

MANAGING COMPETENCE FOR VENTILATION HYGIENE ACTIVITIES

Industry Competence Steering Group (ICSG)

Sector Led Group 10 - Installation & Maintenance (10.2 Engineering Services)

Ventilation Hygiene Competence Group (VHCG)

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Executive summary

In the wake of the Grenfell Tower fire, a comprehensive review of building regulations and legislation was carried out to deliver the recommendations made in Dame Judith Hackitt's report 'Building a Safety Future'. This triggered change in both primary and secondary legislation which further embedded the requirement for demonstration of individual competence and organisational capability for those carrying out work in the built environment. The Industry Competence Steering Group, a formal sub-committee of the Building Safety Regulator's statutory Industry Competence committee, is tasked with supporting employers to define and address approaches to demonstrating competence within their areas.

Within this structure, the Ventilation Hygiene Competence Group (VHCG) was formed to lead the development and implementation of individual competence frameworks related to ventilation hygiene (air and grease hygiene).

This document sets out a proposed future state for developing, validating and revalidating individual competence in this area, intended to apply throughout the UK. Following a consultation period, final documentation will be approved through the Building Services Engineering Skills Partnership Committee signalling formal adoption by industry. Subsequent implementation activities will then be led by the relevant skills body.

Key challenges and opportunities in defining and measuring competence were discussed by VHCG, with recommendations highlighted for building on existing available documentation and making improvements. These include creating clarity around the health and safety requirement for ventilation hygiene in the absence of recommended qualification structures which have been agreed by industry, and addressing issues with site access.

A functional map and framework of competencies has been created, building on the existing National Occupational Standard in this area. This breaks down work into discrete activities and sets out standards for them in terms of skills, knowledge, experience and behaviour (SKEB), in line with the requirements of 8670-1. The statements are also mapped back to other relevant standards and frameworks. A second phase of activity is proposed to address competence associated with surveying and auditing, which is currently out of scope of these developments.

Routes to competence, including requirements for initial demonstration of SKEB, validation of evidence, ongoing demonstration of SKEB and periodic revalidation of competence evidence have been set out. This includes routes for new entrants and experienced workers. In the absence of formal qualifications based on agreed industry structures, these are based around assessment which meets the requirements of the proposed competence framework, in conjunction with ongoing evidencing of experience and behaviour.

Further activity will be required to turn the proposed state into a reality. An implementation plan is therefore set out which includes proposed actions to move towards this. This includes development of more detailed specifications of training and assessment content in conjunction with training and assessment providers.

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i Introduction

i.1 Drivers for change

In 2017, the Grenfell Tower fire created shockwaves throughout the built environment sector and generated a great deal of focus on deficiencies in both construction practices and the capability of the construction workforce.

It was recognised in the report of Dame Judith Hackitt, 'Building a Safer Future: Independent Review of Building Regulations and Fire Safety' (also known as the Hackitt Report) that a simple, more effective regulatory framework would be required to deliver change. This included moving to an 'outcomes-based' model, rather than a prescriptive rules-based model reliant on complex and detailed guidance. To achieve this, competent people who are capable of understanding their responsibilities for safety & integrity and thinking for themselves are required, alongside capable organisations which put individuals in a position where they can act competently.

The Building Safety Act 2022 (the Act) has introduced a new regulatory regime which puts a legal requirement to demonstrate competence front and centre, to directly address this issue. The Act, together with supporting secondary legislation sets a general requirement for competence at both individual and organisational levels:

- Individual competence – Any person carrying building or design work must possess the skills, knowledge, experience and behaviours (SKEB) necessary
- Organisational capability – Organisations must have the organisational capability to perform their functions. Organisational capability is defined within Building Regulations as having the appropriate management, policies, procedures, systems and resources in place to ensure that individuals under the control of the organisation comply with relevant regulations and that those in development are appropriately supervised

i.2 Organisational capability and individual competence

Correct cleaning of ductwork and associated products is critical to ensuring correct function of ventilation systems and to minimise risk. The definition of ventilation hygiene used within this document can be found in section 1.1. It encompasses both air and grease hygiene.

Organisational capability for those carrying out grease hygiene activities is currently measured through mechanisms such as the ventilation hygiene register and other similar schemes, which show contractor compliance with TR19 Grease (Specification for Fire Risk Management of Grease Accumulation within Kitchen Extract Systems). These schemes include both desk-based audit of, policies, processes, insurance and training, follow up site visits, and unscheduled audits. The ventilation hygiene register may be further extended to cover air hygiene and fire damper testing. Any extension of the register will be aligned to industry identified requirements for individual competence.

The work described within this report has focussed on defining an approach to individual competence which can be connected to wider organisational capability. This has been aligned with the requirements set out in BS 8670-1:2024, the code of practice for competence frameworks for building safety – core criteria.

i.3 Addressing individual competence

The Industry Competence Steering Group (ICSG) is a formal, cross-sector working group of the Industry Competence Committee (ICC), a statutory committee of the Building Safety Regulator (BSR). ICSG provides a vehicle for industry collaboration in development and implementation of competence frameworks in the built environment.

