

H8MD 04 Set up and Prepare Water Jetting Equipment in the Workplace

SCQF level	5	Credit Value	11
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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"/>			

H8MD 04 Set up and Prepare Water Jetting Equipment in the Workplace

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** _____

H8MD 04 Set up and Prepare Water Jetting Equipment in the Workplace

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to interpret the given information relating to the work and resources when setting up and preparing water jetting equipment in the workplace.	
1.1 Interpret and extract information from risk assessments, method statements, legislation, Codes of Practice, operating instructions and manufacturers' information.	
1.2 Comply with information and/ or instructions derived from risk assessments and/ or method statements.	
1.3 Identify the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.	
1.4 Interpret different types of information, their source in relation to: <ul style="list-style-type: none"> (a) risk assessments (b) method statements (c) legislation (d) Codes of Practice (e) manufacturers' information (f) operating instructions 	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Know how to comply with relevant legislation, special legal status documents, official guidance and organisational procedures when setting up and preparing water jetting equipment.	
2.1 Describe own responsibilities under current legislation and official guidance whilst working: – in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/ storage of materials and by manual handling and mechanical lifting.	
2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.	
2.3 Explain the accident reporting procedures and who is responsible for making reports.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Understand how to maintain safe working practices when setting up and preparing water jetting equipment.	
3.1 Explain the personal protective equipment (PPE) used to safely carry out the activity in accordance with legislation and organisational requirements when setting up and preparing water jetting equipment.	
3.2 Explain why and when personal protective equipment (PPE) should be used, relating to setting up and preparing water jetting equipment, and the types, purpose and limitations of each type.	
3.3 Explain how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know how to request resources to sustain equipment operations when setting up and preparing water jetting equipment.	
<p>4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to:</p> <ul style="list-style-type: none"> (a) water, abrasives, chemicals (b) fuel, lubricants, coolants (c) pump units (d) hoses, lances, guns, nozzles (e) control valves (f) ancillary items 	
<p>4.2 Explain how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.</p>	
<p>4.3 Outline potential hazards associated with the resources and methods of work.</p>	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Be able to minimise the risk of damage to the work and surrounding area when setting up and preparing water jetting.	
5.1 Protect the work and its surrounding area from damage.	
5.2 Minimise damage and maintain a clean work space.	
5.3 Dispose of waste in accordance with legislation.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
6 Understand how to minimise the risk of damage to the work and surrounding area when setting up and preparing water jetting equipment.	
6.1 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.	
6.2 Explain why the disposal of waste should be carried out in relation to the work.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Be able to carry out pre-use preparation inspections on equipment in accordance with given procedures when setting up and preparing water jetting equipment.	
7.1 Setup and prepare water jetting equipment by: <ul style="list-style-type: none"> (a) fitting (b) positioning (c) securing (d) connecting (e) adjusting 	
7.2 Carry out pre-start checks and prepare water jetting equipment to given working instructions relating to: <ul style="list-style-type: none"> (a) siting of equipment (b) connecting hoses and lances/guns (c) power supply (d) water supply 	
7.3 Use, store and secure hand tools and equipment in line with safe methods of working.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
<p>8 Know how to carry out pre-use preparation inspections on equipment in accordance with given procedures when setting up and preparing water jetting equipment.</p>	
<p>8.1 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> (a) carry out pre-checks, set up and shut down equipment (b) operate equipment (c) monitor and assess performance of pump unit, lances, guns, hoses and control valves (d) dismantle equipment (e) use hand tools 	
<p>8.2 Explain the needs of other occupations and how to communicate within a team when setting up and preparing water jetting equipment.</p>	
<p>8.3 Describe how to maintain the tools and equipment used when setting up and preparing water jetting equipment.</p>	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
9 Be able to start-up and operate equipment in accordance with safe working practices when setting up and preparing water jetting equipment.	
9.1 Use personal protective equipment to carry out the activity in accordance with legislation and organisational requirements.	
9.2 Setup and prepare water jetting equipment by: (a) starting (b) stopping (c) controlling (d) dismantling	
9.3 Operate and monitor water jetting equipment to given working instructions relating to: (a) test runs (b) close down (c) clean down	
9.4 Return equipment to a safe operational condition on completion of work.	

Assessment Summary and Confirmation

H8ME 04 Remove Materials or Deposits from Sewers or Drains by Water Jetting

SCQF level	5	Credit Value	12
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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"/>			

