

MINIMUM TECHNICAL COMPETENCE FOR AIR TIGHTNESS TESTING IN BUILDINGS FOR ENGLAND AND WALES

1. Purpose and scope

This Minimum Technical Competence Document (MTC) is intended for use by schemes authorised under the Building Regulations 2010 for air tightness testing of new buildings. It sets out the minimum competence requirements to be met by members and testers applying to join such schemes and against which competency and knowledge will be assessed and monitored. The MTC also details how the scheme will operate.

The competences relate to the air tightness testing and reporting for buildings as set out in the current relevant building standards for England and Wales which consist of

- Conducting air tightness testing
- Reporting on results of air tightness testing

The detailed technical requirements for carrying out inspection and testing are set out in BS EN Standard 13829:2001 and the current approved procedure for each jurisdiction of the United Kingdom.

Note: References in this document are to building regulations terminology, legislation and processes in England and Wales, as administered by the Department for Communities and Local Government and the Welsh Government. In application of this document by other UK administrations, these references will be amended to describe the equivalent terminology, legislation and processes in Scotland or Northern Ireland only where this is needed to ensure clarity of application.

2. Definitions

The following definitions are used in this MTC:

Building Regulations: the Building Regulations 2010 (S.I. 2010/2214), as amended for England and Wales

Building: includes new dwellings and new buildings other than dwellings

Members: registered businesses including sole traders who offer air tightness testing services

Testers: individuals who provide air tightness testing services and who are employed by a member

Conditions of Authorisation: Conditions set by the Department for Communities and Local Government (DCLG) and the Welsh Government, which bodies applying for authorisation to be a scheme operator for air tightness testers must show DCLG they can satisfy before being authorised and which they must continue to satisfy so long as they remain a scheme operator.

Scheme Operator: authorised by DCLG and/or the Welsh Government to run the scheme for the registration of air tightness testing based on this MTC framework and the conditions of authorisation.

Surveillance: A systematic examination of a firm's quality management systems, calibration records, contract management processes, envelope area calculations, test results and report records including witnessing of an air pressure test.

National Occupational Standards (NOS): Standards for the competence requirements of a defined job role or occupation as set out by the appropriate sector skills body.

Level 1 tester: entry level for new testers who test single dwellings and other small simple buildings

Single dwellings and other small simple buildings: air tightness testing of up to a gross internal volume of 4000m³ inside the thermal line as defined by BS EN13829 2001. These buildings are considered to be 'simple' and cannot be tested in volumetric sections less than 4000m³.

Level 2 tester: for testers who have achieved level 1 and test **non-simple buildings**

Non-simple buildings: air tightness and/or air change rate testing of buildings which are greater than a gross internal volume of 4000m³ inside the thermal line as defined by BS EN 13829 2001, and includes buildings that could be tested in smaller volumetric sections.

Level 3 tester: for testers who have achieved level 1 and 2 and test large and complex, high rise and phased handover zonal buildings and require a higher level of expertise

3. Responsibilities of the scheme operator

Air tightness Scheme Operators must, at all times whilst they are authorised, comply with all the requirements in the Conditions of Authorisation for Airtightness Certification Schemes and demonstrate meeting the conditions in line with the notes in that document.

In particular, Authorised Scheme Operators shall comply with the following MTC requirements:

3.1 The criteria for continued authorisation to be met by the Scheme Operator and assessed and audited by an assessment body approved by DCLG and/or the Welsh Government, shall be in the form of an audit check list and plan, which will include all the DCLG, and Welsh Government, Conditions of Authorisation and the requirements placed on the Scheme Operator by this MTC. This audit plan is to be acceptable to DCLG and the Welsh Government

3.2 The Conditions of Authorisation and Scheme Operators' requirements laid out in this MTC shall be incorporated in the Scheme Operator's Quality Management System, which must be assessed by a Third Party Body acceptable to DCLG and the Welsh Government. Regular audit of the Scheme Operator shall be undertaken by this Body at least once per year to confirm ongoing compliance, which is to be reported to DCLG and the Welsh Government. The audits will also consist of a witnessed audit of the Scheme Operator conducting an on-site assessment of a registered business.

