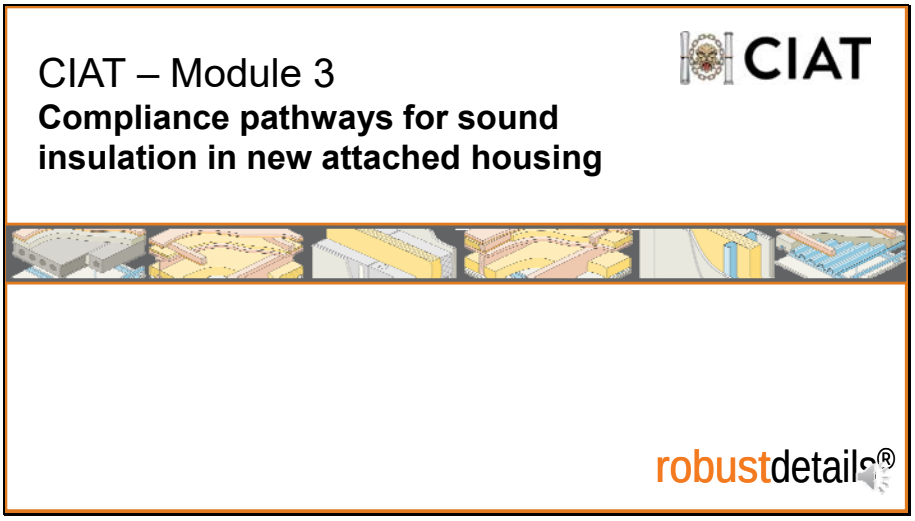
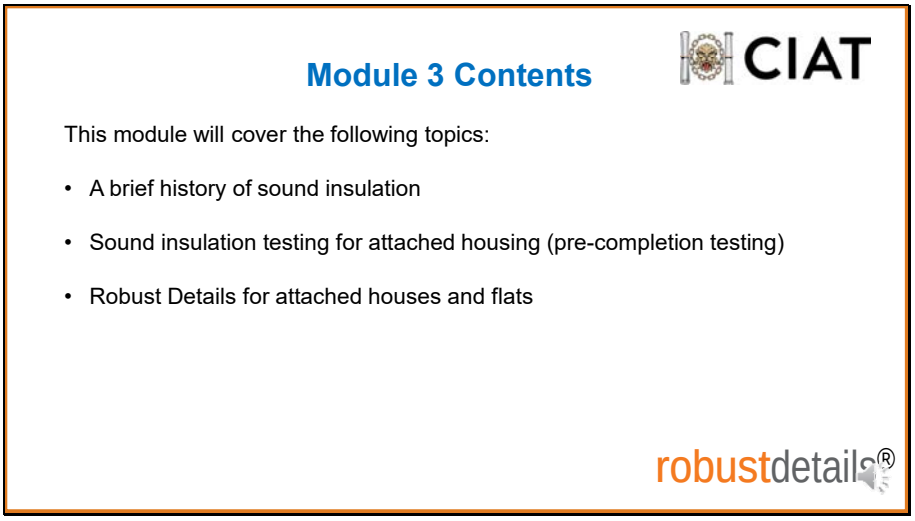
Slide 1



Welcome to Module 3 – Compliance pathways for sound insulation in new attached housing

Additional notes:

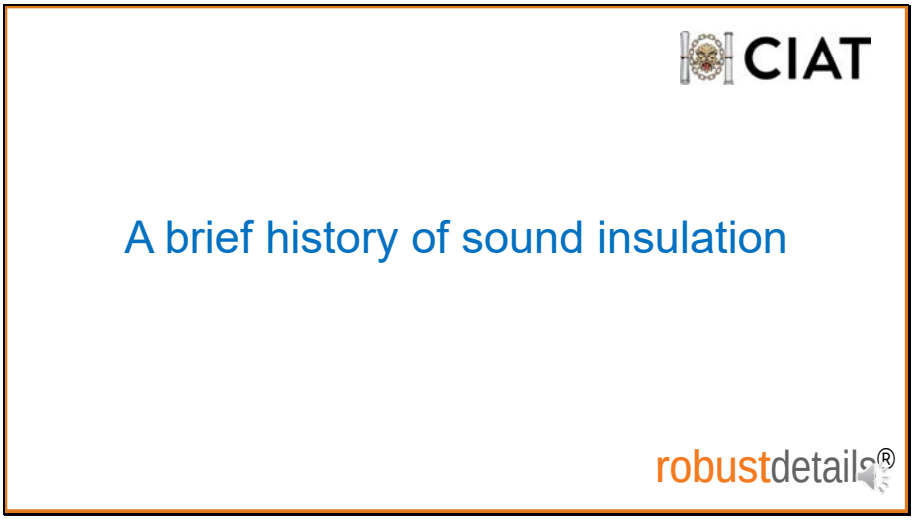
Slide 2



This Module will cover the following topics:
Read slide

Additional notes:

