



Grenfell Tower Inquiry

Day 97

February 25, 2021

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1 Thursday, 25 February 2021  
2 (10.00 am)  
3 SIR MARTIN MOORE—BICK: Good morning, everyone. Welcome to  
4 today's hearing. We're going to begin today by hearing  
5 some further evidence from Mr Clark, who at the time in  
6 question was employed by the BRE.  
7 So I'm just going to check that Mr Clark is there.  
8 I think he is. Can you see me and can you hear me,  
9 Mr Clark?  
10 MR PHILIP CLARK (continued)  
11 THE WITNESS: I can see you and hear you, sir, yes, I can.  
12 SIR MARTIN MOORE—BICK: Thank you very much, good morning.  
13 THE WITNESS: Good morning.  
14 SIR MARTIN MOORE—BICK: Before we resume your evidence, can  
15 we just run through the usual housekeeping checks: can  
16 you confirm that you're alone in the room from which  
17 you're giving evidence?  
18 THE WITNESS: I can confirm that, sir, yes.  
19 SIR MARTIN MOORE—BICK: Can you confirm that you have no  
20 documents or other materials with you?  
21 THE WITNESS: I can confirm that, sir, yes.  
22 SIR MARTIN MOORE—BICK: Thank you, and can you confirm that  
23 your mobile phone is in another room and that you don't  
24 have any electronic device in the room with you which is  
25 capable of receiving messages?

1

1 THE WITNESS: I can confirm that, sir, yes.  
2 SIR MARTIN MOORE—BICK: Very good, thank you very much.  
3 Well, the arrangements are essentially the same as  
4 they were yesterday. I don't think I need run through  
5 them.  
6 THE WITNESS: No, that's fine.  
7 SIR MARTIN MOORE—BICK: Is there anything you'd like to ask  
8 before we carry on?  
9 THE WITNESS: No, I'm fine, sir, happy to carry on.  
10 SIR MARTIN MOORE—BICK: Thank you very much indeed.  
11 Right, then, Mr Millett, when you're ready.  
12 Questions from COUNSEL TO THE INQUIRY (continued)  
13 MR MILLETT: Yes, Mr Chairman, thank you very much.  
14 Mr Clark, yesterday we were examining the test on  
15 19 March 2014 done by Kingspan on K15 to BS 8414—2, and  
16 you deal with that in your witness statement at  
17 paragraph 237, if we can go to that, please, at page 58  
18 {BRE00005768/58}. You say there, at paragraph 237:  
19 "My recollection, which is supported by my review of  
20 the test video footage, is that I informed the test  
21 sponsor of the potential for flaming above the test  
22 facility having occurred at 24:11 due to excessive  
23 flaming over the surface of the wing wall. However,  
24 this flaming subsequently reduced as a note at 24:21  
25 records: 'Flames over the surface of the panels die

2

1 back.'"  
2 And you exhibited the document.  
3 Now, we're going to watch some of the footage from  
4 that test now, and I have some questions for you about  
5 it.  
6 Before I do that, I would like to ask you about the  
7 criteria for the early termination of a test under  
8 BS 8414—2.  
9 Can we go first, please, to {BSI00000097}. Here is  
10 BS 8414—2, and can we go to page 11 {BSI00000097/11},  
11 please. This, I should just say, is the version  
12 confirmed as at December 2011.  
13 At page 11, as you can see, there is paragraph 8.5  
14 under "Procedure". I wonder if we could have that blown  
15 up a little bit, please, 8.5, "Test termination  
16 criteria". Can you see?  
17 A. I can see that, yes.  
18 Q. Can I take it that, as at March 2014, you were very  
19 familiar with this BSI?  
20 A. Indeed, sir, yes.  
21 Q. It says, under "Test termination criteria":  
22 "Extinguish the heat source 30 min after ignition .  
23 If no part of the cladding system is still burning,  
24 terminate the test. If flaming or monitored  
25 temperatures are still rising, continue taking records

3

1 for an additional 30 min, up to maximum test duration of  
2 60 min. (See C.2.4.)  
3 "The test shall also be terminated:  
4 "a) if flame spread extends above the test facility ;  
5 or  
6 "b) if there is a risk to the safety of personnel or  
7 impending damage to equipment."  
8 You can see there that it says "The test shall also  
9 be terminated".  
10 Is it right that section 8.5, to your understanding  
11 at the time, March 2014, represents the full early  
12 termination criteria ?  
13 A. That is correct, yes. I think in the early versions,  
14 this wasn't in the part 1 test, but it came into this  
15 test standard, yes.  
16 Q. There is no other section, is there, which tells the  
17 reader that, for example, the flame spread must be of  
18 a certain type or of a particular duration?  
19 A. No, there isn't. No, you're correct.  
20 Q. What's your understanding of why that wording is  
21 included in the test standard?  
22 A. The thing with fire testing is it's inherently dangerous  
23 to a certain extent. Line (b), for example, is  
24 obviously if there is impending risk to personnel, which  
25 is obviously — this is the priority from our side, to

4

1 make sure everybody goes home safely.  
 2 The flame spread above the facility, again it is  
 3 a criteria that's there to give you a — the grounds for  
 4 termination. One of the things that we have is that  
 5 that doesn't necessarily mean that you have to put the  
 6 test out at that specific time.  
 7 Q. When you say "put that test out at that specific time",  
 8 do you mean extinguish it and terminate it?  
 9 A. Yes, yeah. One of the issues you can have is if you  
 10 have early termination, it doesn't necessarily show up  
 11 on the thermocouples for the period of time that is  
 12 required to actually fail the test on its temperature  
 13 criteria. So to a certain extent I would work to the  
 14 (b) section in that, the risk of personnel and impending  
 15 damage, as my main criteria for terminating, and then  
 16 once the test was completed, the test would officially  
 17 be terminated following the review of the data. So if  
 18 we felt that the data was such that it hadn't passed,  
 19 then it was terminated at that point.  
 20 Q. There are a couple of things in there I just want to  
 21 explore with you.  
 22 The first is you say, "once the test was completed,  
 23 the test would officially be terminated following the  
 24 review of the test data". I'm not sure I really  
 25 understand what you're saying there.

5

1 Are you saying that there would be an official  
 2 declaration of termination after the test had been  
 3 stopped —  
 4 A. Yes, yes, it —  
 5 Q. — based on the data that you reviewed?  
 6 A. Yes, and the review of the video, that's correct, yes.  
 7 Q. You're not saying that you would only terminate the  
 8 physical test after having reviewed the data, that would  
 9 be ridiculous?  
 10 A. No, no, no, that's correct, yes, you're right, yes.  
 11 Q. That's clarified that.  
 12 Going back to the first part of your answer, you  
 13 have just told us that "to the certain extent I would  
 14 work to the (b) section in that, the risk of personnel  
 15 and impending damage".  
 16 Just going back, if we can, please, to the standard,  
 17 do you accept that the mandatory requirements for  
 18 termination are one of two: either if the flame spread  
 19 extends above the test facility, or if there is a risk  
 20 to safety, or both at the same time?  
 21 A. Yes, you are correct in that regard, yes, yes.  
 22 Q. Why was it essential that the test be terminated if the  
 23 flame spread extends above the test facility? In other  
 24 words, what's the purpose of (a)?  
 25 A. It's a mark of performance, to a certain extent.

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1 Q. You don't have the choice, do you, to ignore (a) and go  
 2 with (b)?  
 3 A. There is to a certain extent some — I wouldn't say  
 4 leeway, but this had always been common practice from  
 5 day one. Every single test I've ever performed with me  
 6 or other people, that has always been the way, and it  
 7 had carried on in that regard. It doesn't mean that the  
 8 test would then subsequently go on and pass, if that's  
 9 what you ... the interpretation I'm trying — I might  
 10 get from that.  
 11 Q. You said in answer to my question that (a) is a mark of  
 12 performance to a certain extent. What do you mean by  
 13 that?  
 14 Let me ask it a different way: what's the purpose of  
 15 the British Standard containing a mandatory requirement  
 16 for termination if flame spread extends above the test  
 17 facility?  
 18 A. It means that the test — that the sample cannot be  
 19 classified because you've terminated the test.  
 20 Q. I understand that. That's, with great respect,  
 21 a circular answer. What I want to know is: what is the  
 22 scientific reason for the British Standard requiring  
 23 termination of the test if the flame spread extends  
 24 above the test facility?  
 25 A. Because it's — the test — the flaming on the sample is

7

1 bound by the top of the rig.  
 2 Q. Yes, I understand that. What's the problem with flames  
 3 going above the rig that requires termination?  
 4 A. In terms of the test, there's — the problem is that  
 5 that's — in the test, that's what is mandated in the  
 6 test, you're right. There is no problem in terms of  
 7 what we did in practicality for that. I think we've  
 8 never failed or passed something that hasn't  
 9 subsequently been reviewed and then the tester said,  
 10 "Look, at that point, even though we haven't stopped the  
 11 test as in extinguished it, the test has officially  
 12 terminated at that point".  
 13 Q. Mr Clark, let me have one more go. What I'm really  
 14 trying to get out of you here is your understanding of  
 15 the scientific rationale for (a), the scientific  
 16 rationale behind the requirement that the test be  
 17 terminated if flame spread extends above the test  
 18 facility. What is the rationale?  
 19 A. It's indicating that the performance of the system is  
 20 poor enough that it has exceeded the bounds of the  
 21 facility.  
 22 Q. Right. It's no more than that, is it?  
 23 A. No, that's — no.  
 24 Q. Do you accept that if flame spread extends above the  
 25 facility, the test must be terminated and you've got no

8

1 discretion about that, you can't choose —  
 2 A. I wouldn't say there's no discretion, because  
 3 termination can be viewed in different ways. We could  
 4 say to the client, and we have said to the client, in  
 5 reality, that this test, in terms of how it's performed,  
 6 is being terminated. We've said that to the client,  
 7 that the test as—is at the moment is being terminated.  
 8 But because they don't necessarily always understand  
 9 the mechanisms of things, we do and have and always have  
 10 in the past, if we deemed it to not be unsafe, we would  
 11 allow that system to carry on burning so that knowledge  
 12 could be gained from how it performed in other ways, and  
 13 that has always been the practice that I've always done,  
 14 it's always been with every other person that's ever run  
 15 tests in the whole of my career.  
 16 Q. So is it your evidence that the BRE would not apply the  
 17 mandatory criteria of 8.5(a) but apply a discretion as  
 18 to whether to apply it or not?  
 19 A. No, so it would be that we would say the test has  
 20 officially been terminated now, but we could allow it to  
 21 carry on burning.  
 22 SIR MARTIN MOORE—BICK: May I interrupt? I'm sorry,  
 23 Mr Millett. It seems to me that part of the problem  
 24 here arises from the understanding of the word  
 25 "terminated".

9

1 If you look at criterion (b), which requires the  
 2 test to be terminated if there is a risk to life or —  
 3 I forget — maybe to the building, that means terminate  
 4 the test in a physical sense, doesn't it?  
 5 A. It does, sir, yes.  
 6 SIR MARTIN MOORE—BICK: Well, why does the word "terminated"  
 7 in the introductory language not mean the same?  
 8 A. Because ... when you read it in that way, you're right,  
 9 sir, yes, but I think the practice has always been that  
 10 we try to get as much learning out of these tests as we  
 11 can for the client.  
 12 SIR MARTIN MOORE—BICK: All right.  
 13 A. If you terminate something, you never learn lessons.  
 14 Failures are as valuable as passes in terms of  
 15 understanding the mechanisms for failure, and if you  
 16 just terminated everything as — you would never learn  
 17 anything and no progress would ever be made.  
 18 SIR MARTIN MOORE—BICK: Yes, all right, thank you very much.  
 19 Yes, Mr Millett.  
 20 MR MILLETT: Do you accept that, in electing to apply  
 21 a discretion as to whether to terminate the test once  
 22 flame spread extends above the test facility, you  
 23 haven't adhered to the mandatory requirements of the  
 24 test standard?  
 25 A. Erm ... I ... it's never been pointed out to me that

10

1 that's the case, no, no, because —  
 2 Q. (inaudible) I asked you. Do you accept that, in  
 3 applying the discretion, you are deviating from the  
 4 mandatory standards required by the BSI standard?  
 5 A. In those terms, then yes, you're correct, yes, yes, but  
 6 I would say it's not unusual in fire testing at all.  
 7 Q. Right.  
 8 A. That's ... yes, from my experience, that's not unusual.  
 9 Q. Let me ask you this and see if you can help me: would  
 10 you accept that one of the purposes of a BS 8414 test,  
 11 whether under part 1 or part 2, would be to test whether  
 12 or not the full system adequately resists the spread of  
 13 fire over the walls for the purposes of compliance with  
 14 Approved Document B and the Building Regulation in  
 15 particular?  
 16 A. Yes, that's correct, yes.  
 17 Q. And therefore can we take it that, if flame spread  
 18 extends above the test facility, the test had to be  
 19 terminated because ipso facto that full system would not  
 20 adequately resist the spread of fire over the walls for  
 21 that purpose?  
 22 A. That is correct, sir, yes, you're correct.  
 23 Q. Now, let's look at the footage. Can we go, please, to  
 24 {BRE00005672}, please.  
 25 I'm reminded that I should give a trigger warning

11

1 here: there will be fire shown in the video.  
 2 Before we start it, I've just given a trigger  
 3 warning, perhaps we should wait ten seconds or so,  
 4 that those who don't want to see fire can avert their  
 5 eyes.  
 6 Now, just before we start it, I can ask a question:  
 7 this is a section of the footage recorded by your head  
 8 camera of the test carried out on 19 March 2014 on K15  
 9 and Trespa HPL, isn't it?  
 10 A. It appears to be, yes.  
 11 Q. You have been given an opportunity to review this,  
 12 haven't you, and the Inquiry's transcript?  
 13 A. I have, sir, yes.  
 14 Q. Thank you.  
 15 Now, we can start the video at, please,  
 16 three minutes into this clip. This is about 24 minutes  
 17 into the test. If we can start at 03.00, and please  
 18 play to the end.  
 19 (Video played)  
 20 Right. Mr Clark, can we now look, please, at the  
 21 transcript of the conversation we could hear fairly  
 22 well, actually, on that video and audio. This is at  
 23 {BRE00035418/3}, please. In the fifth line down, you've  
 24 got male speaker 2 ... I'm so sorry, I'm just trying to  
 25 find the spot.

