GQA Level 3 NVQ in Inspecting and Designing Chimneys and Dry Solid Fuel Installations (Construction)

Qualification Number 610/2278/0

PERSONAL COMPETENCE SUMMARY

Name	Company/Centre
Job Title	GQA Registration Number

		UNITS OF COMPETENCE			ASSESSOR SIGNATURE Performance and knowledge assessment completed and supplemented with evidence overtime	DATE
Unit Number		**Mandatory Units**	**Level**	**Credit**		
A/503/2772	209v2	Confirming work activities and resources for an occupational work area in the workplace	3	10		
Y/650/1392	210v3	Developing and maintaining good occupational working relationships in the workplace	3	8		
R/503/2924	211v2	Confirming the occupational method of work in the workplace	3	11		
L/650/6203	826v1	Inspecting and reporting on the condition of chimneys and appliances in the workplace	4	31		
R/650/6205	827v1	Designing dry solid fuel installations in the workplace	3	31		

RELIABLE EVIDENCE: The forms of evidence available include (mark as appropriate)

Observation in the workplace ☐ Assessment of knowledge ☐
Records of prior experience ☐ Witness statement(s) ☐
Testimonial(s) ☐ Photographic evidence ☐
Work records ☐ External testing ☐

Passport Style Candidate Photo (Mandatory)

COMPETENCE COMPLETION SIGNATURES

By signing here, the Candidate and Assessor confirm that evidence presented is authentic and that the assessments took place in accordance with the relevant assessment strategy. Details of the assessments and evidence must be recorded in the assessment decision record/summaries at the end of each unit.

	Name and Signature	Date
Candidate		
Lead Assessor		
Internal Verifier		
EQA		

Introduction to the Qualification

Who is this Qualification for?

This qualification is aimed at individuals wishing to prove they have the level and range of knowledge and skills required to inspect and design chimneys and dry solid fuel installations. All work must be completed following Industry recognised Safe Working Practices and in accordance with relevant legislation.

This qualification is at Level 3, although some units may be at different levels and should be taken by those who are fully trained to deal with routine assignments. Candidates should be fully trained on achievement of this qualification.

What is required from candidates?

GQA qualifications are made up of a number of units that have a credit value or credits. This qualification is made up of 5 mandatory units, which have a total of 91 credits.

The units are made up of the things those working in these job roles need to know and the tasks they need to be able to do to carry out the work safely and correctly. These are called Learning Outcomes, and all must be met to achieve the unit.

Unit Ref		Title	Level	Credit
		Mandatory Units		
A/503/2772	209v2	Confirming work activities and resources for an occupational work area in the workplace	3	10
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Achievement of the required credit indicated above will mean the qualification has been completed and GQA will provide the Certificate with the qualification title. Where a candidate has not completed the requirements of the full qualification and will not go on to do so, a Certificate of credit can be issued for the credits achieved.

Assessment guidance

Evidence should show that candidates can complete all of the learning outcomes for each unit being taken.

Types of evidence:

Evidence of performance and knowledge is required. Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Quantity of evidence:

Evidence should show that candidates can meet the requirements of the units in a way that demonstrates that the standards can be achieved consistently over an appropriate period of time.

Potential sources of evidence:

The main source of evidence for each unit will be observation of the candidate's performance and knowledge demonstrated during the completion of the unit. This can be supplemented by the following types of physical or documentary evidence:

- Accident books/reporting systems
- Safety records
- Training records
- Audio evidence
- Job documentation
- Witness testimonies
- Notes and memos
- Photo/video evidence
- Work diaries
- Timesheets
- Materials
- Work schedules and records
- Equipment

Please Note that photocopied or downloaded documents such as manufacturers or industry guidance, H&S policies, Risk Assessments etc., are not normally acceptable evidence for GQA qualifications unless accompanied by a record of a professional discussion or assessor statement confirming candidate knowledge of the subject. If you are in any doubt about the validity of evidence, please contact your GQA EQA.

GQA Qualification Implementation Requirements covering Centre Approval, Candidate Assessment and ongoing Quality Assurance

This document indicates the requirements of Approved Centres delivering GQA qualifications and / or units of credit.

1. Equality of Opportunity

Equality of access to fair and valid assessment is necessary for all candidates undergoing assessment. This may mean making reasonable adjustments to normal assessment methods for candidates with particular or special assessment requirements. Candidates work patterns should not become a barrier to assessment, the organisation of which may have to be flexible. In the same way, reasonable adjustment arrangements may be necessary for candidates with a disability. For example, a candidate who is unable, through disability, to produce oral or written evidence, may be allowed to use the method they normally use as a substitute for the required form of communication. Reasonable adjustments need to be approved by GQA.

