



Air-Permeability Testing of New Dwellings & Buildings in the UK: Challenges to Maintaining Standards

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Who are ATTMA?

- Originally a “Trade Association” formed in 2002, when ATT first appeared in England/Wales Building Regulations (Part L)
- Membership initially restricted to UKAS Accredited firms (ISO17025).
- Authors of the Technical Standards for ATT, listed in Building Regulations (ATTMA TSL1 & ATTMA TSL2)
- Owners of a new ATT Competence Scheme
 - Replaces BINDT Scheme
 - Authorised by Government and names in Part L
 - Majority of UK Testing Firms are Members



Terminology

- DCLG
 - Government Department in charge of English Building Regulations
- Planning
 - Local Authority/Council Department that decides on what can be built in their area, and imposes various requirements
- Building Control
 - Organisations that check compliance of building work against Building Regulations. Can be either Local Authority or a private “Approved Inspector”
- Part L (of The Building Regulations)
 - Building Regulation that deals with Energy Performance
- BINDT (British Institute of Non-Destructive Testing) –
 - Managers of a now ended Competence Scheme for AT testers of Dwellings.

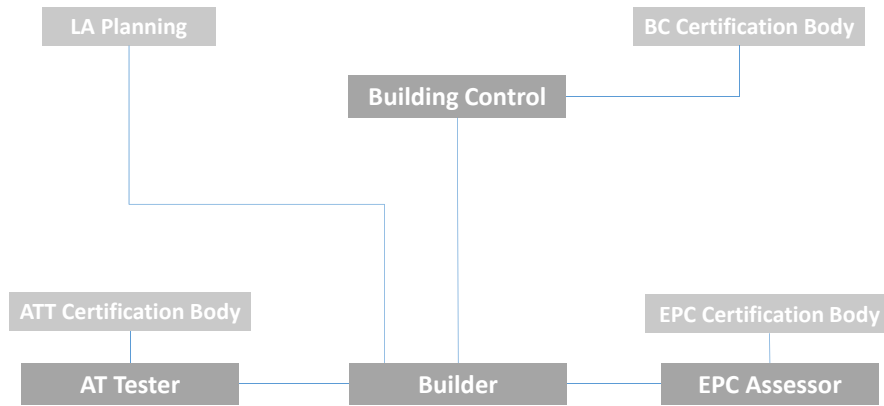


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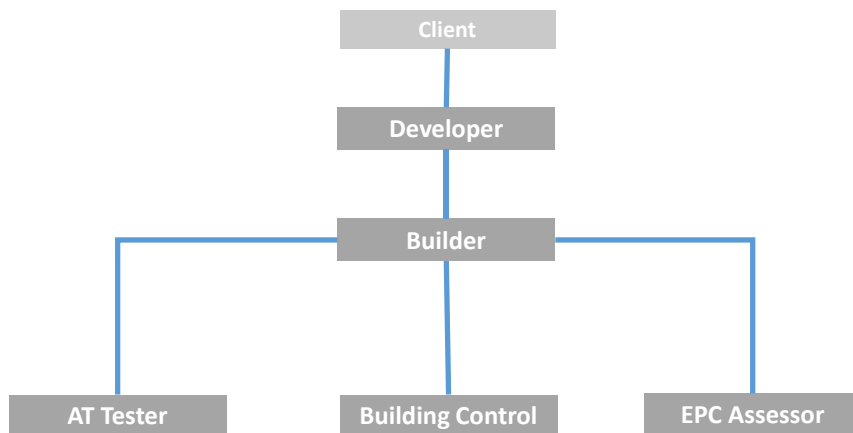
- Client
 - The ultimate owner/occupier of a Building Project
- Developer
 - Company that ‘develop’ and sells/rents buildings or dwellings.... often ‘speculatively’.
- Contractor (“Builder”)
 - Company that builds buildings/houses for Developers or Clients. *(Sometimes the Developer is also the Builder, e.g. all the large House Builders)*
- EPC Assessor
 - Consultant that checks that a new building/dwellings are compliant with Part L using SAP or SBEM calculation methodologies, and produces the Energy Performance Certificate.



Compliance Hierarchy



Commercial Hierarchy



Industry Threats

- **Government**
 - Deregulation is a policy. Government are wanting to help the Building Industry by reducing and simplifying Regulations.
 - Current Building Regulations do require air-tightness testing of new buildings, but are lax about who can test!
- **Developers**
 - Many buildings (and most dwellings) are built *speculatively* by firms who may not be very interested in their energy performance.
- **Builders/Contractors**
 - Primarily interested in completing their contract as quickly and cheaply as possible. Energy performance is regarded as a compliance burden more than a desirable quality feature. Only aim to achieve minimum required level of compliance.