H8ME 04 Remove Materials or Deposits from Sewers or Drains by Water Jetting

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** _____

H8ME 04 Remove Materials or Deposits from Sewers or Drains by Water Jetting

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to interpret the given information relating to the work and resources and in accordance with approved procedures when removing materials or deposits by water jetting.	
1.1 Interpret and extract relevant information from the following documentation: <ul style="list-style-type: none"> (a) risk assessments (b) method statements (c) legislation (d) Codes of Practice (e) operating instructions (f) manufacturers' information 	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Know the information and procedures relating to the work and resources and in accordance with organisational procedures when removing materials or deposits by water jetting.	
2.1 Explain organisational procedures for the following: (a) reporting inappropriate information (b) reporting unsuitable resources	
2.2 Explain the organisational procedures for implementing the following: (a) rectifying inappropriate information (b) rectifying unsuitable resources	
2.3 Describe different types of information including the source and how they are interpreted in relation to: (a) drawings (b) specifications (c) schedules (d) manufacturers' information (e) organisational instructions	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Be able to comply with relevant legislation and organisational procedures when removing materials or deposits by water jetting.	
3.1 Maintain safe working practices when removing materials or deposits by water jetting.	
3.2 Use personal protective equipment (PPE) to carry out the activity in accordance with legislation and organisational requirements when removing materials or deposits by water jetting.	
3.3 Install and maintain safety measures for the working area in accordance with legislation and organisational requirements when removing materials or deposits by water jetting.	
3.4 Comply with information and instructions derived from risk assessments and method statements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand how to comply with relevant legislation, special legal documents, official guidance and organisational procedures when removing materials or deposits by water jetting.	
<p>4.1 Describe own responsibilities under current legislation, special legal documents, official guidance and organisational procedures whilst working:</p> <ul style="list-style-type: none"> (a) in the workplace (b) below ground level (c) in confined spaces (d) at height (e) with tools and equipment (f) with materials and substances (g) with movement and storage of materials (h) by manual handling 	
<p>4.2 Describe organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.</p>	
<p>4.3 Explain why and when personal protective equipment (PPE) should be used, relating to removing materials or deposits by water jetting, and the types, purpose and limitations of each type.</p>	
<p>4.4 Explain the accident reporting procedures.</p>	
<p>4.5 Identify who is the person(s) responsible for making reports.</p>	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand how to comply with relevant legislation, special legal documents, official guidance and organisational procedures when removing materials or deposits by water jetting (continued).	
4.6 Explain how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with: <ul style="list-style-type: none"> (a) fires (b) spillages (c) injuries (d) other task-related hazards 	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
<p>5 Understand how to select the required quantity and quality of resources for the methods of work in accordance with approved procedures to remove materials or deposits by water jetting.</p>	
<p>5.1 Describe characteristics, quality, uses, limitations and defects associated with the resources in relation to:</p> <ul style="list-style-type: none"> (a) water supply, fuel supply, power supply, chemicals, abrasives, protective materials and equipment (b) barriers, guards, pump units, hose assemblies, guns, lances, control valves, nozzles (c) ancillary equipment 	
<p>5.2 Explain how to select resources associated with own work in relation to:</p> <ul style="list-style-type: none"> (a) materials and substances (b) hand tools (c) water jetting plant and associated equipment 	
<p>5.3 Explain how problems associated with the resources are reported.</p>	
<p>5.4 Explain how the organisational procedures are used.</p>	
<p>5.5 Explain the potential hazards associated with the resources and method of work.</p>	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
6 Be able to minimise the risk of damage to the work and surrounding area in accordance with approved procedures when removing materials or deposits by water jetting.	
6.1 Protect the work and its surrounding area from damage when removing materials or deposits by water jetting.	
6.2 Minimise damage and maintain a clean work space when removing materials or deposits by water jetting.	
6.3 Dispose of waste in accordance with legislation.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Know how to minimise the risk of damage to the work and surrounding area in accordance with approved procedures when removing materials or deposits by water jetting.	
7.1 Describe how to protect work from damage and the purpose of protection in relation to: (a) general workplace activities (b) other occupations (c) adverse weather conditions	
7.2 Explain why the disposal of waste should be carried out in relation to the work.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
8 Be able to complete the work within the allocated time and in accordance with approved procedures when removing materials or deposits by water jetting.	
8.1 Complete work within the allocated time when removing materials or deposits by water jetting.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
<p>9 Know how to complete the work within the allocated time in accordance with approved procedures when removing materials or deposits by water jetting.</p>	
<p>9.1 Explain the purpose of the work programme and why deadlines should be kept in relation to:</p> <ul style="list-style-type: none"> (a) types of timetable and estimated completion times (b) organisational procedures for reporting circumstances which will affect the work programme 	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
10 Be able to remove materials or deposits by water jetting to the required specification and by complying with contract information and approved procedures.	
10.1 Remove materials or deposits by water jetting by carrying out: (a) jetting (b) directing (c) checking (d) monitoring (e) evaluating	
10.2 Operate water jetting equipment to remove material and deposits from drains and sewers, including: (a) brick (b) clay (c) concrete (d) plastic (e) metal	
10.3 Use and store hand tools, water jetting pumps and associated equipment in a safe manner.	
10.4 Identify the needs of other occupations and how to communicate within a team when removing materials or deposits by water jetting.	
10.5 Describe how to maintain the tools and equipment used when removing materials or deposits by water jetting.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
11 Know how to comply with the given contract information to remove materials or deposits by water jetting to the required specification.	
<p>11.1 Describe how to apply safe work practices, to the following:</p> <ul style="list-style-type: none"> (a) preparing and using jetting equipment to clean drains and sewers <ul style="list-style-type: none"> (i) brick (ii) clay (iii) concrete (iv) plastic (b) monitoring and evaluating changes in surfaces and structures (c) securing temporary protection (d) monitoring plant and equipment for performance requirements (e) using hand tools, static plant and associated equipment 	

Assessment Summary and Confirmation

H8MF 04 Inspect Asset using CCTV Equipment

SCQF level	5	Credit Value	11
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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"/>			

H8MF 04 Inspect Asset using CCTV 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** _____