2. Recognised/Approved Assessment Centres

2.1 Individual centres must be approved by GQA to offer specific qualifications and / or units of credit. A centre may be a single organisation or a partnership of two or more organisations. It may operate at a single location or have satellites. For further details see the GQA booklet "Guide to Centre Approval". The Centre Approval process is carried out by a GQA approved EQA. Each Centre must maintain a centre file. It is important to be clear what the steps in the assessment process are:

- plan evidence collection and opportunities for assessment
- collect evidence
- judge evidence
- determine whether sufficient evidence has been presented
- make an assessment decision and give feedback to the candidate

NB Any deviation from the norm must be approved by a GQA EQA

2.2 Assessors and Verifiers

All Assessors of candidate performance must be competent, to make qualitative judgements, both in the skills they are assessing and in the assessment of candidates and hold the appropriate Assessor national award. Assessor occupational knowledge related to the qualifications being assessed is essential and must be illustrated to GQA prior to approval.

Internal Verifiers are responsible for the quality assurance of the assessment process within a centre. They should have a relevant occupational background, be competent in internal verification and hold the Internal Verifier national award. It is recommended that Internal Verifiers work towards national recognition of assessor competence.

EQAs are responsible for ensuring accurate and consistent standards of assessment across centres, qualifications, units of credit and over time. They should have a relevant occupational background, be competent in external quality assurance and hold the relevant national external quality assurance award. GQA will approve and licence all individuals involved in the assessment and verification of its approved qualifications and / or units of credit. Individuals who are working towards the Assessor or Internal Verifier national awards can only be provisionally licensed. The judgement of provisional licence holders will need to be agreed/authorised by a fully qualified and GQA licensed individual who cannot carry out a dual role in relation to a specific candidate.

All GQA Assessors and Verifiers must undertake a minimum of 2 significant CPD activities in both occupational areas and assessment and verification. Reflective CPD records must be maintained and made available to GQA EQA's for review.

2.3 Centre Approval, Monitoring Reviews and Quality Assurance

The centre recognition/approval process is the start of a significant part of the awarding body's quality assurance system. The Approval process will begin with an EQA review of centre procedures to ascertain the potential centres ability to deliver GQA qualifications and / or units of credit. Centres will be expected to meet the relevant regulatory authority criteria for delivery of qualifications prior to initial approval; continued compliance with the criteria will be monitored through regular EQA visits. It is recommended that centre reviews are conducted at minimum every six months by a GQA EQA.

New or multi-site centres may be required to undertake quarterly or more frequent EV reviews to ensure that different locations can be seen to satisfy the national requirements.

GQA will ensure that unacceptable barriers relating to the assessment and internal verification of candidates in small companies do not deny recognition of competence to competent young workers. In such circumstances, GQA will demonstrate that its quality assurance procedures remain sufficient and rigorous to ensure that the competence outcomes have standing and credibility in the occupational area.

Enhanced quality procedures to ensure consistency of assessment and verification will be necessary and will include:

- a high level of sampling of assessment decisions N.B. In some instances the EQA may visit each assessment location and qualification / unit of credit candidate (e.g. single candidates dispersed throughout different small companies on government funded programmes)
- an in-depth scrutiny of assessment plans, materials and records
- specific centre guidance aimed at the successful implementation of qualifications and / or units of credit in SMEs via approved centre partnerships. This can include guidance on the quantity and quality of valid, authentic, and transferable evidence expected to be attributed to individual candidates
- ensuring centres are following the requirements prescribed in any appropriate assessment strategies and applicable codes of practice
- the identification and publication of good practice in centres

As part of the Quality Assurance process Proskills require an Enhanced external quality assurance process. This will be in the form of 1 significant underpinning knowledge question answered by the candidate for each unit of the qualification. The questions will be decided by GQA, and guideline answers must be submitted for approval and once approved kept in the Centre File to allow independent assessment

3. Qualification / Unit of Credit Candidates

All candidates must register with a GQA recognised/approved centre. The centre must maintain appropriate candidate personal details for external audit purposes etc.

The centre will provide candidates with advice and guidance on how to prepare for assessment and allocate an Assessor who will assess candidate ability to meet the requirements of the relevant qualifications / unit of credit. It is the candidate's responsibility to demonstrate competence and to do this they must: • prove they can consistently meet all the qualification and / or unit of credit criteria

- provide evidence from work, that they can perform competently in all the contexts specified in the qualification / unit of credit requirements
- prove that they have the knowledge and understanding required to perform competently, even where they have not provided evidence from the workplace

It is therefore critical that quality evidence is provided in a format to allow the Assessor to make a decision and for the Internal Verifier to audit/verify his/her decision.

