SFJ Awards Level 2 Certificate in Fire Sprinkler Installation

Qualification Handbook

SFJ Awards Level 2 Certificate in Fire Sprinkler Installation

Qualification Number: 601/6460/8

Operational Start Date: 23 June 2015
Operational End Date: 31 May 2024
Certification End Date: 31 May 2025

Version	Date of issue	Amendment(s)	Page
V5		Amendments to indicative comments (unit 6, learning outcome 3.5) Amendments to qualification objective	48 5
V6		Withdrawal notification	2, 5

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1 Introduction

1.1 About us

SFJ Awards is part of the Workforce Development Trust, together with Skills for Justice and Skills for Health. For over 10 years **Skills for Health** and **Skills for Justice** have been working with employers, Governments of the UK and agencies within the skills system, to better equip workforces with the right skills now and for the future.

During this time both Skills for Health and Skills for Justice have earned an enviable reputation for their knowledge of the health and justice sectors and their proactive approach to the development of skills and qualifications, along with an ability to deliver genuinely workable solutions for the employers they represent.

SFJ Awards is an awarding organisation that builds upon this reputation. We work with employers in the policing, community safety, legal, armed forces and health sectors and understand their specific challenges, enabling us to quality assure learning outcomes that are suited to the needs of the sectors.

Customer satisfaction is the cornerstone of our organisation, and is delivered through an efficient service, providing excellent value for money.

1.2 Customer Service Statement

Our Customer Service Statement is published on SFJ Awards website giving the minimum level of service that centres can expect. The Statement will be reviewed annually and revised as necessary in response to customer feedback, changes in legislation, and guidance from the qualifications Regulators.

1.3 Centre support

SFJ Awards works in partnership with its customers. For help or advice contact:

SFJ Awards
Consult House
Meadowcourt Business Park
4 Hayland Street
Sheffield
S9 1BY

Tel: 0114 284 1970
E-mail: info@sfjawards.com
Website: www.sfjawards.com

2 The Qualification

2.1 Qualification objective

This handbook relates to the following qualification:

SFJ Awards Level 2 Certificate in Fire Sprinkler Installation

The main objective of this qualification is supporting a role in the workplace. The SFJ Awards Level 2 Certificate in Fire Sprinkler Installation is a qualification aimed at individuals employed across the Fire Sprinkler Industry. The qualification covers Health and Safety, knowledge of the Fire Sprinkler Industry, relationship building and communication, understanding how to manage own resources, maintaining compliance and dealing with non-compliance, installation and final handover procedures. This qualification is intended for people employed in the mechanical fire protection sector installing fire sprinklers in both commercial and residential settings to develop the knowledge and competences necessary to meet the industry standards for the installation role. The framework of the qualification should provide sufficient flexibility for the variations in different jobs and locations.

Qualification Withdrawal

This qualification is being withdrawn and therefore no further learners can be registered after 31st March 2024. All certifications of learners already registered on the qualification must be complete by 31st March 2025. A revised qualification will be available from 1st March 2024.

2.2 Pre-entry requirements

There are no pre-entry requirements to enrol on to this qualification. However, learners should be able to work at level 2 or above. Learners must be able to work at heights.

2.3 Qualification structure

To achieve the SFJ Awards Level 2 Certificate in Fire Sprinkler Installation the learner must achieve 36 credits from the seven mandatory units.

Mandatory Units					
Unit Number	**Unit Title**	**Level**	**GLH**	**Credit Value**	**Estimated TQT***
D/600/6322	Communicate effectively in the workplace	2	17	2	20
J/601/9694	Establish effective working relationships	2	15	3	30

T/507/3224	Manage own resources	2	20	2	20

Mandatory Units					
Unit Number	**Unit Title**	**Level**	**GLH**	**Credit Value**	**Estimated TQT***
A/505/1483	Health and Safety in the Workplace	2	16	2	20
A/507/3225	Awareness of regulations in the Fire Sprinkler industry	2	41	7	70
F/507/3226	Fire Sprinkler installation and handover	2	78	17	170
J/507/3227	Understanding the Fire Sprinkler Industry	2	22	3	30

2.4 Age restriction

This qualification is available to learners aged 18 years and over in England, Wales and Northern Ireland.

2.5 Total Qualification Time (TQT)*

Values for Total Qualification Time[1], including Guided Learning, are calculated by considering the different activities that Learners would typically complete to achieve and demonstrate the learning outcomes of a qualification. They do not include activities which are required by a Learner's Teacher based on the requirements of an individual Learner and/or cohort. Individual Learners' requirements and individual teaching styles mean there will be variation in the actual time taken to complete a qualification. Values for Total Qualification Time, including Guided Learning, are estimates.

Some examples of activities which can contribute to Total Qualification Time include

- Independent and unsupervised research/learning
- Unsupervised compilation of a portfolio of work experience
- Unsupervised e-learning
- Unsupervised e-assessment

[1] Total Qualification Time, Ofqual November 2018
https://www.gov.uk/guidance/ofqual-handbook/section-e-design-and-development-of-qualifications

- Unsupervised coursework
- Watching a pre-recorded podcast or webinar
- Unsupervised work-based learning
- All Guided Learning

Some examples of activities which can contribute to Guided Learning include:

- Classroom-based learning supervised by a Teacher
- Work-based learning supervised by a Teacher
- Live webinar or telephone tutorial with a Teacher in real time
- E-learning supervised by a Teacher in real time
- All forms of assessment which take place under the Immediate Guidance or Supervision of a lecturer, supervisor, tutor or other appropriate provider of education or training, including where the assessment is competence-based and may be turned into a learning opportunity.

The Total Qualification Time and Guided Learning Hours for this qualification are as follows:

Qualification Title	TQT	GLH	Total Credits
SFJ Awards Level 2 Certificate in Fire Sprinkler Installation	360	209	36

2.6 Opportunities for progression

This qualification creates a number of opportunities for progression:

- Level 3 Certificate/Diploma in Fire Science, Operations, Fire Safety and Management (VRQ)
- Level 3 Certificate in Fire Safety (Fire Auditors)
- Level 2 Diploma in Team Leading
- Level 3 NVQ Certificate in Building Services Engineering Technology and Project Management
- Level 3 Diploma in Business Management
- Level 3 Certificate in Leadership and Management Practice for the Construction and Built Environment Sector

2.7 Use of languages

SFJ Awards business language is English and we provide assessment materials and qualification specifications that are expressed in English. Assessment specifications and assessment materials may be requested in Welsh or Irish and, where possible, SFJ Awards will try to fulfil such requests. SFJ Awards will provide assessment materials and qualification specifications that are expressed in Welsh or Irish and support the assessment of those learners, where the number of learners makes it economically viable for SFJ Awards to do so. More information is provided in the SFJ Awards' Use of Language Policy.

For learners seeking to take a qualification and be assessed in British Sign Language or Irish Sign Language, please refer to SFJ Awards' Reasonable Adjustments Policy. A learner may be assessed in British Sign Language or Irish Sign Language where it is permitted by SFJ Awards for the purpose of Reasonable Adjustment.

Policies are available on our website www.sfjawards.com or on request from SFJ Awards.

3 Qualification Units

Title	Communicate effectively with others in the workplace		
Level	2		
Unit Number	1		
Credit Value	2		
GLH	17		
Learning Outcome – ***The learner will:***	**Assessment Criteria –** ***The learner can:***		**Indicative Contents:**
1. Understand how to communicate with others in the workplace	1.1	Describe how to respond to different customer needs and attitudes	<u>Customer requirements:</u> Understanding requirements, why works are carried out and what are they trying to achieve. Customer needs and expectations are a priority.
	1.2	Describe positive and negative behaviour in relation to equality and diversity in the workplace	<u>Diversity and equality:</u> Important in the workplace. How this can then affect the productivity and safety of the workforce.
	1.3	State when different forms of communication should be used in the workplace	<u>Communication:</u> Essential to use various methods of communication, overcome educational and environmental issues. <u>Factors that influence this:</u> Forms of communication used, i.e.; language barriers, hearing and or sight impairment, literacy issues, environmental noise, distance or obstructions between communicators etc.

	1.4	Describe how to check that information has been understood	Understanding Information: There are various means of ensuring and checking that information has been understood. 1) Site induction 2) 2) Toolbox talks: Can then be used with a test to ensure the information has been clearly understood.
	1.5	Explain how personal behaviour can contribute to the positive image of the organisation	Personal behaviour and attitude: Representing the organisation in a positive manner at all times.
	1.6	State the importance of communicating all the information necessary to the relevant person	Communication: Clear, Accurate, Imperative to explain the correct requirements and procedures to carry out the work in a safe and efficient manner. Without all of the information being provided and understood the work may not be carried out correctly or safely.
	1.7	State the importance of responding positively to queries from customers and the public	Customer and public queries: A good positive attitude and response to any queries from clients or the public is of utmost importance to ensure they have confidence in you. Even the most competent engineers can undermine the client's confidence by portraying a poor attitude to customer queries.
2. Understand how to record and pass on information	2.1	State where to find up-to-date information needed to carry out own job	Information: Work sheets, plans and any other work instructions should contain the information to allow the work to be carried out. Supervisor: The supervisor should convey any other information and ensure you have all the necessary information.

			Site office: Provide any H&S information relating to the site and site boards will display any risk areas that affect the workplace.
	2.2	Identify the different ways in which information is recorded	Ways in which information is recorded: Written, Drawings, Video, PowerPoint Presentations, Pictorial etc.
	2.3	Describe the procedures for recording, acknowledging and responding to incoming information	Recording: Acknowledging and responding to incoming information, sign to acknowledge receipt of the information and understanding. Question and Answer session: Often conducted to check that the information has been understood. Response sheets: Complete and return to show that the information and instructions have been understood, information required to be able to carry out the works. If anything is not clear then information must be sought from the supervisor.
	2.4	Describe what actions to take when encountering problems passing on information	Passing on information: If information passed on is not understood or clear then a supervisor must be informed. Issues: If there are issues when passing on information, try to identify why and report to a supervisor explaining the problem. Without full understanding the works may not be carried out correctly or safely.

	2.5	State how to report faults with communication equipment	Reporting Faults: Always report to the immediate supervisor or site supervisor
3. Be able to communicate with others in the workplace	3.1	Respond to the needs and attitudes of customers appropriately	Needs and attitudes: It is imperative to attend to the needs and attitudes of the customer to ensure the works proceed without any problems.
	3.2	Present a positive image of the organisation	Image: Representing the organisation with a positive image must be maintained at all times this can be attitude, personal cleanliness and appearance.
	3.3	Give customers and others relevant information following organisational requirements	Give customers and others relevant information: If any changes occur then the information must be passed on to all affected persons
	3.4	Respond promptly, clearly and politely to questions and comments from customers and others	Communication and organisational representation: A good positive attitude and response to any queries from clients or others is of utmost importance to ensure they have confidence in you. Even the most competent engineers can undermine the client's confidence by portraying a poor attitude to customers' queries. It is important to meet customers' expectations and be confident in your own capability and the organisation's
	3.5	Check that customers and others have understood the information correctly	Communication: Speak clearly and slowly, ensure information conveyed is understood.
4. Be able to record and pass on information	4.1	Use up to date information to carry out the task	Using up to date information to carry out the task: Check all information and work data is up to date. Changes that are not noted may cause issues with coordination and safety.

	4.2	Record information following organisational requirements	<u>Recording Information:</u> Note any changes on work sheets and mark up plans accordingly if changes occur. <u>Supervisor:</u> Check with supervisor before carrying out any changes to original work instructions.
	4.3	Pass on accurate information promptly and take appropriate action when this cannot be done	<u>Communication:</u> Communicate with the supervisor or customer when required and ensure you inform responsible person before you proceed. If this cannot be done on site then ensure the information is passed on to a main office or main contractor's representative.
	4.4	Report faults with communication equipment	<u>Faults:</u> Report any faults immediately with a supervisor. Failure to report a fault could lead to a major safety issue.
Additional information about the unit			
Delivery guidance	This unit is about communicating politely and effectively with other people that you might encounter when conducting your work. Communicating with others is also important to you if you work alone when you must follow workplace procedures to keep in touch with your workplace and/or colleagues.		
Assessment guidance	This unit is subject to the requirements set out in the British Automatic Fire Sprinkler Association assessment strategy – Appendix A and Asset Skills Assessment Principles August 2010 - Appendix B located at the end of this specification.		

	Evidence for this unit must demonstrate the learner's consistent competence in the workplace. Assessment is by portfolio. An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.
Simulation	Simulation is only permitted under certain circumstances where the centre can demonstrate that performance evidence has been impossible to obtain. Please see full guidance in Appendix A and B
Links	This unit is based upon NOS ASTC202 "Communicate effectively with customers and others".

Title	Establish effective working relationships		
Level	2		
Unit Number	2		
Credit Value	3		
GLH	15		
Learning Outcome – ***The learner will:***	**Assessment Criteria –** ***The learner can:***		**Indicative Contents:**
1. Be able to communicate effectively	1.1	Keep the relevant person(s) informed about the works	<u>Reporting:</u> Know who you directly report to or who is in charge of this element of work. Be clear on your role.
	1.2	Communicate effectively without causing undue disruption to normal working activities	<u>Communicate:</u> Be clear on how long the work activity should take, how long you have to undertake the activity and frequency of communication. <u>Work Activity:</u> Focus on the task and do not be prone to idle communication.
2. Be able to establish and maintain positive working relationship	2.1	Establish and maintain productive working relationships with relevant people	<u>Working Relationships:</u> Understand who else is involved and their roles. Understand how your role impacts on others.
	2.2	Identify the behavioural requirements of the organisation	<u>Behaviour:</u> Review lines of communication and authority, be clear on the organisation's chain of command/hierarchy
	2.3	Respond appropriately to requests for help of	<u>Procedures:</u> Take time to understand reporting procedures i.e. written forms requiring completion.

		information which fall within own job	
	2.4	Identify the appropriate person to speak to when requests for assistance fall outside own area of responsibility	Responsibility: Awareness of job description and reporting procedures. Roles: What is your role and who do you report to.
	2.5	Contribute to effective team working	Team working: When opportunities arise to communicate always contribute. Objectives: Understand team objectives and how you fit into these.
	2.6	Identify potential issues which may cause problems to productivity	Tools: Correct tools, equipment and materials to hand. Work area: Clear, free from obstructions.
3. Be able to understand relevant organisational procedures for communication and behaviour	3.1	Follow organisational standards for appearance and behaviour	Appearance and Behaviour: Organisational policy, Guidance notes. Maintain organisational standards at all times.
	3.2	Communicate in accordance with organisational procedures	Procedures: Follow organisational procedures i.e. grievance procedures, understanding pitfalls of not following procedures.
4. Be able to provide relevant functional and technical information to the relevant person	4.1	Respond effectively to requests for job information from the relevant person(s)	Job Information: Recording job progress i.e. marked up drawings, job lists etc.

	4.2	Identify the relevant person(s) that need to be supplied with technical and functional information	Identify: Be clear on all parties within the team and their roles.
	4.3	Obtain current and relevant information required for the work	Information: Know where to obtain relevant information i.e. verbal written work instructions.
	4.4	Identify any unusual features of the condition of the system, equipment or component	Plan and inspect before carrying out task.
5. Understand how to communicate effectively	5.1	Explain why it is important to communicate effectively and give an example	Communication: Essential for the entire team to enable to carry out tasks and achieve objectives. Issues: Failure to raise an issue about an unusual feature might lead to a bigger problem further down the line.
	5.2	Identify the importance of considering others' opinions	Decisions: Having all the information including other opinions and thoughts will allow a better decision-making process and hopefully a better outcome.
6. Know about establishing positive working relationships	6.1	State the principles of good working relationships and why such relationships may break down	Relationship Building: Respect other people's thoughts, views, and principles even when they differ from your own. Breakdowns occur when there is a disregard for the other person or team's views etc. Manner: Assertive, non-aggressive, respectful.