H8MF 04 Inspect Asset using CCTV Equipment

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to prepare to inspect the asset using CCTV equipment in accordance with approved procedures and practices.	
1.1 Confirm the accuracy of the following: (a) cable reading (b) offset distance (c) lighting requirements	
1.2 Check the CCTV equipment and ensure the following: (a) the monitor screen is clean (b) the correct aspect ratio is being used (c) there is no distortion of the picture	
1.3 Confirm all the CCTV and associated equipment is working properly in accordance with approved procedures and practices .	
1.4 Investigate any faults in system performance, reporting them to the correct person.	
1.5 Organise own work area in order to work efficiently and safely.	
1.6 Complete the required records legibly, according to requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to monitor CCTV camera images and report findings in accordance with approved procedures and practices.	
2.1 Use CCTV systems and equipment in line with operating instructions and in accordance with approved procedures and practices.	
2.2 Record CCTV activities or incidents in accordance with approved procedures and practices.	
2.3 Control and use CCTV systems to full operational ability.	
2.4 Interpret and report findings to the correct person.	
2.5 Identify problems outside the scope of own responsibility, reporting them to the correct person.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Know how to use CCTV equipment to inspect assets in accordance with approved procedures and practices.	
3.1 Identify the risks associated when inspecting assets using CCTV equipment and the necessary control measures in line with associated procedures.	
3.2 Explain the operational instructions and procedures that should be followed when preparing to inspect areas using CCTV equipment .	
3.3 Explain what to do if the CCTV equipment is not working correctly when inspecting assets.	
3.4 Explain the health and safety guidance relating to the use of visual display units.	
3.5 Explain how to adjust and use the equipment and system controls for best performance.	
3.6 Identify the terminology used with CCTV equipment and usage relating to using CCTV equipment .	
3.7 Describe the area of coverage of each camera being used.	
3.8 Outline the capabilities and limitations of the systems and equipment being used.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Know how to maintain effective and efficient working relationships.	
4.1 Explain how to maintain working relationships with others during CCTV monitoring.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Approved procedures and practices include:	
<ul style="list-style-type: none"> ◆ regulatory ◆ Health, Safety and Environment ◆ relevant company procedures ◆ risk assessments and method statements ◆ security of equipment 	
2 Equipment includes:	
<ul style="list-style-type: none"> ◆ cameras ◆ monitors ◆ system controls ◆ computers ◆ lights ◆ ancillary equipment 	
3 Records include the records that the candidate needs to make of:	
<ul style="list-style-type: none"> ◆ incidents ◆ equipment ◆ digital media ◆ duties ◆ access ◆ contracts and work instructions ◆ Health, Safety and Environmental compliance 	

Assessment Summary and Confirmation

H8MG 04 Work Safely on Sites in Utilities Network Construction

SCQF level	5	Credit Value	3
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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"/>			

H8MG 04 Work Safely on Sites in Utilities Network Construction

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** _____

H8MG 04 Work Safely on Sites in Utilities Network Construction

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to prepare, segregate and protect the work site in accordance with approved procedures and practices.	
1.1 Locate and confirm the area for works according to instructions and specified requirements.	
1.2 Plan work to minimise disruption and inconvenience to others in accordance with approved procedures and practices .	
1.3 Carry out a site-specific risk assessment to identify hazards.	
1.4 Determine the range of control signs and protection equipment necessary for the works.	
1.5 Review risk assessments in accordance with company procedures.	
1.6 Select and wear specified personal protective equipment (PPE), including high visibility vest or coat.	
1.7 Prepare and segregate areas for works in line with the specified requirements.	
1.8 Take steps to protect the safety of work area and the natural environment where hazards and risk are identified.	
1.9 Maintain security of the site where work is not completed.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to prepare the resources for site works in accordance with approved procedures and practices.	
2.1 Select materials and equipment for planned works in accordance with work instructions and specifications.	
2.2 Confirm materials and equipment supplies are correct for work requirements and are of the quality and quantity required.	
2.3 Maintain in accordance with operational and organisational requirements: (a) the materials and equipment in Storage (b) the security of materials and equipment	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Be able to use and communicate data and information in accordance with approved procedures and practices.	
3.1 Use information from work instructions and specified requirements to locate the work site.	
3.2 Use approved procedures and practices when communicating throughout the work activity to ensure work complies with statutory requirements.	
3.3 Check with authorised personnel any circumstances where information appears incorrect.	
3.4 Use organisational information systems to record and store data and information.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Be able to resolve problems which could arise from preparing the site and resource requirements in accordance with approved procedures and practices.	
4.1 Record and report any shortages and defects of materials and equipment to the designated person.	
4.2 Refer problems and conditions outside own responsibility to the designated person using approved procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Know approved responsibilities and procedures for utilities network construction operations.	
5.1 Describe the main responsibilities of the employer and employee under the Health and Safety at Work Act.	
5.2 Explain the health and safety guidance governing work in excavations.	
5.3 Describe safe procedures for handling Hazardous materials.	
5.4 Explain own organisational accident recording and reporting procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
6 Know how to work safely on site in accordance with approved procedures and practices when installing equipment.	
6.1 Describe common hazards in site works, and fit-for-purpose safety precautions and hazard prevention methods that can be used.	
6.2 Describe how to respond to emergencies.	
6.3 Describe the range of safety equipment appropriate for site operations.	
6.4 Outline the main requirements of safety legislation governing site works.	
6.5 Describe materials that may pose a health hazard on site, and how to handle them safely.	
6.6 Describe personal protective equipment (PPE) that is used in site operations.	
6.7 Describe lifting and handling techniques appropriate to the materials, tools and equipment used in site works.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Understand the roles, responsibilities and procedures for installing equipment.	
7.1 Describe the roles and responsibilities of people within the site operations team.	
7.2 Describe site management structures for operations on site.	
7.3 Explain the importance of referring problems outside own area of responsibility to designated persons.	
7.4 Describe the recording and reporting procedures for: (a) job progress (b) problems (c) deviations to work programmes	
7.5 Explain the importance of confirming that the work location has been identified correctly.	
7.6 Describe the types of information contained in written instructions, specifications and drawings.	
7.7 Outline the key requirements of an effective site layout.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Characteristics and conditions of the carriageway include:	
<ul style="list-style-type: none"> ◆ speed and volume of traffic ◆ volume of pedestrian traffic ◆ number and directions of lanes ◆ proximity of other features (such as junctions, railway crossings, pedestrian crossings, roundabouts, traffic lights etc) 	
2 Codes of practice are:	
<ul style="list-style-type: none"> ◆ statutory ◆ regulatory, including the New Roads and Street Works Act 	
3 Hazards include:	
<ul style="list-style-type: none"> ◆ traffic ◆ weather ◆ other activities 	
4 Control signs and protection equipment include:	
<ul style="list-style-type: none"> ◆ traffic signs ◆ cones ◆ lights ◆ barriers ◆ traffic lights ◆ stop and go boards 	
5 Approved procedures and practices are:	
<ul style="list-style-type: none"> ◆ environmental ◆ statutory ◆ regulatory ◆ emergency ◆ operational ◆ health and safety ◆ organisational and company procedures ◆ risk assessments 	