4. Evidence

A qualification and / or credit is awarded when a person has achieved the necessary outcomes of the qualification and / or unit of credit.

The specific combination of units necessary to achieve a qualification is detailed in the qualification structure. Certificates of Unit Credit can be awarded when candidates achieve any one, or more, units from the qualification.

The evidence the candidate brings forward is primarily evidence of performance of what he/she can do, not just what he/she knows. The assessment criteria / qualification requirements are described within the qualification and / or unit of credit itself and can incorporate practical skills and knowledge.

The assessor's role is to judge each relevant item of evidence. Each must be judged against the qualification and / or unit of credit requirements. It is not sensible to collect evidence against individual criteria. Nor is it effective. If items of evidence were collected for each of the criteria, the candidate may have to produce many items of evidence, well above the number actually required. GQA recommend holistic assessment.

When judging each item of evidence, the assessor is deciding whether the evidence:

- is authentic – i.e. actually produced by the candidate
- meets the criteria
- relates as appropriate to a context defined within the qualification and / or unit of credit
- confirms that the candidate has the required underpinning knowledge

When the assessor makes a decision about the candidate's competence, he or she examines all the evidence available to determine:

- if the evidence, as a whole, covers all the evidence of achievement
- whether the evidence indicates consistency in competent performance
- whether there is enough evidence on which to base an inference of competence

The answer can only be:

- yes (the candidate is competent)
- no (the candidate is not yet competent)
- there is insufficient evidence to make a decision

Consistency means that the individual is likely to achieve the standard in their work role, in the different activities defined in the qualification and / or unit of credit over time and range of work. The assessor must judge how long a time period is enough to be confident that the candidate can perform reliably to the standard. Unsupported evidence i.e. based on a single assessment/visit will not normally prove consistency.

Performance evidence

Performance evidence can be what the individual actually produces, or the way the individual achieves the standard. One is called product evidence and the other process evidence.

Product evidence is tangible – you can look at it and feel it. Products can be inspected and the candidate can be asked questions about them.

In order to make a fair and objective assessment, the assessor must be able to answer the question: Is there sufficient evidence that the candidate can consistently meet the requirements of the qualification and / or unit of credit?

Process evidence describes the way the candidate has achieved an outcome – how they went about it. This may be, for example, the way the quality of products is checked or the way customer complaints are handled. This usually means observing the candidate in action.

Performance evidence may cover a number of outcomes. It makes sense to plan evidence collection so that what the candidate does, in the normal course of their job, can be related to different outcomes and units. The activities that clearly link to the qualification and / or unit of credit requirements are the things to concentrate on when planning evidence collection and assessment and when monitoring the candidate's progress. Look for opportunities in the candidate's job when evidence can be collected against a number of units at the same time.

Performance evidence can be:

- Naturally occurring – evidence produced in the normal course of work. Evidence of this sort is usually of high quality and reliable. It is also cost effective to collect naturally occurring evidence
- Taken from previous achievements – the candidate may be able to bring forward evidence from previous work experience to show that they are still competent to the standard.
- Evidence of prior achievement can be used when it can be shown to support a judgment that the candidate can still achieve the standard. So, the assessor must be satisfied that the evidence of prior achievement is sufficiently reliable to justify saying that the candidate is currently competent.
- Simulated – from circumstances specially designed to enable the candidate's performance to be assessed. Simulation is generally not acceptable.

  The exceptions to this are:
  - Dealing with emergencies
  - Dealing with accidents
  - Certain pre-approved real time simulators
  - Limited other procedures that cannot be practically performed in the workplace, and for which sufficient evidence can be collected through other means.

NB: It is not always possible or feasible to collect naturally occurring evidence. It is likely that some simulation may be needed, when it may take too long to wait for the evidence to arise e.g. it may be an aspect of performance which occurs infrequently. An example of this may be evidence of how to deal with emergencies i.e. it makes sense to look for evidence from sources other than naturally occurring ones, rather than for, say, waiting for the building to burn down. Centres must obtain GQA EQA approval prior to the use of simulation.

Knowledge evidence

Being able to achieve a standard requires the ability to put knowledge to work. The qualification and / or unit of credit indicates the knowledge each person should use if they are to perform competently.

It should not be necessary to test all of the candidate's knowledge separately; however, any exception to this would be detailed in the relevant Assessment Strategy. Performance evidence could show that the candidate knows what he or she is doing. When this is not the case, or if the assessor is not convinced from the performance evidence, it may be necessary to check the individual's knowledge separately.