12

1 A. I think it might be slightly further down.  
 2 (Pause)  
 3 Q. Yes. We've got:  
 4 "MALE SPEAKER 2: (Tom Lennon, BRE): (inaudible) see  
 5 the (inaudible) thermocouple wing wall (inaudible)  
 6 sticking right out.  
 7 "MALE SPEAKER 1: (Phil Clark, BRE) [that's you]  
 8 Where?  
 9 "MALE SPEAKER 2: (Tom Lennon, BRE) First (inaudible)  
 10 thermocouple up on the wing wall (inaudible).  
 11 "MALE SPEAKER 1: (Phil Clark, BRE) Oh yeah.  
 12 "MALE SPEAKER 2: (Tom Lennon, BRE) doesn't make any  
 13 difference (inaudible).  
 14 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah no it  
 15 doesn't."  
 16 Then it goes on, and I just want to show you  
 17 a little bit further down at page 3, under the heading  
 18 "BRE00005672" — do you see that?  
 19 A. Yes. I think the male speaker 1 is where the  
 20 conversation starts, "You alright Tom? Alright".  
 21 I think that's where the video started.  
 22 Q. "MALE SPEAKER 1: (Phil Clark, BRE) You alright Tom?  
 23 Alright.  
 24 "MALE SPEAKER 1: (Phil Clark, BRE) We might need to  
 25 ah yeah.

13

1 "MALE SPEAKER 3: (Stephen Howard, BRE) Guys! Do you  
 2 want to move that way.  
 3 "MALE SPEAKER 3: (Stephen Howard, BRE) Right come  
 4 this way.  
 5 "MALE SPEAKER 1: (Phil Clark, BRE) Right give it,  
 6 just give ... grab the um Tom ... give it a couple of  
 7 seconds give it a couple of seconds because it might  
 8 just be burning off.  
 9 "MALE SPEAKER 2: (Tom Lennon, BRE) I'll get on the  
 10 hose just give me a shout ok?  
 11 "MALE SPEAKER 1: Yeah yeah right.  
 12 "MALE SPEAKER 1: (Phil Clark, BRE) That's all right.  
 13 It's just burned the surface off. It's fine. Panic  
 14 over. It just hit its ignition temperature.  
 15 "MALE SPEAKER 5: (Unknown) Sorry?  
 16 "MALE SPEAKER 1: (Phil Clark, BRE) It just hit its  
 17 ignition temperature.  
 18 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) Still  
 19 alright though to me.  
 20 "MALE SPEAKER 1: (Phil Clark, BRE) Dunno, would not  
 21 like to say."  
 22 Then keep going down into the next section  
 23 {BRE00035418/4}:  
 24 "MALE SPEAKER 1: (Phil Clark, BRE) Tom, it's ok I'm  
 25 happy to carry on. We'll just keep going.

14

1 "MALE SPEAKER 2: (Tom Lennon, BRE) (inaudible) we'll  
 2 give it another 5 minutes unless you say otherwise.  
 3 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah yeah no it's  
 4 alright it's calmed down. It warm isn't it?"  
 5 A. I think this bit wasn't on that video, as far as I'm  
 6 aware.  
 7 Q. No, I think that's probably right. Then ...  
 8 A. I think the video ends at "MALE SPEAKER 1 [me]: Dunno,  
 9 would not like to say". That's where the video ended.  
 10 Q. Yes.  
 11 It's right, isn't it, that you could see, and indeed  
 12 said, that the flames were definitely over the top but  
 13 it was for a very short time?  
 14 A. That's correct, yes. Yes.  
 15 Q. Why did you say that? Why did you say it was definitely  
 16 over the top but it was for a really short time?  
 17 A. Because that's what happened. It was literally  
 18 three seconds, maybe.  
 19 Q. We can see this at the bottom of page 5 {BRE00035418/5},  
 20 in another clip, where you say:  
 21 "Got a feeling it might be quite short lived it  
 22 just, just flashed over the surface there didn't it."  
 23 A. Yes.  
 24 Q. Yes. Then at the top of page 5, you see you say at the  
 25 end of this video:

15

1 "Yeah has it turned itself off — can you see if it  
 2 comes back on?"  
 3 A. Yes, that was in reference to a camera which had turned  
 4 itself off.  
 5 Q. Now, when you say it was definitely over the top but it  
 6 was a really short time, that would have required early  
 7 termination on your part, wouldn't it, if you were  
 8 adhering properly to the test standard?  
 9 A. Yes, and I think subsequently the videos were reviewed  
 10 and it was decided that that was the termination point.  
 11 Q. I understand that, but your observation, which you've  
 12 agreed with, that it was definitely over the top but it  
 13 was for a very short time, would require early  
 14 termination under the mandatory standard, wouldn't it?  
 15 A. If you read it that way, yes, yes.  
 16 Q. Yes. It wasn't open to you to invent additional  
 17 criteria for early termination, was it?  
 18 A. No, I'm not inventing early criteria, no.  
 19 Q. You couldn't choose to ignore the fact that the flames  
 20 had overtopped the rig, even if it was for what you  
 21 regarded as a short time.  
 22 A. If you look at the standard in that way, no, you're  
 23 correct, but the problem you have is that in — from  
 24 past experience is that the way the data is collected,  
 25 the data requires temperatures for — to be exceeded for

16

1 a period of 30 seconds, and we've had a number of  
 2 occasions where something has happened where we've been  
 3 in a position where it's been terminated for  
 4 a particular reason, and then subsequently, looking at  
 5 the temperature data, it hasn't failed in that regard.  
 6 So we were in a position where, to make it more robust,  
 7 we were allowing it to carry on, to be absolutely  
 8 certain. And that had always been the practice  
 9 throughout my career with every person who had ever done  
 10 tests — I've done tests with or anything that I'd ever  
 11 done.  
 12 Q. Yes, but that would mean that you were introducing  
 13 a level of discretion into the operation of the  
 14 termination criteria, wouldn't it?  
 15 A. Erm ... if you put it that way, to a certain extent,  
 16 yes.  
 17 Q. And that's not allowed under the BSI, is it? There is  
 18 nowhere in the document(?) where it says it's up to the  
 19 test operator to decide whether to terminate or when to  
 20 terminate the test once flames exceed the top of the  
 21 rig.  
 22 A. No, but you learn from experience what is relevant.  
 23 I think that the implication is that you're saying that,  
 24 had we terminated, the test would have failed at that  
 25 point. But the test didn't then subsequently go on to

17

1 pass any of the criteria, so it's a bit of a superfluous  
 2 argument, I think.  
 3 Q. In hindsight, as a matter of analysis, that may be  
 4 right, but we know that test termination is a physical  
 5 act, not an official act.  
 6 A. Indeed, yes.  
 7 Q. Can we look, please, at the next section of footage  
 8 I want to show you, please, {BRE00005677}. I would like  
 9 the video to be played, please, from 0.25 to 4.48. This  
 10 is a long section, I'm afraid, it's about four minutes,  
 11 but if we can please play that.  
 12 (Video played)  
 13 Right. That was a bit long, but we have the  
 14 transcript here and I'm going to take you through that  
 15 now.  
 16 Can we please go back to the transcript,  
 17 {BRE00035418/9}, under the bold heading "BRE00005677".  
 18 We start with male speaker 1, and you have identified  
 19 that as you, and I'll just read it out:  
 20 "MALE SPEAKER 1: (Phil Clark, BRE) That um.. you  
 21 know that flash from the surface what happened there is  
 22 the um (inaudible) of the panel has been heated up to  
 23 its auto—ignition temperature so basically everything  
 24 (inaudible) ..."  
 25 I think you have added those words, haven't you?

18

1 A. I think I have, sir, yes.  
 2 Q. " ... and it just took off but you can see how quickly it  
 3 (inaudible) it burned away it burned probably  
 4 (inaudible) 10—15 seconds.  
 5 "MALE SPEAKER 6: (Adrian Brazier, Kingspan) That's  
 6 why it was giving colour to the face of the panel isn't  
 7 it.  
 8 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah yeah. If  
 9 that gets much worse, Tom, if they get like another if  
 10 they get over a metre we might just have to knock it  
 11 down. Banging on that beam at the moment but um..  
 12 "MALE SPEAKER 2: (Tom Lennon, BRE) There's a lot of  
 13 embers going up and over (inaudible).  
 14 "MALE SPEAKER 1: (Phil Clark, BRE) Nothings, there's  
 15 no um (inaudible).  
 16 "MALE SPEAKER 2: (Tom Lennon, BRE) I don't think  
 17 it's going to go out oh there you go look.  
 18 "MALE SPEAKER 1: (Phil Clark, BRE) Got a hole in my  
 19 hose.  
 20 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) Sorry I  
 21 walked in front of the camera.  
 22 "MALE SPEAKER 1: (Phil Clark, BRE) That's all right.  
 23 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) So, can  
 24 it fail if it assuming it passed in during the  
 25 30 minutes, can you fail it if it's getting up there

19

1 now?  
 2 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah.  
 3 "MALE SPEAKER 5: (Ivor Meredith, BRE) What does it  
 4 have to do though what's the .. ?  
 5 "MALE SPEAKER 1: (Phil Clark, BRE) Flames above ..  
 6 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) What you  
 7 just have to call it a danger or something does it?  
 8 "MALE SPEAKER 1: (Phil Clark, BRE) Um it says, the  
 9 standard says, and I can pull it up what it says .. got  
 10 it here ... It says, um, extinguished after 30 minutes,  
 11 um if no parts still burning, terminate the test. If  
 12 flaming, monitor and temperature still rising continue  
 13 recording for up to an additional 30 minutes, a maximum  
 14 of 60 minutes so we're (inaudible) .... Um the tests are  
 15 to be terminated if spread when spread above the test  
 16 facility or risks personnel (inaudible) damage to  
 17 equipment."  
 18 Now, just pausing there, were you reading  
 19 paragraph 8.5, and particularly (a), to Mr Meredith at  
 20 that point?  
 21 A. I was, yes.  
 22 Q. You had it on your iPad, did you?  
 23 A. I did, yes.  
 24 Q. So you had no doubt at all at that point that the terms  
 25 of the British Standard were actually physically in

20

1 front of you?  
 2 A. Yes, you're correct.  
 3 Q. Then Ivor Meredith goes on:  
 4 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) the  
 5 flames spread above the test facility .  
 6 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah.  
 7 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) It did?  
 8 "MALE SPEAKER 1: (Phil Clark, BRE) That doesn't mean  
 9 the Burn Hall though. (inaudible) burn a hole in the  
 10 roof.  
 11 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) Are you  
 12 saying it went above that.  
 13 "MALE SPEAKER 1: (Phil [Clark], BRE) It's gone above  
 14 now.  
 15 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) I can't  
 16 see it (inaudible)  
 17 "MALE SPEAKER 1: (Phil Clark, BRE) You can see it's  
 18 died down a little bit. It's actually impacting on that  
 19 beam up there.  
 20 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) But is  
 21 that actually, is that fail or?  
 22 "MALE SPEAKER 1: (Phil Clark, BRE) Well I'm, I'm  
 23 yeah..  
 24 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) On the  
 25 fence.