Scope of evidence	Evidence or File X-Ref/Coverage
6 Materials and equipment include:	
<ul style="list-style-type: none"> ◆ backfill and reinstatement materials ◆ spoil ◆ digging and hand tools ◆ road breaking and cutting equipment ◆ compaction equipment 	
7 Problems arise from:	
<ul style="list-style-type: none"> ◆ traffic control ◆ pedestrians ◆ access to premises ◆ equipment failure ◆ materials shortage 	

Assessment Summary and Confirmation

H8MH 04 Inspect and Maintain Sewers and Ancillaries

SCQF level	5	Credit Value	9
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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"/>			

H8MH 04 Inspect and Maintain Sewers and Ancillaries

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** _____

H8MH 04 Inspect and Maintain Sewers and Ancillaries

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to prepare sewers and ancillaries for inspection and maintenance in accordance with approved procedures and practices.	
1.1 Locate position of sewers and ancillaries in accordance with approved procedures and practices to include those requiring: (a) inspection (b) rectification (c) repair	
1.2 Select the water supply in accordance with approved procedures and practices .	
1.3 Establish inspection and maintenance requirements of sewers and ancillaries in accordance with approved procedures and practices .	
1.4 Confirm materials, tools and equipment are appropriate for work activities.	
1.5 Notify individuals and organisations affected by work activities in accordance with relevant company procedures.	
1.6 Report defects and deficiencies outside the scope of the job holder in accordance with relevant company procedures.	
1.7 Identify and report external factors which prevent jobs being carried out at the present time.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to prepare sewers and ancillaries for inspection and maintenance in accordance with approved procedures and practices (continued).	
1.8 Record work activities in accordance with relevant company procedures.	
1.9 Ensure work activities comply with approved procedures and practices at all times.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to carry out inspection and maintenance of sewers and ancillaries.	
2.1 Prepare tools and equipment in accordance with approved procedures and practices .	
2.2 Carry out inspection and operational maintenance of sewers and ancillaries in accordance with approved procedures and practices .	
2.3 Report outcomes of work activities in accordance with relevant company procedures.	
2.4 Carry out inspection of maintained components in accordance with approved procedures and practices and relevant technical specification.	
2.5 Identify risks associated with confined spaces, and the associated control measures.	
2.6 Undertake, record and report work activities and outcomes in accordance with relevant company procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Be able to identify and report condition of sewers and ancillaries outside the scope of the job holder in accordance with approved procedures and practices.	
3.1 Identify reportable defects and conditions outside the scope of the job holder.	
3.2 Check that reportable defects and conditions are notified in accordance with relevant company procedures.	
3.3 Recommend possible temporary arrangements to protect the operation and condition of sewers and ancillaries , in accordance with approved procedures and practices .	
3.4 Confirm records of reportable defects and conditions are accurate and legible and notified to the relevant person.	
3.5 Ensure work activities comply with approved procedures and practices at all times.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand how to carry out inspection and operational maintenance of sewers and ancillaries in accordance with approved procedures and practices.	
4.1 Describe risks and the necessary control measures associated with working in confined spaces in line with associated procedures.	
4.2 Describe how to identify the condition of sewers and ancillaries .	
4.3 Describe the maintenance requirements relating to different types of fault and damage on sewers and ancillaries .	
4.4 Explain risks associated with manual handling and the appropriate control measures.	
4.5 Explain the implications of inadequate inspection and operational maintenance for the operation of the system.	
4.6 Explain how to work out what the problem is from the tests carried out.	
4.7 List the technical specifications for: (a) tools and equipment operational maintenance procedures (b) verification (c) testing	
4.8 Explain how to identify reportable defects and conditions in the sewer.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand how to carry out inspection and operational maintenance of sewers and ancillaries in accordance with approved procedures and practices (continued).	
4.9 Identify different types of temporary arrangements to recommend in different circumstances.	
4.10 Explain the effects of influents on sewer condition.	
4.11 Explain the implications of flooding and pollution.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Understand the procedures for inspection and operational maintenance of sewers.	
5.1 Explain the correct procedures for obtaining and using a water supply.	
5.2 Describe methods that could be used for: (a) Operational maintenance of sewers and ancillaries. (b) Inspection of sewers and ancillaries.	
5.3 Describe the reporting procedures for inspection and operational maintenance activities.	
5.4 Explain preparation procedures for inspection and operational maintenance of sewers and ancillaries .	
5.5 Describe correct procedures for using tools and equipment .	
5.6 Explain procedures for recording and notifying reportable defects and conditions .	
5.7 Explain the implications of not recording and notifying reportable defects and conditions correctly.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Approved procedures and practices are:	
<ul style="list-style-type: none"> ◆ regulatory ◆ Health, Safety and Environment ◆ relevant company procedures 	
2 External factors are:	
<ul style="list-style-type: none"> ◆ weather ◆ traffic ◆ access ◆ safety ◆ working environment ◆ environmental issues 	
3 Reportable defects and conditions include:	
<ul style="list-style-type: none"> ◆ major structural damage ◆ serious blockage ◆ flooding ◆ danger to public health ◆ pollution ◆ dangerous atmospheres ◆ presence of vermin 	
4 Inspection covers:	
<ul style="list-style-type: none"> ◆ visual inspection ◆ performance test 	
5 Inspection and maintenance requirements include:	
<ul style="list-style-type: none"> ◆ visual inspection ◆ performance test ◆ operational checks ◆ lubrication 	
6 Operational maintenance includes:	
<ul style="list-style-type: none"> ◆ operational checks ◆ lubrication ◆ cleaning 	