3.3 It is the responsibility of air tightness scheme operators to assess all testers and members applying for registration with its scheme in line with the requirements of this MTC, the Conditions of Authorisation for Airtightness Schemes and the Building Regulations. Members and testers will be assessed against the relevant route of entry in Annex A. Links to the full National Occupational Standards are given at Annex B.

3.4 Scheme Operators must carry out documented periodic surveillance of Members registered with its scheme in line with Condition 12 of the Conditions of authorisation.

3.5 Where the Member is accredited by UKAS under ISO17025 for air-tightness testing to the relevant standards, this can be deemed to satisfy the surveillance requirements and the Scheme Operator need only obtain annual proof from the Member that their UKAS accreditation is maintained. However, should a Member cease to be suitably UKAS accredited, the Scheme Operator must have procedures in place to respond appropriately, especially in case where UKAS have withdrawn or suspended the accreditation.

3.6 Where surveillance shows that a registered business no longer has the technical competences required to carry out air tightness testing, the scheme operator will list the areas of non-compliance and assess the proposed steps for the Member to implement timely corrective actions, or where necessary suspend the business from the list of registered companies until it can demonstrate that it has acquired the required technical competence. If it is unable to do so in a reasonable timescale, the business must be removed from the register. Scheme Operators must have a documented process for suspension and removal of scheme members.

3.7 Scheme operators will make available to applicants to their schemes, on request, the National Occupational Standards, the current Minimum Technical Competence and the current approved procedures.

3.8 Scheme Operators will have the necessary resources available to provide ongoing technical and other help and impartial advice to its scheme members, as detailed in the DCLG, and Welsh Government, Conditions of Authorisation, Condition 11.

3.9 Scheme operators must produce audited annual accounts clearly demonstrating self-sufficiency and a surplus for development, research, training and updating members.

3.10 Scheme operators must have a documented complaints scheme, including an independent panel for appeals

4. Responsibilities of air tightness testing members and testers

4.1 Registered members and testers with the relevant competences may be allowed to carry out air tightness testing, and complete an air tightness report and test the building. A member may sub-contract site testing to another registered member or tester.

4.2 It is the responsibility of businesses applying for registration of an air tightness testing scheme to make available all information required by the scheme operator for the purpose of the assessment of the business and each of the individuals who will carry out air tightness testing.

4.3 It is also the responsibility of a registered member to co-operate in any periodic surveillance carried out by the scheme operator with which the business is registered.

4.4 Registered members must have access to the following documents:

- The current approved procedures
- Current relevant building standards and regulations approved by the jurisdictions within which the member is operating

4.5 Registered members must ensure that the following test equipment has been calibrated as set out in the approved procedure:

- Micromanometer
- Thermometer
- Barometer
- Fan equipment

4.6 Registered members must have an appropriate level of professional indemnity and public liability insurance in place which meets their business requirements

4.7 Registered members must keep records for all jobs for at least six years from the date of certification of the building. The records must contain at least a copy of any air tightness test results, supporting data and certificates as required by regulation 43 of the Building Regulations 2010.

Annex A.1 Level 1 - Air tightness testing for single dwellings and other small simple buildings