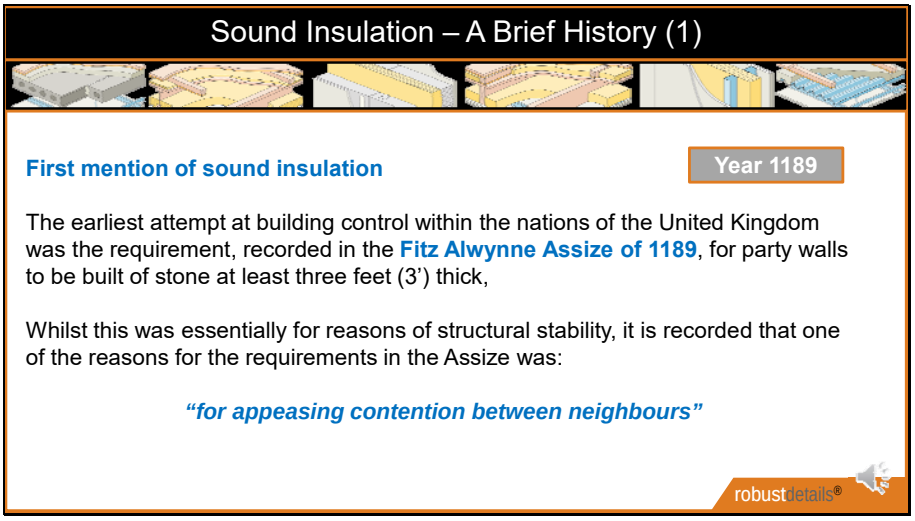
Slide 3



Read slide

Additional notes:

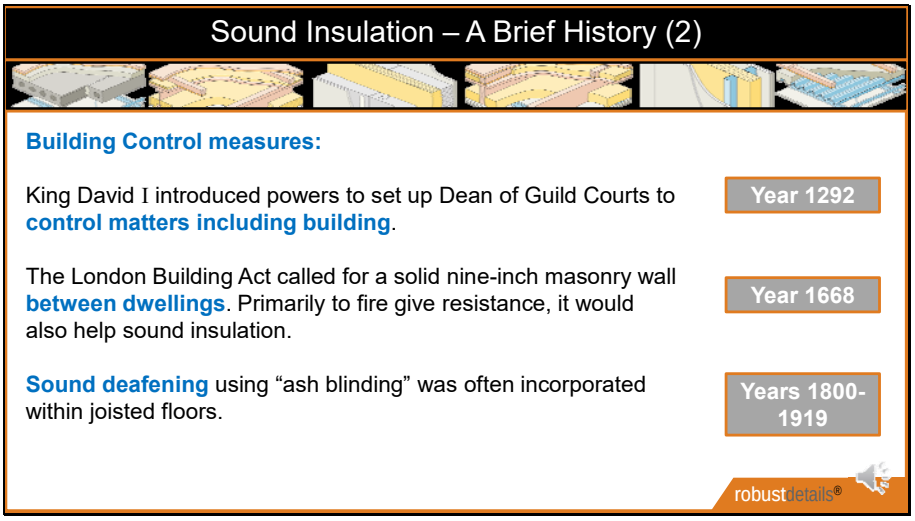
Slide 4



Read slide

Additional notes:

Slide 5



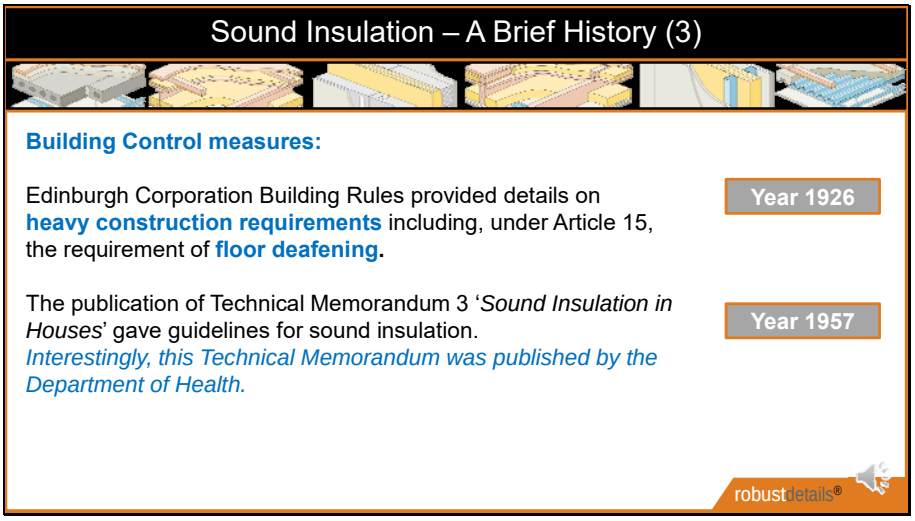
In Scotland in 1292, King David the 1st introduced powers to set up Dean of Guild Courts to control matters including building, although it took a further 400 years before this became regulated into building control as it is known today.