Scope of evidence	Evidence or File X-Ref/Coverage
7 Sewers and ancillaries include:	
<ul style="list-style-type: none"> ◆ sewers ◆ drains ◆ ancillaries (air valve, combined storm overflow, non-return valve, overflow outfall, interceptor, etc) ◆ unpowered and electrically isolated ancillaries 	
8 Temporary arrangements include:	
<ul style="list-style-type: none"> ◆ flow diversion ◆ temporary pumping ◆ isolation to protect work area 	
9 Tools and equipment include:	
<ul style="list-style-type: none"> ◆ cutting equipment ◆ hand tools ◆ inspection equipment ◆ cleaning tools 	

Assessment Summary and Confirmation

H8MJ 04 Restore Sewers and Ancillaries to a Working Condition

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"/>			

H8MJ 04 Restore Sewers and Ancillaries to a Working Condition

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** _____

H8MJ 04 Restore Sewers and Ancillaries to a Working Condition

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to prepare sewers and ancillaries for work activities in accordance with approved procedures and practices.	
1.1 Locate accurately the position of sewers and ancillaries requiring remedial action in accordance with approved procedures and practices .	
1.2 Select an appropriate water supply in accordance with approved procedures and practices .	
1.3 Establish remedial action requirements in accordance with relevant technical procedures.	
1.4 Confirm the following are appropriate for remedial action: (a) information (b) plant (c) tools and equipment	
1.5 Notify individuals and organisations affected by remedial actions in accordance with company procedures.	
1.6 Report problems outside the scope of own role in accordance with relevant company procedures.	
1.7 Identify and report external factors which prevent jobs being carried out at the present time.	
1.8 Identify risks associated with confined spaces, and the associated control measures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
<p>2 Be able to carry out work activities to restore sewers and ancillaries to an appropriate condition in accordance with approved procedures and practices.</p>	
<p>2.1 Check condition of tools and equipment used for remedial action in accordance with approved procedures and practices and manufacturer's specification.</p>	
<p>2.2 Report defects and deficiencies in tools and equipment in accordance with relevant company procedures.</p>	
<p>2.3 Prepare tools and equipment in accordance with approved procedures and practices.</p>	
<p>2.4 Carry out work activities in accordance with approved procedures and practices at all times.</p>	
<p>2.5 Dispose of waste materials in accordance with approved procedures and practices.</p>	
<p>2.6 Verify and test maintained sewers and ancillaries in accordance with approved procedures and practices.</p>	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Be able to identify and report faults and damage to sewers and ancillaries in accordance with approved procedures and practices.	
3.1 Identify faults and damage outside the scope of own job.	
3.2 Report faults and damage in accordance with relevant company procedures.	
3.3 Recommend possible temporary arrangements in accordance with approved procedures and practices to protect the operation and condition of: (a) sewers and ancillaries (b) properties (c) the environment	
3.4 Produce accurate and legible records of faults and damage in accordance with relevant company procedures.	
3.5 Report faults and damage in accordance with relevant company procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Understand the procedures for restoring sewers and ancillaries.	
4.1 Describe the correct procedures for obtaining and using a water supply.	
4.2 Describe reporting procedures for restoring sewers and ancillaries to an appropriate condition.	
4.3 Describe reporting procedures for defects to tools and equipment.	
4.4 List types of sewerage systems and flow variations.	
4.5 Describe procedures for recording and reporting faults and damage .	
4.6 List the sources of information relevant to the activity and how to interpret them.	
4.7 Explain procedures for disposal of waste materials .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Understand the risks and hazards associated with restoring sewers and ancillaries to a working condition.	
5.1 Describe risks associated with working in confined spaces and the necessary control measures in line with associated procedures.	
5.2 Describe potential hazards associated with sewage including: (a) trade effluents (b) uncontrolled discharges into the system (c) other hazardous objects	
5.3 Explain the dangers from vermin and the associated control measures.	
5.4 Explain risks associated with manual handling and the appropriate control measures.	
5.5 Describe the implications of inadequate remedial action.	
5.6 Describe problems that may be encountered during remedial action and ways in which they can be mitigated.	
5.7 Describe responsibilities for health and safety in own work activities .	
5.8 Explain effects of influents on sewer condition.	
5.9 Describe implications of flooding and pollution.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
6 Understand how to restore sewers and ancillaries to a working condition in line with procedures and practices.	
6.1 Explain how to distinguish between public and private sewers.	
6.2 Describe the most suitable choice of materials and equipment given the nature of the work activity , and its potential impact on the environment.	
6.3 Describe the most appropriate remedial action to restore the sewer to safe and serviceable condition.	
6.4 Explain the likely impact of work activities on others.	
6.5 Explain how to identify faults and damage on sewers and ancillaries .	
6.6 Identify different types of temporary arrangements to recommend in different circumstances.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Be able to record and report work activities and outcomes in accordance with relevant company procedures.	
7.1 Record work activities and outcomes in accordance with relevant company procedures.	
7.2 Report work activities in accordance with relevant company procedures.	
7.3 Ensure work activities conform with approved procedures and practices at all times.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Approved procedures and practices includes:	
<ul style="list-style-type: none"> ◆ regulatory ◆ Health, Safety and Environment ◆ relevant company procedures 	
2 External factors are:	
<ul style="list-style-type: none"> ◆ weather ◆ traffic ◆ access ◆ safety ◆ working environment ◆ environmental issues 	
3 Faults and damage include:	
<ul style="list-style-type: none"> ◆ major structural damage ◆ serious blockage ◆ flooding ◆ danger to public health ◆ pollution ◆ dangerous atmospheres 	
4 Sewers and ancillaries include:	
<ul style="list-style-type: none"> ◆ sewers ◆ drains ◆ ancillaries ◆ unpowered and electrically isolated ancillaries 	
5 Specification includes:	
<ul style="list-style-type: none"> ◆ tools and equipment ◆ maintenance of sewers and ancillaries ◆ verification and testing 	
6 Temporary arrangements are:	
<ul style="list-style-type: none"> ◆ flow diversion ◆ temporary pumping ◆ isolation to protect work area 	