	6.2	State the importance of establishing positive working relationships	Positive working relationships: Maximises the chances of a successful outcome.
	6.3	Give an example of how to deal with issues that could have an adverse effect on working relationships	Working relationships: Having the confidence to speak up when there is an issue whilst respecting other opinions/points of view. If that doesn't work raise/escalate the issue to a line manager.
7. Know about relevant organisational procedures for communication and behaviour	7.1	Identify organisational procedures for communicating with customers	Organisational procedures: Read and be aware of the company objectives, strategies and mission statement. Staff Induction: Company induction should illustrate the corporate strategy on customers.
	7.2	State own organisation's standards for appearance and behaviour	Organisational standards: Appearance, behaviour both should be in line with Employer's written standards.
	7.3	Identify how to find organisational targets relevant to own job and state own role in meeting them	Targets: Read and be aware of the company objectives, strategies and mission statement.
	7.4	Identify the consequences of not meeting targets	Consequences of not meeting targets: Understand that there could be wide ranging consequences of not meeting targets.
	7.5	Describe the organisational policy in relation to the handover	Handover: Review all method statements for the task being undertaken

		and demonstration of a product or equipment	
8. Know how to provide relevant functional and technical information to the relevant person(s)	8.1	Identify the types of job information that may be required by others in the workplace, including where relevant, the need to keep colleagues informed about own work activities	Job Information: Programme and progress, Health and Safety including Risk Assessment. Non-compliant materials, equipment and plant.
	8.2	Identify technical and functional information sources which may be considered	Information Sources: Standards, guidance notes, site literature, site specific reports
	8.3	Identify the technical and functional information that they are providing	Technical and functional information: References to various management system literature will identify what information should be provided.
	8.4	Give an example of the safety implications and functional consequences of supplying inaccurate or incomplete information.	Safety Issues: Improper COSHH assessments can lead to health issues. Non-compliance to H&S protocols i.e. wearing PPE has clear consequences.
Additional information about the unit			
Delivery guidance	This unit develops the learner's knowledge of and competence so that they are able to communicate effectively and establish and maintain positive working relationships. Other areas covered are: developing an understanding of the relevant organisational procedures for communication and behaviour and being able to provide relevant functional and technical information to the relevant person.		

Assessment guidance	This unit must be assessed in a work environment and in accordance with the British Automatic Fire Sprinkler Association assessment strategy – Appendix A and the SummitSkills Consolidated Sector Assessment Strategy which is located in Appendix C at the end of this document. Assessment is by portfolio and must use a combination of the following assessment methods: • observation of normal work activities within the workplace that clearly confirms the required skills • questioning the learner on knowledge criteria that clearly confirms the required understanding • review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding. Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of this and any other associated or relevant unit(s) being assessed including where relevant the National Highways Sector Scheme 8 and/or the Highway Electrical Registration Scheme, to be effective and reliable when confirming a learner's competence. An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All Assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.
Links	This unit is has links to Skills for Security Common Core NOS –SFS 8 Develop productive working relationships with colleagues.

Title	Manage own resources		
Level	2		
Unit Number	3		
Credit Value	2		
GLH	20		
Learning Outcome – ***The learner will:***	**Assessment Criteria - #** ***The learner can:***		**Indicative Contents:**
1. Understand how to manage own resources	1.1	Explain the importance of managing own resources	Effective outcomes are conditional on using your resources correctly (particularly knowledge, understanding, skills and time). Invest your own time in developing the knowledge and understanding. Assists in skill development and execution.
	1.2	Explain how to identify the requirements of a work role	Job Description: Review job descriptions Method Statements: Review and digest method statements for activity. Risk Assessment: Review and digest risk assessments for activity.
	1.3	Explain how to set SMART work objectives	SMART (Specific, Measurable, Achievable, Realistic and Time-bound): Clear vision of overall objective, break down into manageable chunks. Writing down objectives and strategies crystallises thought.
	1.4	Explain how to measure progress against work objectives	Work Objectives: If objectives are SMART then measuring progress should be straight forward i.e. if a date is set to complete a task that is specific and measurable.

	1.5	Identify how to record the use of time and identify possible improvements	Time Management: Break down your day into hours and minutes and allocate time to specific tasks.
	1.6	State how to identify gaps in current knowledge, understanding and skills	Identify skills gaps: What do you find difficult within your role? Are there elements of work that take longer than they should?
2. Understand how to create and use personal development plans	2.1	Explain how to identify development needs	How to identify development needs: To address gaps between the requirements of a work role and current knowledge, understanding and skills. Skills Gaps: Organisational personal development processes (CPD, etc.). Objectives: Understand the organisation's objectives and how you contribute to the achievement of these objectives. Identify and discuss when and what skills are required for further personal development.
	2.2	Identify the components of a development plan	Details of training courses: Courses attended, CPD, key competencies required.
	2.3	List types of activities which address development needs	Personal Development: Training courses provided by 3rd party training providers, in house training, reading materials and literature.
	2.4	Explain how to obtain and use performance feedback	Performance feedback: should be provided through regular performance appraisals. Implement: changes or new skills quickly

	2.5	Identify how and when to update work objectives and development plans	Appraisals: Engage in regular appraisals. Take notice of the corporate objectives as they may change from time to time. Update work objectives and development plans in the light of: a) performance feedback received b) development activities undertaken c) wider organisational or work changes
3. Manage own resources	3.1	State the reporting lines in own organisation	Organisational Structure: Review the organisations reporting structures.
	3.2	Identify and agree the requirements of own work role	Requirements of own work role: Review of job description and function. Expectations: Understand what others expect of you and where improvements can be generated.
	3.3	Ensure own performance consistently meets or goes beyond agreed requirements	Performance: Training, learning, maintain consistency, strive to excel within own role. Behaviour and Performance: Positive, 'can do' attitude, strive to excel within own role.
	3.4	Identify possible sources of feedback in own organisation	Feedback: Line Manager, Supervisor, MD, HR, H&S Manager, work colleagues.
	3.5	Obtain regular and constructive feedback on own performance	Constructive Feedback: Don't be afraid to ask for assessments. Challenge yourself to achieve.

	3.6	Identify how own time at work is used and identify areas for improvement	Time Management: Break down your day into hours and minutes and allocate time to specific tasks. Review: If tasks take longer, review what went wrong and implement a strategy of improvement.
4. Create and use a personal development plan	4.1	Identify own organisation's policy and procedures for the development and maintenance of knowledge, understanding and skills	Organisation: Review the organisation's training and skills policy. Policy and Procedures: Development policies should be available during initial inductions and explanations given about opportunities
	4.2	List the available development opportunities and resources in own organisation	Opportunities: Understand and get to know the career prospects in your organisation including career pathways.
	4.3	Agree work objectives and how progress will be measured	Personal Objectives: PPR, identify skills/knowledge gaps, agree action
	4.4	Identify gaps between the requirements of own work role and current knowledge, understanding and skills	Identify skills/knowledge gaps: Feel comfortable to express the need for additional training and/or support.
	4.5	Agree a development plan to address identified gaps in current knowledge, understanding and skills	Development Plan: Attend regular appraisals and be confident about your discussion relating to skills development.

	4.6	Undertake the activities identified in development plan	Activities: 3rd party training, reading materials/literature. Work towards personal objectives agreed within development plan,
	4.7	Identify contribution of development activities to own performance	Personal Performance: Keep your personal development plan up to date and regularly review. Assess the impact of any skills learnt and it has made your role easier; identify whether/how development activities have contributed to own performance Discussion: Discuss with Line Manager how this has contributed towards own performance.
	4.8	Agree updates to personal work objectives and development plan	Engage in regular appraisals, take notice of the corporate objectives as they may change from time to time; changes to personal work objectives and development plan in the light of: a) performance b) feedback received c) development activities undertaken
Additional information about the unit			
Delivery guidance	This unit develops the learner's knowledge and understanding of how to manage own resources and how to create and use personal development plans. The knowledge is then applied to the management of the learner's resources and to create and use a personal development plan in the workplace.		
Assessment guidance	Assessment is by portfolio. This unit must be assessed in a work environment and in accordance with the British Automatic Fire Sprinkler Association assessment strategy – Appendix A		

	The unit develops knowledge and competence and should be assessed through activities in the workplace as far as possible. An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All Assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.
Links	This unit has links to the Mechanical Fire Protection National Occupational Standards SFS 13 Manage your own resources and professional development

Title	Health and Safety in the workplace		
Level	2		
Unit Number	4		
Credit Value	2		
GLH	16		
Learning Outcome – ***The learner will:***	**Assessment Criteria –** ***The learner can:***		**Indicative Contents:**
1. Understand roles and responsibilities for health, safety and welfare in the workplace.	1.1	Outline employers' and employees' duties in relation to health, safety and welfare at work.	<u>Duties relating to health, safety and welfare at work:</u> <u>Employers:</u> Provision of personal protective equipment, organising training sessions, having reporting procedures in place, conducting regular inspections, safeguarding etc. <u>Employees:</u> Responsible behaviour, personal awareness, attending training sessions, engaging in continuous professional development, informing employer of concerns etc. <u>Legislation:</u> Management of Health and Safety at Work Regulations (1999), the Health and Safety at Work Act (1974), the Control of Substances Hazardous to Health Regulations (2002), the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995) etc. and advice as offered by the Health and Safety Executive (HSE).

	1.2	Outline the consequences of non-compliance with health and safety legislation.	Consequences for non-compliance with health and safety legislation: Injuries, loss of life, complaints by staff, public etc. to HSE, visits by a complaint officer, shutdown of sites/ places of work, prosecution, imprisonment, fines (in event of accident or pre-emptively) etc.
	1.3	Outline the requirements for training and competence in the workplace.	Requirements for training/ competence in the workplace: Including legal requirements, recruitment of new staff, changes in existing work roles/responsibilities, to operate new equipment and to deal with changing demands placed on the organisation; covering: record maintenance, continuous professional development, training courses, gaining qualifications etc.
	1.4	Outline the ways in which health and safety information can be communicated.	Ways in which health and safety information can be communicated: Including: safety signs, notice boards, manufacturer's instructions/ operating manuals, email, regular/ as required meetings, workshops, training session etc.
2. Understand how risk assessments contribute to health and safety.	2.1	Outline the process for carrying out a risk assessment.	Process for carrying out a risk assessment: As stated by the HSE covering: identifying the hazards, deciding who might be harmed/ how, evaluating the risks, deciding on precautions, recording/ implementing findings, reviewing assessments and updating as required.
	2.2	Explain how risk assessment can be used to reduce accidents and ill health at work.	How risk assessment can be used to reduce accidents/ ill health at work: By identifying hazards/ risks, ensuring all staff/ visitors are aware of them, taking precautionary actions to limit them and thereby reducing the possibility of accidents/ ill health.
3. Understand how to identify and control the risks from common workplace hazards.	3.1	Describe common hazards in the workplace.	Hazards that may be found in a range of workplaces: Including: Slips, trips and falls, hazardous substances (e.g. asbestos), machinery/ equipment (e.g. moving parts, faults, electric shocks), activities (e.g. manual handling, working in confined spaces, repetitive strain injuries), sensory hazards (e.g. high noise levels, prolonged use of display screen equipment), gas leaks, fires, flooding, fumes etc.

	3.2	Explain how hazards can cause harm or damage to people, work processes, the workplace and the environment.	How hazards can cause harm/ damage to people, work processes, the workplace and environment: Covering: Loss of life, injuries, diseases/ illnesses, air pollution, water contamination, equipment malfunction/ breakdown, costs incurred through repairs/ inspections, reduced productivity, damage to reputation of organisation, fines/ prosecutions, loss of business, closure of sites etc.
	3.3	Describe different approaches to minimise or eliminate workplace hazards.	Different approaches to minimise or eliminate workplace hazards: Covering: Elimination (redesigning tasks/ materials/ equipment used to remove the hazard), substitution (replacing the tasks/ materials/ equipment with others to minimise exposure to the hazard), engineering controls (keeping to the task as envisaged, but applying the use of equipment to reduce the likelihood of the hazard causing harm e.g. safety harnesses, local exhaust ventilation etc.; these should focus on collective rather than individual safety), administrative controls (identifying/ implementing procedures to work more safely), personal protective equipment (when all previous methods are deemed ineffective at minimising exposure to the hazard, e.g. helmets, goggles, masks, gloves, ear defenders, respirators, chemical suits etc.; these focus on personal safety).
4. Know the procedures for responding to accidents and incidents in the workplace.	4.1	Identify the actions that might need to be taken following an accident or incident in the workplace.	Actions that might need to be taken following an incident in the workplace: In accordance with the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995) (RIDDOR); including: removing all persons from further danger, administering first aid, contacting the emergency services, preventing further damage to equipment/ facilities, informing the HSE, logging the incident and conducting an investigation.
	4.2	Outline the arrangements that should be in place in a workplace for emergencies and first aid.	Arrangements in the workplace for emergencies/ first aid: Including clear policies and procedures, fire detection/ alarm systems, emergency exits, assembly points, firefighting equipment, first aid facilities, appropriately trained staff (fire marshals, first aiders), logbooks etc.

	4.3	Explain why it is important to record all incidents, accidents and ill health.	<u>Importance of recording all incidents, accidents and ill health:</u> Legal requirement under RIDDOR; to avoid reoccurrence of accidents/ near misses; up-dating training effectively; ensuring accident books are completed correctly etc.
Additional information about the unit			
Delivery guidance	This unit develops the learner's knowledge and understanding, within the context of health and safety in the workplace, of roles and responsibilities, the contribution of risk assessments, how to identify and control risks from common hazards and the procedures for responding to accidents and incidents.		
Assessment guidance	Assessment is by portfolio. This unit must be assessed in a work environment and in accordance with the British Automatic Fire Sprinkler Association assessment strategy – Appendix A All learning outcomes in this unit must be assessed using methods appropriate to the assessment of knowledge and understanding; including: • Question and answer test • Multiple choice questions • Question and answer verbal (ensure records are kept) • Essay • Other An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All Assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.		

Title	Awareness of Regulations in the Fire Sprinkler Industry		
Level	2		
Unit Number	5		
Credit Value	7		
GLH	41		
Learning Outcome – ***The learner will:***	**Assessment Criteria –** ***The learner can:***		**Indicative Contents:**
1. Understand legislation and standards in the Fire Sprinkler Industry	1.1	Identify UK Fire Safety legislation and Building Regulations in relation to the Fire Sprinkler Industry	<u>Statutory controls applied to buildings pre-construction such as:</u> • Part B of the Building Regulations (England & Wales); • The Building (Scotland) Act, Building Regulations (Northern Ireland), • The Domestic Fire Safety (Wales) Measure 2011. <u>In addition, the supporting guidance (regarding fire safety):</u> • Approved Document B: Fire Safety Volume 1 Dwelling houses, • Approved Document B: Fire Safety Volume 2 Building other than dwelling houses, • Welsh editions of the above • The Scottish 'Technical Handbooks; and • Technical Handbook E (Northern Ireland) <u>For buildings post-construction and occupation, fire safety legislation applicable in each country within the UK such as:</u> • The Regulatory Reform (Fire Safety) Order 2005 and associated guidance documents.