Oral or written assessments must clearly provide a suitable means of checking the breadth and depth of an individual's knowledge. Assessors will need to judge the best mix of knowledge evidence according to individual circumstances. Knowledge evidence is useful when deciding the quality of performance evidence, but must not be used in isolation to judge competence or as an alternative to performance evidence. Care must be taken that candidate evidence is auditable and verifiable.

NB: These Qualification implementation guidelines are generic across the full range of GQA qualifications. Further guidance on acceptable evidence on each qualification will be found in the Introduction to the Qualification section of the candidate booklet

Candidate Declaration

Candidate Name..

Centre/Company Name..

Assessor(s) Name(s)...

I acknowledge receipt of this copy of GQA qualification booklet. The unit structure provides information on which units must be achieved to be awarded the qualification. The individual units detail the necessary requirements etc that I must achieve.

I understand that I will have an important role in preparing for and planning assessments and with guidance from the Assessor I will collect and record relevant evidence.

I have been informed of the appeals system, should I want to appeal against any part of the assessment process.

I understand the assessments will be carried out with regard to the company's/centre's Equal Opportunities Policy.

Candidate signature..

Date..

Production/Process Activity Guideline

To aid new or established workers, a centre may wish to describe a normal production/process activity relevant to the achievement of the national vocational qualification and identify which units/elements it will contribute to, e.g. the act of preparation for work, implementation and completion will contribute to a number of units of competence.

Production/Process Activity Relevant to the Achievement of this Qualification	Contributory to: Units/Elements

A/503/2772	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace	Level 3	10 Credits
209v2			

The aim of this unit is to ensure that the candidate has the skills and knowledge required to understand and plan work activities to complete the work programme, including how to identify and obtain the necessary resources. Candidates must also understand the factors that can effect progress and the sequence of work carried out, understand the impact of changes to work schedules and why and how to inform relevant people of required changes. Candidates must also have an understanding of how work activities can make a positive contribution to the environment, including knowledge of low and zero carbon requirements.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
1. Identify work activities, assess required resources and plan the required sequence of work.	1.1 Identify work activities, assess required resources and plan the required sequence of work			
	1.2 Identify work activities and formulate a plan for their own sequence of work.			
	1.3 Explain the types of work relative to the occupational area and how to identify different work activities.			
	1.4 Explain methods of assessing the resources needed from a range of available information.			
	1.5 Explain the required information and the different methods used to prepare a work programme relative to the occupational area.			
2. Obtain clarification and advice where the resources required are not available.	2.1 Seek advice and clarity from appropriate sources on resources available and the alternatives that can be used for the work when required resources are not available.			
	2.2 Explain the different sources and methods that can be used to obtain clarification and advice when the required resources are not available.			
3. Evaluate the work activities and the requirements of any significant external factors against the project requirements.	3.1 Assess progress of work against projects requirements, taking into account external factors relating to:- – Other occupations and/or customers – Resources – Weather conditions – Health and safety requirements			
	3.2 Explain different methods of evaluation work activities against the following project requirements: – Contract conditions – Contract programme – Health and safety requirements of operatives			
	3.3 Evaluate the requirements of significant external factors that could affect the progress of work, in relation to: – Other related programmes – Special working conditions – Weather conditions – Other occupations/people – Resources – Health and safety requirements			

A/503/2772	Confirming Work Activities and Resources for an Occupational Work Area in the Workplace (Continued)	Level 3	10 Credits
209v2			

4. Identify work activities which influence each other and make the best use of the resources available.	4.1 Determine work activities that have an influence on each other.			
	4.2 Evaluate which work activities make the best use of the available resources in relation to: – Occupations and/or customers associated with the work – Tools, plant and/or ancillary equipment – Materials and components			
	4.3 Explain different methods and sources that can identify which work activities influence each other.			
	4.4 Describe how to determine the sequence of work activities and how long each work activity will take.			
	4.5 Describe what zero and low carbon requirements are.			
	4.6 Explain how work activities and different ways of using resources can impact on zero and low carbon requirements, and make a positive contribution to the environment.			
5. Identify changed circumstances that require alterations to the work programme and justify them to decision makers.	5.1 Evaluate project progress against the work programme to identify any changed circumstances.			
	5.2 Inform line management and/or customers on the type and extent of any required changes to the work programme.			
	5.3 Explain how to identify possible alterations to the work programme to meet changed circumstances relating to action lists, , method statements, durations, schedules and/or occupation specific requirements.			
	5.4 Explain how to access contractual/work effects resulting from alterations to the work programme.			
	5.5 Explain the methods used to justify to decision makers on the effects resulting from alterations to the work programme.			