Scope of evidence	Evidence or File X-Ref/Coverage
7 Verify and test by:	
<ul style="list-style-type: none"> ◆ visual inspection ◆ performance test 	
8 Waste materials include:	
<ul style="list-style-type: none"> ◆ silt ◆ roots ◆ sewer debris 	
9 Work activities are:	
<ul style="list-style-type: none"> ◆ rodding ◆ drain and sewer repair (this may include trenchless techniques or excavation, as appropriate to the candidate's job role) ◆ cleaning and disinfection ◆ simple maintenance 	

Assessment Summary and Confirmation

H8MK 04 Install Equipment for Working Safely on the Highway for Utilities Network Construction

SCQF level	5	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"/>			

H8MK 04 Install Equipment for Working Safely on the Highway for Utilities Network Construction

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** _____

H8MK 04 Install Equipment for Working Safely on the Highway for Utilities Network Construction

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to set out temporary signing, lighting and guarding traffic control equipment in line with industry Codes of Practice and current legislation.	
1.1 Locate the area for highway works and determine the characteristics and conditions of the carriageway.	
1.2 Plan the works for minimum disruption and inconvenience to others in accordance with approved procedures and practices .	
1.3 Carry out a site-specific risk assessment to identify hazards .	
1.4 Determine the range of control signs and protection equipment necessary for the works based on the risk assessment.	
1.5 Select and wear specified personal protective equipment (PPE).	
1.6 Set out control signs and protection equipment safely, according to: (a) the risk assessment (b) industry codes of practice (c) current legislation	
1.7 Remove all control equipment on completion of the works.	
1.8 Store and maintain control equipment in accordance with operational and organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to set out temporary signing, lighting and guarding traffic control equipment in line with industry Codes of Practice and current legislation (continued).	
1.9 Work to approved procedures and practices and in compliance with statutory requirements.	
1.10 Maintain the security of the site where work is not completed.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to prepare and maintain resources for highway works in line with industry Codes of Practice and current legislation.	
2.1 Select materials and equipment for the planned works in accordance with the work instructions and specifications.	
2.2 Confirm materials and equipment supplies are correct for the work requirement.	
2.3 Confirm materials and equipment are of the quality and quantity required.	
2.4 Maintain in accordance with operational and organisational requirements: (a) materials and equipment in storage (b) security of materials and equipment	
2.5 Use approved procedures and practices throughout the work activity to ensure the work complies with statutory requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Be able to use and communicate data and information in accordance with approved procedures and practices.	
3.1 Use information and data to: (a) determine the safety and security requirements for the area of the highways works (b) ensure compliance with current legislation	
3.2 Check with designated personnel any circumstances where information appears incorrect.	
3.3 Use organisational information systems to record and store data and information.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Be able to respond to problems which could arise from work on the highway.	
4.1 Resolve problems which arise from work on the highway, including: <ul style="list-style-type: none"> (a) record defects (b) replacements (c) additional equipment required and report to the designated person 	
4.2 Refer problems and conditions outside own responsibility to the designated person using approved procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Understand the safe working methods in utilities network construction operations.	
5.1 Explain the main responsibilities of the employer and employee under the Health and Safety at Work Act.	
5.2 Explain the health and safety guidance governing work in excavations.	
5.3 Describe the safe procedures for handling hazardous materials.	
5.4 Explain organisational accident recording and reporting procedures.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
6 Know the temporary signing, lighting and guarding traffic control equipment in line with industry Codes of Practice and current legislation.	
6.1 Describe the main sources of information on statutory requirements for the control of highways works.	
6.2 Explain different types of signs, lights, and guarding equipment.	
6.3 Explain different types of traffic control equipment.	
6.4 Explain the implications of incorrect signing, lighting, guarding and traffic control.	
6.5 Describe the design and the purpose of signs used for protecting highways works.	
6.6 List the main approved procedures and practices for determining site and resource requirements, within own job role.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Understand how to safely install temporary signing, lighting and guarding traffic control equipment in line with industry Codes of Practice and current legislation.	
7.1 Explain the importance of: (a) checking and reporting defects in signs, guards, lighting, and traffic control systems (b) checking that defective equipment is taken out of use (c) checking and reporting defects in personal protective equipment	
7.2 Explain the statutory positioning requirements for protection equipment relative to different highways environments and conditions, to cover: (a) signs (b) lights (c) guards (d) traffic controls	
7.3 Describe guarding arrangements for highways works, including: (a) Different types of guards used to protect highways works. (b) Positioning requirements of guards relative to the work.	
7.4 Explain different types and positioning of lighting required for highways works.	
7.5 Explain the main road classifications, including single and dual carriageways.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Understand how to safely install temporary signing, lighting and guarding traffic control equipment in line with industry Codes of Practice and current legislation (continued).	
7.6 Describe the design, operation, and maintenance requirements for traffic controls including: (a) warning signs (b) priority signs (c) stop/go boards (d) portable traffic signals	
7.7 Explain types of traffic control requirements for highways works in different road conditions.	
7.8 Explain the correct procedures and sequences for the following: (a) implementing traffic control equipment in different work locations (b) moving traffic controls as work progresses	
7.9 Explain the importance of the following: (a) signing, lighting, guarding, and traffic control arrangements are checked and updated regularly as work progresses (b) regular maintenance and cleaning of signs and lights throughout highways works	
7.10 Describe the statutory requirements and recommendations for signing, lighting and guarding highways works on single and dual carriageways.	
7.11 Explain the range and purpose of personal protective equipment (PPE) used during highways works.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Understand how to safely install temporary signing, lighting and guarding traffic control equipment in line with industry Codes of Practice and current legislation (continued).	
7.12 Explain the steps that must be taken in the event of an accident or emergency on the highway.	
7.13 Explain the persons and organisations with whom it is necessary to liaise on highways operations.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Characteristics and conditions of the carriageway are:	
<ul style="list-style-type: none"> ◆ speed and volume of traffic ◆ volume of pedestrian traffic ◆ number and direction of lanes ◆ proximity of other features (such as junctions, railway crossings, pedestrian crossings, roundabouts, traffic lights, etc) 	
2 Codes of practice are:	
<ul style="list-style-type: none"> ◆ statutory ◆ regulatory, including the New Roads and Street Works Act 	
3 Hazards include:	
<ul style="list-style-type: none"> ◆ traffic ◆ weather ◆ other activities 	
4 Control signs and protection equipment include:	
<ul style="list-style-type: none"> ◆ traffic signs ◆ cones ◆ lights ◆ barriers ◆ traffic lights ◆ stop and go boards 	
5 Approved procedures and practices are:	
<ul style="list-style-type: none"> ◆ environmental ◆ statutory ◆ regulatory ◆ emergency ◆ operational ◆ health and safety ◆ organisational and company procedures ◆ risk assessments 	

Scope of evidence	Evidence or File X-Ref/Coverage
6 Materials and equipment include:	
<ul style="list-style-type: none"> ◆ backfill and reinstatement materials ◆ spoil ◆ digging and hand tools ◆ road breaking and cutting equipment ◆ compaction equipment 	
7 Problems arise from:	
<ul style="list-style-type: none"> ◆ traffic control ◆ pedestrians ◆ access to premises ◆ equipment failure ◆ materials shortage 	

Assessment Summary and Confirmation

H8ML 04 Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

SCQF level	5	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"/>			

H8ML 04 Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction

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** _____

H8ML 04 **Locate, Mark and Avoid Supply Apparatus for Utilities Network Construction**

