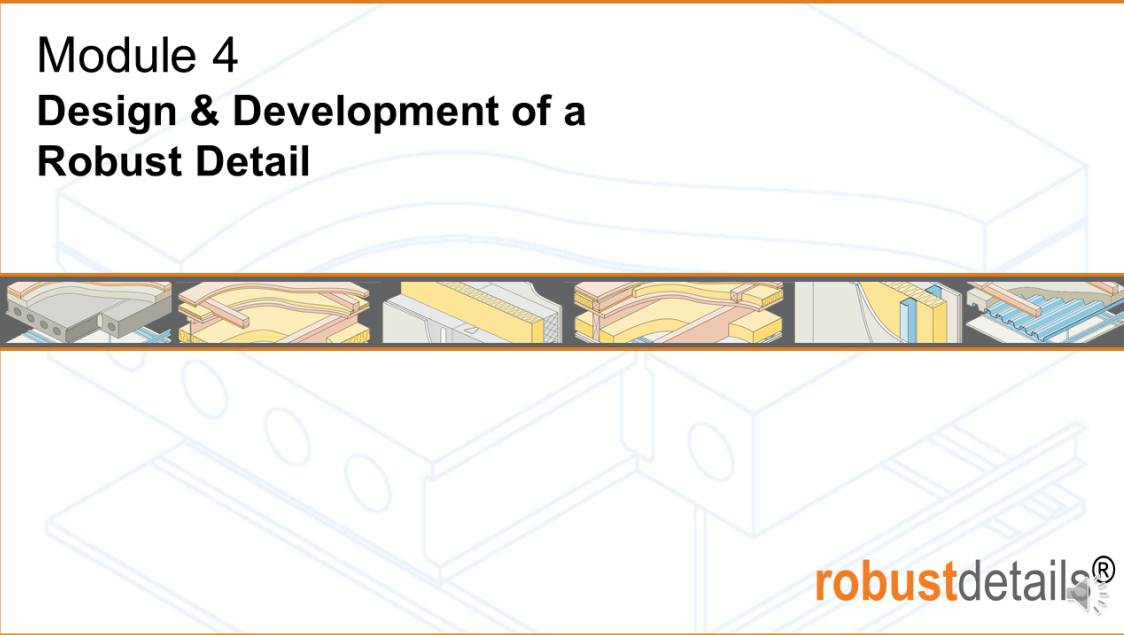



**Module 4**  
**Design & Development of a**  
**Robust Detail**



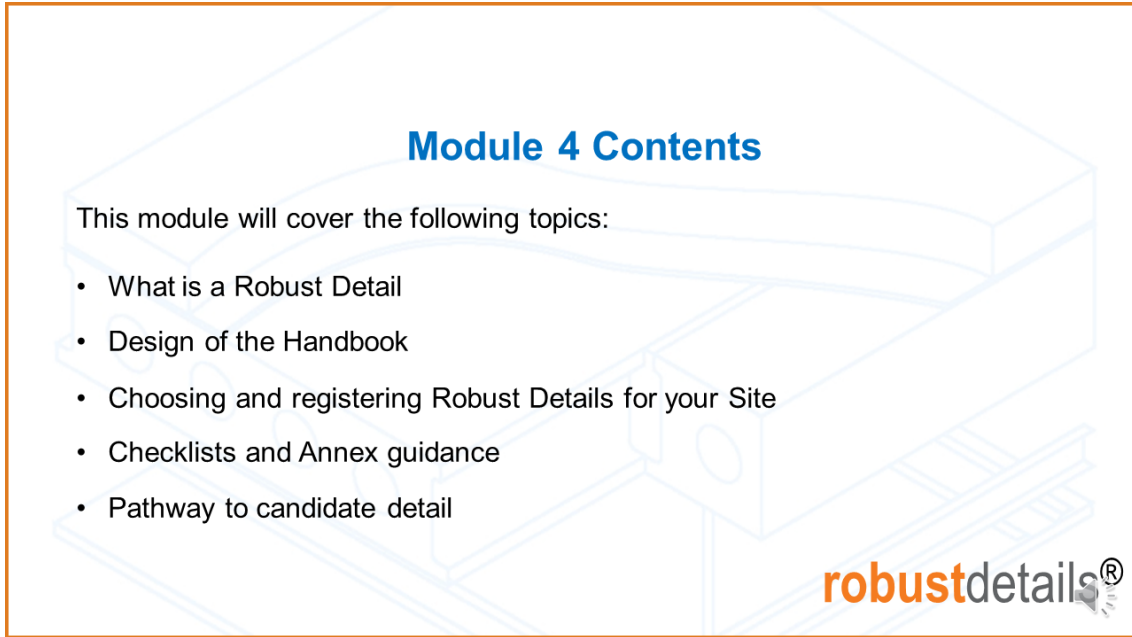
robustdetails®

Welcome to Module 4 – Design and Development of a Robust Detail

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

Slide 2



**Module 4 Contents**

This module will cover the following topics:

- What is a Robust Detail
- Design of the Handbook
- Choosing and registering Robust Details for your Site
- Checklists and Annex guidance
- Pathway to candidate detail

robustdetails®

This Module will cover the following topics

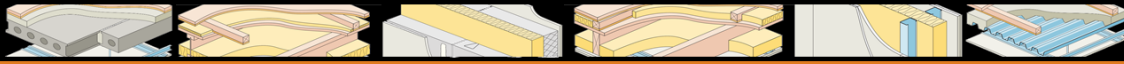
- What is a Robust Detail
- Design of the Handbook
- Choosing and registering Robust Details for your Site
- Checklists and Annex guidance
- Pathway to candidate detail

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

Slide 3

### What is a Robust Detail



**ABOUT THE SCHEME**

The **robustdetails**® scheme is an alternative to pre-completion sound testing for satisfying Part E of the Building Regulations.


It covers New adjoined dwellings (so not any conversions, home extensions or building refurbishments)

Using the scheme avoids the uncertainties of pre-completion sound testing.

Robust Details Limited's activities **supplement** (rather than replace) BCB compliance monitoring

BCB needs to be satisfied with compliance

more information @ [robustdetails.com](http://robustdetails.com)

**robustdetails**® 

The scheme can be used as an alternative to Pre-completion sound testing between new adjoined dwellings only – so no conversions, extensions; and also not student accommodation or care homes unless they are categorised as flats under Part B. It obviously covers Part E in England and Wales, but the same scheme can be used in Northern Ireland, as they have the same performance standards. There's a separate scheme for Scotland, as they have much higher standards – to give an idea, there are: 72 Details for E&W and 13 for Scotland.

This is a complementary service, so building control still need to go to site to the checks as they would for any other aspect. We do go to site, but this is only to check that the Details are performing and the scheme remains fit for purpose.

**Continued Overleaf**

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

While on site we can do a bit of knowledge transfer, so we can tell the builder what he needs to do to comply with the Detail, but

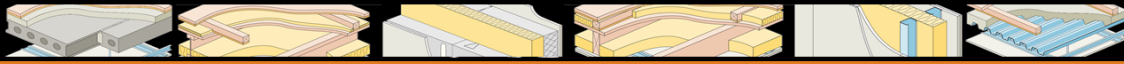
We are not licenced or authorised to check for Building Regulations – it is still very much the job of building control to check compliance, and by that I mean that the plots have been registered; and the construction meets the specification

Additional notes:

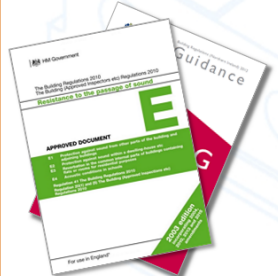
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

Slide 4

### Using Robust Details – 3 Key Processes



**USING THE SCHEME**



- 1. Choose your Robust Details from our Handbook**, ensuring you can meet the specifications. For flats, check the combination table to ensure that your walls and floors are compatible.
- 2. Register the plots (online)** prior to commencement on site. Notify Building Control by forwarding them a copy of the Purchase Statement
- 3. Construct in accordance with specification**

more information @ [robustdetails.com](http://robustdetails.com)

robustdetails®

So the person using the scheme needs to:  
Select an appropriate Robust Detail, ensuring that all the specifications can be met;  
and include these in the design drawings

Then they need to register the plots with Robust Details and use the registration documents to notify building control before work starts on site

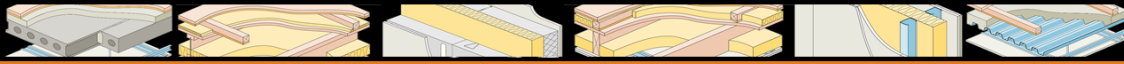
And finally, ensure that on-site, the construction is in accordance with the robustdetails specifications.

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

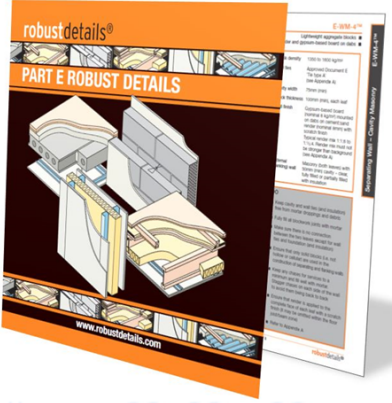
Slide 5

## Using a Robust Detail



To use the robustdetails® option, the 'Person carrying out the work' **must**:

- Select** appropriate Robust Details from the **Handbook**, and
- Design** in accordance with the relevant Robust Detail specification(s)



more information @ [robustdetails.com](http://robustdetails.com)

robustdetails®

OK, so we said you need to reference the Handbook in order to select a Detail and to see the specifications  
So let's look at the Handbook in a bit more "detail"

Additional notes:

---

---

---

---

---

---

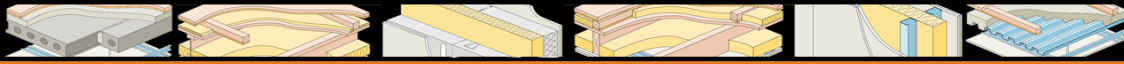
---

---

---

---

**Handbook**



**Introduction** - contains the Compatibility Tables

**Robust Details** - contain material specifications, specific requirements, and checklists

**Appendices** - contain additional information and lab test requirements

**Appendix F**

**E3 Testing Required**  
For the purposes of meeting the reference conditions set out in the reference conditions table, the following test requirements shall be met. The following table shall be used to determine the test requirements for each detail.

**Table 1** - Determination of  $R_{w,ext}$  for the initial design stage

**Table 2** - Determination of  $R_{w,ext}$  for the initial design stage

**Table 3** - Determination of  $R_{w,ext}$  for the initial design stage

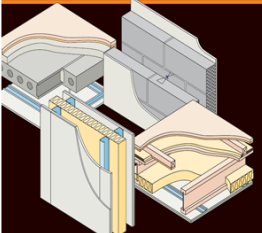
**Table 4** - Determination of  $R_{w,ext}$  for the initial design stage

**E3 Performance Required for robustdetails®**  
Lightweight Insulating Frames  
For alternative window configurations the alternative details shall be tested to Table 1, Table 2, or Table 3, as appropriate.  
NOTE: Details which qualify for the above performance requirements may also be used at building heights in excess of the maximum building height for each alternative.

robustdetails® © 2022 Appendix F October 2011


robustdetails®

**PART E ROBUST DETAILS** July 2022 Revision



www.robustdetails.com

more information @ [robustdetails.com](http://robustdetails.com)

robustdetails® 

Explanation of the slides when going through the animation – see recording

Additional notes:

---

---

---

---

---

---

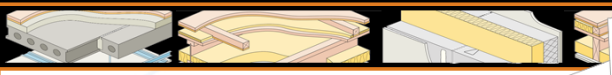
---

---

---

---

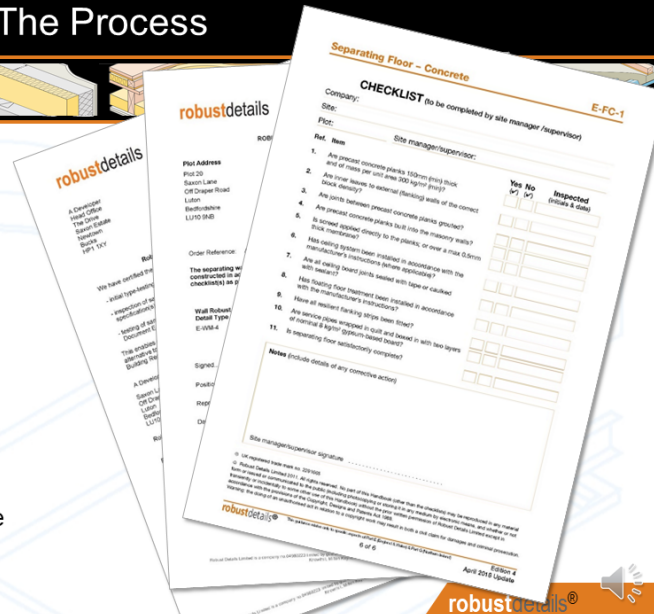
### The Process



**Registration Documents:**

- Purchase Statement** lists all plots with their unique reference and the registered **Robust Details Pattern**.
- Compliance Certificate** one for each of the plots registered with their unique reference and the registered **Robust Details Pattern**.
- Checklists** to help site pick up on the critical items.

more information @ [robustdetails.com](http://robustdetails.com)



**Separating Floor - Concrete CHECKLIST** (to be completed by site manager/supervisor) E-FC-1

Company: \_\_\_\_\_  
Site: \_\_\_\_\_  
Ref. Name: \_\_\_\_\_ (Site manager/supervisor)

Ref. Num	Yes/No	Inspected
1. Are precast concrete planks 150mm (plus) thick and of mass per unit area 200kg/m² (plus)?		
2. Are cover, laps or spacers (including walls of the correct thickness)?		
3. Are joints between precast concrete slabs of the correct thickness?		
4. Is screed applied directly to the planks, or over a max 0.5mm thick membrane?		
5. Has casting system been installed in accordance with the manufacturer's instructions (where applicable)?		
7. Are all casting board joints sealed with tape or caulked with the manufacturer's instructions?		
8. Has floating floor treatment been applied in accordance with the manufacturer's instructions?		
10. Are service rows wrapped, caulked and sealed in both directions or normal 4 layer gypsum board used?		
11. Is separating floor satisfactory completed?		

Notes (include details of any corrective action): \_\_\_\_\_

Site manager/supervisor signature: \_\_\_\_\_

© 2018 Robust Details Ltd. All rights reserved. No part of this handbook shall be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Robust Details Limited.

Robust Details Ltd. 8, 9 & 10, The Old Rectory, 100, High Street, Bournemouth, Dorset, BH1 1AA, UK. Tel: 01202 562000. Email: [info@robustdetails.com](mailto:info@robustdetails.com). Website: [www.robustdetails.com](http://www.robustdetails.com)

Edition 4 April 2018 Update

We also said about registering, So let's look at the registration documents:

Purchase statement is the only mandatory scheme document, as it gives proof of registration – copy to BCB, so they can schedule inspections

Ideally, building control would be on site seeing everything – but if this is not possible, they can ask the builder to complete the Compliance Certificate to declare they've built in accordance with the Detail


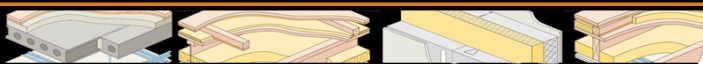
The Checklist lists all the critical items, and is really for site to check that these are in place – but again, building control might ask for it as evidence.

Additional notes:

_____ _____ _____ _____ _____ _____ _____ _____
--



### ADE Annex Guidance



**Building Control:**

**Annex E of Approved Document E** gives guidance to BCBs in relation to the robustdetails® scheme.

**BCB should be satisfied** that the relevant requirements have been met.

If **Registration** is invalid, or **Construction** is not in accordance with the Details, then the separating elements can become **subject to PCT**.

more information @ [robustdetails.com](http://robustdetails.com)

If the notification is itself valid but the work is not carried out in accordance with the design detail or details, the relevant separating structures become subject to sound insulation testing under Regulation 41 or 20(1) and (5). It would be open to the builder to take remedial action such that the building control body was satisfied that the work had been brought into compliance with the specified detail or details. With that exception, testing under Regulation 41 or 20(1) and (5) would be needed on all structures that have been subject to a valid notification under Regulation 41(4) or 20(1) and (5) but which in the opinion of the building control body have not then been constructed in accordance with the specified detail or details.

robustdetails®

That's the registration side of things, now lets look at the Approved Documents. Annex E, at the end of ADE explains how the scheme fits in with Building Regulations; and identifies the responsibilities

We mentioned earlier that builders need to notify building control before work starts on site – this is so the whole construction can be inspected

If notification is late, the BCB won't necessarily know what has been constructed – so they can ask for a test to prove the performance.

If the BCB is confident that what has been built meets the RD spec, they could accept the late registration.

If the construction doesn't match a RD specification, then the BCB can ask for a test; or if there is only a minor deviation, they could ask for remediation to bring it back to the spec.

If this cannot be done to satisfaction, all separating elements may need testing.

Additional notes:

---

---

---

---

---

---

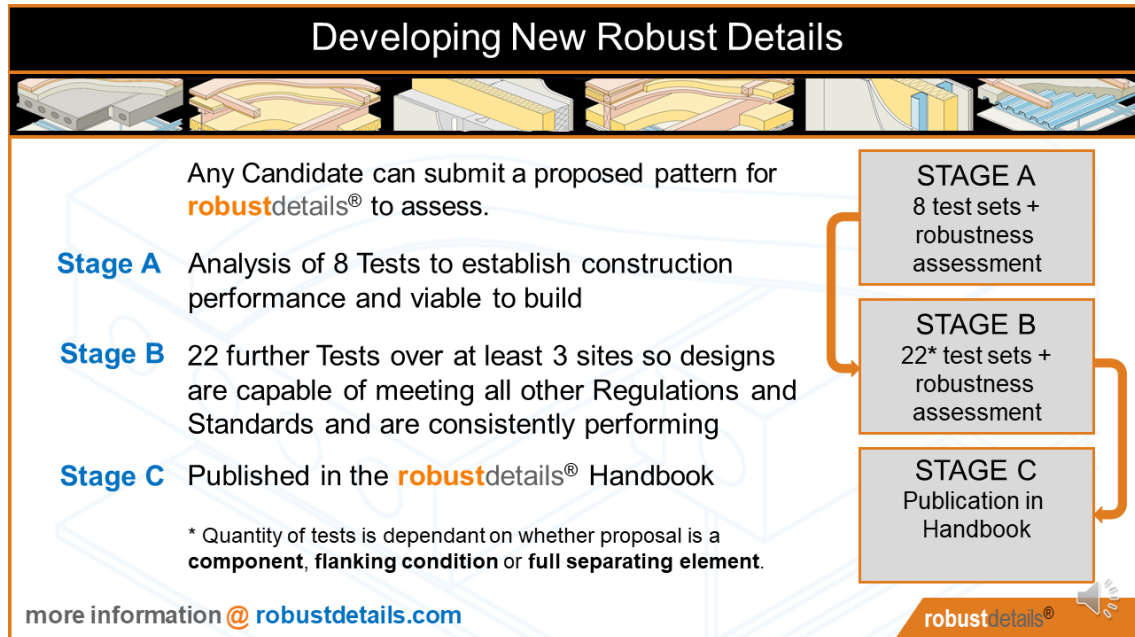
---

---

---

---

Slide 9



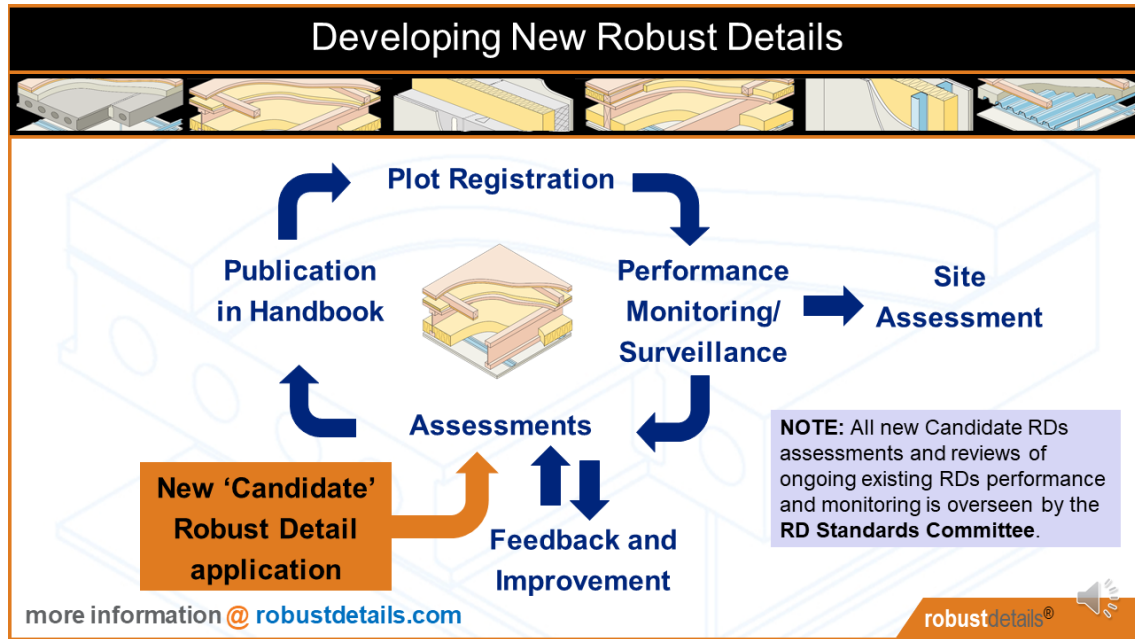
So how do new Robust Details get developed.  
The assessment and approval of a new Robust Detail is based on 30 tests conducted on real developments, and is done in 3 stages:

**Stage A** looks at the first 8 tests to see that the construction is capable of hitting the performance standards; and that it is not over-complicated to build. If successful, it goes on to **Stage B** which checks the its ability to consistently hit the performance when subject to different site conditions and variations in workmanship. Then if it gets through that assessment, it can be published in the Handbook as a new Robust Detail which is **Stage C** .

An assessed benefit testing on real sites is so the designs can stand up to the scrutiny of other Regulations and standards

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---



So looking at the whole picture, we can see where the new Details come in...

Once published in the Handbook, they can be registered for use on sites.

To ensure they continue to perform i.e. out in the wild, we randomly pick registered plots for monitoring – we'll look at that in detail a bit later.

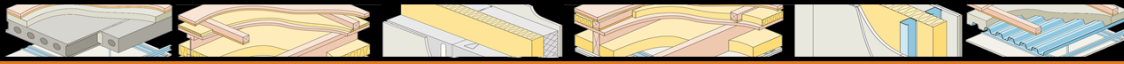
If the monitoring picks up any trends in poor performance, or the Detail being built consistently wrong, this is fed-back to the proposer; and is also borne in mind when similar new Details are proposed e.g. toolbox talks for screeded floors.

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---



### Monitoring




**Performance Monitoring**

**Spot Check** visual inspections and sound tests carried out by *The Inspectorate*

- 1% registrations have been subject to visual inspection
- 2% completed registered properties subject to randomly sampled sound tests

Testing for the 12 months to Dec 2022



Category	Percentage
Meets or exceeds robustdetails® standards*	98.7%
Meets Building Regulations standards	0.9%
Fails to meet Building Regulation standards	0.4%

\* RD performance = min. 2 dB better than Building Regulations minima

more information @ [robustdetails.com](https://robustdetails.com)

**robustdetails®**

To do this, we have independent consultants who do the monitoring for us, and this comprises of an inspectorate team completing visual spot checks and random sound tests. This covers 1% of registrations for a visual check during build and 2% of registered plots have a random Sound Testing a the end of the build.

So this is considerably less than the 10% recommended for pre-completion sound testing

To put this into some sort of context, we've now sound tested around 23000 dwellings, and the levels of compliance achieved by the industry are very encouraging, as you can see.

Explain the colour system

Additional notes:

---

---

---

---

---

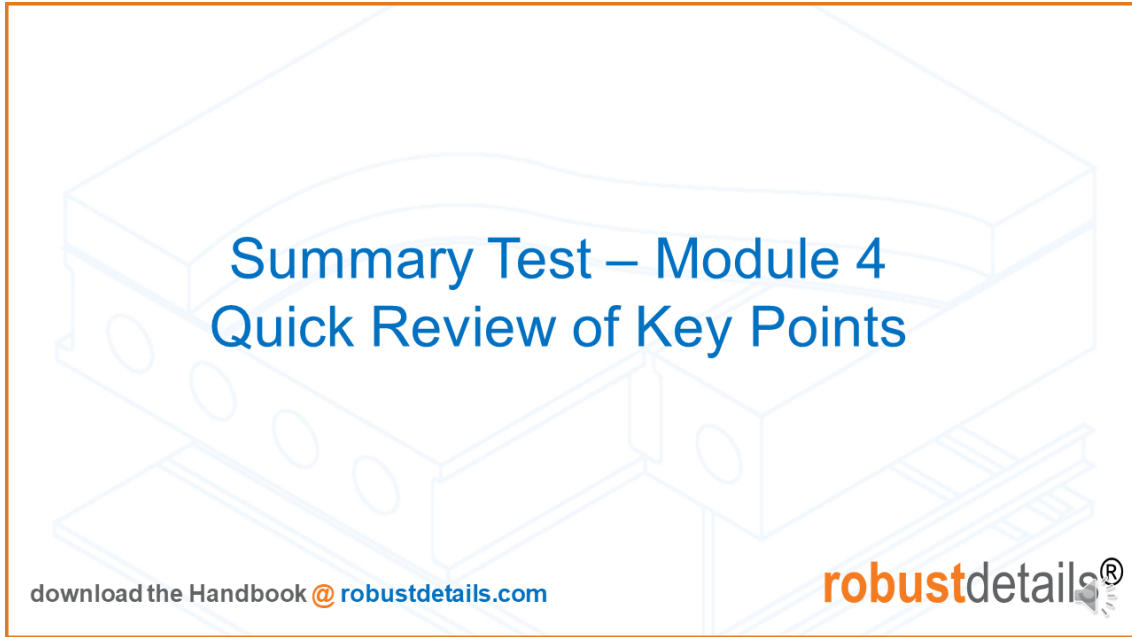
---

---

---

---

---



Summary Test – Module 4  
Quick Review of Key Points

download the Handbook @ [robustdetails.com](https://robustdetails.com)

robustdetails®

Now for a quick TEST to recap on Module 4

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

Slide 14

**Summary Test – Module 4**

No.	Question
1	Does the Robust Detail (RD) route replace the building control function for the regulations?
2	What are the 3 key processes when using a Robust Detail?
3	If a site uses RD construction designs and has not registered the site, does the site still need to be sound insulation tested?
4	If a registered site undergoes an RD Inspection what does a 'green' outcome indicate?
5	What was the proportion of site inspections up till 2022 rated 'green'?
6	When developing a new 'candidate' RD or amending an existing RD how many stages are involved in the assessment and publication?
7	How many total tests are required for a new RD?
8	To have an early indication of test performance of the new candidate construction RD how many tests should be submitted at the first Stage A?
9	What are the three registration documents provided to sites/companies that register with RD compliance route?
10	Who should sign the site RD checklists?

download the Handbook @ [robustdetails.com](https://robustdetails.com)

robustdetails®

Here are 10 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.

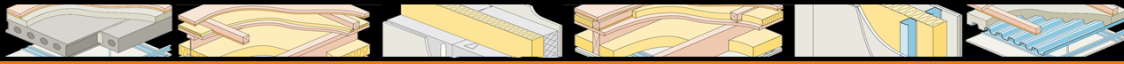
Thank you for following Module 4.

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---




## Summary Test – Answers



No.	Answer
1	No, building control functions and operations are the same. The RD route is a supplement to the activities and provides an alternative compliance route to sound insulation testing.
2	(1) <b>Select</b> your RDs for the plots (2) <b>Register</b> the plots with Robsut Details (3) <b>Build in accordance</b> with the RD construction guidance.
3	Yes it will require to undergo sound insulation testing, as only sites registered with Robust details do not test.
4	The site has complied and met or exceeded the RD performance requirements
5	99%
6	3 stages: A, B and C
7	30
8	8
9	Purchase statement, Compliance Certificate and Checklists
10	Site manager or lead person supervising the construction works on site?

more information @ [robustdetails.com](https://robustdetails.com)

robustdetails® 

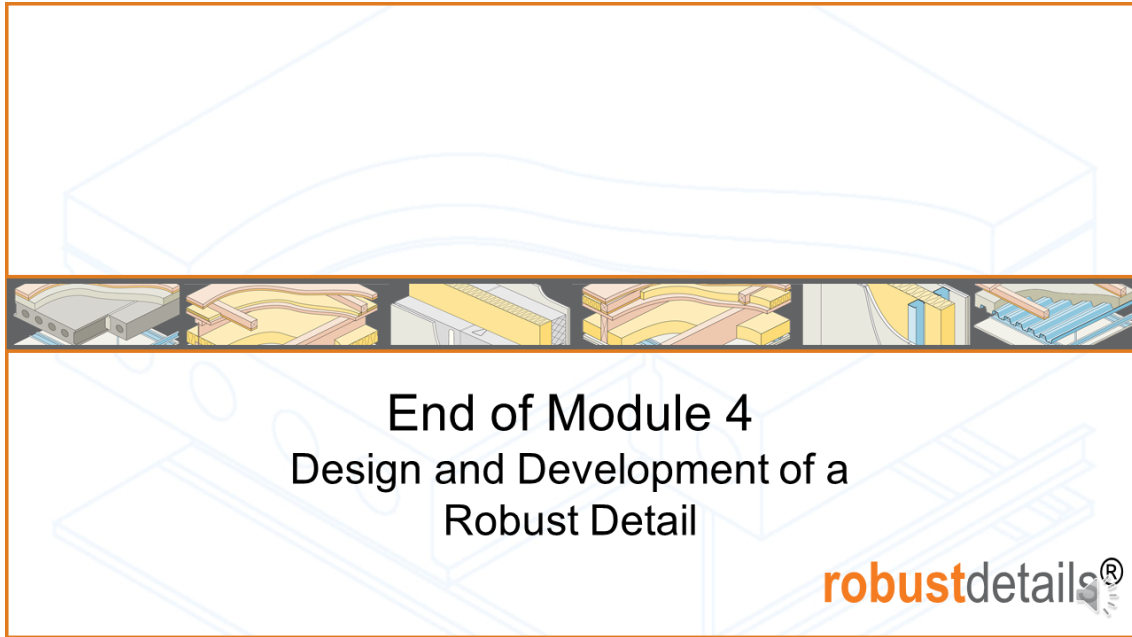
Here are the answer to Module 4's quick test.  
How did you do?

Thank you for following Module 4

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---





End of Module 4  
Design and Development of a  
Robust Detail

robustdetails®

End of Module 4 – Design and Development of a Robust Detail

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---

Slide 17



Download your free copy of the **Handbook** by signing up @

[www.robustdetails.com](http://www.robustdetails.com)

**Contact us:**

**Technical @**

email: [technical@robustdetails.com](mailto:technical@robustdetails.com)

call: 03300 882 140

**Customer Service @**

email: [customerservice@robustdetails.com](mailto:customerservice@robustdetails.com)

call: 03300 882 141

Additional notes:

<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
---