Industry Threats

- **Building Control**
 - Since this process was partially privatised in the '1990s, it has become commercially subordinate to the Builders. BCOs do not have full and unfettered authority.
- **Air-Tightness Testers**
 - They are also too commercially influenced by the Builder, who only wants a "pass" certificate. Many testers are very small firms with little ability or inclination to resist "undue influence". Air tightness testing has become a commodity.
- **EPC Assessors**
 - Are also appointed by the Builder who has control over the flow of information to them. They lack control over the process, work remotely, and provide a 'commoditised' service



Who is the customer?

- In most markets, the end customer drives energy efficiency.
- In the UK Market for dwellings this is not straightforward
 - There are more buyers than dwellings being built
 - Most new houses are built speculatively. Customers buy the end product and can't specify quality.
 - If the "Customer" is a Landlord, they are less interested in Energy Performance. (Tenants pay bills)
 - Against background of relatively low energy costs, UK customers are still quite ignorant towards energy performance (and air-tightness).



Industry Regulation

- Government recognises Competent Persons Schemes.
 - Members of Schemes can do work without it needing checking by Building Control.
 - Building Control more interested in safety than energy
- Until recently there have been two recognised ATT Competence Schemes
 - BINDT Scheme (for testers of Dwellings only), and
 - Membership of ATTMA (for UKAS-accredited testing firms, who can test any building)
- These have now been replaced by the new unified ATTMA Scheme.



Lessons Learnt from BINDT Scheme

Problem	Solution	Lesson Learnt
BINDT were not experienced in either Air Tightness Testing or Competent Person Schemes	Control passed to ATTMA	Competent Persons Schemes should be run by focussed organisations.
BINDT Scheme membership was individual Testers only. No control over Testers' Employers	Membership of new ATTMA Scheme is by Testing Firms. Individuals are certified by the scheme.	Vital to capture firms as well as individuals to prevent firms forcing their employed testers to break the rules for commercial benefit.
Very lax auditing of member testers	New Scheme will properly audit both testers and firms annually	ATT Competence Schemes must properly and regularly check on their members to maintain standards – and respect!.



Lessons Learnt from BINDT Scheme

Problem	Solution	Lesson Learnt
BINDT Scheme did not have a technical expert available to support members.	New ATTMA Scheme has fully employed ATT expert available to members	Members need to have a technical point of reference to maintain standards and perceived value
BINDT Scheme did not control test certificates. As a result, there was no traceability	ATTMA Scheme members will use lodgement system to centrally archive test data and generate Certs	Test integrity is massively improved by test data lodgement as it makes the Tester more quality conscious and it prevents corruption of Data by Builders.
BINDT Scheme was underfunded	New Scheme will charge higher fees which will be proportionate to the activity-level of member	Member fee income should be sufficient to enable the Scheme to deliver value, and be effective as a regulator, and should be proportionate to member-company size.



Lessons Learnt from BINDT Scheme

Problem	Solution	Lesson Learnt
BINDT Scheme intended to produce Dwelling-Testers. No means for members to become non-dwelling testers.	New ATTMA Scheme has provided a route for individuals to become more qualified	The scheme must ensure that members stay within their qualification level, but must also enable people to progress.
The existence of two Schemes (BINDT and ATTMA) which were complete different, confused Stakeholders. Building Control	A single Scheme now operates in a harmonised way for all members. Stakeholders can easily check on testers' credentials via ID cards and the website	It is very important to make it simple for external Stakeholders (like builders and Building Control) to understand the Scheme, identify its members and their qualifications.



Key features of the new ATTMA Scheme



Members are *Companies*

- Individual Testers are Certified but not “Members”
- Why is membership limited to companies?....
 - To ensure organisational compliance
 - For top-down accountability
 - Unaffected by staff changes
 - Works better for member firms’ marketing activities
 - *Its required within DCLG’s Conditions of Authorisation*
- Companies will join the scheme and be bound by its Rules of Membership and Code of Conduct
- Members (companies) will be audited
- Members are equal stakeholders in the scheme



Members Obligations

- Abide by Scheme Rules & Code of Conduct, including:-
 - Employ appropriately certified individuals for all testing operations
 - Test within certification level of individual testing staff
 - Test strictly to ATTMA Technical Standards
 - Do not make false marketing claims.
- Upload (‘lodge’) all test result data to ATTMA database
- Allow 3rd-party auditing (& corrective actions)
 - Either by UKAS (to ISO17025), or
 - By ATTMA
- UKAS Firms will have to put all their “Level 2 Testers” through the Level 2 Assessment by end of 2015.