ICSG is made up of multiple sector led groups (SLGs), each leading work in a specific area. Within this, SLG 10 is focussed on competence frameworks for installation and maintenance. The structure of SLG 10 is split into 5 super sectors, each focussed on different aspects of the installer landscape. SLG 10.2 covers roles and activities associated with engineering services, including ventilation hygiene.

i.4 The Ventilation Hygiene Competence Group (VHCG)

VHCG was formed to take forward the development of a sector-based approach to competence on behalf of SLG 10. It is formed from industry specialists and employer representative organisations in line with the principles underpinning the work of ICSG.

The following organisations have contributed to the work of VHCG and been instrumental in the production of this document:

- Airmec Essential Services
- Building Engineering Services Association (BESA)
- Compliance Air and Water Limited
- Ductbusters Limited
- Engineering & Building Services Skills Authority (EBSSA)
- IAQ Consultancy Services
- System Hygienics Limited
- Vent-Tech Ltd.
- Ventilation Surveys & Services Limited

VHCG would also like to thank Milford & Marah Ltd. for facilitating this work.

At every stage, VHCG has endeavoured to consult with or include the work of other relevant bodies or working groups to ensure a joined-up approach to competence with allied areas.

i.5 The structure of this document

This document has been created to set out an intended ‘future state’ for individual competence for those carrying out ventilation hygiene activities (in accordance with the definition in section 1.1). This is set out in five sections:

Section 1 – Scope

This section provides information on the applicability of this document. This includes the purpose and scope of the work carried out in terms of occupation, building types and geographical area.

Section 2 – Background & context

The section provides contextual information around current competence arrangements within ventilation hygiene, including strengths, weaknesses, challenges and opportunities, which has informed the development of subsequent sections. Throughout this section, recommendations for improvement have been embedded, which are reflected in the proposed framework, standard for competence and/or implementation plan. These recommendations are summarised in Appendix 1 – Consolidated list of recommendations.

Section 3 – Functional map and framework of competencies

This section sets out the activities carried out within the agreed scope of ventilation hygiene, and the benchmark for competence within them in terms of skills, knowledge, experience, and behaviour (SKEB).

Section 4 – Standard for competence

This section includes details of how competence can be validated and revalidated against that standard to ensure both initial competence and currency of competence.

Section 5 – Implementing the standard

This section sets out expected actions required to turn the future state into a reality, including revision of standards and associated education products, and actions to ensure consistency across the training and assessment landscape.

Additional information is included within the appendices. Appendix 2 sets out terms and definitions used in the document, and appendix 3 provides a bibliography of further publications in support of this document.

This document provides industry guidance on demonstrating competence in ventilation hygiene. Whilst the requirements of the Building Safety Act (2022) and secondary legislation such as the Building Regulations 2010 and their 2023 amendment have been taken into account in its production, its content does not constitute regulatory guidance and it is not intended to provide interpretation of the law. Responsibility for complying with the law sits with the individuals and organisations carrying out work. Signposting to relevant legislation and regulations can be found within Appendix 3.

i.6 The consultation and adoption process

This document is intended to provide a mechanism for consultation with the wider sector. Following closure of the consultation all comments will be reviewed by VHCG and, where required, amendments may be made to the functional map and framework of competencies, the standard for competence, and/or the implementation plan.

Final proposals post-consultation will be submitted to the Skills Partnership Committee for adoption and publication through its formal processes. Following approval, implementation will be continued by BESA (the relevant skills body) in collaboration with VHCG and other stakeholders, including training & assessment providers as appropriate.

1 Scope

1.1 Occupational area

The following definition has been used to underpin the developments outlined in this document:

Ventilation hygiene ensures that ventilation systems are maintained in a clean condition and decontaminated as required by statutory regulation and in compliance with industry standards, to maintain system performance and efficiency important to net zero and ensure the wellbeing and safety of those within the built environment. This includes checking, testing and reporting operation of associated equipment to maintain compartmentation when cleaning is being carried out.

This includes:

- Air hygiene – cleaning of industrial, commercial and healthcare ventilation systems that are not used for commercial extract cooking applications, aligned with the requirements of TR19 Air – Specification for Internal Cleanliness and Hygiene Management of Ventilation Systems, NAAD-21 Part 2: AIR (Indoor Air Quality), and BS EN 15780 – Ventilation for buildings. Ductwork. Cleanliness of ventilation systems
- Grease hygiene – cleaning of industrial, commercial and healthcare ventilation systems specifically relating to kitchen extract systems not suitable for air or general ventilation cleaning works, aligned with the requirements of TR19 Grease – Specification for Fire Risk Management of Grease Accumulation within Kitchen Extract Systems, NAAD-21 Part 1: GREASE (Kitchen Extract), and BS EN 15780 – Ventilation for buildings. Ductwork. Cleanliness of ventilation systems

1.2 Purpose

The purpose of this work is to set out an industry approach to developing, measuring, and validating the competence of those undertaking ventilation hygiene activities against the scope set out in section 1.1. This will ensure that defined arrangements are in place by which competence can be objectively measured and confirmed, increasing safety.