Following the Great Fire in 1666, the London Building Act called for a solid masonry wall between dwellings of nine inches (9”) minimum thickness. Which in addition to fire resistance would also help reduce sound transmission.

During 1800-1919 sound deafening using ‘ash blinding” was often incorporated within joist floor cavities.

Additional notes:

Slide 6

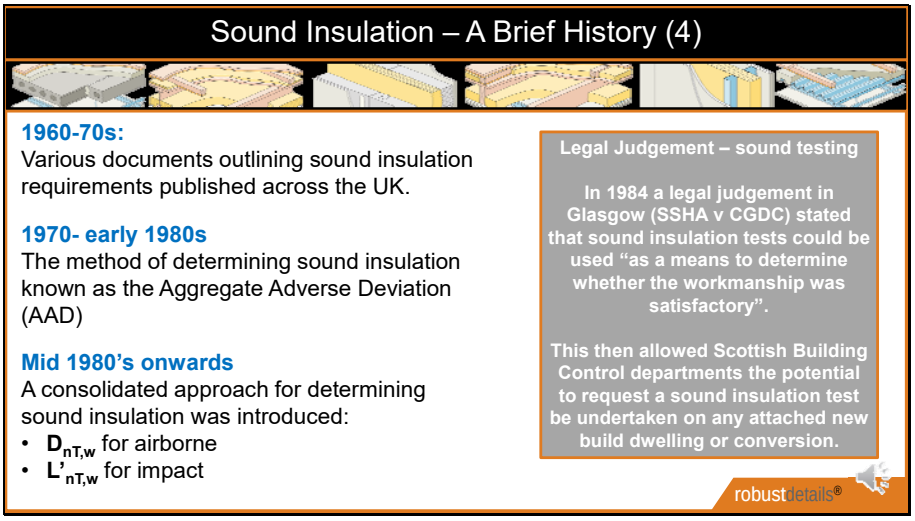


In 1926 under the Edinburgh Corporation Building Rules builders were provided with quite clear details on the heavy construction requirements for walls and floors including, under Article 15, the requirement of floor deafening.

Model byelaws included some requirements for sound insulation, and in 1957 the publication of Technical Memorandum 3 'Sound Insulation in Houses' full guidelines for sound insulation were made available. Interestingly, this Technical Memorandum was published by the Department of Health.

Additional notes:

Slide 7



1960-70s:
Various short documents outlining sound insulation requirements were published across the UK.

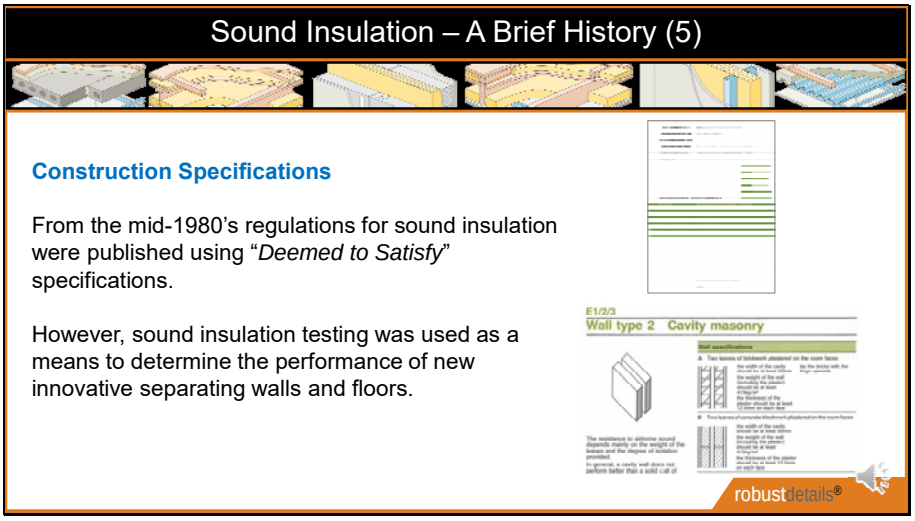
1970- early 1980s
The method of determining sound insulation was known as the Aggregate Adverse Deviation (AAD)

Mid 1980's onwards
A consolidated approach for determining sound insulation was introduced using DnT,w for airborne and L'nT,w for impact.

A subsequent legal judgement stating that sound tests could be used to determine the quality of workmanship, allowed Scottish building control the ability to sound test any attached dwelling.

Additional notes:

Slide 8

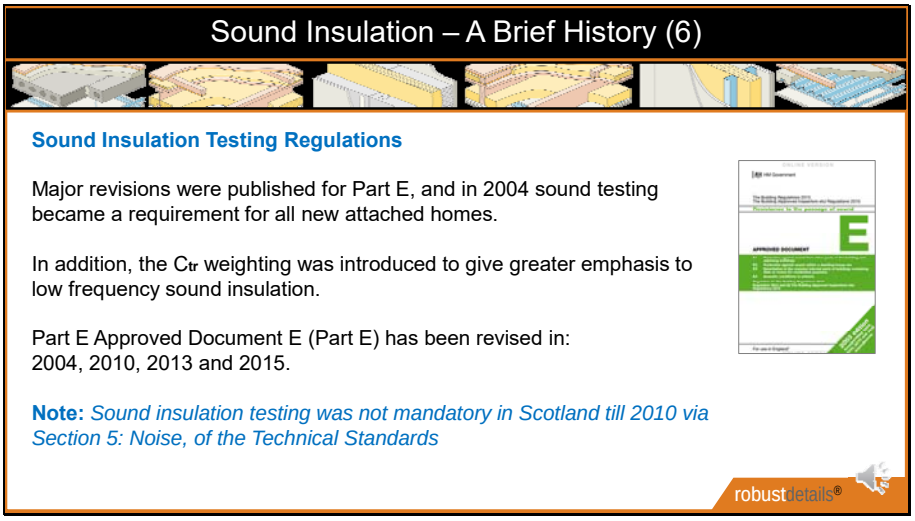


From the mid-1980's regulations for sound insulation were published using "*Deemed to Satisfy*" construction specifications (Approved Document E [ADE]). Generally if a ***deemed to satisfy*** was built it was rare to undertake a sound insulation test. Specification guidance was very limited within the ADE .

However, as new construction methods and products appeared in the market, sound insulation testing was used as a means to determine the performance of new innovative separating walls and floors.

Additional notes:

Slide 9



In 2001 major revisions were published for Part E of the Building Regulations in England and Wales and in 2004 sound insulation testing became a requirement for all new attached homes.

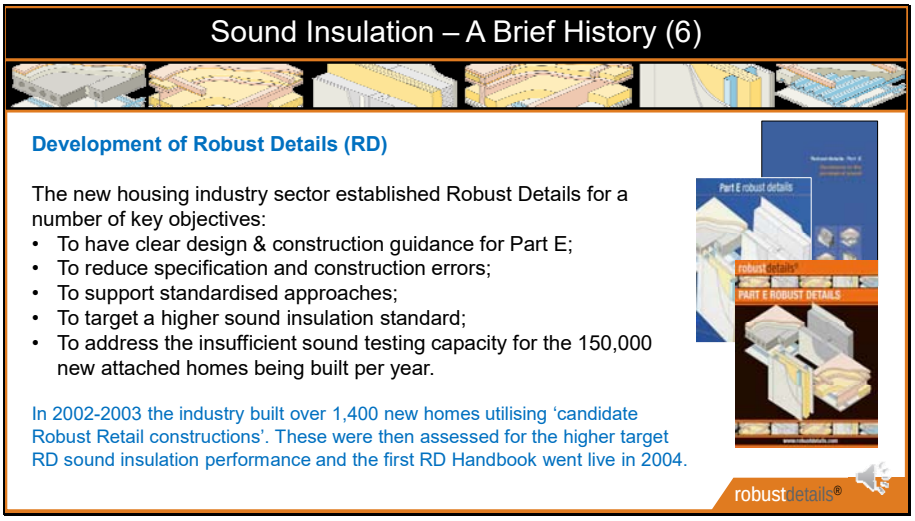
In addition, a new weighting criteria (Ctr) was introduced to give greater emphasis and improve low frequency sound insulation.

Part E Approved Document (England) for *resistance to the passage of sound* has been revised in 2004, 2010, 2013 and 2015. Wales and N.Ireland use similar standards to England as outlined in Module 2.

Note: *Sound insulation testing was not mandatory in Scotland till 2010 via Section 5: Noise of the Technical Standards*

Additional notes:

Slide 10



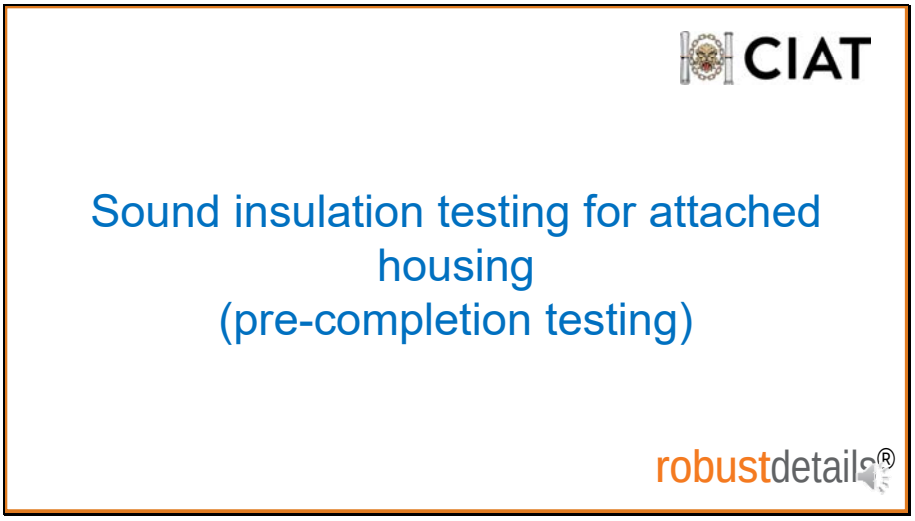
The new housing industry sector established Robust Details for a number of key objectives:

- To have clear design & construction guidance for the new Part E,
- To reduce errors in specifications and constructions
- To support standardised approaches based on site test evidence helping supply chains and skills,
- To target a higher sound insulation standard for the lifetime of the building, improving quality of life,
- There was (and is) insufficient sound testing capacity for the 150,000 new attached homes per year.

In 2002-2003 the industry built over 1,400 new homes utilising 'candidate Robust Retail constructions'. These were then assessed for the higher target RD sound insulation performance and the first RD Handbook went live in 2004.

Additional notes:

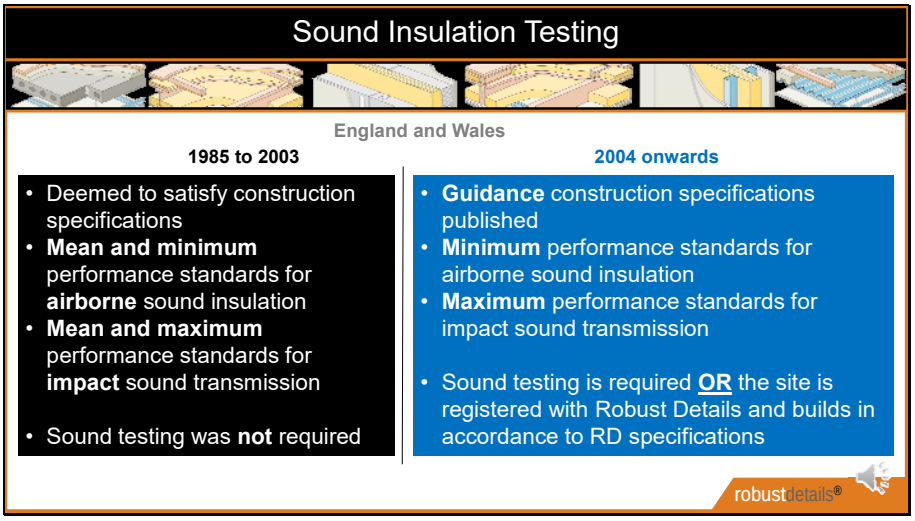
Slide 11



Read slide

Additional notes:

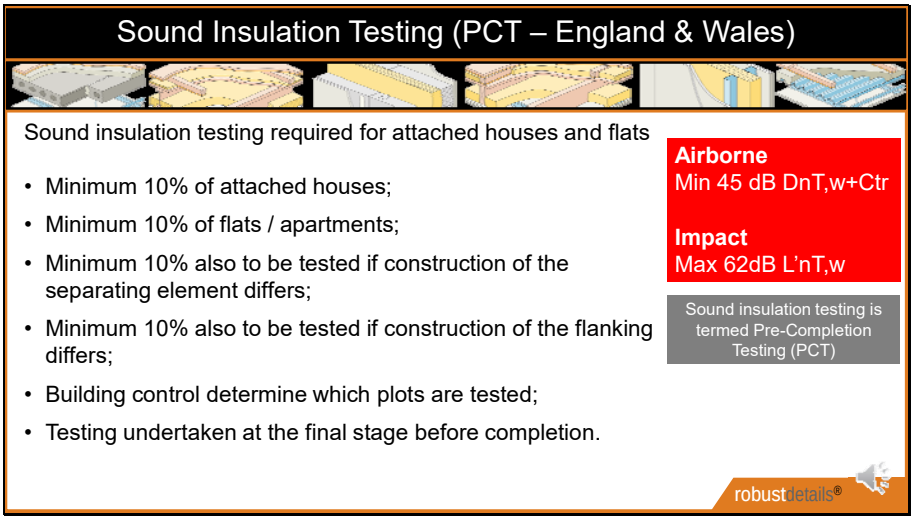
Slide 12



Read slide

Additional notes:

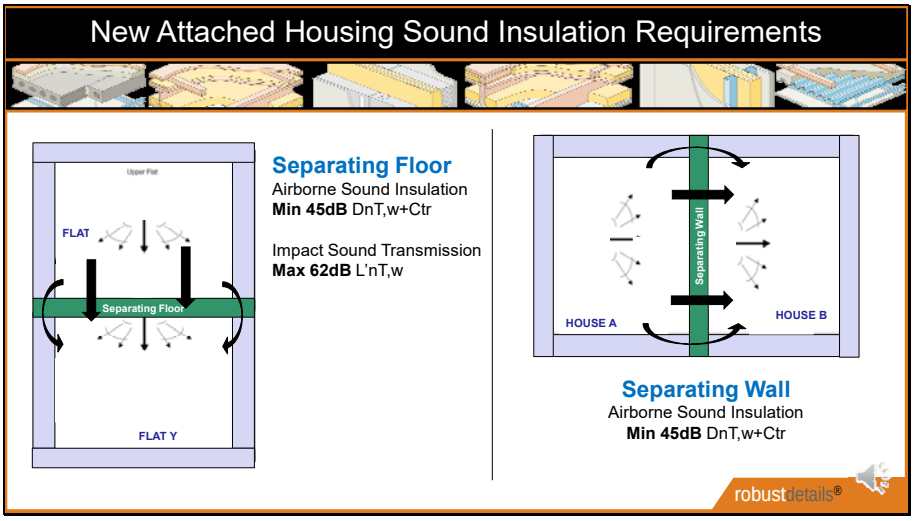
Slide 13



Sound insulation testing required for attached houses and flats on the same site (separating walls & Separating floors),
Minimum 10% of attached houses must be tested,
Minimum 10% of flats / apartments must be tested,
Minimum 10% also to be tested if there are changes (within the same site) if the construction details are different (e.g. blockwork homes and timber frame homes in same site),
Minimum 10% also to be tested (within the same site) if the flanking constructions are different (e.g. outer wall constructions are different),
Building control or equivalent should determine which plots are to be tested,
Testing undertaken at the final build stage "Pre-completion"
Then RED box
Then GREY box

Additional notes:

Slide 14

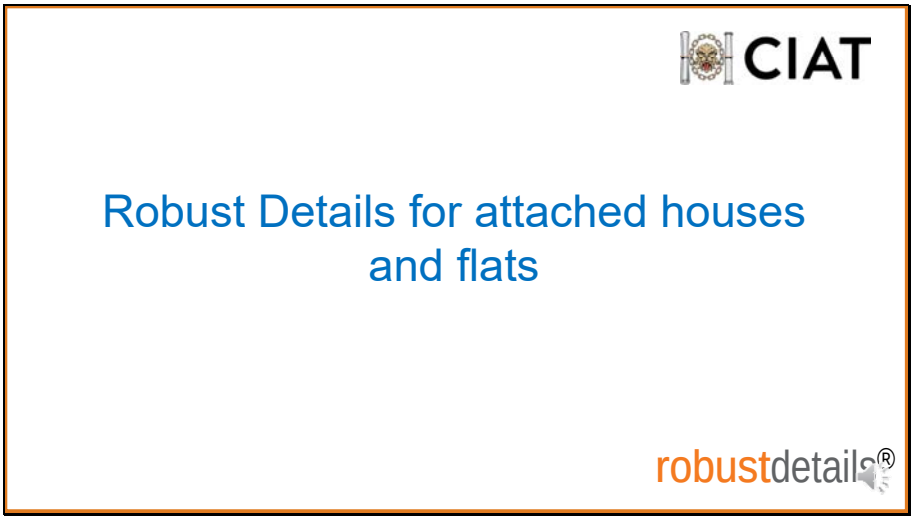


Read slide

Also note on the diagram the direct and indirect (flanking) transmission pathways shown by the arrows.

Additional notes:

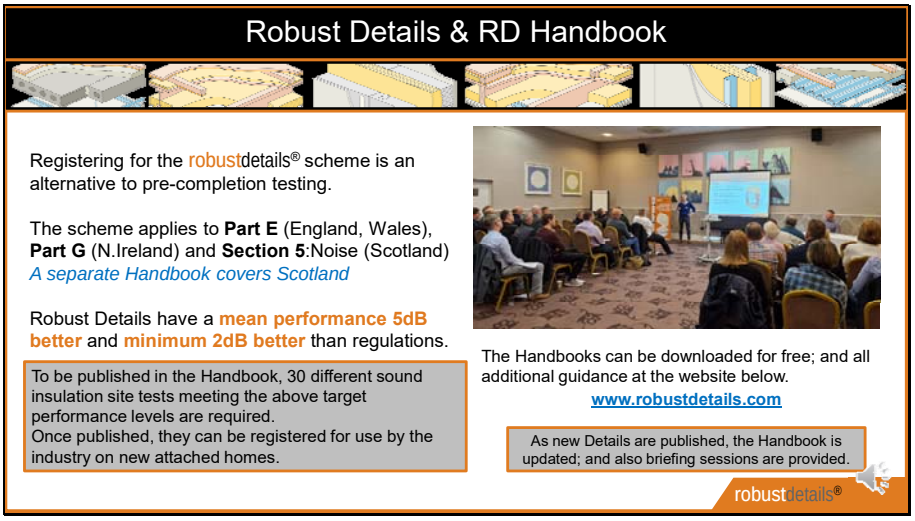
Slide 15



Read slide

Additional notes:

Slide 16



Registering with Robust Details constructions (RDs) can be used as an alternative to pre-completion testing.

They can be used for Part E (England, Wales), Part G (N.Ireland) and Section 5:Noise (Scotland)
Please note there are different RD Handbooks depending on which nation the site is located.

RDs are designed to have a mean performance 5dB better than the regulations and minimum 2dB better than regulations.

To become an RD construction and published in the RD Handbook 30 different sound insulation site tests of the same separating floor or wall construction system are required. If the proposed construction meets the above target performance levels the RD construction is then published for registration and use by the industry for new attached homes.
See overleaf

Additional notes:

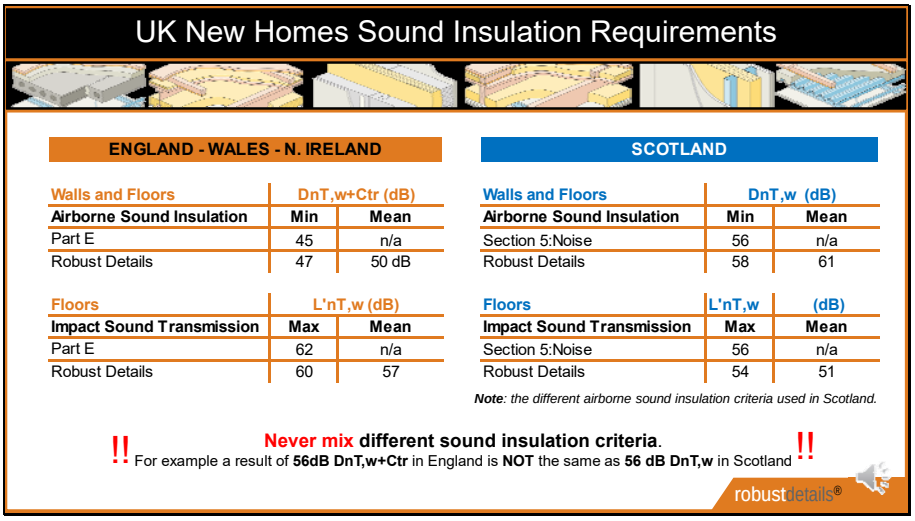
The handbook can be downloaded for free and all additional guidance at www.robustdetails.com

Now in its 4th edition, as new RDs are published, the FREE online handbook is updated and also industry briefing and CPD sessions are provided.

More information the RD route is outlined in Module 4.

Additional notes:

Slide 17

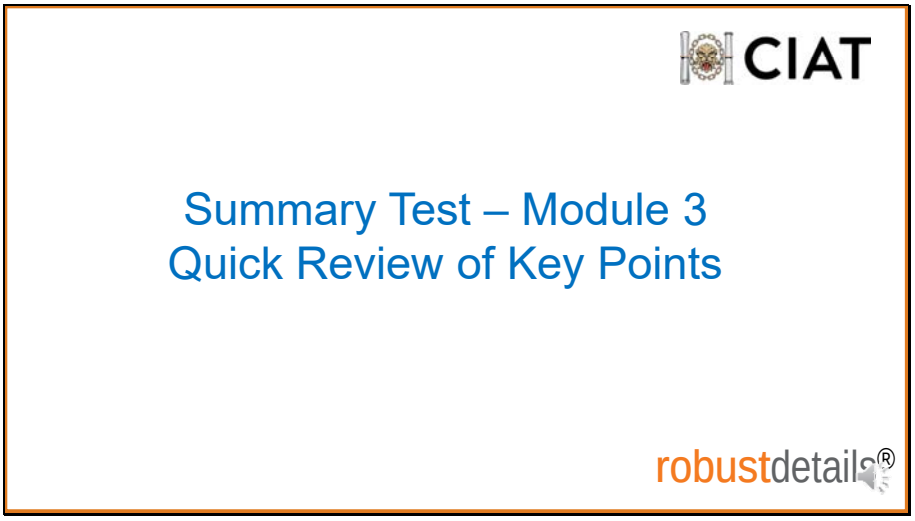


Read slide

More information on the RD route is outlined in Module 4.

