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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Terminology

• **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

- LA Planning
- ATT Certification Body
- AT Tester
- Building Control
- Builder
- BC Certification Body
- EPC Certification Body
- EPC Assessor

Commercial Hierarchy

- Client
- Developer
- Builder
- AT Tester
- Building Control
- EPC Assessor
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

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

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<td>BINDT Scheme did not have a technical expert available to support members.</td>
<td>New ATTMA Scheme has fully employed ATT expert available to members</td>
<td>Members need to have a technical point of reference to maintain standards and perceived value</td>
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<tr>
<td>BINDT Scheme did not control test certificates. As a result, there was no traceability</td>
<td>ATTMA Scheme members will use lodgement system to centrally archive test data and generate Certs</td>
<td>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.</td>
</tr>
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<td>BINDT Scheme was underfunded</td>
<td>New Scheme will charge higher fees which will be proportionate to the activity-level of member</td>
<td>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.</td>
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<td>BINDT Scheme intended to produced Dwelling-Testers. No means for members to become non-dwelling testers.</td>
<td>New ATTMA Scheme has provides a route for individuals to become more qualified</td>
<td>The scheme must ensure that members stay within their qualification level, but must also enable people to progress.</td>
</tr>
<tr>
<td>The existence of two Schemes (BINDT and ATTMA) which were complete different, confused Stakeholders. Building Control</td>
<td>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</td>
<td>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.</td>
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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

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**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.
Members Obligations

• UKAS Firms will have to put all their “Level 2 Testers” through the Level 2 Assessment by end of 2015.
  • Any that fail – or don’t sit it – will be certified at Level 1.
• Maintain appropriate insurance cover
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