Assessor Comments/Feedback

Y/650/1392	**Developing and maintaining good occupational working relationships in the workplace**	**Level 3**	**8 Credits**
210v3			

The aim of this unit is to ensure the candidate has the skills and knowledge required to give appropriate advice and information to relevant people about the different methods of carrying out occupational work activities to achieve the required outcome.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
1. Develop, maintain and encourage working relationships to promote good will and trust	1.1 Give appropriate advice and information to relevant people about the occupational work activities and/or associated occupations involved.			
	1.2 Apply the principles of equality and diversity by considering the needs of individuals when working and communicating with others.			
	1.3 Explain the methods and techniques used and personal attributes required to encourage and maintain working relationships that promote goodwill and trust with relevant people.			
	1.4 Explain the principles of equality and diversity and how to apply them when working and communicating with others.			
2. Inform relevant people about work activities in an appropriate level of detail, with the appropriate level of urgency.	2.1 Communication on the following work activity information to relevant people following organisation procedures: – appropriate timescales – health and safety requirements – co-ordination of work procedures			
	2.2 Explain the different methods and techniques used to inform relevant people about work activities.			
	2.3 Explain the effects of not informing relevant people with the expected level of urgency.			
	2.4 Explain the different type of work activity related information and to what level of detail the following people would expect to receive: – colleagues – employers – customers – contractors – suppliers of products and services – other people affected by the work/project			
3. Offer advice and help to relevant people about work activities and encourage questions/requests for clarification and comments.	3.1 Give appropriate advice and information to relevant people about the different methods of carrying out occupational work activities to achieve the required outcome.			
	3.2 Explain the techniques of encouraging questions and/or requests for clarification and comments.			

Y/650/1392	Developing and maintaining good occupational working relationships in the workplace (Continued)	Level 3	8 Credits
210v3			

	3.3 Explain the different ways of offering advice and help to different people about work activities in relation to: – progress – results – achievements – occupational problems – occupational opportunities – health and safety requirements – co-ordinated work			
4. Clarify proposals with relevant people and discuss alternative suggestions.	4.1 Engage regular discussions with relevant people about the occupational work activity and/or other occupations involved.			
	4.2 Explain the methods of clarifying alternative proposals with relevant people.			
	4.3 Explain the methods of suggesting alternative proposals.			
5. Resolve differences of opinion in ways that minimise offence and maintain goodwill, trust and respect.	5.1 Examine and agree the work activities that satisfy all people involved and will meet the required outcome of the proposed method of work.			
	5.2 Explain the methods and techniques used to resolve differences of opinion in ways which minimise offence and maintain goodwill, trust and respect.			

Assessor Comments/Feedback

R/503/2924 211v2	**Confirming the Occupational Method of Work in the Workplace**	**Level 3**	**11 Credits**

The aim of this unit is to provide the learner with the knowledge and skills to interpret information from project data to evaluate and confirm work methods that will meet the project requirements, be cost effective and comply with the statutory and contractual requirements and taking into account environmental issues. Candidates must be able to communicate recommended methods to all relevant persons.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
1. Assess available project data accurately to determine the occupational method of work.	1.1 Interpret and extract information from drawings, specifications, schedules, manufacturer's information, methods of work, risk assessments and programmes of work.			
	1.2 Explain how to summarise the following project data: – Required quantities – Specifications – Detailed drawings – Health and Safety requirements – Timescales – Scope of works			
	1.3 Explain the different methods of assessing available project data.			
	1.4 Explain how to use project data to interpret the work method, in relation to: – Standard work procedures – Sequence of work – Organisation of resources (people, equipment, materials) – Work techniques – Working conditions (health, safety and welfare) – Risk assessment			
2. Obtain additional information from alternative sources in cases where the available project data is insufficient.	2.1 Collect and collate additional information from alternative sources to clarify the work to be carried out.			
	2.2 Explain different methods of techniques of obtaining additional information from the following alternative sources when available project data is insufficient: – Customers and representatives – Suppliers – Regulatory authorities – Manufacturer's literature			
3. Identify work methods that will make best use of resources and meet project, statutory and contractual requirements.	3.1 Examine potential work methods to carry out the occupational work activity.			
	3.2 Determine which work methods will make best use of relevant resources and meet health and safety requirements relating to technical and/or project criteria.			

	3.3 Explain how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against technical criteria, in relation to: – Health and safety welfare (principles of protection) – Fire protection – Access and egress – Equipment availability – Availability of competent workforce – Pollution risk – Waste and disposal – Zero and low carbon outcomes – Weather conditions			
	3.4 Explain how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against project criteria, in relation to: – Conforming to statutory requirements – Customer and user needs – Contract requirements in terms of time, quantity and quality – Environmental considerations			
	3.5 Explain how different methods of work can achieve zero/low carbon outcomes			
4. Confirm and communicate the selected work method to relevant personnel	4.1 Confirm the selected occupational work method that meets project, statutory and contractual requirements.			
	4.2 Communicate appropriately to relevant people on the selected occupational work method.			
	4.3 Describe the different techniques and methods of confirming and communicating work methods to relevant people.			
	4.4 Explain the principles of equality and diversity and how to apply them when working and communication with others/.			