			• Building Bulleting BB100 Design for fire safety in Schools which includes extensive guidance on the use of sprinklers and their importance as a weapon against arson. (The Department for Children, Schools and Families have also produced a Standard specifications, layout and dimensions for sprinklers in schools. • British standards BS 9999 and BS9991
	1.2	Explain how the different statutory bodies and legislation interact	The Holroyd Report 1970, roles of Building Control and Fire Authorities. Local Fire and Rescue services have policies to promote the use of sprinklers, in education, commercial, residential and domestic premises or as part of an engineered solution.
	1.3	Give an overview of the standards for Fire Sprinkler systems	There are a number of different nationally recognised standards used throughout the EU countries e.g. EN 12845, Factory Mutual (FM) and NFPA. All have slightly different design criteria which at this level it is only appropriate to have an appreciation of.
	1.4	Explain how the identified standards affect own role	There are currently two British standards for the design and installation of automatic sprinkler systems installed in the United Kingdom although other standards. e.g. FM/NFPA can be used:- LPC Rules for Automatic Sprinkler Installations: Incorporating BS EN 12845: 2009 (primarily addressing property protection of commercial and industrial premises): This standard specifies requirements and gives recommendations for the design, installation and maintenance of fixed fire sprinkler systems in buildings and industrial plant, and particular requirements for sprinkler systems, which

			are integral to measures for the protection of life. This standard covers only the types of sprinkler specified in EN 12259-1. The requirements and recommendations of this standard are also applicable to any addition, extension, repair or other modification to a sprinkler system. They are not applicable to water spray or deluge systems. It covers the classification of hazards, provision of water supplies, components to be used, installation and testing of the system, maintenance, and the extension of existing systems, and identifies construction details of buildings which are the minimum necessary for satisfactory performance of sprinkler systems complying with this standard. This standard does not cover water supplies to systems other than sprinklers. Its requirements can be used as guidance for other fixed firefighting extinguishing systems, however, provided that any specific requirements for other firefighting extinguishing supplies are taken into account. The requirements are not valid for automatic sprinkler systems on ships, in aircraft, on vehicles and mobile fire appliances or for below ground systems in the mining industry. Sprinkler system design deviations may be allowed when such deviations have been shown to provide a level of protection at least equivalent to this European Standard, for example by means of full scale fire testing where appropriate, and where the design criteria have been fully documented. Automatic sprinkler system: Designed to detect a fire and extinguish it with water in its early stages or hold the fire in check so that extinguishment can be completed by other means.

			A sprinkler system: Consists of a water supply (or supplies) and one or more sprinkler installations; each installation consists of a set of installation main control valves and a pipe array fitted with sprinkler heads. The sprinkler heads are fitted at specified locations at the roof or ceiling, and where necessary between racks, below shelves, and in ovens or stoves. BS9251: 2014 (specific to domestic and residential occupancies): This British Standard gives recommendations for the design, installation, components, water supplies and backflow protection, commissioning, maintenance and testing of fire sprinkler systems in domestic and residential occupancies. These systems are primarily intended for the protection of life in case of fire and have additional benefits for property protection, environmental protection, sustainability of buildings and continuity of use, and firefighter safety. The recommendations of this British Standard are also applicable to any addition, extension, repair or other modification to a residential sprinkler system. Both sprinkler system design standards, strongly recommend the use of third party “listed” or “approved” contractors for the design and installation of sprinkler systems. The third-party certification schemes should be accredited by The United Kingdom Accreditation Service (UKAS).
	1.5	Explain awareness of fundamental differences between standards	BS EN 12845: Covers the installation of fixed firefighting systems automatic sprinkler systems sets out how sprinklers should be designed and installed for the protection of commercial and industrial premises. BS EN 12845 also forms part of the LPC Rules for Automatic Sprinkler Installations. The latter, known widely as the

			LPC Rules, are now extensively used in the UK and elsewhere and tend to be imposed for all sprinkler installations which are either mandated by an insurer or where a property owner wishes to avoid higher insurance premiums if a sprinkler system is not provided. These LPC rules include additional Technical Bulletins where they are mandated as noted above. BS 9251: Provides recommendations for the design, installation, components, water supplies, commissioning and maintenance of fire sprinkler systems for use specifically in residential and domestic occupancies. Both Standards work on the same principles but differ in the requirements i.e. the water supply, the area of operations, Pump capacities.
2. Be able to apply organisational compliance, policies and procedures with the Fire Sprinkler Industry	2.1	Act in an ethical manner in the Fire Sprinkler Industry	Quality Management System: Companies working in the sprinkler industry should work to a quality to a QMS ISO9001, this will involve following set procedures on how to carry out operations of work. Every employee should ensure that they follow these procedures and that the design, installation and maintenance is carried out to the required specification, standard and requirements. Discrepancies: These should be reported to the appropriate authority and action taken to ensure the system will operate as intended. The correct guidance should be given to Clients and end users on the systems being installed.
	2.2	Contribute to organisational compliance in the Fire Sprinkler Industry through own actions	Company policy: By not following the company's policies and procedures can lead to the company losing its accreditations and reputation with Clients and potential Clients.

			Standards: Systems not installed to the correct standards can endanger life and property, the main purpose of correct sprinkler installation is to prevent danger to life and property. Disadvantages: Having to return to a site to modify, alter or extend a system can lead to additional cost which cannot be recouped. Therefore, it is important that actions follow the required procedures.
	2.3	Apply organisational policies and procedures within the Fire Sprinkler Industry	Policies/Procedures: By not installing the system as required - drawings, specification and standards, this can lead to the system being non-compliant and not operational in the event of a fire. Company policies and procedures should advise how to carry out methods of design, installation and maintenance. These tend to be in the form of flowcharts so you can follow through and tick off when an action has been carried out so the next one will follow or see the consequences of an action not being done correctly.
	2.4	Explain how organisational policies and procedures remain effective and sustainable	Policies and Procedures: To ensure these remain effective and sustainable the company carries out internal audits on projects to ensure the correct actions have been taken and any documentation is completed. Audits: Carried out by external bodies on a regular basis to ensure the standard of workmanship remains. There are also regular project reviews undertaken by the Contracts manager with the project managers to assess any enormities in the scheme at an early stage and rectify them.
3. Understand organisational	3.1	Explain the organisational procedures for reporting	Non compliances:

procedures for dealing with non-compliance within the Fire Sprinkler Industry		non-compliance in the Fire Sprinkler Industry	Should be provided at the preliminary or estimating stage of the contract to the client and if possible removed or assurance obtained that they are acceptable to all parties. Certificate of Conformity: Any non-compliances should be recorded on a certificate of conformity or completion certificate issued. Materials: That are not compliant should not be used in the works and action taken to find the source of the problem and carry out corrective action to eliminate any reoccurrence.
	3.2	Explain the organisational procedures for dealing with individuals who contribute to non-compliance	Non-Compliance: If organisational procedures are not followed and individuals are found not to comply with requirements or contribute to non-compliances appropriate action will be taken. Action: Retraining, suspension or dismissal depending on the nature of the action.
	3.3	Explain how individuals may not comply with organisational requirements	Individuals may not comply with organisational requirements by taking it upon themselves to adjust systems to make an operation easier for themselves. i.e. moving the location of heads within a ceiling, but by doing so putting the head spacing out of rule and not allow the system to operate as intended. This could also include: Health and Safety breaches such as using inappropriate means to gain access to carry out the work or endangering others.
	3.4	Explain how to carry out a risk assessment on non-	Risk Assessment:

		compliance in the Fire Sprinkler Industry	You need to understand what might cause harm to people and decide whether you are doing enough to prevent that harm. Once you have decided that you need to identify and prioritise putting in place, appropriate and sensible control measures. <u>Start by:</u> Identifying what can harm people in your workplace, identifying who might be harmed and how, evaluating the risks and deciding on the appropriate controls, taking into account the controls you already have in place, recording the risk assessment, reviewing and updating the assessment. The risk assessment should include consideration of what in your business might cause harm and how and, the people who might be affected. It should take into account any controls which are already in place and identify what, if any, further controls are required. <u>Assessment Checks:</u> A proper check was made, all people who might be affected were considered, all significant risks have been assessed, the precautions are reasonable, the remaining risk is low. Insignificant risks need not be included and risks from everyday life unless work activities increase the risk. <u>The risk assessment:</u> Should cover all groups of people who might be harmed by your actions: Including members of the public, employees on the site outside of your organisation. <u>‘Reasonably Practicable’:</u> Means balancing the level of risk against the measures needed to control the real risk in terms of money, time or trouble. However, action need not be taken

			if it would be grossly disproportionate to the level of risk. Risks should be reduced to the lowest reasonably practicable level by taking preventative measures, in order of priority. This is what is meant by a hierarchy of control. The list below sets out the order to follow when planning to reduce risks you have identified in your workplace. Consider the headings in the order shown, do not simply jump to the easiest control measure to implement: 1. Elimination - Redesign the job or substitute a substance so that the hazard is removed or eliminated. 2. Substitution - Replace the material or process with a less hazardous one. 3. Engineering controls - for example use work equipment or other measures to prevent falls where you cannot avoid working at height, install or use additional machinery to control risks from dust or fume or separate the hazard from operators by methods such as enclosing or guarding dangerous items of machinery/equipment. Give priority to measures which protect collectively over individual measures. 4. Administrative Controls - These are all about identifying and implementing the procedures you need to work safely. For example: reducing the time workers are exposed to hazards (e.g. by job rotation); prohibiting use of mobile phones in hazardous areas; increasing safety signage, and performing risk assessments. 5. Personal protective clothes and equipment - Only after all the previous measures have been tried and found ineffective in controlling risks to a reasonably practicable level, must personal protective equipment (PPE) be used. E.g., where you cannot eliminate the risk of a fall, use

			work equipment or other measures to minimise the distance and consequences of a fall (should one occur). If chosen, PPE should be selected and fitted by the person who uses it. Workers must be trained in the function and limitation of each item of PPE. It is a legal requirement for every employer and self-employed person to make an assessment of the health and safety risks arising out of their work. The purpose of the assessment is to identify what needs to be done to control health and safety risks. You do not necessarily need specific training or qualifications to carry out a risk assessment. However someone competent should be employed to help with health and safety duties and be available to consult. A competent person is someone with the necessary skills, knowledge and experience to manage health and safety.
Additional information about the unit			
Delivery guidance	This unit develops the learner's knowledge and understanding of legislation and standards in the Fire Sprinkler Industry so that they are able to apply organisational compliance, policies and procedures with the Fire Sprinkler Industry. The unit also develops learners' understanding of organisational procedures for dealing with non-compliance within the Fire Sprinkler Industry		
Assessment guidance	Assessment is by portfolio. This unit develops knowledge and competence and therefore must be assessed by a suitable range of methods Methods appropriate to the assessment of knowledge and understanding; including: • Question and answer test • Multiple choice questions • Question and answer verbal (ensure records are kept) • Essay • Other		

	Assessment criteria 1.4, 1.5, 2.1 and 2.2 must be assessed through practical activities which allow learners to demonstrate their knowledge and understanding. This unit must be assessed in a work environment and in accordance with the British Automatic Fire Sprinkler Association Assessment Strategy which is located in Appendix A at the end of this document. An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All Assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.
Links	This unit has links to the Mechanical Fire Protection National Occupational Standards SFS 11 Ensure compliance with legal, regulatory, ethical and social requirements

Title	Fire sprinkler installation and handover		
Level	2		
Unit Number	6		
Credit Value	17		
GLH	78		
Learning Outcome - ***The learner will:***	**Assessment Criteria –** ***The learner can:***		**Indicative Contents:**
1. Be able to conduct pre installation checks	1.1	Identify checks required to ensure sprinkler system can be installed	Environment: Check the environment is safe to work in. Workspace, safe work zone. Risk: Potential dangers i.e. holes in the floor, People working at heights etc. Review of RAM's (Risk Assessment Method statement). Communication: Be aware who else is on site and who to report, coordination clashes etc. Awareness of site: Familiarise yourself with the site, code of conduct. Drawing: The Building should reflect the drawing. Building location: Ensuring the address details are correct. Tools: Tools should be fit for purpose.

			PPE: PPE should be suitable for the job, Appropriate PPE for material, i.e. Plastic, Steel etc.
	1.2	Comply with health and safety requirements, relevant statutory regulations and industry standards/codes of practice at all times	Health and Safety: CSCS Scheme (skill card) A CSCS skill card is required to enable access to the site. Site procedure: Registering on and off site. Fit for duty: In good health to be able to work on site.
	1.3	Carry out checks to ensure the sprinkler system can be installed	Visual Inspection: A visual inspection of the site/work area should always be carried out before installation.
2. Be able to prepare work environment for installation of sprinkler system	2.1	Identify Personal Protective equipment	PPE: Fit for purpose, Appropriate PPE for environment. RAMS (Risk Assessment Method statement): PPE should be listed, PPE awareness, hard hat, steel toe cap boots etc.
	2.2	Explain how to prepare work environment in preparation for installation of sprinkler system	Work area: Use suitable cover to protect any surfaces from potential damage. Materials: Storing materials, Suitable space to do so. Access platforms: If required.

			Good housekeeping: Where possible disposing of rubbish in an environmentally friendly manner as instructed. Emergency Exit: Familiarise the emergency exit procedure in the event of an emergency.
	2.3	Prepare work environment ready for installation of sprinkler system	Visual Inspection: A visual inspection of the site/work area should always be carried out before installation.
3. Be able to install pipework and associated components	3.1	Select equipment for the task	Tools: Dependant on material, plastic/steel, copper, hand tools. Access: Lifts, steps (MEWPS) Mobile elevated working platforms, etc.
	3.2	Carry out checks on installation materials	Materials: Materials must comply with the drawing and work instructions. Types of sprinkler heads: Conventional, Upright, Pendant, Side wall, Concealed etc. Temperature ratings
	3.3	Use equipment in line with manufacturer's or organisational instructions	Tools: Cutter, reemer, measuring equipment – predominantly for plastic (dependant on task and material), spirit level. Threading machine: For steel.

			Roll grooving machine: For steel. Drills and fixing devices: All materials. Hand tools (e.g. sprinkler spanner): Steel/Plastic. Integrity of tools: Should be fit for purpose.
	3.4	Carry out installation under supervision	Drawing: Reading the drawing, Understanding the symbols. Setting out: Measuring and setting out of the pipework/brackets. Brackets: Selecting correct brackets for the site. Bench work: Self-assembly, Fabrication. Fixing pipework Jointing process and techniques: Including ongoing inspections. Sprinkler head installation: Different types of sprinkler heads, e.g. conventional, upright, pendant, side wall, concealed etc.