Candidate's name _____

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to locate, mark and record position of supply apparatus for utilities network construction in accordance with approved procedures and practices.	
1.1 Use and interpret work instructions and utility plans to determine the extent of the work site and to enable the supply apparatus to be marked.	
1.2 Carry out site specific risk assessment, and review in accordance with company procedures.	
1.3 Use appropriate search techniques to enable the identification and marking of supply apparatus .	
1.4 Mark the position and type of supply apparatus and sub-structures on the work site in accordance with: <ul style="list-style-type: none"> (a) work instructions (b) statutory and regulatory Codes of Practice 	
1.5 Mark risks of damage to supply apparatus and sub-structures in accordance with statutory and regulatory Codes of Practice .	
1.6 Record positions and types of supply apparatus and sub-structures in accordance with instructions and organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
1 Be able to locate, mark and record position of supply apparatus for utilities network construction in accordance with approved procedures and practices (continued).	
1.7 Communicate details of the position and type of supply apparatus and sub-structures to personnel in accordance with instruction and organisational requirements.	
1.8 Report deviations in the position of equipment and identification of other structures in accordance with instruction and organisational requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
2 Be able to maintain the safety and integrity of supply apparatus according to specifications and Codes of Practice.	
2.1 Maintain the position and condition of supply apparatus within the work site according to specifications and Codes of Practice .	
2.2 Avoid damage to supply apparatus when working on site.	
2.3 Check that exposed supply apparatus are supported correctly in line with specifications and approved procedures and practices .	
2.4 Take precautions to protect personnel and equipment from the effects of damage to supply apparatus according to approved procedures and practices .	
2.5 Check that all work complies with: (a) the latest specifications (b) statutory regulations (c) company Codes of Practice	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
3 Be able to use and communicate data and information.	
3.1 Check any circumstances where information appears incorrect with the designated personnel.	
3.2 Use organisational information systems to record and store data and information.	
3.3 Follow all required lone working procedures when working alone.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
4 Be able to resolve problems which could arise from work on the highway.	
4.1 Report any damage to supply apparatus promptly to the designated person and make the area safe.	
4.2 Resolve day to day problems within own area of responsibility.	
4.3 Advise the designated person where situations require intervention.	
4.4 Refer matters outside own responsibility to the designated people using approved procedures .	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
5 Know the safe working methods in utilities network construction operations.	
5.1 Explain the main responsibilities of the employer and employee under the Health and Safety at Work Act.	
5.2 Explain the health and safety guidance governing work in excavations.	
5.3 Describe the safe procedures for handling hazardous materials.	
5.4 Explain own organisational accident recording and reporting procedures.	
5.5 Explain the range and use of personal protective equipment for the work.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
6 Understand different types of supply apparatus.	
6.1 Describe typical locations and depths of the usual range of underground supply apparatus .	
6.2 Explain the key physical properties of the supply pipeline or components of supply apparatus , including: (a) size (diameter) (b) colour (c) material and its resistance to impact from excavation activities (d) methods of identification	
6.3 Describe the physical properties of the supply being carried by different types of supply apparatus , including: (a) ignition characteristics (b) density relative to air (c) electrocution risk (d) risk of water damage	
6.4 Describe the risks that arise when the safety and integrity of supply apparatus is not maintained.	
6.5 Describe the industry procedures and practices for confirming the location and marking of supply apparatus .	
6.6 Explain different methods used to provide temporary and permanent support to protect supply apparatus exposed during site excavations.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
7 Understand the importance of protecting supply apparatus.	
7.1 Explain the importance of providing adequate support and protection for supply apparatus.	
7.2 Explain the methods of marking and warning of the presence of underground supply apparatus .	
7.3 Describe the possible effects of damage to the supply apparatus .	
7.4 Explain the implications of damage to the different types of supply apparatus , including where relevant: (a) personal danger to the health or life of the operatives, or to others on site (b) damage to the environment (c) additional job costs in repair (d) delay to job progress	
7.5 Explain the types of hazards associated with different supplies and actions to take in the case of damage.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
8 Understand equipment and techniques used for locating and marking out supply apparatus.	
8.1 Describe the principles of operation and method of use of electronic detection equipment.	
8.2 Describe the safe procedures for handling the range of equipment necessary to carry out the tasks.	
8.3 Explain how to interpret the results of readings from electronic detection equipment.	
8.4 Explain the possible effects of external influences on electronic detection equipment readings.	
8.5 Explain how to visually locate and identify underground supply apparatus , using: (a) markers (b) signs and features (c) existing records	
8.6 Describe situations where trial holes can be used to locate underground supplies.	
8.7 Describe how to mark the position of supply services on the surface to ensure accurate location of the excavation.	
8.8 Explain the consequences of marking out excavations incorrectly, including: (a) costs (b) loss of time (c) material wastage	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
8 Understand equipment and techniques used for locating and marking out supply apparatus (continued).	
8.9 Explain the importance of protecting supply apparatus exposed during excavation work.	
8.10 Describe the precautions to be taken when locating supply apparatus, including statutory and regulatory requirements.	

Assessment Criteria — the candidate can:	Evidence or File X-Ref/Coverage
9 Know the legislation, responsibilities and reporting requirements for locating supply apparatus.	
9.1 Describe the main sources of legislation relating to highways operations in the proximity of other supply apparatus .	
9.2 Name the responsible persons or organisations that must be notified where there is damage to supply apparatus or other underground structures.	
9.3 Explain the regulations that govern the location of supply apparatus where this exposes other services.	
9.4 Outline the requirements of the legislation that applies to new roads and street works.	
9.5 Explain why it is important to refer problems outside own area of job role responsibility to designated people.	
9.6 Describe the procedures for reporting and recording: (a) job progress (b) problems (c) deviations to work programmes	
9.7 Outline the roles and responsibilities of the organisations involved in location work and how to liaise with them effectively.	

Scope of evidence	Evidence or File X-Ref/Coverage
1 Supply apparatus covers:	
<ul style="list-style-type: none"> ◆ supply apparatus for utilities and other agencies ◆ above and below ground services ◆ built structures (eg foundations) ◆ the natural environment (eg tree roots, natural watercourses) 	
2 Approved procedures and practices are:	
<ul style="list-style-type: none"> ◆ environmental ◆ statutory ◆ regulatory ◆ emergency ◆ operational ◆ health and safety ◆ organisational and company procedures ◆ risk assessments 	
3 Search techniques include:	
<ul style="list-style-type: none"> ◆ electronic location in the following modes: <ul style="list-style-type: none"> — with and without signal generator — induction — connection — radio — power ◆ trial holes ◆ visual examination ◆ use of drawings and records 	
4 Codes of practice are:	
<ul style="list-style-type: none"> ◆ statutory ◆ regulatory, including New Roads and Street Works Act 	