Assessor Comments/Feedback

L/650/6203 826v1	Inspecting and reporting on the condition of chimneys and appliances in the workplace	Level 4	31 Credits

The aim of this unit is to ensure the individual has the skills and knowledge to be able to check that the flue system and appliance operate as intended in terms of combustion and environmental performance as required by the documentation and specifications

Glossary of Terms
A description of terms in **bold font** in this NVQ unit should be used as a reference point, these can be found on Page 26.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
1. Plan and prepare work activities relating to the work and resources when inspecting and reporting on the condition of chimneys and appliances	1.1 Identify, record, and agree the client's job requirements in accordance with **organisational procedures**, **documentation and specifications**.			
	1.2 Describe how to access and correctly interpret the required information to ensure the inspection meets the requirements of the **documentation and specifications.**			
	1.3 Survey the work site and consult the **documents and specifications** for any key structural features and existing defects that could affect the safe use or performance of the installation and record them to allow all interested parties to be notified of these findings.			
	1.4 Describe the limits of their own autonomy, competency and responsibility when co-operation and liaison with others is required.			
	1.5 Check that the condition, size, location and availability of all **services and systems** meet the **documentation and specifications** for the requirements of the installation.			
	1.6 Work to a risk assessment and method statement and amend as needed, to include, but not limited to the following: – working at height – slips, trips and falls – hit by falling or moving objects – manual handling – health issues – overhead hazards – power sources – hazardous substances – trapped by something collapsing or overturning – confined spaces – fire – obstructions – moving vehicles – water			

	– on-site security – protection of client property – protection of the working area – other occupations and clients affected by the work – welfare facilities – 3rd party protection.			
	1.7 Describe the regulations and guidance governing health and safety in the workplace, environmental protection and the use of risk assessments.			
	1.8 Explain why it is important and how to include health, safety and environmental factors in the risk assessment and method statement for the inspection and reporting of flue systems and **appliances.**			
	1.9 Protect the work site and the building fabric against possible damage being caused during the inspection.			
	1.10 Describe the methods of working which protect the building décor, customer property and existing systems and components.			
	1.11 Check and confirm that all materials, tools and equipment that may be necessary for the agreed inspection are available as required, within calibration and in working order.			
	1.12 Describe the tools and equipment necessary to provide safe access to work at heights, or in confined spaces.			
	1.13 Describe the care and maintenance requirements of tools and equipment and checks for safe condition.			
	1.14 Explain the ordering, supplying, advising, checking and delivery procedures for the tools, equipment, materials and components required to perform the inspection.			
	1.15 Carry out the inspection minimising damage to the building and its surroundings.			
	1.16 Describe how to access and interpret the **documentation and specifications** to ensure that the inspection is carried out to meet the following requirements: – organisational – company – contract.			

	1.17 Describe how to inspect, test and record the details of the installation to meet the **documentation and specifications**, particularly that the flue designations for the components used are correct for the application.			
	1.18 Describe the importance of safe isolation methods, tests, and procedures to inspect the work area, **appliances**, **systems** or components.			
	1.19 Check the positioning of the flue system and **appliance** to confirm that it meets the location and clearances required by the **documentation and specifications.**			
	1.20 Check that the ventilation is adequate to ensure that sufficient combustion air is available to meet performance and environmental outcomes required by the **documentation and specifications.**			
	1.21 Use the correct procedures to confirm that the integrity of the flue system and **appliance** meet the **documentation and specifications.**			
	1.22 Explain why it is important and how to inspect and test existing installations with reference to the work area, **appliances** and flue systems.			
	1.23 Carry out the following tests to ensure the performance of the flue system and **appliance** meet current **documentation and specifications:** – smoke test I – smoke test II – spillage test – internal flue inspection – external inspection.			
	1.24 Check the compliance of the complete installation to the **documentation and specifications** and confirm that manufacturers' written approvals have been given if needed.			
	1.25 Check that sufficient data is permanently available with the installation and that it is up to date and correctly located.			
	1.26 Describe why it is important and how to appropriately label defective installations or **systems** to raise awareness of their defects to potential users and responsible persons.			
	1.27 Check that the flue system and **appliance** operate as intended in terms of combustion and environmental performance as required by the **documentation and specifications.**			