This document and its underpinning details are designed for use for a variety of purposes, including:

- Development of industry wide tools for measuring and validating competence
- Development of organisational approaches to evidencing workforce competence
- Alignment and/or recognition of existing training, assessment, qualifications
- Development of new training, assessment, qualifications, and occupational standards
- Strengthening arrangements for organisational capability through third party certification schemes or trade body membership schemes

No specific sector-based legal requirements for validation or revalidation of competence in ventilation hygiene currently exist, however the Building Safety Act (2022) and associated legislation place an onus on individuals and employers to prove competence to work in critical activities in construction and the built environment.

1.3 Occupational relevance

This approach to competence has been designed for those carrying out ventilation hygiene activities as set out in the definition in section 1.1. This includes activities which may apply to those with the following role titles:

- Trainee
- Air hygiene operative
- Air hygiene technician
- Grease hygiene operative
- Grease hygiene technician

A second phase of work will be required to focus on activities which fall outside these roles, for example surveying and / auditing.

1.4 Limitations and exclusions

The scope of this work applies to industrial / commercial, healthcare and large-scale residential settings. Small-scale domestic ductwork is out of scope.

1.5 Building types

The requirements set out in this document apply to work carried out on both new build construction sites and in existing buildings. They also apply equally to work carried out on higher-risk buildings (HRBs) and other building types.

1.6 Geographical scope

The proposals set out have been designed to apply to the whole of the UK to create a consistent standard for competence. Further discussion with bodies in devolved nations may be required to implement these proposals outside England.

2 Background & context

2.1 Activity based competence

Work carried out in ventilation hygiene extends from general cleaning activities through to customer service and supervisory activities in both air and grease hygiene. Activities for those carrying out surveying and auditing may also need to be addressed. The extent of work in an individual's area of responsibility will depend on whether they are conducting air or grease hygiene work and whether they are acting in the role of operative or technician, or whether they are in a related role. An activity-based definition of competence will help to set out these requirements in a modular way.

Recommendation 1: An activity-based approach should be used when defining required standards of competence

Initial development of competence standards should focus on activities carried out by those in operative and technician roles for both air and grease hygiene. Surveying and auditing activities should be covered in a subsequent phase of work.

Recommendation 2: Development of initial competence standards and frameworks should focus on activities carried out by ventilation hygiene operative and technicians

2.2 Occupational standards

The National Occupational Standard (NOS) BSEHV11 – clean industrial and commercial ventilation systems – is the only existing description of competence for ventilation hygiene (Apprenticeship occupational standards in England were withdrawn due to low uptake). This standard was reviewed in early 2025 with only minor amendments made. Already consulted upon and adopted by industry, this provides an existing foundation for development of broader competence standards.

No specific occupational standards for surveying and auditing currently exist, but elements of these may be embedded within existing NOS.

Recommendation 3: NOS should form a basis for development of competence standards in this area

Although the NOS reflect skills and knowledge, requirements for experience and behaviour have not been fully articulated. There are also areas of identified weakness around engaging with customers which are applicable at technician level. Addition of further statements in the competence standards in these areas will therefore be required in order to support industry in discharging their legislative and regulatory responsibilities. Integrating NOS into wider competence standards set by industry will maintain alignment between qualifications systems and wider legal or best practice requirements.

Concerns around the level of detail included in the NOS have also been identified which may result in inconsistent interpretation in resulting qualifications and assessment programmes. Some clarification detail may therefore be required in the competence standards which does not appear in the NOS.

Recommendation 4: Competence standards should build on the NOS to ensure full coverage of SKEB requirements in relevant activities

No industry agreed qualification structures (which would usually be developed by the relevant standard setting body alongside the NOS) exist to underpin assessment provision¹. The full scope of health and safety included in building services engineering NOS which underpin qualifications at level 2 and 3 is considered to be too broad in scope for the needs of ventilation hygiene operatives and technicians. To address this, the work of this group should set minimum standards of SKEB for health and safety within the competence standard that programmes of training and assessment can be aligned to.

Recommendation 5: The competence framework should set minimum requirements for health and safety SKEB

2.3 Existing qualifications and assessment programmes

2.3.1 Regulated qualifications

No nationally recognised qualifications specific to ventilation hygiene currently exist. Difficulty creating traction with awarding organisations has been identified throughout mechanical engineering services. Current qualifications across the sector have limited take-up. Costs and time taken for completion are seen as barriers to learner uptake.

Apprenticeships were developed in England, but these have subsequently been withdrawn due to very low uptake. This is likely due to the scope of work in ventilation hygiene and difficulties meeting minimum thresholds for apprenticeship duration.

It is felt that further formal qualifications for ventilation hygiene will not provide the necessary support to the sector. Work should focus on ensuring that non-qualification programmes of training and assessment aligned to the competence framework are available to industry.

Recommendation 6: Work should focus on ensuring that non-qualification programmes of training and assessment, aligned to a central competence framework, are available to industry

An optional unit for ventilation hygiene is included within the SVQ Heating and Ventilation Ductwork Planning and Installation (SCQF level 6). The qualification structure is in the process of being updated (Spring 2025) to make this unit additional rather than optional. This is, however, only accessible to those carrying out installation works as well as cleaning. This creates a barrier to use of this qualification for ventilation hygiene operatives and technicians. Consideration for maintaining alignment of this qualification with newly developed pathways specific to ventilation hygiene needs to be made.