	3.5	Describe problems that can occur during installation	Materials: Plastic - Dry joint, expansion and contraction issues, over tightening of hangers, curing times, chemical compatibility. Steel - Trapped gaskets, poor/cross threads. Pipes and Fittings - Incorrect pipe sizes, inappropriate fittings or excessive use of fittings. Drawings and specifications - Different drawings, adjustment of contract or change or contractors.
4. Be able to identify faults after installation	4.1	Describe how to identify faults after installation	How to identify faults after installation: Visual inspection of sprinkler heads/joints; Comply with Manufacturer's instructions; Codes of Practice. Drawing: Installation as per the drawing.
	4.2	Rectify identified faults	Faults: Take steps to alert supervisor, establish cause of the fault, undertake rectification of faults under supervision as appropriate.
	4.3	Explain the importance of conducting a system integrity test	System integrity test procedure: Codes of practice, Quality Management. Benefits of carrying out test by codes of practice: Financial impact, Cost effective, Reputation.
5. Be able to understand limits of responsibility	5.1	Explain limits of responsibility within own role	Job description/Course Details: Contains details of own responsibility.

and authority to deal with problems within own role	5.2	Explain limits of authority within own role when dealing with problems	Job description/Course Details: Contains details of own responsibility.
	5.3	Explain who to report to when problems are beyond limits of own authority	Job description/Course Details: Contains details of own responsibility.
6. Be able to complete handover procedure for completion of work	6.1	Identify handover procedure for completion of work	Site procedures: Work instructions, company protocol. Verbal communication: Accountability. Review of work done: Reflection on what has been achieved.
	6.2	Complete handover procedure to confirm completion of work	Site procedures: Work instructions, company protocol. Verbal communication: Accountability. Review of work done: Reflection on what has been achieved. Handover: Carry out handover to responsible supervisor/person
Additional information about the unit			
Delivery guidance	This unit develops the learner's skills and competences so that they are able to conduct pre installation checks, prepare the work environment for installation of sprinkler systems and install pipework and associated		

	components. They will also develop the skills to be able to identify faults after installation and to understand their limits of responsibility and authority to deal with problems within own role. They will then be able to carry out handover procedures for completion of work.
Assessment guidance	Evidence for this unit must demonstrate the learner's consistent competence in the workplace. Assessment is by portfolio. Assessment must be carried out in accordance with the British Automatic Fire Sprinkler Association Assessment Strategy which is located in Appendix A at the end of this document. An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All Assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.
Simulation	Simulation is only permitted under certain circumstances where the centre can demonstrate that performance evidence has been impossible to obtain, please see full guidance in Appendix A.
Links	This unit is based on the Mechanical Fire Protection National Occupational Standards SFS MFP 4 Install mechanical fire protection SFS MFP 5 Commission mechanical fire protection solutions SFS MFP 6 Handover mechanical fire protection solution to customer

Title	Understanding the Fire Sprinkler Industry		
Level	2		
Unit Number	7		
Credit Value	3		
GLH	22		
Learning Outcome - The learner will:	**Assessment Criteria - The learner can:**		**Indicative Contents:**
1. Understand the aims and purposes of the Fire Sprinkler Industry	1.1	State the key purposes of the Fire Sprinkler Industry	Promote fire safety in the build environment, protection of life and property, control fire size, prevent spread of fire, part of a fire engineered solution. Design, install, commission and maintain systems to approved standards.
	1.2	State the purpose of organisations in the Fire Sprinkler Industry	BAFSA: British Automatic Fire Sprinkler Association, trade association for sprinkler industry. Members include: designers, installers, component suppliers, fire services, local authorities, insurance companies, consultants. Promotes use of sprinkler systems in UK. Promotes improvements to legislation, technical standards, codes of practice and best practice. RSA: Residential Sprinkler Association, trade association for residential and domestic sprinkler system installers and designers. Promotes use of sprinklers in residential and domestic sprinkler systems in UK. Promotion of improvements to technical standards and codes of practice. LPCB:

			BRE third party certification scheme for design and installation of sprinkler systems. LPS1048 for BS 12845 systems, LPS 1301 for BS 9251 systems. FIRAS: Technically equivalent alternative Third-party certification scheme for design and installation of BS 12845 systems and BS 9251 systems. IFCC (IFC Certification): Technically equivalent alternative Third-party certification scheme for design and installation of BS 12845 systems and BS 9251 systems. LPCB Red Book online: Third party approved list of approved products and services for use in sprinkler systems, tested by BRE (Building Research Establishment). FM Global (Factory Mutual): Insurance company, reduce property loss by prevention, standards and codes of practices, third party fire testing of sprinkler systems. Approval Standards: Approval Standards, third approval for sprinkler system components. UL (Underwriters Laboratories): Third-party testing for sprinkler system components. FPA (The Fire Protection Association): Publishing body for LPC Sprinkler Rules and Technical Bulletins.

	1.3	Give an overview of other building services within the Fire Sprinkler Industry	Building Services: HVAC, lighting and racking installers, building construction operations, gas and water providers etc.
2. Understand the importance of development in Fire Sprinkler Industry	2.1	Give an overview of the history of the Fire Sprinkler Industry	Fire was a serious risk in man-made buildings in the early 1800s. Risk factors included: Candles and fireplaces as the main sources of light and heat; flammable materials and lack of education about on fire safety issues. Theatres among other public buildings, presented huge fire risks and the first fire sprinkler system was at Theatre Royal, Drury Lane in London in 1812. The manually activated system featured an airtight reservoir of 95,000 litres of water with connection to a 10-inch water pipe joined to a series of smaller pipes with half inch-wide holes to release water in the case of fire. Similar systems were commonly used up to 1885 in textile mills throughout New England, North America. Experiments had started into automatic fire sprinkler systems by 1860 with the first official patent given in 1872. Henry S. Parmelee, of New Haven, Connecticut, developed the existing patent at his piano factory designing a fully automatic fire sprinkler system patented in 1881. The automatic sprinkler system, he invented a year earlier, was activated by a glass bulb containing heat-sensitive substances that expanded and shattered the glass in the presence of fire. It was the fore-runner of many systems in use today. Fire sprinkler systems were in wide use in commercial buildings by the 1940s. Insurance companies encouraged manufacturers, retail establishments and other businesses to install them with discounts in premiums. They spread to hospitals, schools and other public buildings in

			the US but it was rare to find statutes requiring their installation in other countries then.
	2.2	Explain misconceptions about fire sprinklers	Only heads in immediate vicinity of fire operate, not entire system as depicted in media. Water supply for systems tanks and pumps not required if mains supply provides adequate flow and pressure. Modern systems can provide specialized solutions for specific risks, unobtrusive designs, concealed options. Heads not actuated by smoke, dust, fumes, aerosol spray e.g. burnt toast, smoking. Legionella Pestis: Research, no realistic chance of contracting from a sprinkler system operation.
	2.3	Explain the importance of fire sprinklers in saving life and property from fire	Statistics (2014): 99% of fires controlled by sprinklers alone. Death rate (2014): No UK fire deaths as a result of a fire in a building with a fully functioning sprinkler system. Proactive: Automatically operate, no human intervention required. Automatic actuates alarm/fire alarm, notify fire service.

			Benefits: Reduced spread of fire and damage due to smoke and heat. Less environmental impact. Reduction in insurance premiums. Reduction in fire development and size, extended travel time to evacuate building, improved safety for occupants. Used to compensate for reduced fire safety measures e.g. poor compartmentation, extended travel distance, poor water supplies. Reliable: Accidental operation of system extremely unlikely. Products produced to high standards with safety margins.
	2.4	Explain the implications of British standards and other standards	BSi (British Standards Institution): Provide a range of codes of practice for design and installation of sprinkler systems and related components, standards drawn up by industry stakeholders. Systems would normally comply with these standards. American NFPA (National Fire Protection Association), standards are similar to BS, also used in UK. Sprinkler standards and codes of practice: Specify system design, performance criteria, installation requirements, workmanship, specify system component standards, commissioning and maintenance requirements. Fire safety standards and codes of practice: Identify when sprinkler systems are required and to what standard. Can be used as compensatory feature.

3. Understand the elements of the Fire Sprinkler Industry	3.1	Explain the differences between the Commercial Fire Sprinkler Industry and the Domestic Fire Sprinkler Industry	<u>Design and installation:</u> Commercial systems designed and installed to BS 12845, Residential systems designed and installed to BS 9251. <u>Commercial systems:</u> Primarily for property protection, uses large quantities of water with larger pipework often in steel with mechanical joints. May be installed for insurance requirements. Life safety systems, e.g. shopping malls have additional features, e.g. zoned areas of operation, dual water supplies. Commercial system tanks and pumps are larger than residential systems. Pumps may be diesel powered with large steel tanks. <u>Residential systems:</u> For protection of life. Often installed in smaller CPVC pipe with glued joints.
	3.2	Identify key stakeholders in the Fire Sprinkler Industry	<u>Key stakeholders:</u> DCLG (*Department for Communities and Local Government),* Fire and Rescue Services, Building Control, British Standard Institution, Insurance Companies, Certification Bodies.
	3.3	Describe the roles of key stakeholders within the Fire Sprinkler Industry	<u>DCLG:</u> Secretary of State responsible for strategic direction of the Department for Communities and Local Government (DCLG). Standards for planning permission and building regulation approval e.g. Approved Document B in the construction of new and alterations to existing buildings.

			Fire and Rescue Services: Promote and regulate fire safety in the area it operates, Regulatory Reform (Fire Safety) Order 2005, Fire and Rescue Services Act 2004. Provide information and encourage improvement in prevention of fires and reduction of death or injury by fire. Give advice on reducing fire spread, improving means of escape. Extinguish fires and protect life and property. Regulate standards of fire safety in buildings. Provide guidance to building control. Building Control: Local authority building control and approved inspectors regulate the standard of construction in new and alterations to existing buildings. British Standard Institution: Provide a range of codes of practice for design and installation of sprinkler systems and related components, standards drawn up by industry stakeholders. Insurance Companies: Provide requirements for sprinkler system that they provide insurance cover. Certification Bodies: Third party approval for system components, fire testing of systems, system design and installation, check conformity to a standard or code of practice.
	3.4	Describe career opportunities available within the Fire Sprinkler Industry	Designer, Project manager, Quantity Surveyor, Installer, Supervisor, Service Engineer, Procurement Buyer, Contract Managers, Estimator, Sales, Accounts.

Additional information about the unit	
Delivery guidance	This unit develops the learner's knowledge and understanding of the Fire Sprinkler Industry. Areas covered include: the aims and purposes of the Fire Sprinkler Industry; the importance of development in Fire Sprinkler Industry and the elements of the Fire Sprinkler Industry
Assessment guidance	Assessment is by portfolio. All learning outcomes in this unit must be assessed using methods appropriate to the assessment of knowledge and understanding; including: • Question and answer test • Multiple choice questions • Question and answer verbal (ensure records are kept) • Essay • Other Assessment must be carried out in accordance with the British Automatic Fire Sprinkler Association Assessment Strategy which is located in Appendix A. An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All Assessment criteria must be met. Holistic assessment, when appropriate, is encouraged; evidence for each assessment criterion must be clearly mapped.

4 Centre Requirements

Centres must be approved by SFJ Awards and also have approval to deliver the qualifications they wish to offer. This is to ensure centres have the processes and resources in place to deliver the qualifications. Approved centres must adhere to the requirements detailed in the SFJ Awards Centre Handbook, which includes information for centres on assessment and internal quality assurance (IQA) processes and procedures and is available in the centres' area of the SFJ Awards website http://sfjawards.com/approved-centres.

Centres are responsible for ensuring that their assessor and internal quality assurance staff:

- are occupationally competent and/or knowledgeable as appropriate to the assessor or IQA role they are carrying out
- have current experience of assessing/internal quality assuring as appropriate to the assessor or IQA role they are carrying out, and
- have access to appropriate training and support.

Information on the induction and continuing professional development of those carrying out assessment and internal quality assurance must be made available by centres to SFJ Awards through the external quality assurance process.

This qualification handbook should be used in conjunction with the SFJ Awards Centre Handbook, the SFJ Awards Assessment Policy and the SFJ Awards Quality Assurance (Internal and External) Policy. All policies are available on the website www.sfjawards.com or on request from SFJ Awards.

5 Assessment

5.1 Qualification assessment methods

Assessment for all units in the SFJ Awards Level 2 Certificate in Fire Sprinkler Installation qualification is through a portfolio of evidence which demonstrates the learner's knowledge and understanding or consistent performance in the workplace as indicated in the unit specifications.

Assessment must meet the requirements of assessment principles of the:

- British Automatic Fire Sprinkler Association assessment strategy (for all units) – Appendix A.
- Asset Skills Assessment Principles (for unit 1) - Appendix B.
- SummitSkills Consolidated Sector Assessment Strategy (for unit 2) - Appendix C.

An Achievement Record for this qualification which includes the forms necessary to map and claim knowledge and competence is available to download from Odyssey. All assessment criteria of relevant units must be covered.

Unit 5: Awareness of Regulations in the Fire Sprinkler Industry develops knowledge and understanding, however some assessment criteria, as indicated in the unit details, should be assessed in the workplace.

This qualification is not graded, successful learners achieve a pass.

5.2 Assessor and internal quality assurer and requirements

Internally set and marked and quality assured by SFJ Awards which demonstrates the learner's knowledge and understanding or consistent performance in the workplace as indicated in the unit specifications.

5.2.1 Occupational knowledge and competence

All assessors, internal and external quality assurers must:

- be occupationally knowledgeable across the range of units for which they are responsible prior to commencing the role
- engage in continuous professional development activities to maintain:
    - occupational competence and knowledge by keeping up-to-date with the changes taking place in the sector(s) for which they carry out assessments
    - professional competence and knowledge.

Assessors must also:

- have gained their occupational competence by working in the sector relating to the units or qualifications they are assessing. This means they must be able to demonstrate consistent application of the skills and the current supporting knowledge and understanding in the context of a recent role directly related to the qualification units they are assessing as a practitioner, trainer or manager
- be able to interpret and make judgements on current working practices and technologies within the area of work.

Internal quality assurers (IQAs) must also:

- understand the nature and context of the assessors' work and that of their learners. This means that they must have worked closely with staff who carry out the functions covered by the qualifications, possibly by training or supervising them, and have sufficient knowledge of these functions to be able to offer credible advice on the interpretation of the units
- understand the content, structure and assessment requirements for the qualification(s) they are internal quality assuring*.

**Centres should provide IQAs with an induction to the qualifications that they are responsible for quality assuring. IQAs should also have access to ongoing training and updates on current issues relevant to these qualifications.*

Approved centres will be required to provide SFJ Awards with current evidence of how each member of their team meets these requirements, for example certificates of achievement or testimonials.

5.2.2 Assessor competence

Assessors must be able to make valid, reliable and fair assessment decisions. To demonstrate their competence, assessors must be:

- qualified with a recognised assessor qualification, or
- working towards and have a clear plan for achieving the award(s) within 18 months of commencing assessments, or
- able to prove equivalent competence through training to appropriate national standards,
- be occupationally competent in the functions covered by the units they are assessing
- must meet the requirements of the BASFA assessment strategy (Appendix A at the end of this document) as follows:
-

  a). Hold verifiable, relevant, current industry experience (typically 5 years or relevant justifiable experience) and knowledge of the occupational working area above the level being assessed. This experience and knowledge must be of sufficient standing to be effective and reliable when judging candidates' competence. Assessors experience and knowledge may be verified by among other things:

- Curriculum vitae and references
- Possession of a relevant qualification
- Membership of a relevant professional organisation

b). Demonstrate their ability and commitment to maintain their occupational competence;

c). Be able to relate the national occupational standards against which they will be assessing candidates;

d). Provide evidence that they,
- Understand and interpret the structure of national occupational standards and qualifications;
- Recognise acceptable sources of evidence for the qualification; and
- Can implement the recording procedures required by the assessment centre.
- Can implement the assessment centre policies and procedures.

e). Have regular contact with the candidates and the internal verifier in accordance with the assessment centre processes; and

Approved centres will be required to provide SFJ Awards with current evidence of how each assessor meets these requirements, for example certificates of achievement or testimonials.

5.2.3 Internal Quality Assurer competence

IQAs must occupy a position in the organisation that gives them the authority and resources to:

- coordinate the work of assessors
- provide authoritative advice
- call meetings as appropriate
- conduct pre-delivery internal quality assurance on centre assessment plans, for example, to ensure that any proposed simulations are fit for purpose
- visit and observe assessment practice
- review the assessment process by sampling assessment decisions
- ensure that assessment has been carried out by assessors who are occupationally competent, or for knowledge-based qualifications occupationally knowledgeable, in the area they are assessing
- lead internal standardisation activity
- resolve differences and conflicts on assessment decisions.

To demonstrate their competence, IQAs must be:

- qualified with a recognised internal quality assurance qualification, or
- working towards a recognised internal quality assurance qualification, or
- able to prove equivalent competence through training to appropriate national standards, for example National Occupational Standard 11: Internally monitor and

maintain the quality of assessment[2] or Police Sector Standard for the Training of Internal Verifiers, Internal Verifier Standard.

Approved centres will be required to provide SFJ Awards with current evidence of how each IQA meets these requirements, for example certificates of achievement or testimonials.