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 - Any that fail – or don’t sit it – will be certified at Level 1.
- Maintain appropriate insurance cover



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ATTMA Certified Testers

- Are not scheme members...their companies are!
 - Including sole traders and partnerships.
 - Newcomers must be employed by a member company - or join as one.
- Can move between member firms
 - Tester certification is portable and independent
- Can be sub-contracted to, or employed by, other member firms.
- Will carry ATTMA Certificates and ID Cards



Tester Certification Levels

- Based on new National Standards (produced for the Government)
 - Level 1 – Testers of residential & small, simple non-residential buildings
 - Limited to 1 blower door fan and a maximum volume of 4000m³
 - Level 2 – Testers of residential and non residential buildings
 - Level 3 – Experts in air permeability
 - EA – Trained and authorised to calculate envelope areas for other testers.
 - This is a separate module that is included as part of the above levels
 - Auditor – Minimum of Level 2 (to audit Level 1) or Level 3 (to audit Level 1 & 2) and trained in accordance with ISO 19011:2011
 - Existing BINDT members were automatically Level 1
 - UKAS Level 2 testers will still be required to prove competency

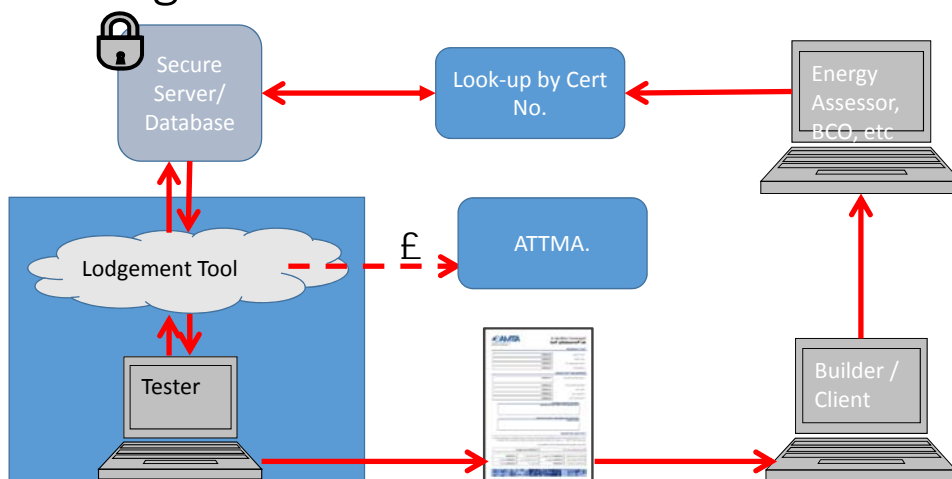


Lodgement of Results

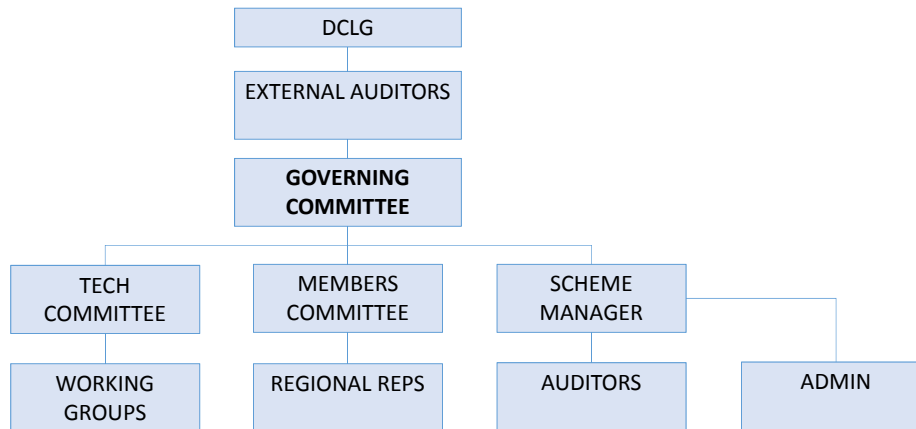
- To Encourage Responsible Testing
- To Give the Scheme “Teeth”
- To Differentiate ATTMA Tests & Testers
- To Reduce Risk of ‘corruption’ in test process & data
- To Add a Layer of QA
- To Generate Funds - Proportionately
- To Generate Data for Statistical Analysis



Lodgement Process



Scheme Organisation



Key Improvements

- Companies are Members – and accountable
 - Therefore owners/managers of ATT firms (as well as Testers) must ensure standards are maintained
- Increased fees, controls, support, profile...
 - means increased perceived value. *Members must be more fearful of losing their ATTMA status than of losing customers (that don't like failing tests).*
- *Lodgement of Test Data*
 - means better quality data that is then protected
 - Forms a means for proportionate membership charging
 - Generates recognisable ATTMA Test Certificate



Key Improvements

- Full-time scheme manager
 - Testers now feel supported
 - Better handling of complaints
 - More effective protection of Testers from Builders
 - Can drive marketing initiatives and PR effort
- Scheme will accommodate all sizes of Firm
 - No more two-tier industry; no more in-fighting!
 - UKAS accreditation is accommodated but not required.



In an ideal world...

- Building Regulations would mandate testing by Qualified Testers only
 - ...and the lodging all test data
- Building Control Officers would witness tests on site
- ATT Firms would work directly for the Client or Local Authority
 - Therefore they would be free from Undue Influence
 - Same should apply to Building Control and EPC Assessor
- Technology would facilitate real-time uploading of test data
 - To completely eradicate corruption of test data
- Building Regulations would require in-use testing of Buildings
 - To ensure on-going integrity