Additional notes:

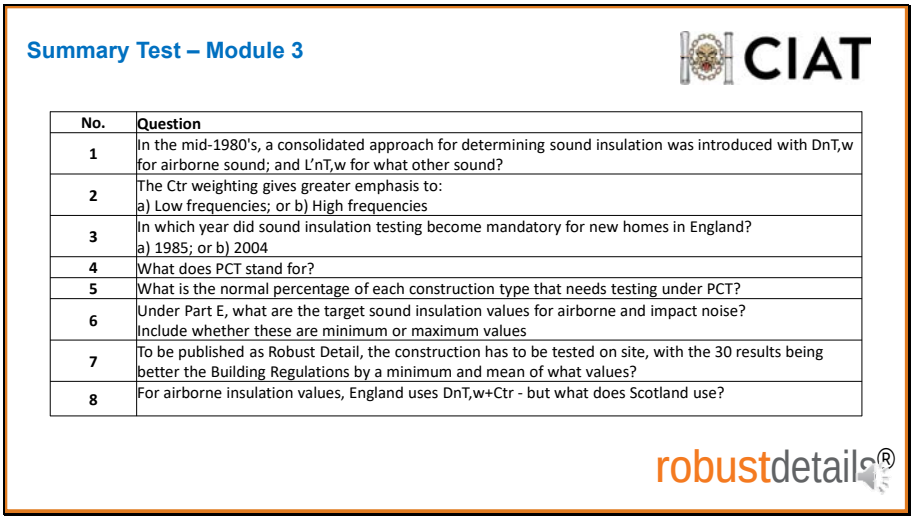
Slide 18



Now for a quick TEST to recap on Module 3

Additional notes:

Slide 19



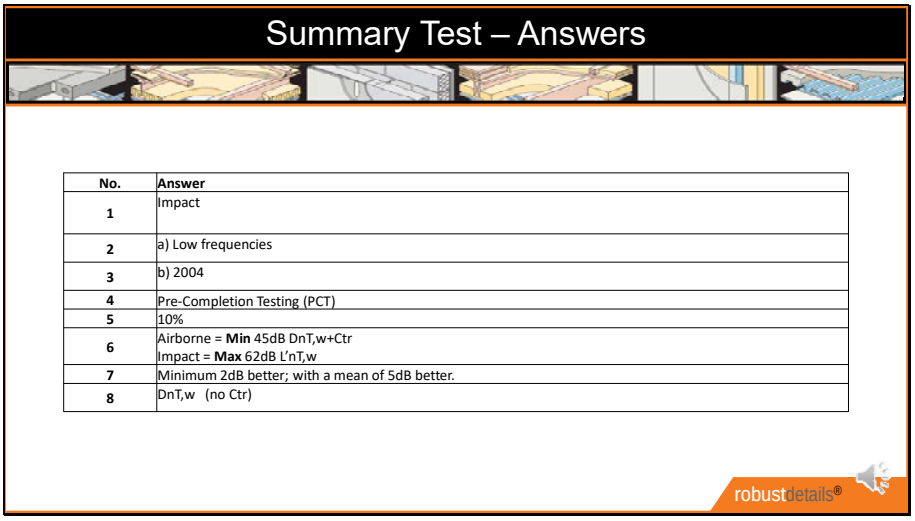
Here are test questions – you may wish to PAUSE the recording and test yourself against these questions.

Once you have answered all of them – the next slide provides the answers.
In 10 seconds the slide will change so press pause now if you want to test yourself first.

Thank you for following Module 3.

Additional notes:

Slide 20

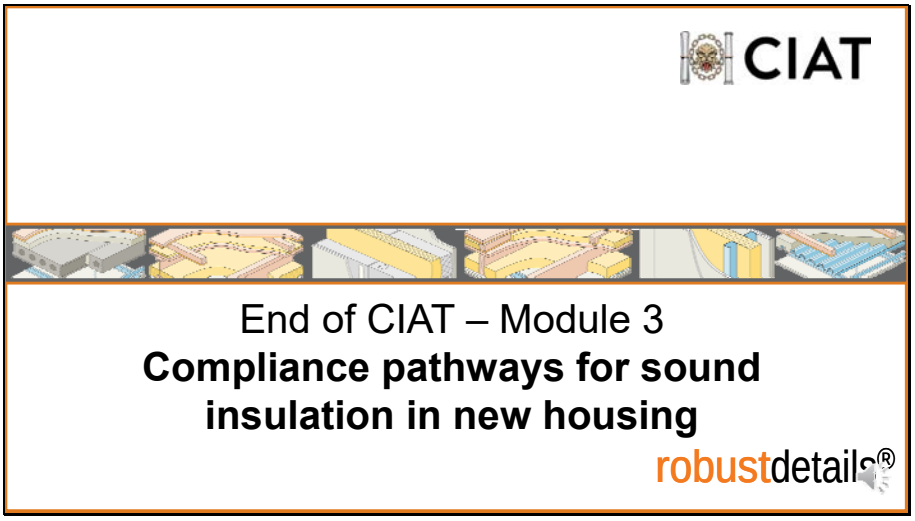


Here are the answer to Module 3's quick test.
How did you do?

Thank you for following Module 3

Additional notes:

Slide 21



This is the end of module 3 – Compliance pathways for sound insulation in new housing

Additional notes: