



MANAGING COMPETENCE FOR INDUSTRIAL AND COMMERCIAL DUCTWORK INSTALLATION ACTIVITIES

Pathways for Installers

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.

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- Advanced Air (UK) Ltd.
- Association for Specialist Fire Protection (ASFP)
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- Building Engineering Services Association (BESA)
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1 SCOPE

1.1 Purpose

The purpose of this work is to set out an industry approach to developing, measuring, and validating the competence of those undertaking ductwork installation activities against the scope set out in section 1.2. This will ensure that defined arrangements are in place by which competence of ductwork installers can be objectively measured and confirmed, increasing safety.

No specific sector-based 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.

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 2 – Bibliography.

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

This standard should be read in combination with the *‘Managing Competence for Industrial and Commercial Ductwork Installation Activities – Benchmarking’* document, which describes the work of the Ductwork Installer Competence Group (DICG), and the context / background underpinning development of competence requirements and pathways in this area.

1.2 Occupational area

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.

This approach to competence has been designed for those carrying out installation activities as set out in the definition in above. This includes activities which may apply to those with the following role titles (this list is not exhaustive):

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

1.3 Limitations and exclusions

The design and specification of ductwork is specifically excluded, as design responsibility does not sit with those individuals carrying out installation activities.

This document is specific to ductwork and damper installation as defined in section 1.2. 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.

The pathways set out in this document relate to core competence of ductwork installers. A second phase of work will be required to focus on activities which extend the scope of installer competence as progression towards supervisory roles and allow multiskilling in other trade areas. This includes activities around:

- Installer progression
 - Work coordination
 - Commissioning & decommissioning of systems
- Multi-skilling
 - Penetration sealing
 - Installation of thermal or fire resisting insulation

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

1.4 Building types

The requirements set out in this document apply equally to those installing ductwork in higher-risk buildings (HRBs) and other building types.

Although design and specification of firestopping 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.

1.5 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 THE STANDARD FOR COMPETENCE

2.1 Competencies and target audiences

Detailed competencies for ductwork installation activities can be found within the associated functional map and framework of competencies '*DICG - OP005 – Ductwork Installation FM and SKEB R1*'.

Evidence should then be gathered to show that the full scope of skills, knowledge, experience and behaviour (SKEB) statements for all mandatory activities has been met, in accordance with the routes to competence set out in section 2.6 - Routes to competence.

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

- New entrant (2.6.1)
- Job mover (moving from allied trade) (2.6.1)
- Experienced worker (unqualified) (2.6.1)
- Experienced worker (qualified) (2.6.2)

2.2 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. A training specification linked to the requirements of the framework of competencies is in development to provide additional guidance on alignment between training content and scope of assessment. This will support individuals and employers in identifying training that adequately prepares learners for assessment.

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

2.3 Collecting evidence of competence

Determination of competence should be made through gathering evidence that the SKEB statements for mandatory activities have been met in accordance with one of the routes to competence outlined in section 2.6.

- Evidence of skills and knowledge should be obtained through achievement of relevant qualifications and/or programmes of assessment meeting the competence standard, indicated 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. Note that the requirements specify a minimum quantity of evidence of experience. Individuals (in conjunction with their employers where appropriate) should ensure that they are collating evidence appropriate to their scope of work, which may exceed the minimum requirement

- 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 an appropriate individual until competence has been demonstrated.

Where individuals are required to work at height, they should also hold the relevant qualifications / accreditations for the type(s) of access equipment / work types being employed. Guidance on appropriate programmes of learning and assessment is available through the Access Industry Forum (<https://accessindustryforum.org.uk/>). Where the individuals are not personally installing or using the equipment but are protected by it, the equipment should be installed / used by individuals holding the relevant qualifications.

2.4 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, this may be 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.

2.5 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 2.6 and the requirements of the framework of competencies.

Alongside ongoing collation of evidence to demonstrate baseline competence, individuals should also complete and collate evidence of relevant manufacturers' training for the products / systems they are using.

2.6 Routes to competence

The following are routes to competence for each entry point. It should be noted that further development will 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. An implementation plan to support this can be found in section 3 - Implementing the standard.

Until the point where new routes to competence are available, existing competence guidance should be followed.

2.6.1 Evidencing initial baseline competence – new entrant, job mover and experienced worker (unqualified)

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(s) (e.g. qualifications or equivalent programmes of assessment) indicated by the Skills Partnership Committee as meeting the requirements of the competence framework, in mandatory activities
- 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 blue, skilled worker SKILLCard for ductwork installation on completion of the first two items, and the relevant Health, Safety & Environment (HS&E) test.

Where individuals are working at heights, they should also meet the relevant requirements (see section 2.3).

2.6.2 Evidencing competence – experienced worker (qualified)

Where experienced workers hold existing qualifications, additional assessment may be required to confirm that the skills and knowledge requirements have been met.