2.3.2 Alternative programmes of training and assessment

The gap in qualifications has been filled with training & assessment through the BESA Academy and customised awards.

BESA training & assessment is short-form, lasting a maximum of 4 – 5 days and aligned to BSEHV11 and the TR19 code of practice. Assessment tests underpinning knowledge through multiple choice questions and professional discussion, and practical skills through practical

¹ Qualification structures usually group multiple NOS together and usually create combinations of generic NOS (e.g. health and safety) with specialist NOS like BSEHV11.

assessment tasks. Capstone, on-site assessment is not carried out as, in this case, assessment of skills can be successfully carried out in a simulated environment.

Customised awards are provider specific packages of learning and assessment, designed to allow recognition of employer-specific training. In this case, they have been repurposed to create a commercial offer. Customised awards may not be regulated in the same way as nationally recognised qualifications, although awarding organisation specific quality measures are applied. For ventilation hygiene, the relevant customised awards are based on BSEHV11 and wider health and safety NOS taken from existing building services engineering suites.

Non-qualification programmes of training and/or assessment should align to the competence standard and framework moving forward (both initially and as time passes). It should be made clear to industry which available programmes meet or exceed the standards set.

Recommendation 7: The Skills Partnership Committee should approve all products which contribute to evidence of competence and make it clear how these relate to the activities and statements set out within the competence framework

Although these interventions address skills and knowledge, limited assessment of experience and behaviour is made. Additional mechanisms for evidencing experience and behaviour will need to be set out within routes to competence created

Recommendation 8: Mechanisms for evidencing experience and behaviour should be set out within the routes to competence

Although elements of surveying and auditing may be built into these programmes, the extent to which these activities are covered is unclear. Phase 2 of work should set minimum requirements for these activities and identify appropriate routes to competence.

Recommendation 9: A second phase of activity should address routes to competence for surveying and auditing

Concerns have been raised around the consistency of assessment between providers, due to the potential for differing interpretations of the NOS. Confidence will need to be provided that assessment is robust and meets any competence standards set. Developing a central assessment specification alongside the NOS would help to drive consistency and ensure that assessments in place remain true to the competence requirements set by industry. It is important that assessment providers are included in this work.

Recommendation 10: A standard assessment specification should be developed to drive consistency and ensure alignment with the competence framework

On-site assessments for ventilation hygiene may be cost and time prohibitive, or unnecessarily extend the time taken to signoff of initial competence. In some cases, the logistics of getting assessors on to site can be difficult due to the nature of sites being worked on, permitting requirements or scheduling of work at unsociable hours. This may overlay additional costs that ultimately need to be borne by employers. Low volumes of learners split across multiple locations do not allow for economies of scale to offset these costs and drive efficiencies. The use of simulation in the assessment process should be carefully considered to mitigate this – the move to simulation is reflective of other areas of construction and the built environment and has not been found to adversely affect outcomes. Room should be left for both on-site and

simulated assessment models within the assessment specification, although care should be taken to ensure parity of outcomes.

Recommendation 11: Provision for on-site and off-site assessment should be made in the assessment specification, ensuring parity of outcomes

2.4 Training provision

2.4.1 Industry training

Much training in ventilation hygiene takes place in the workplace, within organisations. This may be difficult to replicate in a training environment. Despite this, lack of clear direction for those carrying out training may result in differing operative / technician capabilities. Training infrastructure is in place to deliver off-site training to supplement this where required.

Development of a standard training specification would support both employer developed and third-party training to meet the needs of the sector. Input from training providers will be essential to ensure that this guidance is fit for purpose.

Recommendation 12: A standard training specification aligned to the competence standard should be created and maintained to support consistency of training delivery

2.4.2 Basic fire safety awareness training

A key recommendation of CSG's final report² was the development and implementation of basic fire safety training for all installers across the built environment. As a result of this, in consultation with industry, CITB has developed a basic e-learning package to ensure awareness of the basic principles of fire safety. A contextualised version of this is currently in development for the Building Services Engineering sector, which will create broad awareness of fire safety requirements in a sector specific manner. Integrating this into routes to competence for ventilation hygiene will ensure a basic awareness of fire safety for all whether dealing with air or grease hygiene work.

Recommendation 13: Building services engineering specific basic fire safety awareness training should be incorporated into ventilation hygiene routes to competence

2.4.3 Manufacturers' training

Manufacturer's training is not considered specifically relevant in this area in the context of baseline competence.

2.5 Capacity and capability for training / qualification / assessment delivery

A lack of qualified assessors is seen as a potential barrier to driving a consistent standard of qualification / assessment within industry. Training and assessment providers in both the private and public sectors struggle to find appropriately qualified and experienced people to deliver, which leads to a knock-on lack of investment in facilities specific to building services engineering learning and assessment programmes. Despite this, there is a wealth of expertise and experience within industry which could be leveraged to expand the trainer and assessor population.

² CSG (the Competence Steering Group) was the forerunner of ICSG. Its final report was: Setting the Bar. The Final Report of the Competence Steering Group for Building a Safer Future. October 2020. Available from: <https://www.cic.org.uk/uploads/files/old/setting-the-bar-9-final-1.pdf>

Consideration needs to be given as to how to expand and formally qualify the pool of available assessors. Transitional arrangements to allow occupationally competent individuals to assess wider workforce competence may be required to allow time for more formal infrastructure to be embedded.

BESA is currently running a campaign called Skills Legacy to encourage experienced workers to qualify in learning and development in order to support ongoing provision. This includes connecting potential trainers and assessors with upskilling qualifications, brokering funding, creating a register of assessors, and connecting those assessors with qualifications providers who need additional support.

2.6 Validation of competence

2.6.1 Initial validation

Initial validation of competence across the full scope of SKEB is not currently made. Additional guidance on how to evidence competence will need to be made available to industry to support individuals and employers in discharging their legislative and regulatory responsibilities.

Recommendation 14: Additional guidance on how to evidence competence should be made available to industry

Card provider registration (BESA SKILLcard) is currently used as a proxy for validation of competence. This currently relates to skills and knowledge only. On-going registration with SKILLCard is then subject to completion of the relevant health, safety & environment (HS&E) test.

Concerns have also been raised around a lack of opportunities for assessment of competence linked to registration, particularly for operatives. Registration is currently only available through Ventilation Hygiene Technician registration with BESA SKILLCard. The only existing route to registration is via completion of a customised award, subject to the completion of health and safety testing.

Consideration should be focussed on the requirements for competence in this area, taking into account the level of skill required for the roles (considered to be semi-skilled rather than skilled at operative level), and competence should be validated accordingly. If a card is required for site access, the basis on which this card is awarded should link with the competence requirements as set out by industry, rather than the competence requirements being built to allow achievement of a blue skilled worker card. Other card types should be explored which better reflect the scope and extent of requirements, for example exploring the use of the 'related discipline card' for ventilation hygiene operatives³.

Recommendation 15: Other card types for ventilation hygiene operative should be explored, which link to rather than drive competence requirements

Current registration is occupational and does not provide a granular view of the work that people do, or do not, have the skills and knowledge to undertake. No distinction is made between grease and air technicians. This may need to be made explicit in future models.

³ This type of card may be used for ancillary occupations or activities within building services engineering

Recommendation 16: Card scheme registration should be made more granular to make it clearer whether scope of assessment related to air, grease or both

In addition, registration is made mainly on demonstration of skills and knowledge with little accounting for experience or behaviour. Additional consideration of how card schemes may be able to support demonstration of competence across the full scope of SKEB should be made. This may provide an additional avenue to support individuals and their employers evidencing that the required competence is in place.

Recommendation 17: BESA SKILLCard should consider how it might support validation / evidencing of competence across the full scope of SKEB

2.6.2 Currency of competence and ongoing validation

Currency of competence is essential to ensure that the workforce is not only capable now but remains capable in the future. A key component of the new competence regime is that competence must be maintained over time and that maintenance should be demonstrated.

Currently, no formal ongoing assessment of competence is made. Card scheme re-registration is based on achievement of the relevant HS&E test, with evidence of occupational competence coming solely from initial programme completion. No continuing demonstration of sector based SKEB is required. No requirements for continuing professional development (CPD) are in place.

Recommendation 18: Routes to competence should consider the threshold(s) for continuing demonstration of competence

Completing formal CPD is not the only mechanism for retaining skills and knowledge. Consideration should be given to how continuing to evidence application of skills and knowledge (experience) plays into currency of competence.

Recommendation 19: Routes to competence should consider all potential mechanisms for ensuring currency of competence, not just formal training and/or assessment

2.7 Direct links to organisational capability

Both the short form training for Grease Hygiene Technician and the customised awards are further linked to demonstration of workforce capability contributing to organisational registration on the Ventilation Hygiene Register. Consideration needs to be given to the equivalence between these two routes and the role that they play in organisational capability.

In future, the Ventilation Hygiene Register may also be extended to cover air hygiene. Consideration should be given to how any routes to competence identified for Air Hygiene Technician underpin this new part of the register.

2.8 Devolved nations consistency

In setting out requirements for the development, measurement and validation of competence, consideration of the best methods of ensuring consistency between England and the devolved nations is required. This is particularly important where parts of the workforce on national borders may operate in more than one nation. It is essential that a consistent bar for competence is set and adhered to throughout the UK.

Additional collaboration with skills bodies will be required to encourage take up of the additional requirements for competence identified in the devolved nations, over and above NOS, as these sit outside the direct scope of application of the Building Safety Act.

Recommendation 20: Additional collaboration with the devolved nations should be made to drive consistency in standards of competence across the UK

2.9 End user considerations

Any solutions developed in this area need to consider what the market can / will bear in addition to providing robust routes to competence. Cost is a key issue – organisations need to see the value that they are getting from training and assessment processes to be able to justify the spend. Likewise, time taken to complete any processes needs to be considered to ensure that unnecessary burdens are not being placed upon individuals or organisations. Employers / contract holders acknowledge that competence is a requirement and that individuals will need to go through a process but want to ensure that this is as streamlined as possible to ensure that buy-in can be gained from those working in the sector.

2.10 Communications

Communication will be critical to ensure uptake of any final solutions. The value of competence processes needs to be communicated to be seen as credible. This also needs to link back to quality of work. Communications need to show the benefits and why these solutions are different to what has come before.

Across the board, support from the Skills Partnership Committee to review products against the competence standards, any quality requirement in place within industry, and training / assessment specifications, and make clear which products are confirmed as contributing to competence would be helpful.

Recommendation 21: The Skills Partnership Committee should promote the competence requirements approved by industry, and maintain a list of both qualifications and non-qualifications products that contribute to evidence of competence

3 Functional map and framework of competencies

3.1 Development background

A functional map has been created which breaks down the work carried out within the scope of ventilation hygiene (as defined in section 1.1) into discrete activities. These activities reflect the roles, responsibilities and types of work undertaken. These activities have then been aligned to the roles set out within that definition – where activities are marked as mandatory it is expected that individuals within the specified role(s) will demonstrate competence in them.

Each activity has then been broken down into competency statements outlining the skills, knowledge, experience, and behaviour (SKEB) required to perform that activity competently. The most recent versions of National Occupational Standards (NOS) have been used as the basis for skills and knowledge statements. Statements for experience and behaviour and additional specific knowledge and skills statements have been added to create fit for purpose competence standards.

It is acknowledged that the full scope of health and safety included within engineering services qualifications is too broad in this case. Statements of skills, knowledge, experience and behaviour related to working safely have been derived from the basic entry standard expected for existing ventilation hygiene training, as agreed by industry.

Together, the functional map and SKEB statements set out the benchmark for competence in each activity. These are designed to be used in conjunction with the expectations of the standard for competence set out in section 4. The routes to competence defined within that standard have been designed to facilitate demonstration of competence against this framework.

3.2 The functional map and framework of competencies

The detailed functional map and SKEB statements can be found in the spreadsheet included alongside this consultation document: VHCG-OP005 – VH functional map & SKEB v1 FINAL (12.08.25).

Note that only activities prioritised as phase 1 have been addressed in this paper. A subsequent phase of work will be required to address activities for surveying, marked as phase 2.

3.3 Mapping to other standards and frameworks

The SKEB statements developed have been mapped against BS 8670-1, the relevant BSE Skills NOS, and the emerging requirements for construction products competence as outlined in the WG12 whitepaper. Details of that mapping can be found in the framework spreadsheet.

Consideration has also been given to the contents of the whitepaper by the Joint Competence Initiative for the Building Envelope Sector (JCI), published in June 2023.

4 The standard for competence

4.1 Target audiences

This standard for competence is intended to address the needs of the following:

- New entrant (4.6.1)
- Experienced worker (4.6.1)

Individuals will need to meet the requirements set out in the framework of competencies (section 3) for activities relevant to their job role. The routes to competence described in section 4.6 set out how this can be achieved.

As the type and scope of an employer's work changes it is possible that employees will need to extend their job role scope to cover more activities. A method for adding additional activities is therefore provided (see section 4.6.2).

4.2 Preparing to evidence competence

Individuals may use a combination of formal and informal learning to prepare to demonstrate competence.

Training alone (without embedded summative assessment) does not provide evidence of competence, but it is a useful enabler to prepare individuals to create the evidence of skills and knowledge required. Training may be carried out in house or through third-party training providers. When purchasing training, individuals and employers should check that this meets the requirements of the framework and will have value to them.

In addition to aiding development of knowledge and skills, informal learning in the workplace will also help to develop experience and behaviour.

4.3 Collecting evidence of competence

Individuals (in conjunction with their employer where appropriate) should select relevant activities from the functional map according to their role scope - this should include all mandatory activities. Determination of competence should then be made through gathering evidence that the SKEB statements set out for relevant activities have been met in accordance with one of the routes to competence outlined in section 4.6.

- Evidence of skills and knowledge should be obtained through achievement of a relevant programme of assessment meeting the competence standard, approved as fit for purpose by the Skills Partnership Committee
- Experience (continuing application of skills and knowledge) can be demonstrated through collecting and storing evidence of work carried out in accordance with the benchmarks for experience set out within the selected activities
- Evidence of behaviour may be gained through performance management systems, including formal appraisals or reviews, or supervisor / team-leader feedback

Individuals who have yet to meet the required standard of competence for a particular activity should be supervised by a competent individual until competence has been demonstrated.

4.4 Validating competence

Individuals and their employers should validate that evidence of competence is in place across the full scope of relevant standards, as set out in the SKEB statements within the framework, and in accordance with the routes to competence.

It is recommended that a third-party system is utilised, to provide an objective check. For example, through a specific third-party installer certification scheme, a certificated quality management system incorporating management of individual competence, or a trade association membership scheme. Widening of the current industry registration scheme to incorporate full requirements for competence may also support industry in validating competence.

Where use of third-party validation is inappropriate, structured mechanisms for collating and checking evidence should be in place.

4.5 Revalidation of competence

Continuing demonstration of competence and revalidation of that competence are a key component of any assurance scheme. Competence should be revalidated every five years. As with initial validation, it is recommended that a third-party system is utilised to provide an objective check.

Evidence contributing to revalidation should be collected according to the routes to competence set out in section 4.6.3 and the requirements of the framework of competencies.

4.6 Proposed routes to competence

The following are routes to competence for each entry point. It is expected that an employer or individual will define the job role relevant to their scope of activities (as set out in section 4.3) aligned to the relevant occupation, and that individuals will be developed to that level using the appropriate route.

It should be noted that further development and agreement may be required to put those routes to competence in place, specifically to ensure that appropriate products are in place for individuals and their employers to access. Until the point where new routes to competence are available, existing competence guidance should be followed.

4.6.1 *Evidencing initial baseline competence – new entrant and experienced worker*

Individuals develop their skills, knowledge, experience and behaviour in the workplace, supported by appropriate third-party training where required.

Individuals must provide the following evidence of competence:

- Completion of BSE specific fire safety training
- Completion of skills & knowledge assessment approved by the Skills Partnership Committee as meeting or exceeding the requirements of the competence framework, in mandatory activities. This may include existing assessment recognised by the Skills Partnership and may integrate CSCS HS&E testing if appropriate
- Collated evidence of experience in line with the requirements of the competence framework, in mandatory activities

- Collated evidence of behaviour in line with the requirements of the competence framework, in mandatory activities

Individuals will be eligible for:

- A related discipline SKILLcard for air and /or hygiene operative, upon completion of the first two points above, with evidence in place for all mandatory activities related to the role undertaken, and achievement of the relevant CSCS HS&E test
- A blue, skilled worker SKILLcard for air and/or grease hygiene technician, upon completion of the first two points above, with evidence in place for all mandatory activities related to the role undertaken, and completion of the relevant CSCS HS&E test

4.6.2 Addition of further competencies

Following initial demonstration of competence, individuals may need to add on competence in other activities, as their scope of work changes over time. For example, an air hygiene operative may also need to demonstrate grease hygiene competence, or progress to demonstrate competence in activities undertaken by an air hygiene technician.

These additions may be made at various points throughout an individual's career as they extend their scope of work. Individuals should supply evidence of SKEB in relevant activities in line with the route set out in section 4.6.1.

Individuals will then be eligible for relevant additional registration with SKILLCard, subject to relevant CSCS HS&E test completion.

4.6.3 Revalidation

Continuing demonstration of competence and revalidation of that competence are a key component of any assurance scheme.

Revalidation of competence must be made every five years on the basis of:

- Completion of any relevant skills / knowledge updates (CPD) (e.g. legislative updates, technological changes)
- Completion of refresher assessment in line with industry requirements and the requirements of the framework, in relevant activities
- Ongoing evidence of experience (continuing application of skills and knowledge over time) meeting the requirements of activities in the framework for which competence needs to be maintained
- Ongoing evidence of behaviour meeting the requirements of activities in the framework for which competence needs to be maintained
- Completing the relevant HS&E test where ongoing SKILLCard registration is required

It is recommended that the evidence gathered is validated by a third party to provide external, objective oversight.

4.7 Relationship to organisational capability

Alongside demonstrating the competence of individuals within their workforce, companies also need to demonstrate organisational capability. This can be evidenced through being part of a

certification scheme or trade body membership scheme that embeds these requirements for competence within it.

4.8 Ongoing monitoring and maintenance

This standard and the functional map / framework of competencies will be managed and maintained by the BSE Skills Partnership, with practical support provided by VHCG.

The Skills Partnership will maintain a list of approved programmes which contribute towards the evidencing of competence in order to support employers in identifying appropriate provision.

5 Implementing the standard

It has been acknowledged that further development work will be required to put in place the proposed routes to competence for the sector. The following table sets out the next steps required to fully implement the competence requirements set out within this paper. It should be noted that this list is not necessarily exhaustive, and further actions might be identified as work progresses.

Where specific product development is required, estimated time required for that development to take place has been factored into the timescale outlined. This may be subject to change as more detailed requirements emerge

Activity required	Purpose	Owner	
Develop standard training specification	To drive consistency in training & support alignment of training with assessment	BESA / VHCG / training providers	Q4 2025
Develop standard assessment specification (requirements and guidance for assessors & assessments, including provision for off-site and on-site assessment)	To drive consistency between providers	BESA / VHCG / training providers	Q4 2025
Finalise BSE specific fire safety training	To create contextualised fire safety awareness training	BESA	Q3 2025
Engage with devolved nations stakeholders to encourage take-up of additional competence requirements	To ensure consistent requirements for competence are in place throughout the UK	BESA	Q4 2025
Make updates to SKILLCard register in line with revised requirements	To increase granularity of registration and ensure appropriate cards are available at both operative and technician level, and consider how the register can support the full scope of competence	BESA SKILLCard	Q4 2025
Communicate new requirements and changes regarding competence to industry	To drive awareness of competence requirements and support industry	BESA / VHCG	Q3 2025
Develop requirements for refresher assessment and any associated training	To ensure that currency of competence can be maintained	BESA / VHCG	TBD
Maintain list of approved provision	To make it clear to employers what has been approved as supporting demonstration of competence	Skills Partnership	Ongoing

Activity required	Purpose	Owner	
Complete phase 2 work on additional competencies for surveying and auditing	To ensure requirements are in place for additional aligned activities	VHCG	Q3 2025

Appendix 1 - Consolidated list of recommendations

Recommendation 1: An activity-based approach should be used when defining required standards of competence

Recommendation 2: Development of initial competence standards and frameworks should focus on activities carried out by ventilation hygiene operative and technicians

Recommendation 3: NOS should form a basis for development of competence standards in this area

Recommendation 4: Competence standards should build on the NOS to ensure full coverage of SKEB requirements in relevant activities

Recommendation 5: The competence framework should set minimum requirements for health and safety SKEB

Recommendation 6: Work should focus on ensuring that non-qualification programmes of training and assessment, aligned to a central competence framework, are available to industry

Recommendation 7: The Skills Partnership Committee should approve all products which contribute to evidence of competence and make it clear how these relate to the activities and statements set out within the competence framework

Recommendation 8: Mechanisms for evidencing experience and behaviour should be set out within the routes to competence

Recommendation 9: A second phase of activity should address routes to competence for surveying and auditing

Recommendation 10: A standard assessment specification should be developed to drive consistency and ensure alignment with the competence framework

Recommendation 11: Provision for on-site and off-site assessment should be made in the assessment specification, ensuring parity of outcomes

Recommendation 12: A standard training specification aligned to the competence standard should be created and maintained to support consistency of training delivery

Recommendation 13: Building services engineering specific basic fire safety awareness training should be incorporated into ventilation hygiene routes to competence

Recommendation 14: Additional guidance on how to evidence competence should be made available to industry

Recommendation 15: Other card types for ventilation hygiene operative should be explored, which link to rather than drive competence requirements

Recommendation 16: Card scheme registration should be made more granular to make it clearer whether scope of assessment related to air, grease or both

Recommendation 17: BESA SKILLCard should consider how it might support validation / evidencing of competence across the full scope of SKEB

Recommendation 18: Routes to competence should consider the threshold(s) for continuing demonstration of competence

Recommendation 19: Routes to competence should consider all potential mechanisms for ensuring currency of competence, not just formal training and/or assessment

Recommendation 20: Additional collaboration with the devolved nations should be made to drive consistency in standards of competence across the UK

Recommendation 21: The Skills Partnership Committee should promote the competence requirements approved by industry, and maintain a list of both qualifications and non-qualifications products that contribute to evidence of competence

Appendix 2 - Terms & definitions

Behaviour

Observable traits or ways of working that should be displayed. Observable things that an individual does or does not do

Competence / individual competence

Application of skill, knowledge, experience, and behaviour consistently by an individual to achieve a specific outcome

Standard for competence

Procedures & requirements for developing, measuring, validating, and proving competence against agreed skills, knowledge, experience, and behaviours required for an individual undertaking a role, function, activity, or task in order to perform their work to predetermined standards and expectations and maintain or improve their performance over time. This is sometimes referred to as a competence framework or competence standard

Continuing professional development (CPD)

Activities undertaken by an individual to maintain and develop competence, including formal and informal learning, self-assessment, obtaining feedback and identifying areas for improvement

Firestopping

Firestopping techniques encompass those used for penetration seals for services e.g. cables and pipes, linear joint seals, cavity barriers (e.g., in voids in roof spaces, above suspended ceilings, within walls and in external walls). Firestopping is also required as part of some other passive fire protection measures, including around fire door frames, around fire resisting /smoke control ducts and dampers.

Experience

Participation in relevant activities or observation of facts and events leading to

acquisition, improvement or demonstration of skills and knowledge

Formal learning

Organised and structured learning against formal learning objectives

Framework of competencies

Agreed statements of skills, knowledge, experience, and behaviour against specific activities identified in the functional map

Functional map

A map of activities included in the sub-sector, split into pre-determined levels of complexity

Individual

A single human being

Informal learning

Self-directed learning, or learning from experience

Higher-risk building (HRB)

Building subject to enhanced regulatory requirements or where risks might be considered elevated (for example as a result of the physical characteristics of the building, the way in which the building is used, or as a result of human factors)

Job role

The specific combination of activities performed in a specific role, as agreed between an employee and an employer. This may change over time, or from employer to employer, or between employees of the same employer

Knowledge

Assimilation of facts, theories, and practices in relation to a given role, function, activity, or task

Occupation

The area of work undertaken by a category of employees, each of which may have a related but different job role. This is standard across the entire industry

Organisational capability

The combination of people, practices and other resources brought together by a business to allow it to function effectively and deliver value to customers and stakeholders

Qualification

A regulated programme of assessment, sometimes with aligned training, which results in the issue of a nationally recognised award being made upon completion

Revalidation

The formal process of reassessing an individual's competence against a sector-specific framework on a periodic basis to check that competence has been maintained

Sector-specific competence framework

A competence framework relevant to a specific role, function, activity, task, trade, or discipline

Skill

The ability to perform an activity or task consistently with a specific intended outcome

Validation

The formal process of assessing an individual's competence against a sector-specific framework

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