	1.28 Check that a means of detection of Carbon Monoxide (CO) release has been provided which meets the **documentation and specifications** including the following: – location and expiry date – test it to manufacturer's instructions.			
2. Use and communicate data and information, liaising with property occupiers and relevant registration bodies when inspecting and reporting on the condition of chimneys and appliances	2.1 Liaise with the property occupier and other parties who will be affected by the work during the planning and inspection processes.			
	2.2 Describe the need to liaise with others whose activities or routines may be affected and where co-operation and other services, may be required.			
	2.3 Describe the industry practices and work standards for the inspection of and reporting on flue systems and **appliances** to the **documentation and specifications.**			
	2.4 Use the **documentation and specification** to ensure that the inspection is done to meet the contract requirements.			
	2.5 Describe the positioning and fixing requirements for flue systems and **appliances** to comply with the **documentation and specifications.**			
	2.6 Advise of any delays to the work, unsafe situations and required remedial actions to those who require the information.			
	2.7 Complete all records and documentation to meet **organisational procedures.**			
	2.8 Check if the installation has been correctly notified to the relevant registration body and if sufficient information is available on site about the flue system and **appliance** as required by the **documentation and specifications.**			
	2.9 Describe the procedures and work methods to inspect and test flue systems and **appliances** against the **documentation and specifications** to check the following: – ventilation can provide sufficient combustion air to the **appliance** – efficient and effective combustion performance can be achieved – adequate flue system performance to remove the products of combustion – spillage from a closed **appliance** when the door is open is not excessive – combustible material will not experience sufficient temperature to produce deterioration – effective alerts to the release of CO are correctly positioned and function as intended – installation documentation and adequate data relating to the flue system and **appliance** are permanently available on site			

	2.10 Describe the principles of chimney flue draft and design including but not limited to: – mechanical ventilation – natural flue draft – forced flue draft – adequate chimney draft to evacuate the products of combustion – effective flue height – effective flue area – impact of bends and restrictions – impact of flue outlet position – interaction with the building envelope and topography – meteorological effects.			
	2.11 Describe the principles of combustion including but not limited to: – adequate fuel quality – combustion temperature – sufficient combustion air – **combustion performance effects on emissions.**			
	2.12 Produce a report to document the inspection process, the results of the inspection, tests and any recommendations for remedial work, to meet **organisational procedures** and the **documentation and specifications.**			
Assessor Comments/Feedback				

R/503/6205 827v1	Designing dry solid fuel installations in the workplace	Level 3	31 Credits

The aim of this unit is to ensure the individual has the skills and knowledge to identify different design options for evaluation which meet documentation and specifications and organisational procedures, including:

- assessing the work area
- the level of heat output required
- environmental impact

Glossary of Terms

A description of terms in **bold font** in this NVQ unit should be used as a reference point, these can be found on Page 26.

Learning outcome; The learner will:	Assessment criteria: The learner can:	Evidence Ref No.		
1.1 Review intended requirements relating to the work when designing dry solid fuel installations	1.1 Describe the **documentation and specifications** and **organisational procedures**.			
	1.2 Identify and clarify the key operating requirements and implications of the dry solid fuel installation.			
	1.3 Explain the principles of combustion to include: - adequate fuel quality - combustion temperature - sufficient combustion air - combustion performance effects on emissions.			
	1.4 Explain the principles of chimney flue draft and design to include: - mechanical ventilation - natural flue draft - forced flue draft - adequate chimney draft to evacuate the products of combustion - effective flue height - effective flue area - impact of bends and restrictions - impact of flue outlet position - interaction with building envelope and topography - meteorological effects.			
	1.5 Describe why it is important to provide a means of detection of Carbon monoxide (CO) release from the dry solid fuel installation.			
	1.6 Evaluate the potential for adaptation to accommodate new equipment where there is an existing system, site structures and features.			
	1.7 Describe all technical criteria for adapting existing equipment.			
	1.8 Review the feasibility of proposed adaptations against **documentation and specifications**, technical, legal and cost criteria.			

R/503/6205 827v1	Designing dry solid fuel installations in the workplace (Continued)	Level 3	31 Credits

	1.9 Describe the ways of costing and scheduling equipment adaptations.			
	1.10 Identify the relevant operating factors which will influence the design of the dry solid fuel installation for new **systems.**			
	1.11 Ensure that a risk assessment is carried out for incorporation in planning, schedules of work, testing and commissioning procedures.			
	1.12 Describe all relevant health, safety and environmental factors including how to carry out a risk assessment.			
	1.13 Review **documentation and specifications** for siting the dry solid fuel installation and the impact this will have on the final design.			
	1.14 Describe why it is important to ensure that sufficient data is left with the dry solid fuel installation and is permanently available.			
	1.15 Ensure your plans allow access for service, maintenance and repair to meet the **documentation and specifications.**			
	1.16 Identify different design options for evaluation which meet **documentation and specifications** and **organisational procedures**, including: - assessing the work area - the level of heat output required - environmental impact.			
	1.17 Explain how to identify the requirements from inspection reports, site surveys, **documentation and specifications** and **organisational procedures.**			
	1.18 Describe different types of dry solid fuel installations, their performance, application and environmental capabilities.			
	1.19 Describe different types of dry solid fuel **appliance**, their usage and fuel types.			
	1.20 Discuss the different design options with all relevant parties to establish if they are technically feasible and cost-effective including: – providing full information and options available to all relevant parties for them to make an informed decision.			
	1.21 Describe appropriate alternative ways to meet the requirements.			
	1.22 Explain the importance of getting agreement to the design proposals from all relevant parties.			

2. Select design options for the dry solid fuel installation	2.1 Describe how to interpret and apply inspection reports, site surveys, the **documentation and specifications** and **organisational procedures** to enable selection of the design options.			
	2.2 Describe the range of information that is required to carry out design work across new and existing buildings, domestic and commercial.			
	2.3 Agree and fully cost a plan of action including the removal and disposal of any equipment or material that is to be replaced or will no longer be part of the installation.			
	2.4 Ensure your design meets the key operating requirements identified from inspection reports and site surveys with particular reference to environmental outcomes.			
	2.5 Describe how to select components with the correct flue designation for the application.			
	2.6 Explain the access requirements to allow service, maintenance and repair of dry solid fuel installations.			
	2.7 Describe how to provide suitable isolation of other **services** connected to the installation.			
	2.8 Perform calculations to determine the required heat output, flue performance and ventilation requirements.			
	2.9 Describe how to calculate the performance of components to meet the heat output, flue performance and ventilation requirements			
	2.10 Explain the positioning requirements for dry solid fuel installations and standard system layouts including flue termination position.			
	2.11 Include a means of detection of Carbon Monoxide release from the dry solid fuel installation into the design to the meet the **documentation and specifications.**			
	2.12 Ensure that sufficient data is left with the dry solid fuel installation and is permanently available to meet the **documentation and specifications.**			
	2.13 Introduce all appropriate measures for the safe removal and disposal of existing equipment which comply with current legislation.			
	2.14 Agree the final design with all relevant parties ensuring it is compliant with the **documentation and specifications.**			

	2.15 Describe methods of presenting design information to customers, users, installers and all relevant parties by means of drawings, specifications, schedules of work, component lists, testing and commissioning procedures.			
	2.16 Obtain and record the agreement on the design proposals from all relevant parties.			
	2.17 Produce drawings, specifications, schedules of work, component lists, testing and commissioning procedures.			
	2.18 Select all the materials and equipment identified by the drawings, specifications, schedules of work, component lists, testing and commissioning procedures along with purchasing options including cost and lead time information.			
	2.19 Arrange for all materials and equipment to be provided to meet contract requirements and the project program.			
	2.20 Amend the design to account for unforeseen issues, update all relevant parties, agree any alterations to time schedules and update design records.			
Assessor Comments/Feedback				

Glossary

Organisational procedures
Organisational
Insurances – public, product and employers liability, professional indemnity

Company documents
contract for the work, safety management plan, CDM, environmental policy, complaints procedure, information privacy and security policy, management structure

Work area
The area where the equipment will be installed and all areas affected by the work extending to topographical features and meteorological conditions

Services and systems
Chimney and flue systems, appliances, ventilation systems and appropriate utilities

Documentation and specifications
Manufacturers' instructions for all equipment that forms part of the work
architect's plans and site-specific documentation
local building rules and regulations
Party Wall legislation
Clean Air Act
Environment Act
Smoke Control Zones
Permitted Development
Conservation Areas
Heritage status
Areas of Outstanding Natural Beauty
Sites of Special Scientific Interest
specific requirements of insurance underwriters
Building regulations in England and Wales, particularly ADJ but also ADA, ADB, ADF, ADL and AD7
Building Standards Technical Handbook in Scotland
Technical Booklets in Northern Ireland, particularly B, D, E, F1, F2, K and L
BSEN's particularly 8303, 15287, 1856, 16510, 1251, 3376, 4834, 12815, 13229, 13240, 15250

Note: Technical and BSEN documents may be withdrawn or superseded during review programmes, it is therefore important to check the currency and validity of all such documents to ensure the correct version is being referenced.

Appliances
Solid fuel burning appliances up to 50kW output including but not limited to the following:

- open fires
- free standing room heaters
- inset room heaters
- free standing cookers
- independent boilers
- slow heat release stoves

NOTES

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