Individuals must provide the following evidence of competence:

- Completion of BSE specific fire safety training
- Evidence of an existing, relevant qualification
- Completion of a bridging knowledge / skills assessment against relevant activities
- Collated evidence of experience in line with the requirements of the competence framework, in relevant activities
- Collated evidence of behaviour in line with the requirements of the competence framework, in relevant activities

Individuals will then be able to renew their blue, skilled worker SKILLCard subject to re-completion of the relevant HS&E test.

Where individuals are working at heights, they should also meet the relevant requirements (see section 2.3).

2.6.3 Evidencing currency of competence

Evidence of currency of competence should be collected regularly throughout the five-year validation period, in order to support revalidation. Individuals must provide the following evidence of ongoing competence:

- Completion of any relevant skills / knowledge updates (CPD) (e.g. legislative updates, technological changes)

- 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

Individuals should also have completed manufacturer training relevant to their scope of work and the products / systems being installed.

Where individuals are working at heights, they should also meet the relevant requirements (see section 2.3).

2.7 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, trade body membership scheme, or other mechanism that embeds these requirements for competence within it.

Employers should ensure that work is only allocated to those who are competent to undertake it. Where individuals have yet to demonstrate competence in a particular activity (including having the relevant experience to carry it out correctly), appropriate supervision should be in place.

2.8 Ongoing monitoring and maintenance

The current version of these pathways 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 document, 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.

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.

3 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 / DICG / training providers	Q3 2026
Develop standard assessment specification (requirements and guidance for assessors & assessments)	To drive consistency in assessment between providers	BESA / DICG / assessment providers	Q3 2026
Create bridging assessments for skills and / or knowledge	To allow those with existing qualifications to evidence against the new standard	BESA / DICG	TBD
Review NOS: SUMMES07-09	To ensure these remain fit for purpose	BSE Skills	TBD
Revise SVQ 2 qualification structure	To incorporate standards for damper installation and provide coverage of the relevant SKEB statements within damper standards	BSE Skills	TBD
Retire COSVR352 from NOS and qualification structures	To create a single consolidated pathway for demonstration of ductwork installation skills and knowledge	CITB	TBD - in progress
Finalise BSE specific fire safety training	To create contextualised fire safety awareness training	BESA	Q2 2026
Create guidance on what constitutes good CPD / manufacturers' training looks like	To support employers when selecting third party training	BESA / DICG	Q3 2026
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	Ongoing

Activity required	Purpose	Owner	
Create example evidence records for experience & behaviour	To support employers in capturing evidence of experience and behaviour	BESA / DICG	Q3 2026
Make updates to SKILLCard register in line with emerging programmes	To update scheme if any new relevant programmes / requirements emerge	BESA SKILLCard	As required
Approach CITB regarding maintenance of funding for fire resistant ductwork	To maintain a funding stream for in-scope employers installing fire resisting ductwork	BESA	TBD
Communicate new requirements and changes regarding competence to industry	To drive awareness of competence requirements and support industry	BESA / DICG	Ongoing
Maintain list of approved provision	To make it clear to employers what has been approved as supporting demonstration of competence	Skills Partnership	Ongoing
Complete phase 2 work on additional competencies for upskilling and multi-skilling	To ensure requirements are in place at specific trade junctions and in extension of installer competence	DICG	Q3 2026

APPENDIX 1 – 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

APPENDIX 2 – BIBLIOGRAPHY

Building a Safer Future. Independent Review of Building Regulations and Fire Safety: Final report. Dame Judith Hackitt DBE FREng. Published May 2018. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/707785/Building_a_Safer_Future_-_web.pdf

Industry Competence Steering Group. Construction Leadership Council (CLC). Published Dec 2024. Available from: <https://www.constructionleadershipcouncil.co.uk/news/industry-competence-steering-group/>

BS 8670-1:2024 TC. Competence frameworks for building safety – Core criteria. Code of practice. BSI. Published 31 May 2024. Available from: <https://knowledge.bsigroup.com/products/competence-frameworks-for-building-safety-core-criteria-code-of-practice>

The Building Safety Act 2022, Part 3 Building Act 1984, Section 35 Industry Competence. Published 2022. Available from: <https://www.legislation.gov.uk/ukpga/2022/30/contents>

The Building Regulations 2010 (as amended 2023), Part 2A Dutyholders and competence. Published 2023. Available from: <https://www.legislation.gov.uk/ukxi/2010/2214/contents>

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>

NB: 2025 revised National Occupational Standard awaiting publication at the time of creation of this document (<https://app-nos-l-noswebsite-uks.azurewebsites.net/en>).

Built Environment – Proposed construction product competence standard – white paper. CSG Working Group 12 / CPA. Published September 2022. Available from: <https://www.constructionproducts.org.uk/publications/technical-and-regulatory/built-environment-proposed-construction-product-competence-standard-white-paper/>

Achieving Competence in the Building Envelope Sector. JCI. Published June 2023. Available from: <https://c-a-b.org.uk/wp-content/uploads/White-Paper-Achieving-Competence-in-the-Building-Envelope-Sector-Publication-Version-09.05.23.pdf>