5.3 Expert witnesses

Expert witnesses, for example line managers and supervisors, can provide evidence that a learner has demonstrated competence in an activity. Their evidence contributes to performance evidence and has parity with assessor observation. Expert witnesses do not however perform the role of assessor.

5.3.1 Occupational competence

Expert witnesses must, according to current sector practice, be competent in the functions covered by the units for which they are providing evidence.

They must be able to demonstrate consistent application of the skills and the current supporting knowledge and understanding in the context of a recent role directly related to the qualification unit that they are witnessing as a practitioner, trainer or manager.

5.3.2 Qualification knowledge

Expert witnesses must be familiar with the qualification unit(s) and must be able to interpret current working practices and technologies within the area of work.

5.4 Assessing competence

The purpose of assessing competence is to make sure that an individual is competent to carry out the activities required in their work. Assessors gather and judge evidence during normal work activities to determine whether the learner demonstrates their competence against the standards in the qualification unit(s). Competence should be demonstrated at a level appropriate to the qualification. The skills required at the different qualification levels are defined in Ofqual's level descriptors.[3] Further information on qualification levels is included in the SFJ Awards Assessment Policy.

Evidence must be:

- Valid
- Authentic
- Sufficient
- Current
- Reliable.

[2] National Occupational Standards for Learning and Development, LLUK 2010 https://www.excellencegateway.org.uk/

[3] Qualification and Component Levels, Ofqual November 2018, https://www.gov.uk/guidance/ofqual-handbook/section-e-design-and-development-of-qualifications

Assessment should be integrated into everyday work to make the most of opportunities that arise naturally within the workplace.

5.5 Methods for assessing competence

Qualifications may be assessed using any method, or combination of methods in Section 5.1, which clearly demonstrate that the learning outcomes and assessment criteria have been met.

Assessors need to be able to select the right assessment methods for the competences that are being assessed, without overburdening the learner or the assessment process, or interfering with everyday work activities. SFJ Awards expects assessors to use a combination of different assessment methods to make decisions about an individual's occupational competence. Further information on assessment methods is provided below and in the SFJ Awards Assessment Policy.

5.5.1 Observation

SFJ Awards believes that direct observation in the workplace by an assessor or testimony from an expert witness is preferable as it allows for authenticated, valid and reliable evidence. Where learners demonstrate their competence in a real work situation, this must be done without the intervention from a tutor, supervisor or colleague.

However, SFJ Awards recognises that alternative sources of evidence and assessment methods may have to be used where direct observation is not possible or practical.

5.5.2 Testimony of witnesses and expert witnesses

Witness testimonies are an accepted form of evidence by learners when compiling portfolios. Witness testimonies can be generated by peers, line managers and other individuals working closely with the learner. Witnesses are defined as being those people who are occupationally expert in their role.

Testimony can also be provided by expert witnesses who are occupationally competent and familiar with the qualification/unit(s)/criteria. Expert witnesses are the preferred witness type recommended by SFJ Awards as they provide a stronger form of evidence which is more easily authenticated and verified.

The assessor should consider witness testimonies of either type as a typical form of evidence. Assessors are therefore responsible for making the final judgement in terms of the learner meeting the evidence requirements of the qualification/unit(s)/criteria.

5.5.3 Work outputs (product evidence)

Examples of work outputs include plans, reports, budgets, photographs, videos or notes of an event. Assessors can use work outputs in conjunction with other assessment methods, such as observation and discussion, to confirm competence and assure authenticity of the evidence presented.

5.5.4 Professional discussion

Professional discussions are a free-flowing two-way dialogue between the assessor and learner. It should not be confused with questioning where the assessor asks specific questions and the learner provides answers. Discussions allow the learner to describe and reflect on their performance and knowledge in relation to the standards. Assessors can use discussions to test the authenticity, validity and reliability of a learner's evidence. Written/audio/electronic records of discussions must be maintained.

5.5.5 Questioning the learner

Questioning can be carried out orally or in written form and used to cover any gaps in assessment or corroborate other forms of evidence. Written/audio/electronic records of all questioning must be maintained.

5.5.6 Simulations

Simulations may take place either in an operational or non-operational environment, for example a training centre, or in the learner's workplace. Simulations may only be used for certain units. Proposed simulations must be reviewed to ensure they are fit for purpose as part of the IQA's pre-delivery activity.

Simulations can be used when:

- the employer or assessor consider that evidence in the workplace will not be demonstrated within a reasonable timeframe
- there are limited opportunities to demonstrate competence in the workplace against all the assessment criteria
- there are health and safety implications due to the high risk nature of the work activity
- the work activity is non-routine and assessment cannot easily be planned for
- assessment is required in more difficult circumstances than is likely to happen day to day.

Simulations must follow the principles below:

1. The nature of the contingency and the physical environment for the simulation must be realistic
2. Learners should be given no indication as to exactly what contingencies they may come across in the simulation
3. The demands on the learner during the simulation should be no more or less than they would be in a real work situation

4. Simulations must be planned, developed and documented by the centre in a way that ensures the simulation correctly reflects what the specific qualification unit seeks to assess and all simulations should follow these documented plans
5. There should be a range of simulations to cover the same aspect of a unit and they should be rotated regularly.

5.6 Assessing knowledge and understanding

Knowledge-based assessment involves establishing what the learner knows or understands at a level appropriate to the qualification. The depth and breadth of knowledge required at the different qualification levels are defined in Ofqual's level descriptors.[4] Further information on qualification levels is included in the SFJ Awards Assessment Policy.

Assessments must be:

- Fair
- Robust
- Rigorous
- Authentic
- Sufficient
- Transparent
- Appropriate.

Good practice when assessing knowledge includes use of a combination of assessment methods to ensure that as well as being able to recall information, the learner has a broader understanding of its application in the workplace. This ensures that qualifications are a valid measure of a learner's knowledge and understanding.

A proportion of any summative assessment may be conducted in controlled environments to ensure conditions are the same for all learners. This could include use of:

- Closed book conditions, where learners are not allowed access to reference materials
- Time bound conditions
- Invigilation.

5.7 Methods for assessing knowledge and understanding

Qualifications may be assessed using any method, or combination of methods in Section 5.1, which clearly demonstrate that knowledge-based learning outcomes and assessment criteria have been met. Evidence of assessment, examples listed below, can be included in a portfolio of evidence.

a) Written tests in a controlled environment
b) Multiple choice questions

[4] Qualification and Component Level, Ofqual November 2018
https://www.gov.uk/guidance/ofqual-handbook/section-e-design-and-development-of-qualifications

c) Evidenced question and answer sessions with assessors
d) Evidenced professional discussions
e) Written assignments (including scenario-based written assignments).

Where written assessments are used centres must maintain a bank of assessments that are sufficient to be changed regularly.

5.8 Assessment planning

Planning assessment allows a holistic approach to be taken. Holistic assessments are those which focus on assessment of the learner's work activity as a whole. This means that the assessment:

- reflects the skills requirements of the workplace
- saves time and streamlines processes
- makes the most of naturally occurring evidence opportunities.

Planning assessment enables assessors to track learners' progress and incorporate feedback into the learning process. By effectively planning assessors can therefore be sure that learners have had sufficient opportunity to acquire the skills and knowledge to perform competently and consistently to the standards before being assessed. As a consequence the assessment is a more efficient, cost effective process which minimises the burden on learners, assessors and employers.

5.9 Standardisation

Internal and external standardisation is required to ensure the consistency of evidence, assessment decisions and qualifications awarded over time. Written/audio/electronic records of all standardisation must be maintained, including records of all involved parties.

IQAs should facilitate internal standardisation events for assessors to attend and participate to review evidence used, make judgments, compare quality and come to a common understanding of what is sufficient. In addition, it is also good practice to participate in external standardisation activities. SFJ Awards will facilitate external standardisation events which are open to centres and their teams.

Further information on standardisation is available in the SFJ Awards Quality Assurance (Internal and External) Policy and the SFJ Awards Standardisation Policy.

5.10 Recognition of Prior Learning (RPL)

Recognition of prior learning (RPL) is the process of recognising previous formal, informal or experiential learning so that the learner avoids having to repeat learning/assessment within a new qualification. RPL is a broad concept and covers a range of possible approaches and outcomes to the recognition of prior learning (including credit transfer where an awarding organisation has decided to attribute credit to a qualification).

The use of RPL encourages transferability of qualifications and/or units, which benefits both learners and employers. SFJ Awards supports the use of RPL and centres must work to the principles included in Section 6 Assessment and Quality Assurance of the SFJ Awards Centre Handbook and outlined in SFJ Awards Recognition of Prior Learning Policy.

5.11 Equality and diversity

Centres must comply with legislation and the requirements of the RQF relating to equality and diversity. There should be no barriers to achieving a qualification based on:

- Age
- Disability
- Gender
- Gender reassignment
- Marriage and civil partnerships
- Pregnancy and maternity
- Race
- Religion and belief
- Sexual orientation

Reasonable adjustments are made to ensure that learners who have specific learning needs are not disadvantaged in any way. Learners must declare their needs prior to the assessment and all necessary reasonable adjustment arrangements must have been approved by SFJ Awards and implemented before the time of their assessment.

Further information is available in the SFJ Awards Reasonable Adjustments and Special Considerations Policy and the SFJ Awards Equality of Opportunity Policy.

5.12 Health and safety

SFJ Awards is committed to safeguarding and promoting the welfare of learners, employees and volunteers and expect everyone to share this commitment.

SFJ Awards fosters an open and supportive culture to encourage the safety and well-being of employees, learners and partner organisations to enable:

- learners to thrive and achieve
- employees, volunteers and visitors to feel secure
- everyone to feel assured that their welfare is a high priority.

Assessment of competence based qualifications in the justice sector can carry a high-risk level due to the nature of some roles. Centres must therefore ensure that due regard is taken to assess and manage risk and have procedures in place to ensure that:

- qualifications can be delivered safely with risks to learners and those involved in the assessment process minimised as far as possible
- working environments meet relevant health and safety requirements.

Appendix A BAFSA Assessment Strategy

This Assessment Strategy was provided by BAFSA to support delivery of qualifications on the Qualifications and Credit Framework (QCF). The QCF has now been replaced by the Regulated Qualifications Framework (RQF), however this Assessment Strategy is still relevant and must be followed.

British Automatic Fire Sprinkler Association

ASSESSMENT STRATEGY

for Qualifications (QCF) using

National Occupational Standards

This Assessment Strategy has been developed by BAFSA and is available to all Awarding Organisations offering qualifications, for fire sprinkler related occupations, based on the National Occupational Standards developed by Skills for Security Ltd.

We confirm that this document contains all the criteria and requirements for Awarding Organisations to meet in the four key areas given on page 1 of this document. Furthermore, we undertake to not alter the requirements or content of this strategy without prior consultation and agreement with the relevant Awarding Organisations.

Introduction

This document gives a strategic overview of the arrangements required for the assessment of candidates against the National Occupational Standards developed by Skills for Security Ltd. These candidates would normally, but not exclusively, be directly involved in the fire sprinkler installation sector.

The aim of this assessment strategy is to provide a framework to Awarding Organisations to ensure robust, effective quality assurance arrangements for the qualifications based on Skills for Security's national occupational standards.

The Assessment Strategy detailed in this document sets out the requirements to be met by Awarding Organisations in four key areas, which are: -

1. external quality control of assessment;
2. which aspects of the national occupational standards must always be assessed through performance in the workplace;
3. the extent to which simulated working conditions may be used to assess competence and any characteristics that simulations should have, including definitions of what would constitute a 'realistic working environment' (RWE) for the qualifications concerned; and
4. the occupational expertise requirements for assessors and verifiers.

This strategy is the result of:

- review of good practice
- consultation with and agreement of Awarding Organisations
- industry feedback

BAFSA working with Awarding Organisations has a role to monitor the effectiveness of the Assessment Strategy it has put forward and recommends that appropriate Awarding Organisation meet with BAFSA on a frequency agreed between all parties, to discuss assessment and verification issues.

Any specific arrangements or requirements for particular suites of national occupational standards, or occupational areas, will be given in annexes to this strategy.

1. External Quality Control

BAFSA supports the process of robust external quality control and recommends that independent assessment is employed to achieve this.

Independent assessment as a method of external quality control requires that a significant proportion of the assessment is carried out by an assessor other than the candidate's primary assessor and who does not have a vested interest in the outcome of the assessment.

The centre together with the Awarding Organisation will determine which aspects of the qualification are to be independently assessed. At least one unit of the qualification must be independently assessed.

Other approaches to external quality control are acceptable where it can be demonstrated that they are equally robust, have support from the centre and the Awarding Organisation and meet the statutory requirements of the Qualifications Regulators.

2. Assessment Environments

Assessment of all QCF qualification candidates in fire sprinkler installation occupations, against the national occupational standards developed by Skills for Security, will be undertaken in accordance with the following criteria: -

- Evidence of occupational competence should be generated and collected through real work activities in a realistic work environment.
- Real work activities are those undertaken to provide a product or service under typical business conditions.
- A realistic working environment is one that reflects typical employment conditions relevant to the work activities being assessed.
- The evidence collected under these conditions should also be as naturally occurring as possible.

Where opportunities for evidence collection are not available at the workplace, simulation is permitted, in accordance with the criteria listed in section 3 below.

3 Situations where simulation is allowed

Simulation should only be used where it is impractical to gather evidence through a real work environment or within an acceptable time frame. Please see individual units where simulation can be used.

Awarding Organisations will issue guidance to their centres as to how these simulations should be planned and organised with guidance ensuring that the demands on the candidate are no more or less that they would be in a real environment. This may include:-

- activities which are contingency, emergency situations etc. and are relatively rare events; and
- activity where mistakes by candidates in the workplace would be too hazardous, impractical, or expensive to accommodate.

The simulation should match the conditions of a realistic working environment. In other words, the conditions should match those found in the workplace, including facilities, equipment and material, as well as relationships, constraints and pressures.

Where simulation is to be used to assess a complete element, we would consider it to be good practice for external verifier advice to be sought on the validity of any simulation scenario, prior to its implementation and use within an Approved Centre.

When simulation is to be used to cover part of an element, in the interests of assessment efficiency, assessors and internal verifiers should agree the circumstances and conditions under which this process is implemented.

4. Criteria for the Appointment of Assessors, Internal Verifiers and External Verifiers

4.1 Criteria for the Appointment of Assessors

The gathering and judging of evidence should be entrusted to personnel who are not only trained and qualified as assessors (appropriate to the qualification being assessed) but who are occupationally competent in the tasks that they are assessing.

To this end, Awarding Organisations must ensure that assessors are occupationally competent, and are suitably qualified, in accordance with all of the criteria specified below: -

a) Hold verifiable, relevant, current industry experience (typically 5 years or relevant justifiable experience) and knowledge of the occupational working area above the level being assessed. This experience and knowledge must be of sufficient standing to be effective and reliable when judging candidates competence. Assessors experience and knowledge may be verified by among other things:

    - Curriculum vitae and references
    - Possession of a relevant qualification
    - Membership of a relevant professional organisation

b) demonstrate their ability and commitment to maintain their occupational competence;
c) be able to relate the national occupational standards against which they will be assessing candidates;
d) provide evidence that they,

    - understand and interpret the structure of national occupational standards and qualifications;
    - recognise acceptable sources of evidence for the qualification; and
    - can implement the recording procedures required by the Assessment Centre.
    - can implement the Assessment Centre policies and procedures.

e) have regular contact with the candidates and the internal verifier in accordance with the Assessment Centre processes and
f) hold the appropriate assessor award (as defined by the regulatory authorities) or have a clear plan for achieving the award(s) within 18 months of commencing assessments.

Evidence of individuals meeting all of the above criteria should be confirmed by the Awarding Organisation. Evidence of meeting criteria c and d above may be provided as a result of successfully completing a relevant training course.

4.2 Criteria for the Appointment of Internal Verifiers

Awarding Organisations must ensure that internal verification is undertaken by persons who are able to make valid judgements on assessment decisions made by assessors.

To this end, Awarding Organisations must ensure that internal verifiers are occupationally competent and are suitably qualified, in accordance with all of the criteria specified below: -

a) hold verifiable, relevant, current industry experience (typically 5 years or relevant justifiable experience) and knowledge of the occupational working area at or above the level being assessed. This experience and knowledge must be of sufficient standing to be effective and reliable when judging candidates competence. Internal verifiers experience and knowledge may be verified by among other things:
    - Curriculum vitae and references
    - Possession of a relevant qualification
    - Membership of a relevant professional organisation

b) demonstrate their ability and commitment to maintain their occupational competence;
c) be able to relate the national occupational standards against which they will be verifying the assessment of the candidates work;
d) provide evidence that they,
    - understand the structure of national occupational standards and qualifications;
    - can interpret the standards in accordance with awarding body requirements;
    - recognise acceptable sources of evidence for the qualification;
    - and can implement the recording procedures required by the Assessment Centre.
    - can implement the awarding body quality assurance and administration procedures.

e) be in regular contact with the assessor and
f) hold the appropriate verifier award (as defined by the regulatory authorities) or have a clear plan for achieving the award(s) within 18 months of commencing assessments.

It is recommended that internal verifiers hold the appropriate assessor qualification.

Evidence of individuals meeting all of the above criteria should be confirmed by the awarding body, which may be through external verifiers. Evidence of meeting criteria c and d above may be provided as a result of successfully completing a relevant training course, on which attendance is not mandatory but is strongly recommended.

4.3 Criteria for the Appointment of External Verifiers

Awarding Bodies must appoint suitably qualified external verifiers who are able to ensure that standards of assessment and verification are applied consistently across all Approved Centres.

To this end, Awarding Organisations must ensure that external verifiers are occupationally competent and are suitably qualified, in accordance with the criteria specified below: -

a) have a good knowledge and understanding of the sector and of current working practices;
b) be independent of the assessment centres;
c) hold the appropriate external verifier qualification (as defined by the regulatory authorities), or have a clear action plan for achieving this qualification within 12 months of beginning external verification;
d) demonstrate their ability to maintain their occupational knowledge;
e) demonstrate knowledge, understanding and application of the occupational standards they will be externally verifying; and
f) demonstrate their commitment to continuous personal professional development.

External verifiers must hold the appropriate EV qualification or have a clear action plan for achieving the qualification within the set timescale. Evidence of individuals meeting all of these criteria should be held and confirmed by the awarding body.

Appendix B: Asset Skills Assessment Strategy

The Sector Skills Council
for Property Services, Housing, Cleaning Services
and Facilities Management

the sector skills council for the places where we live and work

ASSESSMENT PRINCIPLES
MAY 2012

POLICIES AND PRINCIPLES FOR AWARDING
ASSET SKILLS COMPETENCE UNITS ACROSS ALL FOUR NATIONS

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1 INTRODUCTION

ASSET SKILLS has worked with the Awarding Organisations offering qualifications within their footprint to develop these assessment principles for competence based units of assessment which have been submitted by Asset Skills to the appropriate national qualification and credit framework.

ASSET SKILLS, with the support of industry, is dedicated to embedding the National Occupational Standards and units of assessment into the workplace and to upholding the quality and integrity of the Standards and Units and qualifications based upon them.

2 ASSESSMENT PRINCIPLES FOR COMPETENCY BASED UNITS

2.1 The following principles will apply to Awarding Organisations:

2.1.1 Assessment should normally be at the candidate's workplace, but where the opportunity to assess across the range of standards is unavailable other comparable working environments may be used, following agreement from the External Verifier.

2.1.2 A holistic approach towards the collection of evidence should be encouraged, assessing activities generated by the whole work experience rather than focusing on specific tasks.

2.1.3 Asset Skills does not prescribe a minimum number of observations. However, evidence provided must demonstrate that the candidate's competency is consistent and reliable.

2.1.4 Assessors can only assess in their acknowledged area of occupational competence.

2.1.5 Assessors and Internal Quality Assurers/Internal Verifiers will be registered with their Approved Centre and be accountable to the organisation for their assessment practice.

2.1.6 Health and safety of customers/clients and employees must be maintained throughout the assessment process and if any person carrying out assessment or verification activities does not feel that there is due regard to health and safety then that person should refuse to continue with the activity(ies) until satisfied that due regard to health and safety is being taken.

3 SIMULATION AND WITNESS TESTIMONY FOR COMPETENCY BASED UNITS

There are a few occasions when simulation or witness testimony is warranted where the centre can demonstrate that performance evidence has been impossible to obtain.
The underlying reasons for either simulation or witness testimony are:

- health and safety considerations
- activities that would cause serious inconvenience or loss to an employer if there was an undue delay in their being carried out
- Infrequently occurring activities
- equality of access

3.1 Simulation

Simulation may be necessary for specific elements of the units. It is advisable that centres refer to the Awarding Organisations in these cases for clear guidelines.

Awarding Organisation guidance to centres must ensure that demands on the candidate during simulation are neither more nor less than they would encounter in a real work situation. In particular:

- All simulations must be planned, developed and documented by the centre in a way that ensures the simulation accurately reflects what the unit seeks to assess
- All simulations should follow these documented plans
- A centre's overall strategy for simulation must be examined and approved by the external verifier
- There should be a range of simulations to cover the same aspect of the standard so that the risk of candidates successfully colluding is reduced
- The physical environment for the simulation must be as realistic as possible and draw on real resources that would be used in the industry
- The nature of the contingency must be realistic.

3.2 Witness Testimony

Witness testimony should not form the primary source of evidence. Centres must comply with Awarding Organisation guidance over the occupational competence and briefing of witnesses in the use of witness testimony.

4 RECOGNITION OF PRIOR LEARNING AND EXPERIENCE

4.1 Evidence from past achievement may be included as permissible evidence within assessment methods.

4.2 Evidence of prior knowledge and understanding can be offered as supplementary evidence as long as it is a measurable assessed outcome of learning which links to the unit of assessment

4.3 Assessors should make best use of all the assessment methods available to them in ensuring the most reliable and effective use is made of claims of prior learning and experience which relate to the individual circumstances.

4.4 All candidates must demonstrate current competence with respect to recognition of prior learning (RPL).

5 EXTERNAL QUALITY ASSURANCE OF ASSESSMENT

5.1 Awarding Organisations will operate a Risk Rating system of Approved Centres. This will be applied UK wide.

5.1.1 The Awarding Organisations will review centre risk ratings on an annual basis to ensure risk rating is still appropriate and take appropriate action to ensure quality assurance is maintained.

6 FRAMEWORK CRITERIA FOR THE APPOINTMENT OF EXTERNAL VERIFIERS

6.1 ASSET SKILLS aims to ensure that the technical and quality aspirations of industry are met, in order to inspire confidence in the national occupational standards and qualifications.

6.2 The criteria will apply to existing and new External Verifiers (EVs).

6.3 Verification Competence

6.3.1 The appointment and competence of External Verifiers must comply with current Ofqual regulations for QCF Awarding Organisations. Awarding Organisations will ensure that External Verifiers:

Hold or be working towards an appropriate external verifier qualification and demonstrate evidence of knowledge, understanding and experience of the assessment process (together with the occupational competence requirements below).

- In England, Wales, Northern Ireland new External Verifiers must achieve an appropriate external verifier qualification within 12 months of beginning external verification.
- In Scotland, all new EVs should have an assessment plan for achieving L&D Unit 12 and be working towards achieving the awards. There is no timescale attached to the achievement of L&D Unit 12.

6.4 Occupational Competence

All External Verifiers must

6.4.1 provide evidence of knowledge, understanding and application of the National Occupational Standards (NOS), Units of Assessment and Assessment Principles, together with technical definitions where appropriate. Awarding Organisations should cover this requirement as part of their normal appointment process.

6.4.2 have verifiable relevant experience and current knowledge of the occupational working area at or above the level being verified. This experience and knowledge must be of sufficient depth to be effective and reliable when verifying judgements about assessors' assessment processes and decisions. External verifiers' experience and knowledge could be verified by:

- curriculum vitae and references
- possession of a relevant qualification
- corporate membership of a relevant professional institution

6.4.3 have up to date knowledge and experience of the particular aspects of work they are verifying. This could be verified by records of continuing professional development achievements

6.4.4 have a sound in-depth knowledge of, and uphold the integrity of the NOS, Units of Assessment and these Assessment Principles

6.4.5 undertake continuous professional development to ensure that they are working to the current National Occupational Standards in assessment and verification.

6.4.6 be aware of national issues affecting vocational education, training and qualifications in the sector.

6.4.7 have appropriate knowledge of the ASSET SKILLS framework of qualifications in relevant areas to the qualifications being externally verified.
6.4.8 demonstrate their ability to maintain credibility and retain the confidence of the industry through commitment to continuous personal and professional development.
6.4.9 provide evidence of knowledge, understanding and application of the Regulatory Authorities' codes of practice
6.5 Awarding Organisations may have generic criteria and personnel specifications in addition to the above

FRAMEWORK CRITERIA FOR THE APPOINTMENT OF INTERNAL QUALITY ASSURERS / INTERNAL VERIFIERS

7.1 Internal Quality Assurers/Internal Verifiers (IQAs/IVs) are appointed by an Approved Centre and approved by the Awarding Organisation through their External Verifier.
7.2 This criteria will apply to existing and new IQAs/IVs.
7.3 IQAs/IVs should only verify the decisions of assessors which fall within their area of technical and occupational competence.
7.4 IQAs/IVs should be seen as the persons responsible for an approved centre's assessment quality in order to facilitate the assessment process and should be one of the following:
7.4.1 IQAs/IVs will be employed directly or contractually by the same organisation (approved centre) as the assessors

OR

7.4.2 Acting as a counter-signatory on a short term basis, a maximum period of 18 months, where IQAs/IVs have not yet achieved an appropriate qualification in internal verification
7.5 The appointment and competence of IQAs/IVs must comply with current Regulatory Authority regulations. IQAs/IVs will either:

a) Hold or be working towards an appropriate internal verifier qualification
   - In England, Wales and Northern Ireland all new IQAs/IVs should achieve an appropriate internal verifier qualification within 18 months of beginning internal quality assurance/verification duties. Internal quality assurance/verification decisions by verifiers who are still working towards certification must be countersigned by an IQA/IV who has gained certification.
   - In Scotland, all new Verifiers should have an assessment plan for achieving the Learning and Development (L&D) Unit 11 and be working towards achieving the award. External Verifiers will monitor progress and achievement towards the achievement of Learning and Development (L&D) Unit 11 during centre visits
   - All new IQAs/IVs must hold an appropriate qualification in assessment of competence

OR

b) Where employers opt for an 'employer direct' model, the qualification requirements specified by the regulatory authorities may be waived as described below.

The 'employer direct' model is where colleagues, supervisors and/or managers in the workplace are involved in the assessment process. Under this model, the employer, with the agreement of their Awarding Organisation and Asset Skills may choose between:

Achieving the appropriate regulatory body approved unit qualifications for internal quality assurance/verification

OR

Demonstrating that the employer's training and development activity undertaken to prepare, validate and review these quality assurance/verification roles, maps 100% to the National Occupational Standards which these qualifications are based on. The mapping process **must** be agreed by the Awarding Organisation as providing the equivalent level of rigour and robustness as achievement of the unit qualification.

The alternative option described above, which waivers the need for the regulatory approved units, must be confined in application to an 'organisation by organisation' and 'qualification by qualification' basis. Prospective organisations must be able to confirm that their in-house practices conform to the requirements of the Standards in association with the relevant Awarding Organisation.

7.5.2 It is desirable that all IQAs/IVs hold a relevant qualification

IQAs/IVs will:

7.5.3 have verifiable relevant experience and current knowledge of the occupational working area at or above the level being verified. This experience and knowledge must be of sufficient depth to be effective and reliable when verifying judgements about assessors' assessment processes and decisions. IQAs'/IVs' experience and knowledge could be verified by:

- curriculum vitae and references
- possession of a relevant qualification
- corporate membership of a relevant professional institution

7.5.4 have expertise so they have up to date knowledge and experience of the particular aspects of work they are verifying. This could be verified by records of continuing professional development achievements

7.5.5 have a sound in-depth knowledge of, and uphold the integrity of the NOS, Units of Assessment and these Assessment Principles

7.5.6 be prepared to participate in training activities for their continued professional development

7.5.7 demonstrate their ability to maintain occupational competence by continuous professional development

7.5.8 undertake continuous professional development to ensure that they are working to the current National Occupational Standards in assessment and verification.

7.5.9 have knowledge of the requirements and application of the Asset Skills Assessment Principles
7.5.10 provide evidence of knowledge, understanding and application of the Regulatory Authorities' codes of practice
7.6 Centres will be responsible for ensuring that internal quality assurers/internal verifiers plan and maintain continuous professional development
7.7 Approved Centres may have generic criteria and personnel specifications in addition to the above.

8 FRAMEWORK CRITERIA FOR THE APPOINTMENT OF ASSESSORS

8.1 This section is intended to assist Approved Centres in the recruitment of those individuals who will act as Assessors within the Approved Centre.
8.2 Assessors are appointed by an Approved Centre and approved by the Awarding Organisation through their External Verifier.
8.2.1 They should only assess in their area of technical and occupational competence as approved by their Awarding Organisations.
8.3 Assessors should be one of the following:
8.3.1 Employed directly or contractually by the same organisation (centre) as the candidate

OR

8.3.2 Acting as a counter signatory on a short term basis (18 months) where the Centre Assessor has not yet achieved an appropriate qualification in assessment of competence
8.4 The Assessor should have the following:
Assessment Competence
Either:
8.4.1

a) Hold or be working towards an appropriate qualification in assessment of competence
    - In England, Wales and Northern Ireland, new Assessors must achieve an appropriate qualification in assessment of competence within 18 months of beginning assessment duties. Assessment decisions by Assessors who are still working towards certification must be countersigned by an Assessor who has gained certification.
    - In Scotland, all new Assessors should have an assessment plan for achieving 9D and/or 9DI units and be working towards achieving the units. External Verifiers will monitor progress and achievement towards the achievement of 9D and 9DI units during centre visits.
      Candidates in possession of a TQFE without having an appropriate 9D and 9DI units should undertake continuing professional development to demonstrate that they are working to the appropriate unit standard.

OR

b) Where employers opt for an '**employer direct'** model, the qualification requirements specified by the regulatory authorities may be waived as described below.

The 'employer direct' model is where colleagues, supervisors and/or managers in the workplace are involved in the assessment process. Under this model, the employer, with the agreement of their Awarding Organisation and Asset Skills may choose between:

Achieving the appropriate regulatory body approved unit qualifications for assessment.

OR

Demonstrating that the employer's training and development activity undertaken to prepare, validate and review these assessment roles, maps 100% to the National Occupational Standards which these qualifications are based on. The mapping process **must** be agreed by the Awarding Organisation as providing the equivalent level of rigour and robustness as achievement of the unit qualification.

The alternative option described above, which waivers the need for the regulatory approved units, must be confined in application to an 'organisation by organisation' and 'qualification by qualification' basis. Prospective organisations must be able to confirm that their in-house practices conform to the requirements of the Standards in association with the relevant Awarding Organisation.

8.5 Occupational Competence
All assessors must
8.5.1 have verifiable relevant current industry experience and knowledge of the occupational area at or above the level being assessed. This experience and knowledge must be of sufficient depth to be effective and reliable when judging candidates' competence. Assessors' experience and knowledge could be verified by:

- curriculum vitae and references
- possession of a relevant qualification
- corporate membership of a relevant professional institution

8.5.2 have sufficient occupational expertise so they have up to date knowledge and experience of the particular aspects of work they are assessing. This could be verified by records of continuing professional development achievements
8.5.3 have a sound in-depth knowledge of, and uphold the integrity of the sector's NOS, units of Assessment and these Assessment Principles
8.5.4 be prepared to participate in training activities for their continued professional development
8.6 Centres will be responsible for ensuring that assessors plan and maintain continuous professional development
8.7 Approved Centres may have generic criteria and personnel specifications in addition to the above.

Appendix C Summit Skills Assessment Strategy

SummitSkills Consolidated Assessment Strategy for Units and Qualifications of "Occupational Competence" in the Qualifications and Credit Framework (England, Northern Ireland and Wales) for the Building Services Engineering Sector

Electrical and Electronic Servicing (Consumer Electronics; Domestic

Appliances; Signal Reception)

Electrotechnical (Electrical Installation; Electrotechnical Services)

Mechanical Engineering Services (Air Conditioning; Heating & Ventilation; Plumbing/Domestic Heating; Refrigeration)

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1. Definitions of terminology used in this Assessment Strategy

Terminology	Explanation/Definition
QCF	Qualifications and Credit Frameworks for England, Northern Ireland and Wales.
"NVQ"	The term "NVQ" is used to identify a competence-based qualification.
Occupational Competence	The knowledge, understanding and skills needed by an individual to carry out a particular job role/responsibility safely and in accordance with approved industry and technical standards and working practices.
Assessment of Occupational Competence	A term specifically relating to a means of assessment of the safety-critical and technically critical aspects for the units and qualifications that are the subject of this assessment strategy. It is an independent holistic assessment of the learner's **occupational competence** via an assessment process as determined by the industry and endorsed by SummitSkills and the Awarding Organisation(s). In order to undertake this stage of the qualification's assessment procedure/requirements, evidence of a leaner's involvement, relevant experience and progressive development of occupational competence must be available before an "Assessment of Occupational Competence" is undertaken.
RoC	Rules of Combination – a combination of units, determined by SummitSkills, that are required for a learner to be awarded an identified QCF qualification.
Knowledge Unit	A unit that gives the learner the opportunity to demonstrate their knowledge and understanding of identified topics and subject areas.

Performance Unit	A unit that gives the learner the opportunity to demonstrate they have the practical skills that are in keeping with the relevant National Occupational Standards for identified activities.
Combination Unit	A unit that gives the learner the opportunity to demonstrate their understanding and application of specific knowledge, and is assessed in conditions using particularly identified “relevant practical activities” as defined in the qualification unit.
Simulation and Simulated Conditions	An environment in which simulated activities take place involving the replication of a real working environment. The criteria for which must be to supply fit-for-purpose tools, equipment, full-size components, realistic deadlines and other commercial requirements.
Real Working Environment	An environment in which real work activities take place under real working conditions in keeping with real commercial situations.
Independent Assessment Structure	The independent assessment structure must not be a part of the learner’s working or training environment and will provide facilities for assessment in keeping with the industry arrangements (See Annex 3). Therefore, the learner will be independently assessed by an independent assessor in keeping with an industry determined specification.
Key safety-critical aspects	Any “technical” activity with the potential to harm/damage personnel/property if carried out incorrectly (See section 4).
Technically critical	Any activity that is fundamental to the safe and efficient operation of equipment, components and systems.
SSC	Sector Skills Council – SummitSkills is the SSC for the Building Services Engineering sector

2. Purpose and scope of the Assessment Strategy

The purpose of this assessment strategy is to ensure that qualifications and associated units that attest to occupational competence in an identified role are;

- **Based on the relevant approved National Occupational Standards**
- **Assessed to industry endorsed assessment principles and methodologies**
- **Fit for purpose**
- **Confirm occupational competence**

The assessment of units within a qualification's structure (Rules of Combination-RoC) which are available as "stand alone units" must also be undertaken in adherence with this assessment strategy to ensure that assessment requirements and methodologies are consistently applied in accordance with the principles of the "Assessment of Occupational Competence". Units can be identified as;

- **Knowledge Units**
- **Performance Units**
- **Combinations Units**

2.1 The scope of this Assessment Strategy relates to the competence-based qualifications in the QCF with the term NVQ in the qualification title and any associated units for the principal industries in the Building Services Sector of Air Conditioning, Electrical and Electronic Servicing, Electrotechnical Installation and Services, Heating and Ventilation, Plumbing and Refrigeration. The full list of qualifications is provided in Annex 1. This Assessment Strategy outlines the principles and requirements to be applied to the assessment of knowledge, understanding, performance and/or competence for these qualifications and relevant associated units.

2.2 The qualifications identified in Annex 1 are set at "operative level" which in the context of this strategy is defined as:

Those skilled individuals at level 2 or level 3 (subject to their role) with responsibilities for the installation, maintenance, servicing and/or repair of the systems, services and equipment for climate control, communication, heating, lighting, power, security, water within the sector's principal industries of Air Conditioning and Refrigeration, Electrotechnical Installation and Services, Heating and Ventilation, Plumbing and Electrical and Electronic Servicing.

It should be noted that any additional "Occupational Competence Qualifications/Units" developed for the industries and occupations in the Building Service Engineering sector must be compliant with this assessment strategy. This includes amendments and revisions to those qualifications identified in Annex 1 and relevant associated units developed after the publication of this strategy.

2.3 This strategy is designed for qualifications and units that are delivered in accordance with the requirements of the Qualifications and Credit Frameworks for England, Northern Ireland and Wales.

3. Principles of Assessment

3.1 Given the nature of the potentially hazardous work undertaken by operatives in the key industries of the building services engineering sector (2.2), the methodology(s) of assessment that ensures the candidate is occupationally competent will be determined by the industry for which the qualification and relevant associated unit(s) is designed for.

3.2 Qualifications attesting to "**Occupational Competence**" will have a structure that has been determined by SummitSkills.

3.3 Unit and qualification assessment requirements will set out the scope of evidence required in terms of components, equipment, enclosures, services, statutory and non-statutory regulations and industry standards and systems.

3.4 Methods of assessment;

3.4.1 Knowledge Units – projects/assignments, external written assessments/tests and professional discussion.

3.4.2 Performance Units - practical activities in the work place or as appropriate in simulated conditions.

3.4.3 Combination Units – Practical activities/assignments in simulated conditions. Identified knowledge is assessed in accordance with 3.4.1 above.

3.5 The assessment instruments for **Knowledge Units** must be as identified in the "Additional Information" of the unit, be fit-for-purpose and be one or more of;

3.5.1 Knowledge tests - centrally set, centrally marked and quality assured by the Awarding Organisations who offer a unit(s) or qualification(s) identified in this strategy.

3.5.2 Knowledge based projects or assignments that are centrally set, centre marked and quality assured by the Awarding Organisations who offer a unit(s) or qualification(s) identified in this strategy.

3.5.3 Knowledge based professional discussion that is centre devised following centrally specified guidance, centre marked and quality assured by the Awarding Organisations who offer a unit(s) or qualification(s) identified in this strategy.

3.6 The environment in which the evidence and the quantity of evidence for **Performance Units** must be assessed, i.e. sourced from the real working environment or simulated conditions, will be detailed in the "Additional Requirements" for each Performance Unit. This could be applicable to all the Learning Outcomes in the unit or particular Learning Outcomes.

3.7 Evidence that is sourced from the real working environment for **Performance Units** must be naturally occurring and can be generated by;

3.7.1 Direct observation of performance in the workplace by a qualified assessor and/or testimony from an expert witness subject to the activity being assessed (Also see 3.6 above). This will be the primary source of evidence.

3.7.2 Candidate's reflective account of performance.

3.7.3 Work plans and work based products e.g. diagrams, drawings, specifications, customer testimony, authorised & authenticated photographs/ images and audiovisual records of work completed.

3.7.4 Evidence from prior achievements that demonstrably match the requirements of the Performance Unit.

3.7.5 Witness testimony (See Expert Witness Annex 2 – 2.4).

3.8 Meeting the assessment requirements of **Performance Units** (3.7) will need initial discussions and assessment planning between the learner and Assessor, as an essential activity to identify opportunities to assess real working environment evidence, gaps that need to be filled or opportunities to recognise the prior achievement of the learner.

3.9 The assessment methodology for the assessment of a **Combination Unit** will be centrally-set or centre devised and centrally verified in keeping with design and assessment principles for the unit's assessment assignment, agreed between SummitSkills and the Awarding Organisations

3.10 Competence must be demonstrated **consistently over a period of time and on more than one occasion**. However SummitSkills does not wish to stipulate what that period of time might be as this is a decision for the Assessor. Based on their own professional judgement Assessors must be capable of identifying when competence has been demonstrated by the learner.

3.11 Learners should not be put forward for an "**Assessment of Occupational Competence**" until they are **deemed ready to be assessed as competent**. This underpins the assumption that the learner has sufficient technical expertise, knowledge, skill and maturity to meet the expectancies of employers in terms of "Occupational Competence".

3.12 The "**Occupational Competence**" of learners must be assessed in accordance with industry requirements as prescribed in Annex 3 and Annex 4 of this strategy.

4. Key Safety-Critical Aspects

Any demonstration of competence involving the key safety-critical aspects listed below must be a fundamental element of the "**Assessment of Occupational Competence**" as determined by the industry

Electrical and Electronic Servicing	• Activities relating to limited scope electrical work • Connection & testing of signal reception systems
Mechanical Engineering Services	• Activities relating to F Gas installations/service and maintenance • Pressure testing • Handling of refrigerants (ODS, Ammonia, HC and CO2) • Thermal pipe joining methods – welding; brazing; soldering activities • Limited scope electrical work • As relevant, the installation, connection and servicing/maintenance of fuel systems and equipment – gas; oil; solid fuel • As relevant, the installation, connection and servicing/maintenance of hot/cold water systems and equipment – unvented water; backflow prevention
Electrotechnical	• Safe isolation • Termination and connection • Inspection, testing and commissioning • Risk assessments and safe working practices • Diagnosing and correcting faults

5. Simulation and Simulated Conditions (Performance Units)

Situations where simulation is either permissible or mandatory.

5.1. Permissible:

Simulation can take place in those rare circumstances where the opportunities to collect naturally occurring evidence are limited or absent and the learner lacks evidence for completion of the unit. However, this scenario is anticipated to be rare in relation to the qualifications and the units to which this strategy applies given the inherent flexibility of the evidence-gathering process.

5.2. Mandatory:

Simulation **must take** place for industry identified key-safety critical aspects (Section 4) of the qualification as listed in Annex 1 and their relevant associated units**.**

The activities that will be undertaken demonstrating competence in these areas are contained within each industries "**Assessment of Occupational Competence**" arrangement and this must NOT be undertaken before the learner has demonstrated sufficient technical expertise, knowledge, skill and maturity.

Where simulation does take place it must be in a realistic working environment and/or an independent assessment structure. (See definitions).

6. Quality Assurance of the Assessment Process:

The assessment requirements for "**Competence-Based**" qualifications and units therein identified in Annex 1 of this Assessment Strategy **must** be, in terms of process and quality assurance, compliant with;

6.1 Operating Rules for using the term NVQ in a QCF qualification title – Ofqual, August 2008

and

6.2 "Additional Requirements for QCF Qualifications that use NVQ in the title", September 2009 – Federation of Awarding Bodies (FAB); Joint Council for Qualifications (JCQ); Alliance for Sector Skills Councils, September 2009

Knowledge units must be assessed in accordance with 3.5 above.

The requirements of Assessors, Internal and External Verifiers are detailed in **Annex 2.**

Annex 1 – QCF Qualification Titles

ELECTROTECHNICAL

- **Level 2 NVQ Diploma in Installing & Servicing Electrical and Electronic Equipment and Appliances**

  - Consumer Electronics Servicing

  - Electrical Appliances

- **Level 3 NVQ Diploma in Installing, Servicing & Commissioning Electrical and Electronic Equipment and Appliances**

  - Consumer Electronics Servicing

  - Electrical Appliances

- **Level 2 NVQ Diploma in Installing & Servicing Signal Reception Systems**
- **Level 3 NVQ Diploma in Installing, Servicing & Commissioning Signal Reception Systems**
- **Level 3 NVQ Diploma in Installing Electrotechnical Systems and Equipment**

  - Audio Visual Systems Installation

  - Buildings, Structures and the Environment

  - Structured Cabling

- **Level 3 NVQ Diploma in Electrotechnical Services**

  - Electrical Maintenance

  - Electrical Panel Building

  - Electrical Machine Rewind & Repair

- **Level 2 NVQ Certificate in Highway Electrical Systems**
- **Level 2 NVQ Diploma in Highway Electrical Systems**
- **Level 3 NVQ Diploma in Servicing Highway Electrical Systems**
- **Level 3 NVQ Diploma in Servicing and Commissioning Highway Electrical Systems**

MECHANICAL ENGINEERING SERVICES

- **Level 2 NVQ Diploma in Install, Test and Maintain Air Conditioning Systems**
- **Level 3 NVQ Diploma in Service and Maintain Air Conditioning Systems**
- **Level 3 NVQ Diploma in Installing & Commissioning Air Conditioning Systems**
- **Level 2 NVQ Diploma in Domestic Heating**
- **Level 3 NVQ Diploma in Domestic Heating**
- **Level 2 NVQ Diploma in Heating & Ventilating – Ductwork Installation**
- **Level 3 NVQ Diploma in Heating & Ventilating – Ductwork Installation**
- **Level 2 NVQ Diploma in Heating & Ventilating – Industrial & Commercial Installation**
- **Level 3 NVQ Diploma in Heating & Ventilating – Industrial & Commercial Installation**
- **Level 2 NVQ Diploma in Heating & Ventilating – Service and Maintenance (t.b.c.)**
- **Level 3 NVQ Diploma in Heating & Ventilating – Service and Maintenance (t.b.c.)**
- **Level 2 NVQ Diploma in Plumbing and Heating**
- **Level 3 NVQ Diploma in Domestic Plumbing and Heating**
- **Level 2 NVQ Diploma in Install and Maintain Refrigeration Systems**
- **Level 3 NVQ Diploma in Install and Commission Refrigeration Systems**
- **Level 3 NVQ Diploma in Servicing and Maintaining Refrigeration Systems**

ENVIRONMENTAL TECHNOLOGIES

- **Level 2 Award in Environmental Technology Awareness**
- **Level 3 Award in Installing and Commissioning Solar Thermal Hot Water Systems**
- **Level 3 Award in Installing and Maintaining Solar Thermal Hot Water Systems**
- **Level 3 Award in Installing and Commissioning Solar Photovoltaic Systems**
- **Level 3 Award in Installing and Maintaining Solar Photovoltaic Systems**
- **Level 3 Award in Installing and Commissioning Heat Pump Systems**
- **Level 3 Award in Installing and Maintaining Heat Pump Systems**
- **Level 3 Award in Installing and Commissioning Water Harvesting and Re-use Systems**
- **Level 3 Award in Installing and Maintaining Water Harvesting and Re-use Systems**

Annex 2 –The requirements of Assessors, Internal Verifiers and External Verifiers for Building Services Engineering competent-based qualifications and relevant associated units

2.1 Assessors must;

2.1.1

Be working towards or have achieved A1 or A2 Standards and continue to practice to those standards;

or

2.1.2

Have achieved D32 or D33 or TQFE/TQSE and possess CPD evidence of practicing to A1 or A2 Standards.

Or

2.1.3

Have other suitable “equivalent assessor qualifications” endorsed by SummitSkills, which apply the principles of the A1/A2 Standards.

2.1.4 (Occupational Competence)

Have verifiable relevant industry experience and current knowledge of industry working practices and techniques relevant to the occupational working area. This verifiable evidence must be **at or above the level being assessed** and include one or more of the following:

- a relevant qualification (see list in Section 2.5 of this Annex)
- registration with the appropriate industry registration body at the relevant occupational level and grade.

For particular units/qualifications the verifiable evidence may need to be above the level of the unit/qualification being assessed. This requirement will be detailed in the “Additional Information” pertaining to specific units/qualifications.

Assessment of competence-based units/qualifications for electrotechnical and mechanical services occupations will require assessors **to have the relevant qualification** that certifies their competence in key technical areas pertinent to the completion of the unit/qualification. (see list in Section 2.5 of this Annex 1).

This occupational competence must include up-to-date knowledge of each industry (for which the assessment is taking place), its settings, legislative and regulatory requirements, codes of practice and guidance.

2.1.5 (Assessor Continuing Professional Development)

The occupational competence of assessors must be updated on a regular basis and be periodically reconfirmed via continuing professional development (CPD) via the assessment centres and quality assured by the Awarding Organisation.

It is the responsibility of each assessor to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and SSC and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge. It is imperative that records are kept of all such CPD opportunities/occasions and that they provide evidence of cascading such technical knowledge and industry intelligence to all relevant colleagues.

2.2 Internal Verifiers (IV)

2.2.1 (IV Role and Responsibilities)

SummitSkills considers the main focus of IVs to be the quality assurance of assessment procedures. The IV is also required to have a minimum of occupational experience evidenced by having a Building Services Engineering sector related qualification or proven sector competence/experience plus access to relevant "occupational expertise" to enable them to conduct their role as internal verifier appropriately. This evidence and access to "occupational expertise" is quality assured by the Awarding Organisation

2.2.2. Internal verifiers must:

Be working towards or have achieved the V1 Standard and continue to practice to that standard;
or
Have achieved D34 and possess CPD evidence of practicing to the V1 Standard and Demonstrate an understanding of the assessment process

2.2.3 IV Continuing Professional Development

The occupational experience of IVs must be updated on a regular basis and be periodically reconfirmed via continuing professional development (CPD) via the assessment centres and quality assured by the Awarding Organisation.

It is the responsibility of each IV to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and SSC and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge.

It is imperative that records are kept of all such CPD opportunities/occasions.

2.3 External Verifiers (EV)

2.3.1 EV Role and Competence

External Verifiers must;

- be accountable to the Awarding Organisation
- be working towards or have achieved the V2 Standard and continue to practice to that standard

or

- have achieved D35 and possess CPD evidence of practicing to the V2 Standard and demonstrate an understanding of the assessment process
- have no connections with the assessment centre, in order to maintain objectivity

- have verifiable relevant sector competence. This verifiable evidence must **be at or above the level being audited** and include one or more of a relevant occupational qualification (Examples are listed in section 2.5 of this Annex) or be registered with the appropriate industry registration body at the relevant occupational level and grade.
- have sufficient and relevant technical/occupational understanding in the qualification(s)/unit(s) being verified
- be fully conversant with the standards and performance criteria in the units to be assessed
- be able to provide centres with advice and guidance on assessment and internal verification procedures

2.3.2 EV Continuing Professional Development

The occupational competence of EVs must be updated on a regular basis and be periodically reconfirmed via continuing professional development (CPD) and recorded by the assessment centres and quality assured by the Awarding Organisation.

It is the responsibility of each EV to identify and make use of opportunities for CPD, such as industry conferences, access to trade journals, and SSC and Professional Body/Trade Association events, at least on an annual basis to enhance and upgrade their professional development and technical knowledge.

It is imperative that records are kept of all such CPD opportunities/occasions and that they provide evidence of cascading such technical knowledge and industry intelligence to all relevant colleagues.

2.4 Expert Witnesses

Where "**Expert Witnesses**" are used in the assessment process identified above they must be;

- Sector competent individuals who can attest to the learner's performance in the workplace.
- It is not necessary for expert witnesses to hold an assessor qualification, as a qualified assessor must assess the performance evidence provided by an expert witness
- Evidence from expert witnesses must meet the tests of validity, reliability, authenticity and sufficiency
- Expert witnesses will need to demonstrate: -

    1) They have relevant current knowledge of industry working practices and techniques

    2) That they have no conflict of interest in the outcome of their evidence

2.5 Attesting to Occupational Competence for Assessors and EVs

This Assessment Strategy explains that Assessors and External Verifiers must either be able to demonstrate that they are registered and up-to-date with their registration with an appropriate approved industry registration body or have one or more of a relevant occupational qualification (See example list below) to ensure that they can be regarded as occupational competent in terms of assessing or verifying the relevant qualifications, and units therein, identified in Annex 1.

NVQs/SVQs at the appropriate level or their equivalents in the Qualifications and Credit Framework

Plumbing
Plumbing (Domestic) (SVQ)

Heating and Ventilating (Rectification of Systems)
Heating and Ventilating Installation (Domestic, Ductwork or Industrial & Commercial)

Refrigeration & Air Conditioning (Commercial & Industrial Air Cond. Systems) Refrigeration & Air Conditioning (Ammonia Refrigeration Systems)
Refrigeration & Air Conditioning (Commercial & Industrial Refrigeration Systems - Non Ammonia)
Electrotechnical Services (Installation - Buildings & Structures) Electrotechnical Services (Electrical Maintenance) Electrotechnical Services (Installing Highway Electrical Systems) Electrotechnical Services (Installing Structured Cabling Systems) Electrotechnical Panel Building
Electrical Machine Repair & Rewind
Electrical and Electronic Servicing

Other certificates in competences that have been aligned, and are supplemental, where relevant, to the above:

A relevant brazing or pipe-fitting qualification

Accredited Certification Scheme(ACS)

- CCN1: General Gas Safety
- CEN1: Installation of central heating boilers
- HTR1: Installation of gas fired heaters
- CKR1: Installation of gas cookers
- WAT1: Installation of gas water heaters

BRA/CITB Brazing Assessment

City & Guilds Level 3 NVQ in Gas Emergency Service Operations

City & Guilds Level 2 NVQ in Domestic Natural Gas Installation and Maintenance City & Guilds Level 3 NVQ in Domestic Natural Gas Installation and Maintenance Level 2 Vocational Award in Handling Refrigerants (City & Guilds 2078)
Level 2 Vocational Award in ODS F gases (City & Guilds 2079) Relevant OFTEC and/or HEATAS qualifications
Qualifications recognised under DCLG Competent Person Schemes

Unvented Hot Water external assessment to Building Regulations and/or Building Standards requirements

Water Supply Regulations (1999) Water Byelaws (2000)

NOTE: Assessors and verifiers who have relevant qualifications pre-NVQ and post-NVQ which are not competence- based must provide verifiable evidence that they are occupationally competent. This evidence must demonstrate that the assessor/verifier has up-to-date knowledge of the industry/occupation (for which the assessment is taking place), its settings, legislative and regulatory requirements, codes of practice and guidance.

Annex 3 - Industry arrangements for the "Assessment of Occupational Competence"

As explained above, the "Assessment of Occupational Competence" is an independent part of the assessment process. Each industry will have its own arrangements which will be compliant with the following requirements.

Details of these assessments will be based on "Industry Recommendations", see chart below, and will be arranged and agreed between the Awarding Organisation for the units/qualifications in question and the particular industry/occupation using those qualifications. Each Awarding Organisation shall apply the principles specified in Annex 4 of this strategy, thus ensuring a nationally consistent approach of "Assessment of Occupational Competence" for the industry/occupation concerned.

The design, resource implications, administration and quality assurance requirements for each "Assessment of Occupational Competence" will be determined and agreed by SummitSkills, the industry and the Awarding Organisations in order that there is no disadvantage to the candidate or detriment to the industry in terms of individuals being able to demonstrate "occupational competence".

Any of the above should be cost effective and imply no additional unreasonable burden or expenditure for Awarding Organisations.

Industry	**OUTLINE content for each industry's "Assessment of Occupational Competence"**
Electrical and Electronic Servicing	• Activities relating to limited scope electrical work • Installation of signal reception systems and equipment
Electrotechnical	• Safe isolation • Risk assessments and safe working practices • Inspection, testing and commissioning • Diagnosing and correcting faults
Heat and ventilation / Ductwork	• Activities relating to limited scope electrical work • As relevant, the installation, connection and servicing/maintenance of fuel systems and equipment – gas; oil; solid fuel

	• As relevant, the installation, connection and servicing/maintenance of hot/cold water systems and equipment – unvented water; backflow prevention • As relevant, the installation, connection and servicing/maintenance of ductwork systems and equipment
Refrigeration and Air Conditioning	• Activities relating to F Gas installations/service and maintenance • Limited scope electrical work • Thermal pipe joining methods – welding; brazing; soldering • Assessment and certification as required by F Gas and Ozone Depleting Substances Regulations.

Plumbing

- Activities relating to limited scope electrical work

Domestic Plumbing & Domestic Heating

Assessment in the following competence areas must meet the minimum standards laid down by the following bodies and be capable of facilitating separate operative registration (without further assessment and training) with industry
recognised bodies approved to register operatives in the listed competence area.

- Water Regulations – DEFRA (WRAS)
- Unvented hot water – Building
- Regulations/Standards
- Energy efficiency – Building Regulations/Standards (Part L1 of the Building Regulations in England & Wales)
- Gas – gas registration provider
- Oil – OFTEC
- Solid fuel – HETAS
- Electrical – defined scope Part P electrics
- Emerging technologies – MTC proposals
- (Competent Persons Schemes)

Level 3 Industrial/Commercial Plumbing

Assessment in the following competence areas must meet the minimum standards laid down by the following bodies and be capable of facilitating separate operative registration (without further assessment and training) with industry
recognised bodies approved to register operatives in the listed competence area.

- Water Regulations – DEFRA (WRAS)
- Disinfection of water systems DEFRA (WRAS)
- Unvented hot water – Building Regulations/Standards
- Gas – gas registration provider

Annex 4 – Arrangements between organisations providing the facilities for the "Assessment of Occupational Competence" and Awarding Organisations

1. Introduction

1.1 The "Assessment of Occupational Competence" is a part of the assessment process/requirements for the qualification structures identified in this assessment strategy (Annex 1), it is an independent activity or activities which are conducted as part of the assessment process to confirm occupational competence

1.2 Each industry will have its own requirements which are compatible to and reflect their particular necessities in terms of assessing occupational competence (Annex 3) in an "independent structure". These arrangements and the assessment methodology will be agreed between SummitSkills and Awarding Organisations accordingly.

1.3 The **Heating & Ventilating, Plumbing and Refrigeration & Air Conditioning** industries will maximise the facilities in approved delivery/assessment centres who will provide an independent, controlled and designated assessment environment within its learning and assessment resource for the purpose of the "Assessment of Occupational Competence" for the identified qualification in question

1.4 The **Electrical & Electronic Servicing (Consumer Electronics; Domestic Appliances; Signal Reception)** industry will maximise the facilities in approved delivery/assessment centres who will provide an independent, controlled and designated assessment environment within its learning and assessment resource for the purpose of the "Assessment of Occupational Competence" for the qualification in question

1.5 The **Electrotechnical (Electrical Installation; Electrical Maintenance; Electrical Panel Building; Electric Motor Repair & Rewind)** industry will use an industry prescribed "Assessment of Occupational Competence" facilitated by organisations approved by National Electrotehnical Training (NET)1.

NOTE 1: **NET** is an independent industry charity which represents and coordinates particular training initiatives in the electrotrechnical industry. Its portfolio includes holding the intellectual copyright for the industry's recognised and approved "Occupational Competency Assessment" – AM2 in England, Northern Ireland and Wales. Therefore, NET has the responsibility and accountability for the quality and rigour of the industry's "Assessment of Occupational Competence" in terms of provision, facilities, health & safety, marking regime and assessment methodology and quality assurance.

2. Purpose

2.1 The purpose of these Arrangements is to define the roles and responsibilities of the organisations and bodies involved with facilitating, managing and administering the "Assessment of Occupational Competence" for each industry.

2.2 These Arrangements only relate to the qualifications identified in Annex 1 of this assessment strategy or their revisions/replacements as determined by SummitSkills.

3. Roles and Responsibilities

3.1 Heating & Ventilating, Plumbing and Refrigeration & Air Conditioning and Electrical & Electronic Servicing qualifications:

3.1.1 The “Assessment of Occupational Competence” requirements will be determined by SummitSkills in partnership with industry representatives and Awarding Organisations.

3.1.2 The “Assessment of Occupational Competence” facilities will be provided by Awarding Organisation approved centres and comply with the requirements identified in 3.1.1

3.1.3 Awarding Organisation Internal Verifiers (IVs) and External Verifiers (EVs) will be responsible for quality assuring the “Assessment of Occupational Competence” facilities in accordance with the Awarding Organisation’s compliance requirements.

3.2 Electrotechnical:

For the purpose of these Arrangements organisations approved to provide the “Electrotechnical Assessment of Occupational Competence ” will be referred to as “EAOC Centres”

3.2.1 The “Electrotechnical Assessment of Occupational Competence” requirements will be determined and prescribed by NET.

3.2.2 The “Electrotechnical Assessment of Occupational Competence” facilities will be provided by “EAOC Centres” approved by NET in accordance with the NET industry endorsed Centre Approval Specification.

3.2.3 NET will be responsible and accountable for the quality assurance of the “Electrotechnical Assessment of Occupational Competence” facility, assessment methodology and marking regime/criteria.

3.2.4 NET will be responsible for quality assuring the rigour and assessment methodology associated with the “Electrotechnical Assessment of Occupational Competence” facilities and assessment requirements in accordance with the NET industry endorsed “EAOC Centres” Approval Specification.

3.2.5 NET will provide Awarding Organisation EVs summaries of the annual monitoring visit criteria, procedures and reports, as appropriate, for “EAOC Centres” who are approved to provide the “Electrotechnical Assessment of Occupational Competence” facility.

3.2.6 NET will provide Awarding Organisation IVs and EVs, as appropriate, a summary of the principles of the “Electrotechnical Assessment of Occupational Competence” marking regime and criteria in terms of its integrity, robustness and consistency”.

3.2.7 NET will work in partnership, as appropriate, with Awarding Organisations to address any candidate grievances related to the “Electrotechnical Assessment of Occupational Competence”.

3.2.8 SummitSkills and NET will be responsible for the maintenance of the “Electrotechnical Assessment of Occupational Competence” unit in the QCF.

4. Currency of these Arrangements

It is expected that the currency of these Arrangements will match with the accreditation period of the qualifications, or units therein as relevant, as identified in Annex 1. SummitSkills, in partnership with the Awarding Organisations and any relevant approval organisation(s) associated with these Arrangements will review the Arrangements bi-annually or as appropriate subject to any revisions to the qualifications identified in Annex 1.

Resources

Training Resources

Centres may use their own, or published learner support materials in delivering the qualification. Whatever support materials centres choose to use, they should ensure that their delivery methodology adequately prepares the learner for assessment.

Resources and Useful websites

British Automatic Fire Sprinkler Association -BAFSA	http://www.bafsa.org.uk/
Skills for Security	http://www.skillsforsecurity.org.uk/
Fire Sector Federation	http://www.firesectorfederation.co.uk
European Fire Sprinkler Network	http://eurosprinkler.org/
National Fire Sprinkler Network	http://www.nfsn.co.uk/
Health and Safety Executive	http://www.hse.gov.uk
The National Archives (For all UK legislation)	http://www.legislation.gov.uk
The Information Commissioners Office	http://www.ico.gov.uk
Office of Public Sector Information	http://www.opsi.gov.uk
Health and Safety Executive for Northern Ireland	http://www.hseni.gov.uk
Northern Ireland Office	http://www.nio.gov.uk
Northern Ireland Assembly	http://www.niassembly.gov.uk

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