Route no.	Knowledge and Understanding	National Occupational Standards (NOS) reference	Additional requirements
1	Accredited qualifications approved by the relevant regulator at a minimum of Level 3 which reflect the learning outcomes of the National Occupational Standards for air tightness testing	ASTATT 1 ASTATT 2 ASTATT 3	<ul style="list-style-type: none"> • Witnessing of an air pressurisation test in accordance with the test standards on a relevant single dwelling and small simple building to be organised by the candidate • Undergo three months' probation • 3 actual test reports of a representative sample of work will be assessed during the probation period • For route 3, 5 actual test reports of a representative sample of work will be assessed with supporting documentation
2	Completion of other aligned training, accreditation and/or certification (e.g. PCN examination, ISO 17024, ISO 17025,) reflecting the learning outcomes of the National Occupational Standards for air tightness testing	ASTATT 5 ASTATT 6 ASTATT 7	
3	Demonstrable experience gained through industry experience reflecting the learning and outcomes of the National Occupational Standards for air tightness testing	ASTATT 8 ASTATT 9	

Annex A.2 Level 2 - Air tightness testing for non-simple buildings

Route no.	Knowledge and Understanding	National Occupational Standards (NOS) reference	Additional requirements
1	Accredited qualifications approved by the relevant regulator at a minimum of Level 3 which reflect the learning outcomes of the National Occupational Standards for air tightness testing	ASTATT 1 ASTATT 2 ASTATT 3	<ul style="list-style-type: none"> Witnessing of an air pressurisation test in accordance with the test standards on a relevant non-simple building to be organised by the candidate and questioning of the candidate to ensure competence at this level Undergo three months' probation 3 actual test reports of a representative sample will be assessed during the probation period For route 3, 5 actual test reports of a representative sample of work will be assessed with supporting documentation
2	Completion of other aligned training, accreditation and/or certification (e.g. PCN examination, ISO 17024, ISO 17025) reflecting the learning outcomes of the National Occupational Standards for air tightness testing	ASTATT 4 ASTATT 5 ASTATT 6	
3	Demonstrable experience gained through industry experience reflecting the learning and outcomes of the National Occupational Standards for air tightness testing	ASTATT 7 ASTATT 8 ASTATT 9	

Note: Should the tester not complete 3 actual test reports during the probationary period then this will be extended until they have completed 3 actual tests.

Annex A.3 Level 3 - Air tightness testing for large, complex, high rise and phased handover zonal buildings

Route no.	Knowledge and Understanding	National Occupational Standards (NOS) reference number	Additional requirements
1	Accredited qualifications approved by the relevant regulator at a minimum of Level 4 which reflect the learning outcomes of the national occupational standards for air tightness testing	ASTATT 1	Level 2 additional requirements plus <ul style="list-style-type: none"> • Interview with technical panel to determine competence at this level • Submission of a report demonstrating detailed advanced technical and applied knowledge and understanding (<i>Note: a full specification will be provided on application</i>)
2	Completion of other aligned training, accreditation and/or certification (e.g. PCN examination, ISO 17024, ISO 17025) reflecting the learning outcomes of the national occupational standards for air tightness testing	ASTATT 2	
		ASTATT 3	
		ASTATT 4	
3	Demonstrable experience gained through industry experience reflecting the learning and outcomes of the National occupational standards for air tightness testing	ASTATT 5	
		ASTATT 6	
		ASTATT 7	
		ASTATT 8	
		ASTATT 9	
		ASTATT 10	

Note: Should the tester not complete 3 actual test reports during the probationary period then this will be extended until they have completed 3 actual tests.

ANNEX B

National Occupational Standards relevant to the job roles, responsibilities and competence requirements of an air tightness tester

ASTATT 1 Prepare to carry out tightness testing

ASTATT 2 Prepare building for air tightness testing

ASTATT 3 Carry out air tightness testing for single dwellings and other small buildings

ASTATT 4 Carry out air tightness testing for non-simple buildings

ASTATT 5 Prepare and issue the air tightness report

ASTATT 6 Calculate the area of building envelopes

ASTATT 7 Manage all calibrated equipment

ASTATT 8 Initiate and progress contracts with clients to carry out air tightness testing

ASTATT 9 Quality assure the air tightness testing process

ASTATT 10 Carry out air tightness testing on large and complex, high rise and phased hand over zonal buildings

The standards can be found at <http://nos.ukces.org.uk> by searching on the standard title or reference number: