



MANAGING COMPETENCE FOR INDUSTRIAL AND COMMERCIAL DUCTWORK INSTALLATION ACTIVITIES

Benchmarking

Industry Competence Steering Group

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

Ductwork Installer Competence Group (DICG)

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ABOUT THE ENGINEERING & BUILDING SERVICES SKILLS ALLIANCE (EBSSA)

The Engineering & Building Services Skills Alliance (EBSSA) brings together leading organisations from across the engineering, building services and environmental technologies sectors to collaborate on shared workforce training and skills priorities. A coalition of Actuate UK members together with BEAMA, CIPHE, TICA-ACAD and MCS, EBSSA provides a credible voice for skills across all engineering and building services.

EBSSA would like to thank the following organisations for their participation in the development of this document:

- Association of Ductwork Contractors and Allied Services (ADCAS)
- Advanced Air (UK) Ltd.
- Association for Specialist Fire Protection (ASFP)
- BSB Engineering Services Ltd.
- Building Engineering Services Association (BESA)
- Construction Industry Training Board (CITB)
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1 INTRODUCTION

1.1 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 practices and capability of the built environment 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.

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:

- 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
- Individual competence – Any person carrying building or design work must possess the skills, knowledge, experience and behaviours (SKEB) necessary

1.2 Addressing organisational capability

Organisational capability is currently measured through various third-party certification schemes, or through trade body membership. Third-party schemes are commonly employed by larger companies and are not mandated. Smaller contractors would typically make use of trade body schemes which audit and provide oversight of organisational processes.

Approaches to setting out requirements for, and implementing mechanisms for, demonstrating organisational capability are currently under consideration in collaboration with the wider built environment sector. This work is on-going and is not directly addressed within this document.

1.3 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 ductwork installation.

In addition, SLG 12 is representing the wider picture of passive fire protection. As such, SLG 12 also has an interest in supporting work on competence in ductwork installation, particularly around fire resisting and smoke control products and systems.

1.4 The Ductwork Installer Competence Group (DICG)

The DICG was formed to take forward the development of a sector-based approach to competence on behalf of SLG 10, linking into the wider work of SLG 12. It is formed from industry specialists and employer / sector body representatives in line with the principles underpinning the work of ICSG (see page 2 for a full list of participating organisations).

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.

At every stage, the DICG 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 sectors.

1.5 Document purpose

This document sets out contextual and background information collated through consultation with DICG, and details of the benchmarks for competence that have been put in place by industry. This is intended to be used as contextual information for further development and documentation of:

- Pathways for competence - requirements for competence, including how SKEB should be evidenced and how competence should be validated, kept current, and revalidated, for various relevant occupational areas
- Implementation plans – the actions required to implement the agreed standards for competence

The content of this document was initially collated and published in a consultation document circulated to industry in June 2025. This was then further refined prior to publication based on consideration of feedback received. Information on how feedback was addressed can be obtained by contacting BESA (SSB@theBESA.com).

This document provides background and context to industry guidance on demonstrating competence in ductwork installation activities. 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 resides with the individuals and organisations carrying out work. Signposting to relevant legislation and regulations can be found within Appendix 3 – Bibliography.

2 BACKGROUND & CONTEXT

2.1 Scope and criticality

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

Installation of industrial and commercial ventilation, fume extract, fire resisting and smoke control ducts (or any of these) with the related installation of fire dampers, intumescent dampers (non-mechanical fire barriers), and smoke control dampers. This includes verifying the function of all types of dampers as per design and operation, and installation of associated equipment such as fans, attenuators and support structures. Scope excludes installation of controls and commissioning of whole installed systems.

Installation may take place in higher risk buildings (HRBs) and other building types. Although design and specification of ductwork for HRBs may differ from that required for non-HRBs, the installation of the ductwork selected is dependent on the specification not the building type in and of itself. As a result, it is expected that the competence requirements set out here would apply regardless of the type of building being worked on.

The design and specification of ductwork is not carried out by installers and so should not be reflected in any framework developed specific to installer activities. Design responsibility does not typically sit with those individuals carrying out installation activities.

Installation of other heating, ventilation and air conditioning (HVAC) components, products and systems is not included. Scope also excludes installation of controls and commissioning of whole installed systems.

No specific sector-specific legal requirements for validation or revalidation of competence in ductwork installation 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. Correct installation and maintenance of ductwork and associated products is critical to ensuring correct function of ventilation systems and maintenance of compartmentation in case of fire. This is a key component of ensuring building safety. As such, setting out standards for competence in this area is essential.

2.2 Occupational relevance

The work carried out by 'ductwork installers' is diverse, extending from installation of standard ventilation, fire resisting and smoke control ductwork, through installation of varying types of dampers, including mechanical and non-mechanical dampers and smoke control dampers. Each of these will have distinct installation requirements. The exact combination of these on which a specific installer will undertake work will depend on their employer's scope of work and the types of projects that they secure. The role of each installer will therefore differ from individual to individual and organisation to organisation. The scope of each role may also change over time as the mix of work undertaken expands or contracts.

It is, however, acknowledged that individuals will initially begin in industry by carrying out standard ventilation work before progressing to more complex work with fire and smoke control products. Despite this, installers should have knowledge and understanding relevant to all in-scope duct and damper types from the outset.

Recommendation 1: Individuals should develop knowledge and skills across standard ventilation, fire resisting and smoke control ductwork from the outset

Those undertaking work in this occupational area may have a variety of job titles, including but not limited to those listed below. Consideration should be given to the activities carried out by ductwork installers rather than individual role scopes.

- Ductwork installer
- Ductwork & damper installer
- Fire resistant ductwork installer

2.3 Progression and upskilling

In addition to core installation of ductwork and dampers, some installers may take on additional activities as they upskill. As not all installers will undertake these, this makes a single occupational definition of a ductwork installer, and a single route to competence, challenging.

An activity-based definition of competence will help to account for this complexity. This allows statements for skills, knowledge, experience, and behaviour (SKEB) to be defined per activity undertaken. Installers (in conjunction with their employers) are then able to choose the activities that are relevant to their work, in addition to core activities completed by all installers, and ensure that they meet the competence requirements for those activities. This will prevent barriers to demonstration of competence from being created through introduction of requirements which cannot be met by all installers.

Recommendation 2: An activity based approach should be used when defining required standards of competence

Initial focus should be on core installer activities, with a further phase of work to develop standards for upskilling activities such as work coordination, pre-commissioning, commissioning and decommissioning.

Recommendation 3: Core activities should be addressed during an initial phase of development, with additional upskilling activities developed during a second phase of work

2.4 Trade junctions and multiskilling

In addition to basic competence requirements specific to ductwork installation, installers may also expand their scope of work if they are required to multi-skill at critical trade junctions. This may include areas such as penetration sealing and/or installation of fire resisting insulation. Further activity will be required to identify appropriate standards and routes to competence and/or align with routes for specialists in other trades. It is important that consistent standards are set which do not undermine the requirements already set out for those in other trades. As with section 2.3, an activity based approach will allow for accommodation of these activities.

Consultation will be required with other ICSG framework owners to facilitate this, including but not necessarily limited to thermal insulation (TICA) and firestopping (ASFP).

Recommendation 4: Further work should be carried out on competence standards and routes for progression and multi-skilling of installers in a second phase of work

2.5 Existing occupational standards

National Occupational Standards (NOS) are the only existing descriptions of competence for the sector (apprenticeship occupational standards in England were withdrawn due to low

uptake). Already consulted upon and adopted by industry and underpinning relevant qualifications, these provide an existing foundation for development of broader competence standards.

Recommendation 5: NOS should form a basis for development of competence standards in this area

The NOS primarily reflect skills and knowledge requirements, with some implicit requirements for experience and behaviour. Explicit requirements for experience and behaviour have not been fully articulated. There are also areas of identified weakness in the standards, particularly around fire safety / compartmentation and use of construction products. 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 6: Competence standards should build on the NOS to ensure full coverage of SKEB requirements in relevant activities

Whilst NOS relating to fire and smoke control dampers were developed in 2023, and those underpinning the level 3 (SCQF level 6) qualification provision were reviewed in 2024/25, those only underpinning the level 2 (SCQF level 5) (including SUMMES07) have not been reviewed since 2008. These would bear further examination to ensure that they remain fit for purpose for industry.

Recommendation 7: NOS underpinning the level 2 (SCQF level 5) SVQ referenced in this work (SUMMES07) should be reviewed and any identified amendments incorporated into the competence standard

The full scope of ductwork extends across the footprint of two Standards Setting Bodies (SSBs) – BSE Skills and CITB. Although BSE Skills is responsible for the majority of ductwork and damper installation NOS, CITB holds a specific standard for installation of fire resisting ductwork (COSVR352) in its passive fire protection suite. This has prompted concerns that a less robust route, not aligned to the requirements of the building services engineering sector, exists which does not incorporate the full requirements for ductwork installers. Removing this pathway would ensure alignment of all qualifications with the requirement of the building services engineering sector

Recommendation 8: The installation of fire resistant ductwork NOS (COSVR352) should be retired from the passive fire protection suite owned by CITB

Elements of work undertaken by ductwork installers are not expressed specifically within the scope of the existing NOS underpinning ductwork-specific qualifications, for example manual handling and use of access equipment. Consideration of how to express requirements in these areas within the framework of competencies and pathways to competence should be made. To do this, further consultation with other ICSG installer groups may be required, including the group addressing working at heights.

Recommendation 9: Integration of specific competence not currently reflected within the scope of ductwork installer NOS should be considered (manual handling and working at heights)

2.6 Existing qualifications and assessment programmes

Multiple vocational qualifications, overseen by differing sector bodies and awarding organisations, are available with varying value in determining competence of ductwork installers.

- SVQ 2 in Heating and Ventilating: Ductwork Installation (SCQF level 5) – this confirms baseline skills and knowledge against relevant NOS and implicitly covers fire resisting ductwork and dampers in addition to general ventilation ductwork
- Level 2 NVQ Diploma in Associated Industrial Services Occupations – Passive Fire Protection – this explicitly relates to fire resisting ductwork only and is offered by multiple awarding organisations

The SVQ is rooted in building services engineering, with core units reflecting standards from that area. Conversely, core health and safety units within the passive fire protection NVQ differ. This creates a system where two kinds of ductwork installation are covered by two separate qualifications with different core / generic requirements. The passive fire protection qualification provides a more diluted route, where individuals are not required to demonstrate the wider skills and knowledge required for ductwork installation prior to demonstrating specific knowledge and/or skills relevant to fire resisting ductwork. There is concern that this sets a lower standard for ductwork installers coming through that pathway, and its removal is recommended. CITB has confirmed that, if this pathway is removed, funding can still be maintained for in-scope employers using ventilation qualifications.

Recommendation 10: The fire resisting ductwork installation unit should be removed from the passive fire protection qualification to leave a single, consistent qualification route for learners

An SVQ in Heating and Ventilating: Ductwork Planning and installation (SCQF level 6) is also available, however this extends beyond baseline installer competence into site coordination, commissioning and decommissioning. Consideration of the utility of this qualification in relation to upskilling installers towards supervisory roles should be made as work progresses (see section 2.3).

Apprenticeships were delivered in England through further education (FE) and the private sector, but these have subsequently been withdrawn due to very low uptake. The Industry is made up of companies of varying size, with a large number of smaller companies which found apprenticeships to be cost prohibitive. Larger contractors reported that the apprenticeship offering did not provide the outcomes they required and so moved toward internal provision. Resurrecting apprenticeships without concrete evidence of future uptake would be challenging.

Apprenticeships offered in Wales at level 2 / 3 and Scotland at level 3 / SCQF level 6 are based on NOS and predominantly delivered through private provision, with little available through FE infrastructure.

For dampers, no nationally recognised qualifications exist although NOS are available. Integrating damper installation skills and knowledge into the SVQ 2 in Heating and Ventilating: Ductwork Installation (SCQF level 5) would ensure that these activities are covered in an

appropriate level of detail and a consistent manner. These have already been proposed for incorporation into the ductwork SVQ at level 3.

Recommendation 11: Damper installation, in accordance with the relevant NOS, should be integrated into the L2 qualification

This gap in qualifications around dampers has been met through the use of customised awards. These 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. Where non-qualification programmes of assessment represent an alternative route to evidencing skills and knowledge, ensuring they also align to the competence standard (both initially and as time passes) will be important moving forward.

Recommendation 12: 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

As requirements for skills and knowledge will be revised as the competence standards is developed, bridging assessments may be required to confirm that individuals can evidence against the new framework where they hold an existing qualification

Recommendation 13: Bridging assessments for skills and/or knowledge should be created to allow individuals with existing qualifications to demonstrate that they meet the requirements of the new framework

A lack of consistency between qualifications / assessment providers has also been identified. Group members have highlighted differing views of correct installation and differing interpretations of underpinning knowledge. This is largely driven by the generic nature of NOS and their relationship to SVQs, where providers are not required to cover everything within the scope / range statements included and the assessment plans derived from them differ in level of detail. Although this may be partially resolved by adding further clarification to the competence standard, development of a standard assessment specification to sit alongside the NOS would create more concrete guidance for those offering assessment around the scope and depth of content to be covered¹. Input from assessment providers will be essential to ensure that this guidance is fit for purpose.

