

# Presentation to European Air Tightness Association

Competent Tester Schemes  
in the UK



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*“A Cautionary Tale”*



## The Air Tightness Testing & Measurement Association

- ❑ 16 Member Firms, all UKAS-accredited (ISO 17025) and deemed competent to test all building types
- ❑ Affiliated to BINDT (British Institute of Non Destructive Testing)
  - ❑ Sit on BINDT's governing committee for air testers
- ❑ Produce testing methodologies used for UK Building Regulations.
- ❑ Now authorised by UK Government as a “Competent Persons Scheme” manager (equal to BINDT). *But not currently live.*
- ❑ Mission is to promote the highest standards of air tightness testing.
- ❑ Undertake research, lobbying, information exchange, etc



# The UK Air Tightness Testing Market

- ❑ Around 50000 new dwellings and 12000 new “non-dwellings” tested per year (at current rate).
- ❑ Typical price per dwelling - £100; per non-dwelling - £800.
- ❑ Around 150 testing companies, and up to 400 testing persons
- ❑ Customers are mainly
  - ❑ House-builders
  - ❑ Main Contractors (construction firms undertaking contracts to build all types of buildings)
- ❑ The “end clients” (eventual owners and/or occupiers of new houses/buildings) are rarely involved.



# The UK Air Tightness Testing Market

- ❑ As a result, testing is purchased (by builders) for compliance...
- ❑ Almost all air tightness tests in the UK are conducted for Building Regulations compliance purposes (“Part L”)
- ❑ Part L requires air tightness testing of new buildings
  - ❑ Part L1A (new dwellings): Requires Sample-testing as a minimum, but incentivises 100% testing
  - ❑ Part L2A (new non-dwellings): Requires all new buildings with floor area over 500m<sup>2</sup> to be tested.
- ❑ Compliance with Part L: minimum  $Q_{50}$  result of 10 m<sup>3</sup>/(m<sup>2</sup>.hr)50Pa..... **or** whatever (better) result is needed to satisfy the energy calculation.

**L1A**  
**L2A**



# Key Features of the UK Market

- **Air Tightness Testing has lost its mystique!**
  - No longer viewed as a value-adding, technical process associated with building performance improvement....
  - Now regarded as a routine ‘commodity’ service that is only purchased because its needed for Building Regulations
- **There is a lack of understanding or (or interest in) the Competence Schemes for Air Tightness Testers**
  - Builders and Building Inspectors find it difficult to determine which Testers are qualified... and therefore most don't bother.....



# Key Features of the UK Market

- Its all about price...
  - Customers (builders) want cheap tests and no “fails”
- The pressure on testers to test badly or “cheat” is high.
  - The chance of being ‘found out’ is low
- Most testing people are not qualified engineers. Most testing firms are not formally 3<sup>rd</sup>-party accredited testing organisations.
  - Only around 20 UK firms are UKAS accredited for air-tightness testing(out of around 150 firms in total)
- Building Regs don’t clearly state a need for qualified/regulated testers. As a result, unregulated testers can/do freely operate.



# The background

## Pre 2002:

- Limited air-testing carried out enlightened clients by specialist firms (BRE, BSRIA, Building Sciences, etc)

## 2002:

- Building Regulation Part L updated:
  - Introduces need for large buildings (>1000m<sup>2</sup> floor area) to be tested
  - A few more firms enter the testing market
  - ATTMA formed
  - UKAS accreditation of testing firm (ISO17025) established as requirement to demonstrate competence (and for ATTMA membership)





# The background

2006

- Building Regulation Part L updated again:
  - Introduces need for more new buildings (>500m<sup>2</sup> floor area) to be tested
  - Introduces need for a sample of all new dwellings to be tested
- House-builders complain that there are not Air Tightness Testers!
  - Government appoints “BINDT” (British Institute of Non Destructive Testing) to establish a Competence Scheme for individual dwelling testers (The “L1 Tester Scheme”)
  - The L1 Tester training and certification scheme is launched and therefore the number of L1 Testers starts to rise



# The background

## 2006 - Present

- Building Regulation Part L updated again (2010):
  - Introduces incentive for 100% testing of new dwellings
- The number of L1 Testers has risen to around 250
  - They have formed a representative Association: ATA
- The number of ATTMA/UKAS accredited firms has risen to 16
- ATTMA given licence by Government to run a separate Competence Scheme (in competition to BINDT)
  - At present ATTMA is choosing to continue to operate in conjunction with BINDT



# How to Become a “Competent” Air Tightness Tester in UK

## Method 1:

- Your Firm becomes a UKAS-Accredited Air Tightness Testing “Laboratory”
- Join the Air Tightness Testing & Measurement Association (ATTMA)



**Pros:**

**Cons:**



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## Pros:

- Acknowledged by Stakeholders as the highest Competence Scheme level
- UKAS/ATTMA firms are recognised by Government, BINDT and Building Control as competent to test all building types (for Buildings Regs L1 & L2)
- You therefore have legitimate access to whole marketplace



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## Cons:

- It is technically difficult to attain & maintain UKAS accreditation
- UKAS is expensive (circa £7-10k in year 1, plus £5k per year after), plus £1k to ATTMA
- The competence of individual Testing Operatives is not tested and certified.



# How to Become a “Competent” Air Tightness Tester in UK

## Method 1:

- Testing Staff each get trained and certified under the BINDT L1 Scheme
- Your company signs the BINDT L1 Scheme Code of Conduct
- You join the ATA



## Pros:

## Cons:



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## Pros:

- Doesn't involve organisational accreditation: therefore much easier and cheaper
- While the scope is for dwellings (L1) only, you are not prevented from testing all building types

## Cons:



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## Pros:

- Doesn't involve organisational accreditation: therefore much easier and cheaper
- While the scope is for dwellings (L1) only, you are not prevented from testing all building types

## Cons:

- Your “competence” is deemed to be only applicable to L1. You may often find it difficult to win work to test L2 buildings, or to have test results accepted by BCO.





# How to Become a “Competent” Air Tightness Tester in UK

## Method 3:

- Do not bother with Competence Schemes!

### Pros:






- No cost of training, certification or accreditation costs
- No technical challenges

### Cons:

- Your “competence” is unproven by a 3<sup>rd</sup> party. You may often find it difficult to win work to test anything, or to have test results accepted by BCO.



# Capacity Comparison between 3 Methods

  	 	<p>Unregulated Testers</p>
<p>16-18 firms (some small, some medium) 120 testers</p>	<p>100 firms (mostly small) 250 testers</p>	<p>20 firms ??? 50 testers ???</p>
<p>These testers are fairly highly utilised, so probably undertaking around 50% of all UK air tightness testing</p>	<p>These testers less utilised and more focussed on L1 dwellings. (40% of all tests)</p>	<p>At a guess these testers cover 10%</p>



# Comparison between 3 Methods

## 1. UKAS/ATTMA



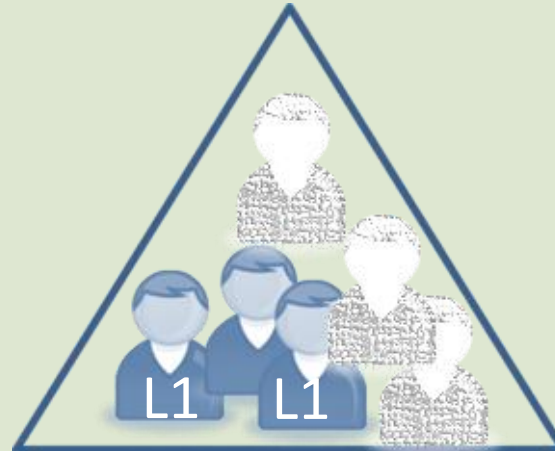
Whole company is accredited for all tests.  
No certification of individuals



## 2. BINDT L1 / ATA

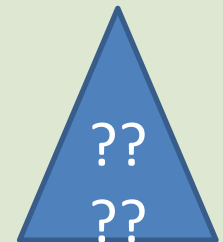


Specific individuals certified for dwellings



## 3. Unregulated Testers

Neither the firm or the staff or accredited or certified



# The Current Situation - Problems

- The Government refuse to be specific about competence requirements in the Building Regulations
  - Allows unaccredited and uncertified testers to operate
- Stakeholders such as Builders, Clients, and Building Control Inspectors don't understand the competence schemes
  - Many use it as an excuse not to take them seriously!
- UKAS accreditation provides the best basis for quality testing but it's not perfect and it's not cheap.
  - Therefore only a few companies have it
  - It does not provide individual tester certification (this is done 'in house' by the accredited company)



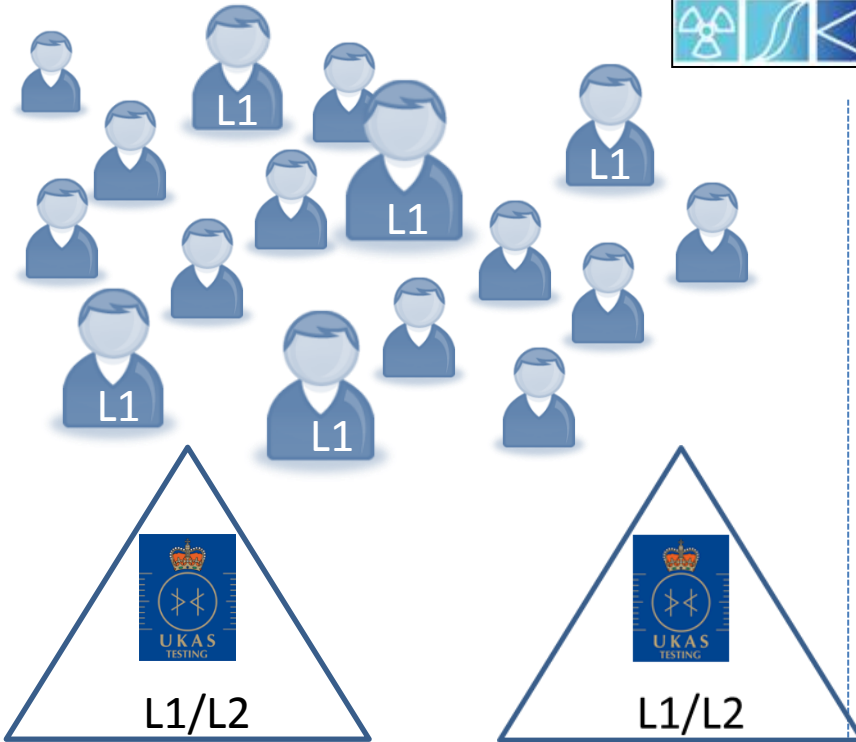
# The Current Situation - Problems

- The BINDT L1 Scheme is not ‘fit for purpose’.
  - Centred on testing individuals. Therefore does not adequately control the testing company:-
  - Only covers L1 testing but does not prevent L2 testing
  - The annual reassessments are very benign
  - It doesn’t prevent “proxy testing”
  - It allows large testing companies to appear “organisationally certified” (to carry out all types of test) when in fact they may only have 1 or 2 certified L1 testers
  - It does not adequately prevent ‘cheating’, which as a result is much too frequently happening

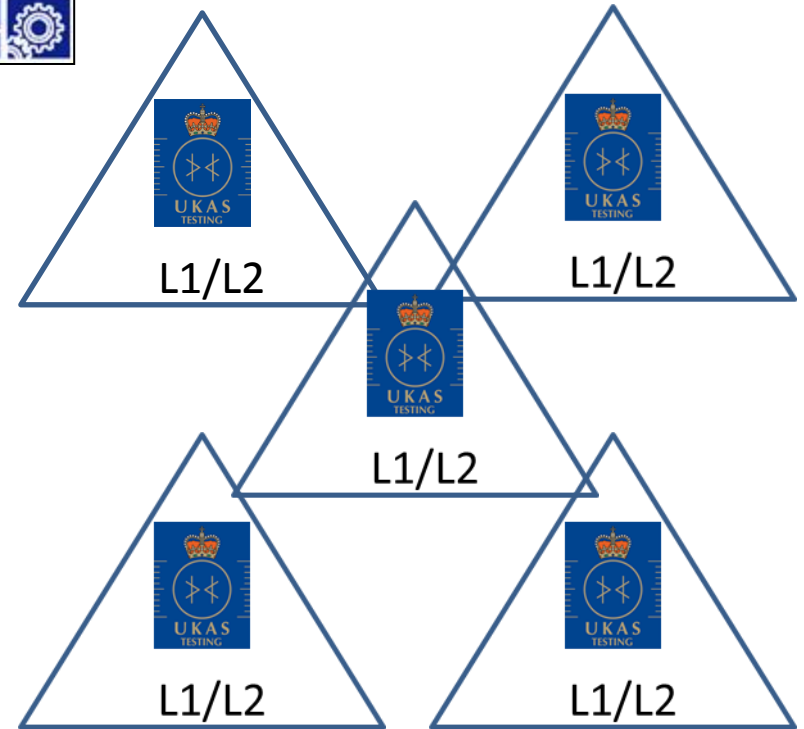


# The Original Intention

## Testing for Dwellings (L1)

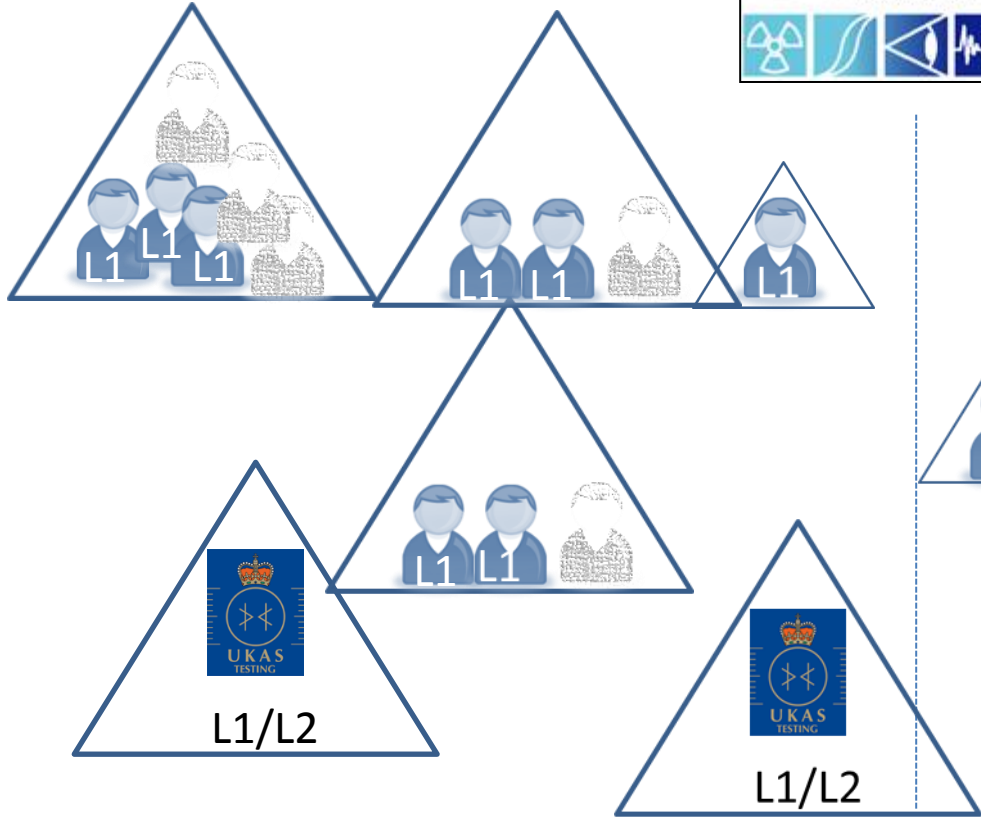


## Testing for Non Dwellings (L2)

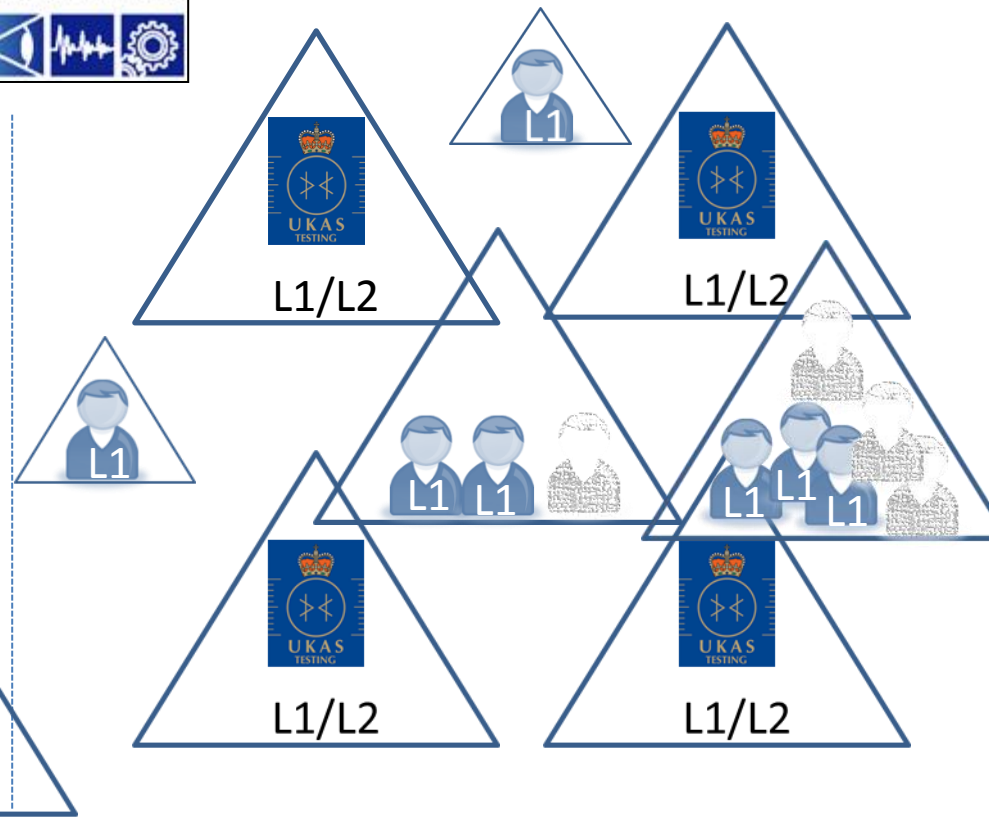


# The Outcome

## Testing for Dwellings (L1)



## Testing for Non Dwellings (L2)



# The Current Situation – Solutions!

- ATTMA & BINDT have proposed that in future ALL testing firms to be **UKAS accredited**, and....
- All individual employed testers to be certified too:
  - **Level 1** (Basic Testing Operative) Certified to test a simple building with a single fan.
  - **Level 2** (Advanced Operative) Certified to test larger and more complex buildings with multiple fans
  - **Level 3** (Technical Leader) Certified as competent in all technical matters relating to air-tightness testing, the scientific theory and calculations, calibration, relevant standards ,etc.





# The Proposal



**Accredited Companies Employing Certified Individuals**



# The Current Situation

- On behalf of current BINDT's L1 Testers, the ATA are opposing this:-
  - Too expensive! (UKAS accreditation costs around £3-5000 per year).
  - They currently pay around £200 per tester for BINDT registration, and nothing for the company
  - They don't want the extra burden that comes with maintaining UKAS accreditation
  - They believe that low levels of regulation are adequate and that they should be trusted to do the job properly
- UKAS are offering a reduced-cost solution for small firms
- Discussions continue....



# Conclusions

ATTMA believes the following...

- ❑ Good Air Tightness Testing relies of Tester **Competence AND Integrity.**
- ❑ Robust Competence Schemes are needed to ensure BOTH
- ❑ Schemes should involve certification and on-going auditing of both the testing **organisation** and **employed testers.**
- ❑ All Test Results and Key Data for ALL tests should be “lodged” to improve traceability, accountability and motivation to get it right.
- ❑ There should be a robust disciplinary mechanism for both companies and individuals



# Contact Details

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