Recommendation 14: A standard assessment specification aligned to the competence standard should be created and maintained to drive consistency of assessment between providers

Although these interventions address skills and knowledge, limited assessment of experience and behaviour is made. Recommendations for additional mechanisms for evidencing experience and behaviour should be set out within any identified routes to competence.

Recommendation 15: Mechanisms for evidencing experience and behaviour should be set out within the routes to competence

¹ Note that any specification created should be designed to sit alongside BSE Skills' existing assessment strategy

2.7 Training provision

2.7.1 Industry training

Existing programmes are largely based around on-site assessment with little formal training input. Where individuals do not reach the standard of assessment no formal training is available to refer them to.

Much training takes place in the workplace, within organisations. Although this is successful in some ways, the lack of clear direction for those carrying out training results in differing installer capabilities. Training infrastructure is in place to deliver off-site training to supplement this, but appropriate training methods and content need to be scoped to allow development activities to be put in place. Where this training is offered it needs to be of high-quality and consistent between providers.

Development of a standard training specification would support both employer developed and third-party training to meet the needs of the sector, providing more insight into the depth and breadth of content that should be covered to prepare individuals for assessment. Input from training providers will be essential to ensure that this guidance is fit for purpose.

Recommendation 16: A standard training specification aligned to the competence standard should be created and maintained to support consistency of training delivery

2.7.2 Basic fire safety training

A key recommendation of CSG's² final report 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 ductwork installers will ensure a basic awareness of fire safety for all whether dealing with general ventilation or fire resisting systems.

Recommendation 17: Building services engineering specific basic fire safety awareness training should be incorporated into installer routes to competence

2.7.3 Manufacturers' training

Training on manufacturers' specific products is an important component of familiarising operatives with the materials that they will be using during installation processes. This provides specific instructions for a manufacturer's products, rather than generic skills and knowledge for installation. This goes beyond the requirements for a competence in an activity, building in detailed product-level familiarisation and confidence with manufacturers' specific instructions.

DICG acknowledges the importance of this additional process, and its adoption should be promoted within the industry. However, this is considered a separate process to the validation of competence in the activities identified.

² The Competence Steering Group (CSG) was the forerunner of ICSG

Recommendation 18: Installers should complete appropriate manufacturers' training in the products and / or systems that they are using, alongside demonstrating baseline competence

It is also important that where manufacturers' training is in place it is of good quality and provides a degree of objective evidence that individuals undertaking it have taken on board the specific product or system requirements included. As manufacturers may not be training providers, an outline guide for manufacturers to work to, ensuring some consistency of provision, guidance on minimum inclusions and embedded assessment would help to ensure that employers and individuals can access high-quality provision.

Recommendation 19: Guidance on what constitutes good CPD / manufacturers' training should be developed to support industry

2.8 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.

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.

2.9 Validation of competence

2.9.1 Initial validation

Initial validation of competence across the full scope of SKEB is not currently made. Additional guidance on how to evidence competence as defined within the Building Safety Act and associated secondary legislation will need to be made available to industry to support individuals and employers in discharging their legislative and regulatory responsibilities. This should sit alongside existing guidance on qualification assessment provided in BSE Skills' assessment strategy, which primarily deals with assessment of skills and knowledge.

Recommendation 20: Additional guidance on how to evidence competence should be made available to industry

Card provider registration is currently used as a proxy for validation of competence. This currently relates primarily to skills and knowledge and is based on qualification achievement and on-going registration with a CSCS card issuer, subject to completion of the relevant health, safety & environment (HS&E) test. This is either with BESA SKILLCard (a CSCS alliance member) or with the CSCS main scheme, depending on which qualification (or in some cases customised award) is undertaken. This creates a system where installers may be reaching different thresholds for competence but still being carded for ductwork activities. Removal of the CITB pathway for fire resisting ductwork will resolve this issue, removing CSCS main scheme registration in this space, and creating a single, consolidated system.

Additional consideration of how card schemes may be able to support demonstration of competence across the full scope of SKEB should be made.

Recommendation 21: BESA SKILLCard should consider how it might support validation / evidencing of competence across the full scope of SKEB

2.9.2 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 qualification achievement. No continuing demonstration of sector based SKEB is required. No requirements for continuing professional development (CPD) are in place.

Recommendation 22: 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 23: Routes to competence should consider all potential mechanisms for ensuring currency of competence, not just formal training and/or assessment

2.10 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 qualifications regulators, skills bodies and awarding organisations will be required to encourage take up of the additional requirements for competence identified in the devolved nations as these sit outside the direct scope of application of the Building Safety Act.

Recommendation 24: Additional collaboration with the devolved nations should be made to drive consistency in standards of competence across the UK

2.11 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.

2.12 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 25: 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 ductwork installation (as defined in section 2.1) into discrete activities. These activities reflect the roles, responsibilities and types of work that are undertaken and, where appropriate, include differences by product type (but not by specific manufacturer or product range).

Activities within the functional map have been designated as ‘mandatory’ where all installers are expected to demonstrate competence, or ‘additional’ where some installers may be required to demonstrate competence. It is expected that individuals and employers will choose the relevant activities from the functional map when determining the competence to be demonstrated within an individual’s particular role scope.

Note that although upskilling and multi-skilling (additional) activities have been included within the functional map, only those prioritised as phase 1 (mandatory activities) have been addressed during the first phase of development. A subsequent phase of work will be required to address phase 2 activities.

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), amended during 2025, have been used as the basis for skills and knowledge statements³. Statements for experience and behaviour and, where necessary, additional specific knowledge statements have been added to create fit for purpose competence standards.

Together, the functional map and SKEB statements set out the benchmark for competence in each activity.

3.2 The functional map and framework of competencies

The detailed functional map and SKEB statements can be found in the spreadsheet ‘*DICG-OP005 – Ductwork Installation FM & SKEB R1*’.

3.3 Mapping to other standards and frameworks

The SKEB statements developed have been mapped against BS 8670-1:2024, the relevant BSE Skills NOS (as amended 2025), 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.

3.4 Ongoing monitoring and maintenance

The current version of the framework was published in April 2026 and is due for review in April 2029. This will be managed and maintained by the BSE Skills Partnership with practical support provided by DICG. Minor amendments to the framework, including the addition of clarification text to existing statements, may be made during this period. Resolving typographical errors and formatting changes to ensure the framework is up to date may be carried out on a continuous basis.

³ Note that these versions are yet to be made publicly available at the time of publication of this document

APPENDIX 1 – CONSOLIDATED LIST OF RECOMMENDATIONS

Recommendation 1: Individuals should develop knowledge and skills across standard ventilation, fire resisting and smoke control ductwork from the outset

Recommendation 2: An activity based approach should be used when defining required standards of competence

Recommendation 3: Core activities should be addressed during an initial phase of development, with additional upskilling activities developed during a second phase of work

Recommendation 4: Further work should be carried out on competence standards and routes for progression and multi-skilling of installers in a second phase of work

Recommendation 5: NOS should form a basis for development of competence standards in this area

Recommendation 6: Competence standards should build on the NOS to ensure full coverage of SKEB requirements in relevant activities

Recommendation 7: NOS underpinning the level 2 (SCQF level 5) SVQ referenced in this work (SUMMES07) should be reviewed and any identified amendments incorporated into the competence standard

Recommendation 8: The installation of fire resistant ductwork NOS (COSVR352) should be retired from the passive fire protection suite owned by CITB

Recommendation 9: Integration of specific competence not currently reflected within the scope of ductwork installer NOS should be considered (manual handling and working at heights)

Recommendation 10: The fire resisting ductwork installation unit should be removed from the passive fire protection qualification to leave a single, consistent qualification route for learners

Recommendation 11: Damper installation, in accordance with the relevant NOS, should be integrated into the L2 qualification

Recommendation 12: 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 13: Bridging assessments for skills and/or knowledge should be created to allow individuals with existing qualifications to demonstrate that they meet the requirements of the new framework

Recommendation 14: A standard assessment specification aligned to the competence standard should be created and maintained to drive consistency of assessment between providers

Recommendation 15: Mechanisms for evidencing experience and behaviour should be set out within the routes to competence

Recommendation 16: A standard training specification aligned to the competence standard should be created and maintained to support consistency of training delivery

Recommendation 17: Building services engineering specific basic fire safety awareness training should be incorporated into installer routes to competence

Recommendation 18: Installers should complete appropriate manufacturers' training in the products and / or systems that they are using, alongside demonstrating baseline competence

Recommendation 19: Guidance on what constitutes good CPD / manufacturers' training should be developed to support industry

Recommendation 20: Additional guidance on how to evidence competence should be made available to industry

Recommendation 22: Routes to competence should consider the threshold(s) for continuing demonstration of competence

Recommendation 23: Routes to competence should consider all potential mechanisms for ensuring currency of competence, not just formal training and/or assessment

Recommendation 24: Additional collaboration with the devolved nations should be made to drive consistency in standards of competence across the UK

Recommendation 25: 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

Test

Testing, in the context of this documentation, relates to visual inspection and / or functional testing of components and systems

Validation

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

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