21

1 "MALE SPEAKER 1: (Phil Clark, BRE) On the fence at  
 2 the moment. But it hasn't got any more than the impact  
 3 onto that beam really, so we're going to let it run and  
 4 see where it gets I said to Tom if it gets like a metre  
 5 or so above obviously we'll have to (inaudible) it does  
 6 but at the moment it looks like the board is holding it  
 7 in place um if that falls down it's going to expose a  
 8 bit.  
 9 "MALE SPEAKER 5: (Ivor, Meredith, Kingspan) Yep.  
 10 "MALE SPEAKER 1: (Phil Clark, BRE) But it's also  
 11 what that um flash did.  
 12 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) that  
 13 flash did.  
 14 "MALE SPEAKER 1: (Phil Clark) .. it was definitely  
 15 over the top but we'll have to watch it back and see how  
 16 long it went for. It wasn't for very long. And a  
 17 lesser man might have put that out... No comment he  
 18 says.  
 19 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) If you're  
 20 going to burn things, you want to watch a proper fire..  
 21 "MALE SPEAKER 1: (Phil Clark, BRE) No wimping out  
 22 half way through."  
 23 Now, we've heard the audio, we've seen the video,  
 24 and we've seen this transcript. Can I ask you this: why  
 25 would you need to watch it back and see how long it went

22

1 for?  
 2 A. Because it's — ultimately it's not my decision to —  
 3 whether it will be pass or fail, so that's — again,  
 4 I think we said this yesterday, while I undertake the  
 5 test, the decision as to how it performs is undertaken  
 6 by other people, so that would be the review that would  
 7 have been undertaken.  
 8 Q. You can see, as you have confirmed, from the criteria  
 9 that you had in front of you that you had to stop the  
 10 test if flames went above the rig; yes?  
 11 A. That's what the standard says, yes, yes.  
 12 Q. Yes, and you actually read the words at the time; yes?  
 13 A. Yes. So in terms of what will be reported, it would say  
 14 in the test report that the test was terminated at that  
 15 point.  
 16 Q. Yes. Just answer my question —  
 17 A. The test — so if — the test, to my mind, is the bit  
 18 where you're collecting data to go into the report and  
 19 which is then used for classification. Once the test is  
 20 terminated, as in you've stopped collecting the data for  
 21 the purposes of classification or whatever, as BRE had  
 22 always done, and I've done it through the whole of my  
 23 career and nobody has ever corrected me to, it was  
 24 common practice to allow that to burn for the client to  
 25 get additional data. So the test officially is

23

1 terminated, but the fire was allowed to burn. So that  
 2 was the difference. And I understand where you mean —  
 3 but, as I say, that was always common practice from what  
 4 we had done.  
 5 Q. Now can you answer my question, please?  
 6 A. Yes, sir.  
 7 Q. The question was: you had the text of the test in front  
 8 of you, didn't you?  
 9 A. I did, yes.  
 10 Q. And there are no criteria in the text of the test  
 11 criteria that you had in front of you for the duration  
 12 of flame spread above the test facility?  
 13 A. No, there isn't, no, you're correct.  
 14 Q. So were you applying your own discretion as to how long  
 15 you would let the flames rise above the test facility  
 16 before —  
 17 A. Erm —  
 18 Q. — terminating the test?  
 19 A. In that regard, yes, yes.  
 20 Q. And you agreed with me that there in fact is no  
 21 discretion afforded to the tester in the test standard  
 22 in that way, is there?  
 23 A. No, if you read it in those regards, then no, you're  
 24 correct, no.  
 25 Q. Then why were you applying a discretion in whether or

24

1 not to terminate the test which doesn't exist in the  
2 test standard?  
3 A. Because that is common practice that had always been  
4 undertaken and I was doing what had always been done, so  
5 I had no reason ...  
6 Q. Common practice or not, do you accept that the common  
7 practice was a deviation from the requirements of the  
8 test standard?  
9 A. If you — by meaning if it goes over the top you have to  
10 extinguish the whole of the facility, then you're  
11 correct, yes.  
12 Q. And this deviation from the test standard in that sense  
13 was something pursued by the BRE as standard practice;  
14 is that your evidence?  
15 A. I would say yes, but officially the test was terminated.  
16 It's ... yes. I understand where you're coming from,  
17 but yes. I think — I don't think it's unusual for  
18 tests to carry on for data-gathering purposes.  
19 Q. Now, we're going to play another piece of footage. This  
20 is the penultimate one.  
21 Can we go to {BRE00005678}, please, and I'd like  
22 this to be played from 1.33 to 4.57. It's about  
23 three minutes, bear with us, but it's useful, and then  
24 I'll show you the transcript, which I know you've  
25 reviewed. So {BRE00005678}, please.

25

1 (Video played)  
2 Now, can we go to the transcript, please, back to  
3 {BRE00035418/12}. If we start at the top of page 12, we  
4 can see male speaker 5, second entry down,  
5 Ivor Meredith, Kingspan, and he says:  
6 "But they are ... transient flames ..."  
7 Can you see that?  
8 A. Yes, I do.  
9 Q. Then you say:  
10 "MALE SPEAKER 1: (Phil Clark, BRE) yeah yeah yeah  
11 that's where I'm sort of ...  
12 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) It's not  
13 the actual test facility on top of that.  
14 "MALE SPEAKER 1: (Phil Clark, BRE) But it doesn't it  
15 doesn't say what sort of flames, it just says flames ..  
16 so .. I think um..  
17 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) I'm  
18 involved in the re—write so I might have to clarify  
19 that.  
20 "MALE SPEAKER 1: (Phil Clark, BRE) Just put 'green  
21 flames' or something like that .... I'm not seeing that  
22 sort of um surface burning so badly for a long time.  
23 "MALE SPEAKER 5: (Ivor Meredith, Kingspan)  
24 (inaudible) because it wasn't really eating away at that  
25 it was sort of concentrating on that side.

26

1 "MALE SPEAKER 1: (Phil Clark, BRE) That shows you  
2 why you put the wing wall in because it um.  
3 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) pushes  
4 it.  
5 "MALE SPEAKER 1: Yea heats up.  
6 "MALE SPEAKER 5: (inaudible)  
7 "MALE SPEAKER 1: (inaudible)  
8 "MALE SPEAKER 5: (Ivor Meredith, Kingspan)  
9 (inaudible) .. frame would be good for another one  
10 then... That'll do .. yeah.  
11 "MALE SPEAKER 1: (Phil Clark, BRE) Between, you, me  
12 and the (inaudible) camera.  
13 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) yeah uh  
14 huh.  
15 "MALE SPEAKER 1: (Phil Clark, BRE) flames above the  
16 rig, I will put ... (writing)  
17 "MALE SPEAKER 5: (Ivor Meredith, Kingspan) Can't you  
18 just delete the whole sentence?  
19 "MALE SPEAKER 1: (Phil Clark, BRE) I will put ..  
20 (writing) .. I think it might be (inaudible) in a minute  
21 it's .. looks like that board just collapsed in."  
22 It's right, isn't it, just reading that, that  
23 BS 8414 doesn't actually give you any sort of  
24 specification about what sort of flame spread above the  
25 rig should lead to termination or not lead to

27

1 termination?  
2 A. No, you're correct yes, yes. One thing that's just come  
3 to mind, I think at this point Kingspan were also asking  
4 about criteria and looking for what is the LPS 1582  
5 standard, and in that it — that does actually define,  
6 I think I've said in my statement, that does define how  
7 you — it does state how you define flaming, and it says  
8 essentially, "Not transient but consistent flame for  
9 a period of 60 seconds".  
10 So that, in terms of what you said there, was — and  
11 I think I've said this in my statement — the criteria  
12 to a certain extent I was working to, because one of the  
13 things organisations like Kingspan were looking to do  
14 was to potentially use this data for the LPS 1582  
15 requirement as well.  
16 Q. If you look at the bottom of page 12 of the transcript,  
17 please, you can see, four entries up from the bottom,  
18 you say, "Between, you, me and the (inaudible) camera",  
19 do you see that?  
20 A. Yes.  
21 Q. Then there is a "yeah" and then you say, "Flames above  
22 the rig, I will put ..." Then you're writing. Do you  
23 see that?  
24 A. I do, yes.  
25 Q. Then he says, "Can't you just delete the whole

28



1 sentence?" And you say, "I will put", and then you  
 2 write.  
 3 What was it that Mr Meredith was suggesting that you  
 4 delete?  
 5 A. If I remember correctly, I put in there, "Flames above  
 6 the system, review the video", I think. Something like  
 7 that.  
 8 Q. You say, "If I remember correctly"; have you refreshed  
 9 your memory?  
 10 A. I think I've seen the text, yes. If I recall correctly,  
 11 that's what I put.  
 12 Q. What text?  
 13 A. I think it's in my statement somewhere, I think.  
 14 Q. Sorry, are these notes —  
 15 A. Yes, because this subsequently went on to be disputed,  
 16 as part of the dispute all of this footage was reviewed  
 17 and the text of that is in this statement here as part  
 18 of that.  
 19 Q. Just to be clear, your notes that you were making at the  
 20 time, were they preserved?  
 21 A. Yeah, they've been given as far as I'm aware.  
 22 Q. Did you review them for the purposes of your statement?  
 23 A. I did, yes, yes.  
 24 Q. We may have to come back to that.  
 25 What were you writing down, do you remember?

29

1 A. As I said, I'm sure I put, "Flames" — "Transient  
 2 flames", or something, "above, review the video", or  
 3 something like that.  
 4 Q. Did you make the deletion that Mr Meredith asked for?  
 5 A. No, I didn't, no. I think it was just him joking.  
 6 Q. Right. Right.  
 7 Can I then take you to a small section of footage  
 8 from near the end of the test at {BRE00005679}. Can we  
 9 please start that at 4.20 and then play that to the end.  
 10 (Video played)  
 11 Now, let's go to the transcript, please, at  
 12 {BRE00035418/14}. At the top of page 14, second entry  
 13 down, you see male speaker 5, that's you, and you say:  
 14 "MALE SPEAKER 5: (Phil Clark, BRE) It's actually,  
 15 the panel's burning that far down the (inaudible) isn't  
 16 it? A flame moving is still transient isn't it?  
 17 (inaudible) floating up. Or are they not still  
 18 transient flames at 59 minutes?"  
 19 Then you say again, well —  
 20 A. Can I just say something there? I think I've  
 21 misidentified male speaker 5. I think that should read  
 22 Ivor Meredith.  
 23 Q. Fine, I was going to ask you. That looked —  
 24 A. Yes.  
 25 Q. — because I saw that there were two. That must be

30

1 Ivor Meredith, and this is you, male speaker 1:  
 2 "MALE SPEAKER 1: (Phil Clark, BRE) Well it doesn't,  
 3 it doesn't define what sort of flame it just says flames  
 4 above the test facility. You could argue that they  
 5 weren't big flames and that they didn't pose  
 6 a danger...."  
 7 Then if we go perhaps just a little bit down the  
 8 page, there is another video clip I'm not going to show  
 9 you, but under "BRE0005680", you can see the first thing  
 10 you say there is:  
 11 "MALE SPEAKER 1: (Phil Clark, BRE) ... didn't pose  
 12 a danger that day so you can argue that."  
 13 Do you see that?  
 14 A. Yes, I do, yes.  
 15 Q. On what basis could you argue that these flames weren't  
 16 big flames or that they didn't pose a danger?  
 17 A. A danger to the facility, is what I meant in that  
 18 regard.  
 19 Q. Right. But why would the size of the flames or the  
 20 nature of the flames be relevant?  
 21 A. Because we're ... my main — or the main criteria when  
 22 we're testing in that facility is to make sure that  
 23 everybody is safe, so that's my criteria in that regard.  
 24 That's what I meant in terms of that. I didn't mean  
 25 they weren't — in the real world they wouldn't

31

1 potentially pose a danger.  
 2 Q. But do you accept that the size of flames isn't a matter  
 3 for your discretion in deciding whether to terminate the  
 4 test or not?  
 5 A. You're correct, yes.  
 6 Q. Or whether the flames are dangerous as you as  
 7 an observer might see it?  
 8 A. No, but that's why there are other criteria that are  
 9 used to determine how a system performed.  
 10 Q. Why were you suggesting this is an argument?  
 11 An argument by whom?  
 12 A. I mean an argument as in it's a discussion point,  
 13 it's ... yeah, I don't know what I meant there, no.  
 14 Q. No. And why were you assisting Mr Meredith, who was  
 15 after all the client, the test sponsor, in thinking of  
 16 potential arguments in favour of exercising a discretion  
 17 based on flame size or flame nature when considering  
 18 whether or not the test should be terminated?  
 19 A. I don't think that's how I meant it. It's not his  
 20 decision to argue or otherwise as to whether a test is  
 21 terminated or not. That's — ultimately the decision  
 22 falls with BRE, and my understanding is that the test  
 23 was deemed to have been terminated. Although the flames  
 24 themselves weren't actually extinguished, the test was  
 25 deemed to have been terminated at 58 minutes, which is

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1 reflected in the report that was issued.  
 2 Q. When you say "you can argue", did you mean "one can  
 3 argue"?  
 4 A. Sorry, I ...  
 5 Q. Well, you see, and it's on the screen at the moment,  
 6 male speaker 1, that's you --  
 7 A. Yes, I understand what you mean. Yes, one could argue,  
 8 not you person -- yes.  
 9 Q. Still, you're presenting to the test sponsor arguments  
 10 that you considered to be sound about why the test  
 11 shouldn't be terminated based on flame size, weren't  
 12 you?  
 13 A. Erm ... if you read it in that way, but no, that's not  
 14 how it was meant, no.  
 15 Q. Why was there any discussion about any of this? Why  
 16 didn't you simply terminate the test on the basis that  
 17 the flames had overtopped the rig, end of story?  
 18 A. Because that's -- we work with people to get as much  
 19 information as they can. I think, like I said earlier,  
 20 if you just start terminating tests in that regard, then  
 21 you never learn anything, you never learn how things  
 22 perform in the real world. And one of the other things  
 23 is that I had a senior staff member there who hadn't  
 24 said, "You need to terminate the tests here", and this  
 25 was common practice.

33

1 Q. Can we go back to the bottom of page 12  
 2 {BRE00035418/12}, please, and that's something in  
 3 relation to the previous audio. There's something there  
 4 that I don't think I completed my questioning on.  
 5 If you go to the bottom of page 12, you can see  
 6 that, four lines up, I put to you, "Between, you, me and  
 7 the (inaudible) camera". Do you see that?  
 8 A. Yes, yes.  
 9 Q. Ivor Meredith says, "yeah uh huh", and then you say,  
 10 "flames above the rig, I will put ..." and then you're  
 11 writing. He asks you to delete the whole sentence, and  
 12 then at the top of page 13 {BRE00035418/13}, you say,  
 13 "I will put ..." and then you're writing.  
 14 It looks from that that you were writing your notes  
 15 in collaboration with Mr Meredith.  
 16 A. No, because he didn't say, "Why don't you put this?"  
 17 I wrote it, he didn't change -- he said -- I think he  
 18 said jokingly, "Couldn't you just delete the whole  
 19 sentence?" I wasn't collaborating with him, no, no.  
 20 Q. Well, he asks you, "Can't you just threat the whole  
 21 sentence?"  
 22 A. I didn't -- sorry, sir.  
 23 Q. Forgive me, can I put it to you, please.  
 24 He says, "Can't you just delete the whole sentence?"  
 25 You say, "I will put ..." What were you putting in

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1 response to his question or request to delete the whole  
 2 sentence?  
 3 A. I think I put, "Review the video".  
 4 Q. Right. Why --  
 5 A. I think he said jokingly, "Couldn't you have just  
 6 deleted the whole sentence", so ...  
 7 Q. Why are you allowing Mr Meredith to have any discussion  
 8 with you at all about your notes?  
 9 A. He wasn't.  
 10 Q. Well, he was, with great respect. This is what this  
 11 transcript shows. You're having a discussion about what  
 12 you should enter in your notes.  
 13 A. If --  
 14 Q. He asks you to delete something and --  
 15 A. Like I said earlier, if I thought I had anything to  
 16 hide, I wouldn't be wearing this helmet camera. I've  
 17 got nothing to hide in terms of what I did. All  
 18 I probably put was some clarification to say, "Review  
 19 this at a later date". There's no collaboration in any  
 20 way, shape or form there.  
 21 Q. Right. So in response to his request to delete, you  
 22 made a change, you then put, "Review the video". That  
 23 was a change, I think, wasn't it?  
 24 A. That was an addition.  
 25 Q. Right, an addition.

35

1 A. An addition, yes.  
 2 Q. So you put an addition into your notes based on  
 3 a discussion, indeed a request, from Mr Meredith; yes?  
 4 A. No, he didn't request it. I did it under my own  
 5 volition. I would have probably put that anyway.  
 6 Q. My question: you put an addition into your notes during  
 7 the course of a conversation about what you should write  
 8 that you were having with Mr Meredith?  
 9 A. No, he never at any point did he tell me what to write.  
 10 He never suggested I write anything.  
 11 Q. Well, he did, but maybe you didn't comply with that, but  
 12 you certainly wrote your notes -- I'll put it again --  
 13 during the course of a conversation with Mr Meredith  
 14 about what your notes should say.  
 15 A. I disagree.  
 16 Q. Right.  
 17 Let's look at your witness statement, please, at  
 18 paragraph 239 {BRE00005768/59}. You say:  
 19 "Subsequent examination of the test data indicated  
 20 that, regardless of the presence of observed flaming  
 21 over the test facility, the temperature was still rising  
 22 on the external face of the facade and within the  
 23 cavity after the nominal 30 minutes termination time for  
 24 the crib; as such, the test would have been required to  
 25 continue for the full 60 minutes duration."

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1 In your view, on the subsequent examination of both  
 2 the video footage and the test data, that test was  
 3 a fail, wasn't it?  
 4 A. It was, yes, yes.  
 5 Q. Indeed, you go on at paragraph 240, as we can see, to  
 6 say that it wasn't suitable for classification to  
 7 BR 135; yes?  
 8 A. Indeed, yes, yes.  
 9 Q. In other words a fail?  
 10 A. Yes, yes.  
 11 Q. Is it right that you were fully supported in that view  
 12 by Stephen Howard?  
 13 A. That is my understanding, it is, yes.  
 14 Q. Did anybody else from the BRE review any of the video  
 15 footage from this test?  
 16 A. I think ... I think Tony Baker may have.  
 17 Q. Right.  
 18 A. I think there's a video — sorry, an email that suggests  
 19 that three people had viewed it, and Stephen Howard was  
 20 actually present at the test as well.  
 21 Q. Can we go back to your statement, please, at page 54  
 22 {BRE00005768/55}, paragraph 224. You identify  
 23 a dispute, an exchange, which led to Kingspan's dispute  
 24 being escalated and treated as a formal complaint within  
 25 the BRE, ultimately dealt with by BRE's compliance team.

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1 Can we look at the complaint summary, which is at  
 2 {BRE00015636}. If we start by looking at the top  
 3 right-hand corner, you will see that there is a date,  
 4 February 2013, which is obviously an error, because the  
 5 internal audit report is dated 6 June 2014.  
 6 A. I think that date at the top, sir, is actually the  
 7 references when the document was put together.  
 8 Q. I was going to ask you, it looks as if this was a BRE  
 9 form, so is 6 February 2013 the date the form was  
 10 created?  
 11 A. Yes, I think that's correct.  
 12 Q. But the actual report is dated 6 June 2014; yes?  
 13 A. I think that's correct, yes.  
 14 Q. I see.  
 15 Now, looking at page 1 under "General Summary:  
 16 Background", it says:  
 17 "The purpose of this investigation was to determine  
 18 if the Kingspan cladding fire performance test  
 19 ref 293941 ..."  
 20 That was the 19 March test, wasn't it?  
 21 A. Yes.  
 22 Q. "... was carried out in accordance with BS 8414-2:2005,  
 23 BR135 and BS EN ISO 17025:2005.  
 24 "The test was carried out by Phil Clark and  
 25 a representative of Kingspan was present during the

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1 test. The main grounds for the complaint was that the  
 2 client disputes the outcome of the fire performance test  
 3 ref 293941 carried out on 19th March 2014. No  
 4 classification was given as Phil Clark observed and took  
 5 photographic evidence of the flame spreading above the  
 6 test facility."  
 7 Do you agree — and if you don't agree, please tell  
 8 me — that that is an accurate summary of the complaint?  
 9 A. Yes, I think they were arguing the flames over the top,  
 10 yes.  
 11 Q. Can we go to page 2 {BRE00015636/2}, please, under  
 12 "Testing":  
 13 "The test data was reviewed with Phil Clark and the  
 14 following was noted."  
 15 In particular, just focus on paragraph 1. It says  
 16 there:  
 17 "The cladding wall logger and thermocouples  
 18 IN 3884/5/6 was last calibrated on 18 September 2012 and  
 19 was due calibration on 24 September 2013. This is now  
 20 classed as a Major Non-Conformance."  
 21 Do you know how that major non-conformance was dealt  
 22 with, so far as you remember?  
 23 A. My recollection is that we commissioned our internal  
 24 audit and calibration team to immediately undertake  
 25 a review of the logger.

39

1 Q. Who was responsible for the calibration of the wall  
 2 loggers and the thermocouples?  
 3 A. That, at that time, fell under my jurisdiction.  
 4 Q. Right. Can you account for how there had been a gap of  
 5 some 18 months between September 2012 and March 2014 in  
 6 the calibration, and how come there was no calibration  
 7 on the due date, 24 September 2013?  
 8 A. Erm ... sorry ... so ...  
 9 (Pause)  
 10 Sorry, what was the date of the test?  
 11 Q. The date of the test was 19 March 2014.  
 12 A. Erm ... no, I can't.  
 13 Q. It was your job to recalibrate it, but you didn't do it.  
 14 Is that —  
 15 A. There was a period from March 2013 until about May 2013  
 16 while I was off with long-term sick, but I can't account  
 17 for the other period of time. It was on occasions very  
 18 difficult to get the — our internal chap to come down  
 19 and — because of his workload as well. But I can't  
 20 account for that necessarily, no, other than the absence  
 21 from the office due to long-term sick.  
 22 Q. That absence from the office wouldn't explain why there  
 23 was no calibration on 24 September 2013 or thereafter,  
 24 would it?  
 25 A. No, not necessarily, no.

40

1 Q. What effect did you understand that this wrong  
2 calibration had or could have had on tests to BS 8414  
3 carried out since the last calibration date, and  
4 particularly the September 2013 recalibration date?  
5 A. If it had been picked up by, for example, UKAS, they  
6 would give you — they would note it and they would give  
7 you seven days to get it sorted out, and I think in this  
8 case it was checked and it was found to still be  
9 compliant, there was no issues raised.  
10 So even if it was done — this was done by  
11 an external auditing organisation, they would give you  
12 the — that period of time to rectify it and then you  
13 would need to demonstrate that it had no detrimental  
14 effect to the readings.  
15 Q. So are you saying that in fact there was a review of all  
16 the thermocouple data since 24 September 2014 and before  
17 the date when it was checked, and all the results were  
18 checked again and re-verified? Is that what happened?  
19 A. That's my understanding, yes.  
20 Q. How do you understand that? What's the source of your  
21 understanding?  
22 A. That would be the process. As far as I'm — I can  
23 remember, the logger was definitely recalibrated, and  
24 the checks were done. I can't remember by whom. I know  
25 who would have done — undertaken the calibration, but

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1 I don't know who else would have checked the other  
2 stuff.  
3 Q. Was the check on the historic thermocouple and wall  
4 logger figures between September 2013 and the date when  
5 the verification was done carried out internally or  
6 externally?  
7 A. It would have been done internally, yes.  
8 Q. By whom?  
9 A. We had a gentleman who worked in the calibration team,  
10 a gentleman called Steve Wright.  
11 Q. Would there have been a report?  
12 A. Yes, it would have gone into the system, yes, and in  
13 that case I think somewhere in my witness statement —  
14 I kept a file of calibration certificates, and they were  
15 also kept electronically on the BRE central system.  
16 Q. Right. Well, I don't think we've seen those, so I think  
17 we'd need to see those.  
18 Did you yourself review the report in order to  
19 satisfy yourself that, notwithstanding the failure of  
20 recalibration of either the wall logger or the  
21 thermocouples, the data that was produced by any tests  
22 was not materially inaccurate?  
23 A. I can't recall specifically doing that, no.  
24 Q. Was it not your job to make sure and satisfy yourself  
25 that the tests that had been done between those dates

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1 and reports produced on the basis of the data produced  
2 between those dates were not materially inaccurate?  
3 A. I probably did, but I just — as I say, I can't recall  
4 specifically having — doing that exercise, but ...  
5 Q. You would remember it, because it would be quite  
6 an exercise to do, wouldn't it? You would have had to  
7 have gone back and reviewed all the thermocouple data,  
8 the wall logger data, for all of the tests following the  
9 date when the recalibration was due. That would be  
10 quite a substantial exercise, would it not?  
11 A. Probably then — I probably think it wasn't done, then,  
12 if I don't remember it. If I don't recall doing it,  
13 then the exercise in the way you put it probably wasn't  
14 done, then.  
15 Q. That would be quite a serious lapse, wouldn't it,  
16 because it would mean that you were taking the risk that  
17 out there, there were tests, test reports,  
18 classification reports, based on thermocouple data and  
19 wall logger data done after 24 September 2013 which  
20 might be materially inaccurate?  
21 A. No, you can tell when there's something wrong with data.  
22 Q. No, but you can't tell if you don't look.  
23 A. Yeah, you can, you can.  
24 Q. You can tell whether there is something wrong with the  
25 data if you don't go back and check it, is that what

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1 you're saying?  
2 A. Yes, yes. The thing with the data is, particularly with  
3 thermocouples, they either work or they don't, and ...  
4 yes.  
5 Q. Well, it's not a light switch, is it? A thermocouple  
6 is —  
7 A. They are like a light switch, yes.  
8 Q. They're like a thermometer, aren't they, they measure  
9 heat?  
10 A. They do measure heat, yes, yes, and you can get them to  
11 a certain tolerance, and we bought the highest tolerance  
12 you could get, and they sort of are, because they're  
13 essentially two wires and if one of the wires breaks  
14 then it will stop working.  
15 Q. What was the point of calibrating? What was the point  
16 of having required calibration dates?  
17 A. To check whether the logger is working consistently and  
18 to an agreed accuracy.  
19 Q. Yes, and if you don't check that it's working to  
20 an agreed accuracy and consistently, then there is  
21 a risk, isn't there, that tests done on an unchecked  
22 system might be done on the basis of figures that don't  
23 accurately and consistently reflect the true thing that  
24 the thermocouple and logger are measuring?  
25 A. Yes, there is that risk, yes, definitely.

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1 Q. And in order to ensure that that risk had no  
2 consequences, it was your responsibility, surely, once  
3 the recalibration had been done, to check whether or not  
4 there had been any material discrepancy between  
5 rechecked figures and the figures as originally produced  
6 by the tests?  
7 A. Yes, but I think what would have happened — and  
8 I didn't undertake this test, this — obviously the  
9 internal audit was undertaken by somebody else, and  
10 I was reliant on what their suggestions were and what  
11 the actions were to do. My understanding is that the  
12 logger was calibrated, was found to have absolutely no  
13 errors and was in — within the standards that it had  
14 always been, and no action was recommended from the  
15 audit team, so ...  
16 Q. That's the logger. What about the thermocouples?  
17 A. The thermocouples and the logger is part in the same  
18 thing. So we would change the thermocouples when they  
19 broke(sic) or they stopped working, but they had  
20 already come in from the manufacturer with an audit  
21 certificate. We used to buy them as batches, labelled  
22 batches, and they would come in with a certificate of  
23 conformity, and we had them calibrated by the supplier  
24 in batches.  
25 MR MILLETT: Mr Chairman, is that a convenient moment?

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1 SIR MARTIN MOORE—BICK: Yes, I think it is, thank you very  
2 much, Mr Millett.  
3 Well, Mr Clark, we'll have our usual morning break  
4 at this point.  
5 THE WITNESS: Okay, sir.  
6 SIR MARTIN MOORE—BICK: We will resume your evidence at  
7 11.35, please. Once again, please don't talk to anyone  
8 about your evidence or anything relating to it while  
9 we're in the break.  
10 THE WITNESS: Okay, sir, thank you very much.  
11 SIR MARTIN MOORE—BICK: Good, see you a bit later. Thank  
12 you very much.  
13 (11.18 am)  
14 (A short break)  
15 (11.35 am)  
16 SIR MARTIN MOORE—BICK: Welcome back, everyone. We're going  
17 to continue hearing from Mr Clark.  
18 Mr Clark, can you see me and hear me well?  
19 THE WITNESS: I can see you and hear you, sir, yes, I can.  
20 SIR MARTIN MOORE—BICK: Good, thank you very much. And  
21 you're ready to carry on, I hope?  
22 THE WITNESS: Indeed I am, yes.  
23 SIR MARTIN MOORE—BICK: Good, thank you.  
24 When you're ready, then, Mr Millett.  
25 MR MILLETT: Yes, thank you very much, Mr Chairman.

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1 Mr Clark, by oversight there was a passage of video  
2 that I did not show you, and I apologise for that. Can  
3 I show it to you now. It's {BRE00005674}. There is  
4 a transcript associated with it which I will also then  
5 show you. We've already discussed it, but I will show  
6 it to you properly so that it goes into the record  
7 formally.  
8 {BRE00005674}, and can that please be played from  
9 3.25 to 4.41.  
10 (Video played)  
11 Now, I would like, please, to show you the  
12 transcript of that video so we can see the audio written  
13 down, {BRE00035418/6}, please. We start in the fifth  
14 line, where you can see you say:  
15 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah it was very  
16 short lived so it just burned itself out but it's come  
17 round into this (inaudible) wing.  
18 "MALE SPEAKER 5: (Tom Lennon, BRE) Still travelling  
19 upwards mind.  
20 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah.  
21 "MALE SPEAKER 2: (Tom Lennon, BRE) It's up above,  
22 are there any fire breaks in this?  
23 "MALE SPEAKER 1: (Phil Clark, BRE) there are yeah.  
24 "MALE SPEAKER 2: (Tom Lennon, BRE) Horizontal ones?  
25 "MALE SPEAKER 2: (Tom Lennon, BRE) (inaudible) It

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1 looks like there's a fire break there and there's  
2 flaming above it actually, right up the centre, you see  
3 that intermittent flaming? That looks like it's above  
4 the barrier.  
5 "MALE SPEAKER 1: (Phil Clark, BRE) Yeah. I never  
6 saw anything out the top, only the surface but that  
7 might have been short lived enough not to have um.  
8 "MALE SPEAKER 2: (Tom Lennon, BRE) Don't think  
9 there's enough energy in this now to get it going.  
10 "MALE SPEAKER 1: (Phil Clark, BRE) But that was  
11 after the 15 minutes anyway so um and it's a burn off  
12 very quickly.  
13 "MALE SPEAKER 2: (Tom Lennon, BRE) I never saw any  
14 flaming at the top I looked in the side there as well.  
15 "MALE SPEAKER 1: (Phil Clark, BRE) No, it was  
16 definitely over the top but it was really short time ...  
17 (inaudible). The GoPro turned itself off again  
18 (inaudible) do that keep it warm uh cool I mean. I  
19 think only about a minute before a couple of minutes  
20 before the end. I've got it all on this anyway. Made  
21 sure I've been watching it."  
22 Then it goes on about file.  
23 When you say, "I've got it all on this anyway", what  
24 was the "this"?  
25 A. I think I meant my helmet camera.

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1 Q. Oh, I see. But you said the GoPro turned itself off and  
 2 there's a discussion about that. Then you say "I've got  
 3 it all on this anyway". Was there a separate recording  
 4 device apart from the GoPro?  
 5 A. No, I don't think so. There were a couple of cameras.  
 6 I think one of the cameras turned itself off, but I said  
 7 "I've got it on this", as in my helmet camera.  
 8 Q. I see.  
 9 Now, this was the passage that I was putting to you  
 10 when I was asking you about whether the flames were  
 11 definitely over the top and would require early  
 12 termination, and you answered the questions on that.  
 13 Just to confirm now, having just seen the video and  
 14 the transcript of it, if the flames were definitely over  
 15 the top, why wasn't the test terminated in accordance  
 16 with the criteria at paragraph 8.5(a) of BS 8414?  
 17 A. As I say, I agree with what you said. The — it — it's  
 18 something that had always, always been common practice  
 19 and I had no reason to question it, and this is even  
 20 common practice with tests where Sarah Colwell, who sits  
 21 on the committee for it, had always said, "Let's carry  
 22 on". So I'd taken it as that's what we did and that was  
 23 common practice, so ...  
 24 Q. Right.  
 25 Does it not follow from the language of

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1 paragraph 8.5 of BS 8414 that termination of the test  
 2 for the purposes of that standard automatically equates  
 3 to extinguishing the fire on the test rig?  
 4 A. No, no, not to my mind, no.  
 5 Q. So can you extinguish the fire but not terminate the  
 6 test or —  
 7 A. You can terminate the test but it doesn't necessarily  
 8 require you, in my understanding of how it had always  
 9 been done, is to — it didn't necessarily require you to  
 10 extinguish the flame.  
 11 Q. Right.  
 12 Now, when you said you were on the fence, was that  
 13 about extinguishing the fire on the rig or was that  
 14 about whether or not the test would be a pass or a fail?  
 15 A. That was a test — it was — I think as I — when I say  
 16 on the fence, I didn't want to say, "Yes, it has", "No,  
 17 it hasn't", I just was not willing to give an opinion.  
 18 Q. On what?  
 19 A. On whether it had — how it had performed.  
 20 Q. You mean pass or fail?  
 21 A. Yes, yes.  
 22 Q. So you were on the fence about whether it had passed or  
 23 failed?  
 24 A. It was a polite way — no, I was — fully understood at  
 25 what point — I deemed at that point that it had failed,

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1 but it's not my job to tell the client what I think, I'm  
 2 not allowed to say that, so it was my polite way of  
 3 saying, "No, I can't say that", in a way, shorthand for  
 4 that.  
 5 Q. I just want to get your evidence clear. What you were  
 6 on the fence about was whether the test had passed or  
 7 failed?  
 8 A. No, I wasn't on the fence for that, it was my polite way  
 9 of saying, "I can't confirm either way". It's not my  
 10 job to ...  
 11 Q. That it had passed or failed?  
 12 A. That it had passed or failed, yes, yeah.  
 13 Q. Let's look at the notes of the test that you referred to  
 14 in your evidence just before the break, and I asked you  
 15 about those and whether you amended those notes in  
 16 response to what Ivor Meredith told you. Can we look at  
 17 those, please, {BRE00032362/62}. This is an email that  
 18 looks like you've sent it to yourself on 2 June.  
 19 A. That's correct, yes.  
 20 Q. Could you just explain what this document is?  
 21 A. So that's the notes that I would type as various things  
 22 happened throughout the test.  
 23 Q. Right. The test was in March; this email was in  
 24 June 2014.  
 25 A. Yes.

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1 Q. Why the gap?  
 2 A. Erm ... I've no idea.  
 3 Q. Right.  
 4 If you look down it, you can see there are lots of  
 5 timings there; yes? Do you see all that?  
 6 A. Yes, yes.  
 7 Q. Starting with ignition at 0, and then you say at the  
 8 bottom of the first chunk of text:  
 9 "Surface flash to full height."  
 10 Then 39 minutes:  
 11 "Flaming behind panel at 5.5m."  
 12 And then 43 minutes:  
 13 "Transient flaming above rig on surface at 6.5 m  
 14 review video."  
 15 Do we take it from your evidence earlier that you  
 16 added the words "review video" in response to  
 17 Mr Meredith's request to delete what you had already  
 18 written there?  
 19 A. Yes, yeah, that was what I had referred to, yes.  
 20 Q. I've just shown you the words after 23 minutes, "crib  
 21 collapsed, surface flash to full height". We haven't  
 22 heard that on the video or seen that in the transcript  
 23 about where you say that.  
 24 A. Where I say what, sorry?  
 25 Q. Well, where you say "Surface flash to full height"

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1 doesn't correspond, does it, with —

2 A. Oh, no, sorry, sir, this information is my typed notes,

3 it's not a note of the — it's not the transcript of

4 what was said.

5 Q. No, I accept that, and I'm not suggesting to you that it

6 is. My point is that the description of what happened

7 in these typed notes, "Surface flash to full height",

8 does not correspond to where we heard you on the audio

9 say that the flames were definitely over the top.

10 A. No, no, part of the reason why the camera was worn and

11 other things was it gives us the ability to look at

12 things post-test, because obviously you can see there

13 was lots of running around and making sure people were

14 safe and out the way and you don't always have time to

15 sit there and type in real time.

16 Q. We see you say at 43 minutes, "transient flaming above

17 the rig". Where you say "Surface flash to full height"

18 at 23 minutes, is there a reason why you haven't written

19 "flames definitely over the top" as we've heard on the

20 audio?

21 A. No, I think that was at — again, in the — with all the

22 other things that were going on, that's probably all

23 I had the time to write at the time.

24 Q. Did you not review the GoPro or the audio and video that

25 we've seen before writing these notes?

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1 A. No, these would have been written on the day.

2 Q. Right.

3 A. They're written in real time.

4 Q. Yes, I understand that, and you would have then had

5 plenty of time to go back and review the audio with the

6 video to check the notes you took in real time against

7 the audio and video record in real time.

8 A. That is correct, sir. I think the test report — and

9 there is another bit of this information where that

10 expands on the — as you say, I filled in the gaps

11 there, and also there was a review of the video that was

12 undertaken, so that is noted in that, and I think it's

13 somewhere further down in my witness statement.

14 Q. Can you explain why nowhere in these notes you wrote

15 "flames definitely over the top" as we heard you say

16 during the test?

17 A. As I say, I'm typing in the middle of a very dynamic

18 situation. What I would do is I would email the raw

19 notes as they were to myself at my BRE account, and

20 then, as part of the review, that would be done later.

21 So these are the raw, unabridged, straight off of the

22 notes, and then that was done later.

23 Q. Yes, I understand what you're saying, that both sets of

24 data, the audio/video and these notes, are both

25 real-time records. I understand that.

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1 A. Yes, yes.

2 Q. My question is: why, when making the real-time record on

3 the day as per these notes, did you not write that the

4 flames were definitely over the top?

5 A. Because it's a very dynamic thing. It's not — as you

6 can see, we were all running around, and then once that

7 had over — had been done, I'd moved on to the next

8 section of the thing and obviously hadn't gone back on

9 the day to correct my notes as ...

10 Q. But "flames definitely over top" is only four words.

11 What was the problem with writing those in here on the

12 day at the time during —

13 A. There was no problem, no problem at all.

14 Q. (Inaudible).

15 A. Sorry, say again?

16 Q. Why didn't you do it?

17 A. I don't know why I didn't do it.

18 Q. What I'm really suggesting to you is that there is

19 an element of amelioration, sweetening the message, in

20 these notes. You didn't want to recall the fact that

21 your observation was that these flames overtopped the

22 rig and that therefore the test had to be terminated in

23 accordance with paragraph 8.5 (a) of the

24 British Standard.

25 A. No, not at all, no. I totally disagree with that.

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1 Q. Why then didn't you record the fact that flames were

2 overtopping the rig on the day?

3 A. As I've explained it, sir, a very dynamic situation,

4 we're doing other things, I've got people asking me

5 various questions. There was no intent to deceive in

6 that way, it was just something — and later on, as

7 I say, that was all reviewed and that was all put into

8 the test report.

9 Q. Now, can we go back, then, please, to where we were

10 before the break, which is the complaint summary at

11 {BRE000015636/2}. I would like to go back to page 2,

12 where we were, and pick up in the list under the heading

13 "Testing" item 5 this time, "Internal test procedures

14 and result sheets are not controlled". Do you see that?

15 A. I do, yes, sorry, yes.

16 Q. Despite Kingspan's formal complaint or appeal about this

17 decision, it's right, isn't it, that the BRE's position

18 held and the system was never classified to BR 135 by

19 the BRE, was it?

20 A. That is my understanding, it's correct, yes.

21 Q. Just on item 5, internal test procedures and result

22 sheets not being controlled, did you understand what

23 that was a reference to?

24 A. I think it refers — do you know at the beginning when

25 you showed this document, I said about the date at the

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1 top? I think that is the control, the document control,  
 2 so it basically says when it's logged into the system  
 3 and essentially form — turns it into a formal document.  
 4 I think that was the thing it — they hadn't been  
 5 entered in the system following that protocol, I think,  
 6 if that makes sense.  
 7 Q. What hadn't been entered into the system?  
 8 A. The document we're looking at here, if you don't mind  
 9 quickly going up to the top of the page.  
 10 Q. Right.  
 11 A. Do you see where it says BRE Global, forms, internal  
 12 audit report, document number, revision number, date,  
 13 page 2 of 4, I think that was a reference to that. The  
 14 documents we had and we used didn't have that header on  
 15 it. That's what that meant.  
 16 Q. You see, despite the failure of the test, as I've put to  
 17 you, item 5 is an observation that internal test  
 18 procedures and results sheets aren't controlled, and it  
 19 was what was noted as a result of the review of the test  
 20 data with you.  
 21 Could you just tell us what it was that was noted  
 22 which led to the conclusion that internal test  
 23 procedures and result sheets are not controlled?  
 24 A. I think that's what I've just explained, that the  
 25 documents that we had, they were on the system but they

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1 weren't in this formal control document. So that  
 2 document number that you see at the top of the page,  
 3 F036, is what they would be classed as a controlled  
 4 document.  
 5 Q. Right. What were they? What was the system for those  
 6 internal test procedures and results sheets if not  
 7 controlled?  
 8 A. Sorry, I don't understand your question.  
 9 Q. Well, in what form were they? In what —  
 10 A. Oh.  
 11 Q. — controlled form?  
 12 A. So they were just Word documents, but they hadn't been  
 13 formally put into the BRE system, which would have meant  
 14 they would have got a document number, an issue date and  
 15 revision dates.  
 16 Q. I see.  
 17 Now, we know that a test report was prepared for  
 18 this test notwithstanding the failure. Why was a test  
 19 report prepared for this test?  
 20 A. It's a very good question. I was told I had to prepare  
 21 it.  
 22 Q. By whom?  
 23 A. By Stephen Howard and the internal audit.  
 24 Q. Did he give you a reason?  
 25 A. No.

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1 Q. Did you ask for a reason?  
 2 A. No, I don't — and — I don't think I was very  
 3 comfortable with issuing one.  
 4 Q. Did you express your discomfort to Mr Howard?  
 5 A. I don't recall doing it directly, no.  
 6 Q. Now, we can look, I think, quite quickly at one or two  
 7 documents on this.  
 8 Can we go to {BRE00018037/4}, please. This is  
 9 an email chain between you and somebody called  
 10 Amaury Queuille of Carea Façades following another  
 11 unsuccessful test on a system incorporating K15 carried  
 12 out in December 2014, but this email run is in  
 13 January 2015. I would like to show you page 4 here, and  
 14 the email you sent to Amaury Queuille on  
 15 16 January 2015. You say:  
 16 "Good Morning Amaury, I hope you are well, I would  
 17 suggest that you discuss the issuing of a report with  
 18 Mr Howard as we do not issue BS8414 reports of[sic] the  
 19 system did not complete the test requirements. I am  
 20 happy to draft a quick letter report showing the data  
 21 which Steve may be able to forward to you."  
 22 This is copied to Stephen Howard.  
 23 Was it correct that, as a matter of policy, the BRE  
 24 does not issue BS 8414 reports if the system doesn't  
 25 complete the test requirements?

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1 A. It was a bit vague, really. I had a number of files on  
 2 my desk where I had asked what to do with them, and  
 3 I didn't get a clear answer ever for it. So there  
 4 wasn't really a policy in that regard, no.  
 5 Q. When you say, "we do not issue BS8414 reports [if] the  
 6 system did not complete the test requirements", you're  
 7 telling Amaury Queuille that that is BRE's policy,  
 8 aren't you?  
 9 A. Yeah, it was generally the policy, I think.  
 10 Q. So was it the general policy of the BRE as a matter of  
 11 fact not to issue test reports if the system doesn't  
 12 complete the test requirements?  
 13 A. I think if the client did request it then we would, yes.  
 14 But it wasn't ... I don't think at the time they were  
 15 just written for every single test unless the client  
 16 requested it.  
 17 Q. I see. So is it your evidence that, as a matter of  
 18 general policy, the BRE would not issue a test report if  
 19 the system fails the test requirements, but would do so  
 20 if the client asked for one?  
 21 A. Yes, yes.  
 22 Q. Right. If the client asked for one, presumably they  
 23 would have to pay, would they?  
 24 A. Not necessarily, no, I think it was included in the  
 25 cost.

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1 Q. Was it?  
2 Are you aware of any occasions before the  
3 Grenfell Tower fire when the BRE did issue BS 8414  
4 reports for systems which had failed the criteria under  
5 BR 135?  
6 A. I'm not aware of many, no.  
7 Q. Obviously apart from the Kingspan test which you say you  
8 were uncomfortable about?  
9 A. Yes, I'm not aware of many at all, no, no.  
10 Q. I see.  
11 Just going back in time a little bit, if I can, to  
12 an email in 2010, {BRE00003327}, this is an internal  
13 email chain in the early part of that year, and you can  
14 see that here at the bottom of the page is an email from  
15 you to Ivor Meredith on 30 March. Do you see that?  
16 A. Yes, I do.  
17 Q. In response to an email from him.  
18 If you scroll up towards the top of the page, we'll  
19 look at the middle of that page. It's an email, it's  
20 part of this string, where Tony Baker says to you and  
21 Stephen Howard, so this is internal:  
22 "If we do indicatives how would this be reported?  
23 Just reading between the lines of Ivor's e-mail it seems  
24 as though he would try to pass off indicatives as being  
25 full tests or am I just being a cynic!"

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1 You respond to Tony Baker and Stephen Howard the  
2 same day, saying at the top of the page:  
3 "I would suggest that the supply of the data and  
4 a brief letter would suffice but no more than that?"  
5 Why was that your suggestion?  
6 A. Because if you issue an 8414 report then it's ... the  
7 fact that people will say it was tested to 8414, but it  
8 doesn't define whether it passed or failed. It's just  
9 saying that it was tested to that standard.  
10 Q. Yes.  
11 Did you agree, at least in part, with Mr Baker's  
12 view that there was a risk that Kingspan might try to  
13 pass off the test report at that time being discussed as  
14 something that it wasn't, in other words a pass?  
15 A. I don't recall this email particularly, but reading what  
16 I've written there, then possibly, yes.  
17 Q. Did it ever form part of your consideration against that  
18 background, in March 2014, four years later, when we  
19 come to it, that very great care would need to be taken  
20 in issuing a test report on request from Kingspan in  
21 circumstances where the tested system couldn't be  
22 classified to BR 135?  
23 A. That email we saw was in 2010, wasn't it, so four years  
24 later? At that point, I hadn't formed a view  
25 necessarily, but at the time when they were requesting

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1 this email, I know they were quite vociferous in terms  
2 of — sorry, of the report, they were quite adamant that  
3 they needed it, and it was — at the time I think it was  
4 probably the first time they were so persistent. So  
5 probably, in answer to your question, probably, yes,  
6 I was becoming a little concerned, I think.  
7 Q. So you were concerned about the risks that they would  
8 pass off the test report for a failed test as a pass?  
9 A. Not in that regard, as in a failed — no, not to — but  
10 I was probably a little bit more concerned that they  
11 would read more into it than they should have.  
12 Q. Well, let me ask the question again, because I'm not  
13 sure you then did answer it, I thought you had.  
14 Did it form part of your consideration, come  
15 March 2014, that very great care would need to be taken  
16 in issuing a test report to Kingspan at their request in  
17 circumstances where the tested system could not be  
18 classified to BR 135?  
19 A. Yes, I think, yes.  
20 Q. And also in circumstances where that decision, the  
21 decision that it hadn't passed the criteria under  
22 BR 135, was being fiercely contested by Kingspan?  
23 A. Yes, I think the test report doesn't necessarily, unless  
24 you thoroughly read it, make it clear that the system  
25 has failed.

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1 Q. Knowing as you did in June 2014 that the system would  
2 not be classified to BR 135, did you consider adding any  
3 words to that effect in the body of the test report?  
4 A. It does clearly say in the description and the timings  
5 that the test was terminated. The thing with the  
6 8414 report and the BR 135 is they are two separate  
7 documents, they are — and by adding bits which aren't  
8 related to the BS 8414 test would probably not be  
9 allowed. So no is the answer to your question.  
10 Q. I understand that, but given the risks that you had  
11 already identified some years before, that Kingspan  
12 might well try to pass off a fail as a pass if they've  
13 been given a test report, why not simply add some kind  
14 of caveat of qualification to the test report itself so  
15 that anybody seeing it would know that this test had not  
16 met the criteria, so as to make it absolutely plain?  
17 A. Yes, no, I understand. I understand entirely, yeah.  
18 Within the industry, I don't think that's common  
19 practice. You can get other reports which don't clearly  
20 say ... obviously if it's a classification report, it  
21 will clearly state what the classification is, but in  
22 other things — I suppose you could have something that  
23 says "Criteria not met", but the issue with that is that  
24 BS 8414 doesn't have any criteria. It's just a test.  
25 Q. Are you aware that the test report which you, in the

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1 end, did issue to Kingspan in relation to the March  
 2 test, which is at {BRE00002516}, and is dated  
 3 26 June 2014 — if we need to look at that we can — was  
 4 used as the basis of a number of desktop assessments to  
 5 BR 135 on systems incorporating K15?  
 6 A. As of when the evidence was given to — Kingspan to  
 7 the Inquiry, before that, I wasn't, but obviously when  
 8 that came out, then I have been made aware of that, yes.  
 9 I am now aware of that. But I wasn't at the time, no.  
 10 Q. Did you know that there were 29 desktops in total, so  
 11 far as we have been able to count them, based on this  
 12 test report, which had in fact failed?  
 13 A. No, I wasn't aware at all, no, no.  
 14 Q. Three of those assessments we have been able to find are  
 15 actually BRE desktop assessments. Did you know that?  
 16 A. No, I had no involvement in any assessments at all.  
 17 Q. Who would have had involvement at the BRE in producing  
 18 desktops?  
 19 A. My understanding was that was led primarily by  
 20 Stephen Howard and they were undertaken by, I think,  
 21 somebody that we ... was mentioned yesterday,  
 22 a gentleman called Norman MacDonald, for a period of  
 23 time, I think. He may not have done external façade  
 24 systems. And there was a gentleman called Andy Russell,  
 25 I think, was the primary outlet for those.

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1 Q. Right.  
 2 Take it from me that not a single one of those 29  
 3 assessments, including those done by the BRE, refers to  
 4 the fact that the March 2014 test failed to meet the  
 5 BR 135 criteria. Did you know that?  
 6 A. I didn't know, and I'm surprised. That's ... yes.  
 7 Q. Are you able to explain how the BRE itself produced  
 8 three assessments which don't say in terms, or at all,  
 9 that the March 2014 failed to meet the BR 135 criteria?  
 10 A. No, because this is the first time I ever heard that,  
 11 and I find that very strange and, to be honest, slightly  
 12 shocking.  
 13 Q. Can I just go back, then, and clarify one thing you  
 14 said, or at least I thought you said, in your evidence a  
 15 minute or two ago about what the test report said.  
 16 Correct me if I'm wrong, and I can't find the place  
 17 on the transcript at the moment, but I think you said  
 18 that the test report identified the fact that the test  
 19 had been terminated. Is that what you said?  
 20 A. Yes, in the notes, similar to what you showed earlier  
 21 with the notes that I took on the day, there was  
 22 a provision put in which said: the test was terminated  
 23 at so many minutes according to provision 8.5 of  
 24 BS 8414:2005, part 2.  
 25 Q. Let's just verify that, shall we, by reference to the

66

1 report: {BRE00002516}, please. Let's just look at that  
 2 to refresh your memory, just to make sure we've got that  
 3 right.  
 4 This is the report itself, as you can see,  
 5 26 June 2014, and the test is on a Kingspan K15  
 6 insulated system with a ventilated Trespa rainscreen.  
 7 If we scroll down to page 2 {BRE00002516/2}, we can see  
 8 that it's signed by you as the senior consultant; yes?  
 9 A. Yes, that's my signature.  
 10 Q. And the date is 26 June.  
 11 If you look at the contents — perhaps you can help  
 12 us with this. We can perhaps go to page 9  
 13 {BRE00002516/9}. Am I right in thinking that in the  
 14 contents we're looking at test results, yes, page —  
 15 A. It's at 43 minutes, I think.  
 16 Q. Right.  
 17 A. "Flaming above rig ... [at] end of test following  
 18 criteria defined in clause 8.5 (a) of the test  
 19 standard."  
 20 Q. I see. So that's where you — I see. So looking at  
 21 that, page 9 {BRE00002516/9}, just to be absolutely  
 22 clear, under "Visual Observations", paragraph 4.2,  
 23 43 minutes is where you say, "Flaming above rig on  
 24 surface".  
 25 A. Yes, it's changed, the page that I can see, but that's

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1 correct, 43 minutes, yes.  
 2 Q. Please can we go back to it, just to be absolutely  
 3 clear, so we can all see what we are talking about.  
 4 43 minutes:  
 5 "Flaming above rig on surface at 6.5m.  
 6 "End of test following the criteria defined in  
 7 clause 8.5 (a) of the test standard."  
 8 So you say that's the clear reference to  
 9 termination, is it?  
 10 A. It is indeed, yes.  
 11 Q. I see.  
 12 Given that fact, can you explain how anybody at the  
 13 BRE could thereafter have produced a desktop assessment  
 14 for K15 based on this test result or this —  
 15 A. I find it very strange, and I can't, and I think it  
 16 should have been picked up.  
 17 MR MILLETT: Yes.  
 18 Now, Mr Chairman, I've come to the end of my  
 19 prepared questions, and there are one or two I have also  
 20 prepared that I haven't put and I just want to consider  
 21 whether I need to go back over them. There are one or  
 22 two strays I think I might need to check. But subject  
 23 to that, Mr Chairman, I have come to the end of my  
 24 prepared questions and this is probably a convenient  
 25 moment for the usual break.

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1 SIR MARTIN MOORE—BICK: Yes.  
 2 Mr Clark, just so you understand what's going on,  
 3 when counsel gets to the end of his questions, we have  
 4 a break to enable him just to check whether there are  
 5 other questions that ought to be asked, and also to give  
 6 others who are following the hearing a chance to suggest  
 7 questions that ought to be asked as well.  
 8 So we're going to have a break now until 12.25.  
 9 THE WITNESS: Okay, sir.  
 10 SIR MARTIN MOORE—BICK: And then we will see at that stage  
 11 whether there are more questions for you, and if so,  
 12 then we'll put them to you. All right?  
 13 THE WITNESS: I understand, thank you, sir, yes.  
 14 SIR MARTIN MOORE—BICK: Thank you very much.  
 15 Again, no discussing your evidence with anyone  
 16 during the break.  
 17 THE WITNESS: Okay, thank you very much.  
 18 SIR MARTIN MOORE—BICK: All right, so thank you very much.  
 19 12.25, thank you.  
 20 (12.11 pm)  
 21 (A short break)  
 22 (12.30 pm)  
 23 SIR MARTIN MOORE—BICK: Welcome back, everyone. We've taken  
 24 a little longer than I originally suggested to allow  
 25 additional time for further question consideration, but

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1 I think we're now ready to go back to Mr Clark.  
 2 Mr Clark, can you see me and hear me?  
 3 THE WITNESS: I can, sir, yes.  
 4 SIR MARTIN MOORE—BICK: Good, thank you very much. Well,  
 5 we'll find out from Mr Millett whether there are more  
 6 questions that he wishes to put to you.  
 7 Yes, Mr Millett.  
 8 MR MILLETT: Thank you, Mr Chairman.  
 9 Yes, Mr Clark, there are one or two.  
 10 First — and they are slightly separate topics —  
 11 can you please go back to your transcript for Day 96,  
 12 and in fact it's probably easier if I simply put this to  
 13 you.  
 14 You said at {Day96/78:9—13} that Mr Roper had said  
 15 in his evidence that there was a minimal gap, and this  
 16 is about the vertical gap on the rig for the May test.  
 17 A. Yes, yeah, I know what — yes.  
 18 Q. You agreed that it wasn't 10 millimetres; yes?  
 19 A. Yes.  
 20 Q. Can we go, please, then, instead of going to the  
 21 transcript, to Dr Lane's report at {BLAS0000026/40},  
 22 please. This is section E of that report.  
 23 She says at paragraph E4.5.21, which is two-thirds  
 24 of the way down the page, this:  
 25 "The provision of cavity barriers is different in

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1 the photograph (Figure 2 in BRE report) relative to the  
 2 design drawings (Figure 7 in BRE report):  
 3 "a) Additional vertical cavity barriers were  
 4 installed in the test above level 1, but are not shown  
 5 on the test drawings;  
 6 "b) An additional 3rd horizontal cavity barrier was  
 7 installed in the test, but is not represented in the  
 8 test drawings."  
 9 My question is: why did you not consider that there  
 10 were extra cavity barriers in the rig itself that were  
 11 not in the design drawings?  
 12 A. My understanding is they're all accounted for in the  
 13 body of the text. I think the trouble with the drawings  
 14 is they don't necessarily represent the rig as—built,  
 15 they represent how the system should be put together in  
 16 reality.  
 17 Q. Why did the test report not draw attention to the fact  
 18 that the drawings don't represent the rig as built?  
 19 A. I don't know, I can't answer that question.  
 20 Q. That is a failing on your part, isn't it?  
 21 A. No, because it's the design of the system, so ... but  
 22 the text reflects the fact that those barriers are  
 23 there.  
 24 Q. Well, if somebody wanted to try to reconstruct a rig for  
 25 the purposes of an application in real life, and used

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1 the drawings, they would be led into error, wouldn't  
 2 they?  
 3 A. In that way, potentially, yes. If they were exactly  
 4 trying to recreate the rig, then yes, yeah, they would,  
 5 but then they would have to read it in line with the  
 6 text, the body of the text and the description of the  
 7 system.  
 8 Q. Why didn't you, before you finalised the report, go back  
 9 to your client, Celotex, and ask them to provide you  
 10 with up-to-date drawings that reflected the rig  
 11 as—built?  
 12 A. I don't know the answer to that, no.  
 13 Q. That's a failing on your part, is it not?  
 14 A. In terms of if it's a drawing representative of the rig,  
 15 but my understanding is the drawings aren't  
 16 a representation of the rig, they're a representation of  
 17 how the system should be built when it goes onto  
 18 a building, not ...  
 19 Q. Well, if they're a representation of how the system  
 20 should be built when it goes onto a building, surely  
 21 that should replicate exactly the rig as tested; no?  
 22 A. Yes, I suppose so, yes.  
 23 Q. Yes. I mean, that's the purpose of BS 8414, isn't it?  
 24 A. Yes, yes.  
 25 Q. Therefore, if a BS 8414 test report or classification

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1 report contains drawings which don't show the rig  
 2 as built, then they would lead the reader into error,  
 3 serious error, I would suggest; no?  
 4 A. Potentially, yes.  
 5 Q. And that would therefore be a failure on your part in  
 6 letting that report go out with that misleading error in  
 7 it?  
 8 A. Yes, so my understanding of the situation with the  
 9 drawings is it's a representation of how the system  
 10 should be put together.  
 11 Q. It's supposed to be —  
 12 A. That's —  
 13 Q. — a diagram of the rig, isn't it?  
 14 A. Erm ... yes.  
 15 Q. Yes.  
 16 Why did nobody check the rig as built against the  
 17 drawings that went into the report to make sure that  
 18 that misleading error did not occur?  
 19 A. My ... I don't know the answer to that question.  
 20 Q. And the failure to do that was a failure on your part?  
 21 A. And others, yes.  
 22 Q. The others being?  
 23 A. The people who reviewed and signed it off over and above  
 24 me.  
 25 Q. Would they be conducting exactly the same exercise of

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1 verification, namely checking the rig as built against  
 2 the drawings?  
 3 A. They should be, yes.  
 4 Q. So going down to the rig before ignition with the  
 5 drawings in hand and making sure that what's built there  
 6 precisely corresponds to the drawings that are going to  
 7 go into the report?  
 8 A. Not on the rig, but no, in terms of what is held on the  
 9 file, they should do, yes.  
 10 Q. What comparison would they be making between the  
 11 diagram as held on file and other documents on the file?  
 12 What other documents would they look at to make that  
 13 verification?  
 14 A. Everything that's available, and to be honest, I've not  
 15 been through this process of doing that, so you probably  
 16 have to clarify with Stephen Howard as to what he  
 17 actually did and didn't check. I'm not fully aware of  
 18 what — his process. But I would have expected him to  
 19 have done that.  
 20 Q. What did you yourself check, as the author of the  
 21 report? How did you check, or did you check, the  
 22 physical rig as completed as against the drawings which  
 23 were going to go into the report?  
 24 A. I would check the photographs that were taken, any  
 25 mark-ups that we'd had. I would look at the drawings to

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1 get an overall view of what was there. Because  
 2 sometimes these drawings don't necessarily show the full  
 3 build-up of the system, so they will — as in they  
 4 don't — it doesn't say that you should have elevation  
 5 drawings. Some of the drawings in these reports only  
 6 have plan cut-through of certain sections. So it  
 7 depends on really what the client supplies, and  
 8 ultimately those drawings are supplied to us by the  
 9 client.  
 10 Q. As a matter of fact, did you yourself look at the rig  
 11 as built before ignition and compare it with the  
 12 diagram or plan of the rig on the file at that time?  
 13 A. I think I probably would, but not with the CAD drawings  
 14 in front of me, no. I would be looking at the system as  
 15 is built there. I'm not there comparing two documents  
 16 in real time, no.  
 17 Q. Why not?  
 18 A. Because that wasn't the practice.  
 19 Q. Well, it may not have been the practice, but why wasn't  
 20 it the practice?  
 21 A. Because we've taken drawings and photographs and notes  
 22 of the system that was in front of us there.  
 23 Q. What is the purpose of having the drawings or plans in  
 24 the report if they don't accurately reflect what's on  
 25 the rig?

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1 A. Because they're a representation of the system.  
 2 Q. The system is what's on the rig; no?  
 3 A. Yes, yes.  
 4 Q. Yes. So, again, what is the purpose of having the  
 5 drawings or plans in the report if they don't accurately  
 6 reflect what's on the rig?  
 7 A. In hindsight, you're probably right, they should have  
 8 been — they should reflect exactly what's there, and  
 9 clearly they hadn't.  
 10 Q. I just want to know why or how this mismatch came about,  
 11 Mr Clark, how the mismatch between the plans and the rig  
 12 as built happened, and how the plan nonetheless was  
 13 stated in the report. I just need to understand that.  
 14 A. Yeah, I think I said yesterday, the BS 8414 report isn't  
 15 a shopping list as to how you put together a building in  
 16 real life on your — when a designer is out there. The  
 17 client supplies drawings of a system that they have  
 18 designed and had tested, and ultimately that's what they  
 19 provide and that's what goes into the report. So that  
 20 has always been what has occurred.  
 21 Q. Well, "The client supplies drawings of a system that  
 22 they have designed and had tested", but you're only  
 23 testing the system that's designed if you're making sure  
 24 that you have actually tested the system as designed and  
 25 not a system that's different from the design, so

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1 I don't understand your answer.  
 2 A. Yes, I — maybe I've misunderstood the reason for the  
 3 drawing, but that was my — always my understanding of  
 4 why the drawings were put in there.  
 5 Q. Can you just explain it in words of one syllable to me:  
 6 what is the purpose of the plan in the report?  
 7 A. To show how the system is put together.  
 8 Q. The system as tested is put together?  
 9 A. No, the system in reality, how it should be built in  
 10 reality to when it goes on the side of a building.  
 11 Q. Even if that's not the system that's tested?  
 12 A. Yeah, we're designing — it's a system test and you have  
 13 to reflect what the system is.  
 14 Q. I'm afraid, Mr Clark, I'm finding it difficult to  
 15 understand these answers. Perhaps we'll just leave it  
 16 there.  
 17 Now, can we then move to a different subject and  
 18 a different document.  
 19 Can we go, please, to {BRE00018859/2}, to an email  
 20 that is sent to you and Stephen Howard on 8 April 2015.  
 21 Do you see that?  
 22 A. I do, yes.  
 23 Q. Its subject, "BS 8414—2 ...":  
 24 "Stephen,  
 25 "We would like to incorporate some additional

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1 thermocouple in at level 1 (so we can understand when it  
 2 fails). Phil had a suggestion so we could understand  
 3 exactly what's going on at the lower levels. Perhaps  
 4 some below and above the fire [barrier] in the  
 5 insulation and void??  
 6 "I have asked Lakesmere to update the drawings.  
 7 I have noted that the vertical joint may have wavered  
 8 a little when reviewing the build."  
 9 Then this is in bold:  
 10 "Can you please confirm whether this will still be  
 11 OK for a BS 8414—2 report and a BR 135 classification."  
 12 Do you see that?  
 13 A. I do, yes, but I don't recall this email. Was that  
 14 highlighted in yellow by the Inquiry?  
 15 Q. I don't know the answer to that question.  
 16 A. Right, okay.  
 17 Q. The fact is this is an email sent to you, and here is  
 18 the question, and then we can see the response from  
 19 Stephen Howard to Ivor Meredith on 9 April. Do you see  
 20 that?  
 21 A. Yes.  
 22 Q. He says:  
 23 "The 25mm is not going to be a problem.  
 24 "I have come back with dates for the meeting, but if  
 25 you want one before to discuss testing can we get in the

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1 diary asap (I am filling up fast).  
 2 "I take it you have sorted the additional  
 3 instrumentation between you and Phil? (For the record,  
 4 we shouldn't include in the report)."  
 5 Do you see that?  
 6 A. I do, yes, yes.  
 7 Q. That's from Stephen Howard, and you were copied in on  
 8 that.  
 9 Do you know why Stephen Howard wrote what he says  
 10 there, namely, "I take it you have sorted the additional  
 11 instrumentation between you and Phil?"  
 12 First of all, had you sorted out the additional  
 13 instrumentation with Mr Meredith?  
 14 A. I don't ever recall adding any extra instrumentation  
 15 onto a Kingspan test at all, no.  
 16 Q. Did you discuss that with Mr Meredith at the time?  
 17 A. No, I can't recall, no.  
 18 Q. Mr Howard suggests or says in the brackets at the end:  
 19 "For the record, we shouldn't include in the  
 20 report."  
 21 Do you know why he said that?  
 22 A. There's no requirement for additional thermocouples, so  
 23 maybe that's what he meant, but I don't know. I know  
 24 at — what year is this? 2015. I know potentially  
 25 around that time the Australians were looking to adopt

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1 the 8414 as part of one of their British Standard — one  
 2 of their standard tests, and that has thermocouples on  
 3 the rear of the system, but he didn't say specifically  
 4 where, so it might have been at the rear in line with  
 5 what the Australians were recommending.  
 6 Q. Right.  
 7 A. That — sorry, sir.  
 8 Q. Are you speculating or do you actually know the answer  
 9 to my question?  
 10 A. I don't know, I'm speculating for that, because he  
 11 doesn't specify, does he? Did he say above and below  
 12 the barrier, sorry? Is that what he said about —  
 13 Q. We can go back to the email to answer your question to  
 14 me. If we go to the bottom of page 2, he says,  
 15 "additional thermocouple in at level 1", and then in the  
 16 last sentence of the first paragraph he says:  
 17 "Perhaps some below and above the fire [barrier] in  
 18 the insulation and void?"  
 19 Does that help you?  
 20 A. Oh, right, oh, so he's — right, okay, so what he is  
 21 looking to replicate is a level 2 layout at level 1, but  
 22 that's very unusual. I don't recall doing that, no.  
 23 Q. Right.  
 24 A. For that, I don't think he'd get any useful information,  
 25 either. I don't understand why he's asked that

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1 question.

2 Q. Why would the BRE omit the presence of the suggested

3 additional thermocouples from the test record?

4 A. I think because they're not a requirement for the 8414,

5 so they would be for the client's information

6 specifically.

7 Q. You see, he says, "For the record, we shouldn't include

8 in the report". Even though they're not required, why

9 would you not put them in if they were there?

10 A. I would, personally, but I don't know why Mr Howard put

11 that. You'd have to ask him.

12 Q. Well, we might.

13 Would the addition of further thermocouples have had

14 any effect on the test performance?

15 A. No, because the thermocouples at level 1 are only used

16 to set the test start criteria, so they only have one

17 function. All of the other data is gleaned from what is

18 at level 2. So they wouldn't, no.

19 Q. Right.

20 Going back, if we can, to Ivor Meredith's email —

21 I showed you this a moment ago — it looks as if the

22 addition of the thermocouples was your suggestion; is

23 that right? Go back to the first paragraph of

24 Mr Meredith's email to Stephen Howard and you. It looks

25 as if he thought, as he says, "Phil had a suggestion so

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1 we could understand exactly what's going on at the lower

2 levels".

3 A. I don't recall the conversation. I don't see what

4 purpose that would have served, because that area heats

5 up so quickly, I don't think you would have got any data

6 that would have been of worth.

7 It may have been, if you say, for example, put it

8 below the barrier at level 2, you may have got some

9 information, if you were looking at how an intumescent

10 barrier or something, how that had performed, and do

11 a comparison between both sides. But I can't see what

12 useful data you'd get from that, personally, so ...

13 Q. I'm not really asking you about that. Let me ask the

14 question more directly. Perhaps it wasn't clear,

15 Mr Clark.

16 In Mr Meredith's email, the first sentence says,

17 I'll read it to you again:

18 "We would like to incorporate some additional

19 thermocouple in at level 1 (so we can understand when it

20 fails) Phil had a suggestion so we could understand

21 exactly what's going on at the lower levels."

22 A. I don't recall having that conversation, no.

23 Q. Can I ask the question, please?

24 A. Sorry.

25 Q. Did you suggest to Mr Meredith that you should

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1 incorporate some additional thermocouple in at level 1?

2 A. I don't ever recall having that conversation, no.

3 Q. You see, we don't see you going back to Mr Meredith and

4 saying, "No, I didn't suggest that" or "You've

5 misunderstood what I'm saying", so can we proceed on the

6 basis safely that, although you can't remember it, as

7 the document says, you did suggest the addition of

8 a thermocouple at level 1?

9 A. Was that 2015?

10 Q. Yes.

11 A. Yes, no, you need to understand, I've done lots and lots

12 of tests for lots of people. It's ...

13 Q. Yes.

14 A. I can't recall the conversation. I can't — I don't

15 think we — if we did, we ever did this, it just doesn't

16 ring a bell at all.

17 Q. Would the addition of a further thermocouple have had

18 any effect on the test performance? I've asked that

19 question, and I'm just going to ask it again.

20 A. No, it wouldn't, no, because that's not where the

21 criteria for the test performance is made.

22 Q. If no, why not then simply put them into the test

23 report?

24 A. Yeah, I agree, I agree.

25 Q. And if the additional data wasn't going to go into the

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1 test report, how were you going to communicate that to

2 Kingspan?

3 A. I suppose they possibly might have wanted it as

4 a separate Excel sheet or something like that.

5 Q. Would that be by way of off-the-record comments or

6 unofficial —

7 A. Not unofficial, it would be processed in the usual way,

8 but that would have gone out through Stephen Howard.

9 How he addressed that, you would have to ask him.

10 I never sent any data to clients which wasn't sanctioned

11 by senior management.

12 Q. You say not unofficial, it would be processed in the

13 usual way; what's that a reference to?

14 A. In terms of how we processed it, so it would be

15 processed with the date of the test, a reference, the

16 time, and temperature axis would be labelled, so it

17 would be a clear and precise graph showing what it

18 actually meant and where it was, and — et cetera,

19 et cetera.

20 Q. Outside the test report?

21 A. Potentially, yes, it's not a requirement of the tests,

22 so — but it would still follow the standard layout of

23 how a graph should be laid out.

24 Q. But if a desktop report was going to be based on that

25 test report which didn't show the addition of the

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1 thermocouple at level 1, the reader of that desktop or  
 2 the writer of that desktop would be misled as to  
 3 precisely how the test was carried out, wouldn't they?  
 4 A. No. No. I don't agree with that.  
 5 Q. How would they know that there was an additional  
 6 thermocouple at level 1 if the test report did not say  
 7 so?  
 8 A. But it's not a requirement of the tests, it's outside  
 9 that, it's —  
 10 Q. That wasn't my question. My question was: how would the  
 11 reader of the test report know that there was in fact  
 12 an additional thermocouple in at level 1?  
 13 A. They wouldn't. They wouldn't. If it's not written in  
 14 there, they won't know, but ...  
 15 Q. Therefore the communication being sent on that data,  
 16 even if you think useless, to Kingspan would have to be  
 17 done informally as part of a document outside the formal  
 18 test record.  
 19 A. In that regard, yes, it wouldn't be — it wouldn't form  
 20 part of a BS 8414 test in that regard, no, you're right.  
 21 Q. No, and do you say that additional thermocouples are  
 22 permitted within the BS 8414 standard?  
 23 A. They're not excluded, no.  
 24 Q. Well, they're not excluded, I see that, but were they  
 25 actually permitted? Are they part of the standard?

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1 A. They're not part of the standard, I don't think, it  
 2 doesn't say that you should or shouldn't. It's not  
 3 clear in that regard.  
 4 Q. Was this suggestion, the addition of a level 1  
 5 thermocouple, the kind of suggestion that you would make  
 6 to all your clients or was this only made to Kingspan?  
 7 A. I don't know. I ... we've never — I think there was  
 8 one other occasion where a client asked for  
 9 an additional thermocouple, but I can't recall. It was  
 10 unusual, I think.  
 11 Q. You see, it's right, isn't it, that the BR 135 criteria  
 12 and the standard are prescriptive, aren't they, or isn't  
 13 it, as to where the thermocouple should go?  
 14 A. The BR 135 isn't, no, because it relies back on the 8414  
 15 as its base.  
 16 Q. Yes, and the 8414 is —  
 17 A. Yes, yes.  
 18 Q. — prescriptive? Yes. So if you added an additional  
 19 thermocouple, you would be departing from the  
 20 prescription in the test, wouldn't you?  
 21 A. Erm ... in that — yes, you would, yes. Yes.  
 22 Q. Yet the reader of the test report wouldn't know, if that  
 23 data had been omitted, that the test had been done on  
 24 a series of test readings from a thermocouple system  
 25 which did not comply with the prescription in the

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1 BS 8414 standard.  
 2 A. I slightly ... I understand what you say, but if, say,  
 3 for example, the request had been to move them from  
 4 50—mil on the surface into the cavity, then that's not  
 5 meeting the requirement of the test standard.  
 6 Addition ... it doesn't say in the test standard that,  
 7 "You shall not add any thermocouples for extra learning  
 8 and extra data collection". So I understand where  
 9 you're going, yes, but it's — yes.  
 10 Q. Yes. But given Kingspan's propensity, as you know, to  
 11 misuse test reports and then use them as the basis or  
 12 ask them to be used as the basis of desktops, surely any  
 13 departure from the rigorous prescriptions in the 8414  
 14 standard was going to be risky?  
 15 A. In knowing what we now know, then, yeah, I think you're  
 16 correct, yes. Yes.  
 17 Q. How does making suggestions such as this to Kingspan  
 18 reconcile with the BRE's duties and obligations of  
 19 impartiality?  
 20 A. I don't think it changes that in any way.  
 21 Q. This is surely the giving of advice, isn't it, making  
 22 a suggestion as to where to put the thermocouples that  
 23 they're not putting in the report? How can that  
 24 possibly be a robust and ruthless independent approach  
 25 to your obligations?

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1 A. I don't think — the independence is that we're ...  
 2 we ... yeah, to be honest, I can't answer the question.  
 3 I understand where you're coming from. I don't think it  
 4 does.  
 5 One of the things I think is sort of really lost in  
 6 a way is that BRE is born of research, and if you don't  
 7 understand certain things, then you don't move forward  
 8 in knowledge. And I think to — on occasions that ethos  
 9 has come through and potentially has allowed us to  
 10 sort of maybe try and help where we can in the knowledge  
 11 chain, I think, maybe. That's my reading of it.  
 12 Q. If you're going to use clients as guinea pigs, though,  
 13 surely you tell them, and if you're going to do  
 14 something which you wouldn't ordinarily do for your own  
 15 benefit, you would have explained that to them and said,  
 16 "Well, we're putting a level 1 thermocouple on here for  
 17 our own benefit only, it's just for our research, do you  
 18 consent?"  
 19 A. I know, but the client requested it.  
 20 Q. Exactly.  
 21 A. Yes.  
 22 Q. Right.  
 23 Did the BRE ever provide any training to you on  
 24 impartiality or where the line was to be drawn between  
 25 impartiality and the giving of consultancy or advice?

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1 A. No, I never received any training on that regard, no.  
 2 Q. Either inside the BRE or from an outside source?  
 3 A. No, no. The only time I did anything on that was I —  
 4 in the early days of my tenure at Kingspan, I undertook  
 5 the BSI 17025 training, but nothing before that, no.  
 6 Q. If you didn't have any training, where did your  
 7 understanding of BRE's duty of impartiality under the  
 8 British Standard come from?  
 9 A. From experience, working with senior colleagues, working  
 10 with other people throughout my career, really.  
 11 Q. Right.  
 12 Just tell me, your line manager when you started in  
 13 2004 was who?  
 14 A. In 2004 it would have been, I think, potentially  
 15 Sarah Colwell. Yes, at that date Sarah Colwell, I would  
 16 have thought, yes.  
 17 Q. Are you able to give me a list off the top of your head  
 18 of your immediate line managers from 2004 to 2017?  
 19 A. 2004 — so I think it would have been Sarah Colwell,  
 20 Steven Manchester and Stephen Howard.  
 21 Q. Did any of them at any time discuss with you the nature  
 22 of the BRE's duty of impartiality?  
 23 A. Not that I recall, no.  
 24 Q. Did any of them ever discuss with you what sort of thing  
 25 you could say to the client and what sort of thing might

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1 constitute consultancy or advice?  
 2 A. No, but in a position where we were — so when I first  
 3 started, I obviously was shadowing and working alongside  
 4 Sarah, and you could tell from what she would say and  
 5 what she wouldn't say, and I learnt from her and others  
 6 in terms of how I accorded myself. And I always made it  
 7 extremely clear to clients that we can't say to them,  
 8 and I was very even reticent to give any answers as to  
 9 how a system had performed, and I've had feedback from  
 10 people that say, "No, you were always very reluctant to  
 11 say anything out of turn".  
 12 Q. Mr Clark, I've come to the end of my questions, but  
 13 there is a question that we ask some witnesses who have  
 14 had particular responsibility for a particular sphere of  
 15 activity, and it's this: we have been through, I regret  
 16 to say, two and a half days now of evidence together,  
 17 and you've seen quite a lot of material and I've asked  
 18 you a lot of questions, I appreciate.  
 19 Looking back on it all, is there anything that you  
 20 would have done differently?  
 21 A. Indeed, yes, yes, and I can say that everything that  
 22 I've learned from this, from myself, from what other  
 23 people have said, and the information that is coming  
 24 through, that lessons need to be learned from myself in  
 25 terms of attention to detail potentially, making sure

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1 that people don't misinterpret what is said, and is  
 2 a bit clearer, and I'm personally in a position where my  
 3 feelings go out to this, and I never thought, given what  
 4 my role was in, throughout my whole career, which has  
 5 always been health and safety and understanding things,  
 6 I never wanted to be in a position where what we had  
 7 done had caused such a disaster. To me it's just —  
 8 I feel it very strongly, and I feel very strongly for  
 9 everybody that's been involved in this tragic disaster.  
 10 MR MILLETT: Mr Clark, thank you very much. I've come to  
 11 the end of my questions, and it only remains for me to  
 12 say thank you very much for coming to the Inquiry and  
 13 helping us with our investigations. We're very  
 14 grateful, thank you.  
 15 SIR MARTIN MOORE—BICK: Mr Clark, it's right that I should  
 16 also thank you on behalf of the panel as a whole for  
 17 giving up really quite a lot of your time to give your  
 18 evidence, but you should understand it's been very  
 19 helpful for us to hear what you have to say, and we are  
 20 very grateful.  
 21 But that's the end of the questions we have for you,  
 22 so you are now free to get back to work.  
 23 THE WITNESS: Thank you very much, sir.  
 24 SIR MARTIN MOORE—BICK: Thank you very much.  
 25 THE WITNESS: Thank you, bye bye.

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1 SIR MARTIN MOORE—BICK: Goodbye.  
 2 We will break there and resume at 2.05, please.  
 3 Thank you.  
 4 (1.05 pm)  
 5 (The short adjournment)  
 6 (2.05 pm)  
 7 SIR MARTIN MOORE—BICK: Welcome back, everyone. We're now  
 8 going to start taking evidence from a new witness,  
 9 Mr Stephen Howard of the BRE. So my first task is to  
 10 make sure that Mr Howard is there and can see me and  
 11 hear me. Mr Howard?  
 12 MR STEPHEN HOWARD (called)  
 13 THE WITNESS: Yes, I can see you and hear you.  
 14 SIR MARTIN MOORE—BICK: Good, thank you very much indeed.  
 15 There are one or two things we need to do, the first  
 16 is that I have to ask you to make the affirmation.  
 17 Do you have on your screen in front of you the  
 18 affirmation? You do. Could I ask you, please, then, to  
 19 say the words on the screen.  
 20 (Witness affirmed)  
 21 SIR MARTIN MOORE—BICK: Thank you very much indeed.  
 22 Can I next ask you to confirm that you're alone in  
 23 the room from which you're giving your evidence?  
 24 THE WITNESS: I'm alone in the room.  
 25 SIR MARTIN MOORE—BICK: Thank you, and that you have no

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1 documents or other materials with you?

2 THE WITNESS: I have no documents or other materials.

3 SIR MARTIN MOORE—BICK: Thank you very much.

4 Can you also confirm that your mobile phone is in

5 another room and that you don't have any other

6 electronic device with you which is capable of receiving

7 messages?

8 THE WITNESS: That's correct, I have no mobile phone or

9 other devices.

10 SIR MARTIN MOORE—BICK: Lovely, thank you very much indeed.

11 Now, you may like to know this — you have probably

12 been told — that your legal representatives are in the

13 virtual hearing room following our progress. They are

14 able to intervene if they think it essential, but we

15 have an arrangement which should enable them to contact

16 Counsel to the Inquiry if they think there is a need to

17 raise anything. So, except in an emergency, I'm going

18 to ask them to keep their microphones and cameras

19 switched off but, as I say, they are following your

20 evidence.

21 I hope we shan't have problems with our sound or

22 vision, but if we do, we will take a short break and

23 solve them in that way.

24 We shall have a short break during this afternoon,

25 about 3.15, but if you feel you need an additional break

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1 at any time, will you just indicate and we'll do our

2 best to accommodate you.

3 Since I'm mentioning breaks, I'm going to say

4 something now which I will remind you of from time to

5 time, and that is: once you have started giving your

6 evidence, it's very important that you don't discuss

7 your evidence or anything relating to it with anyone

8 else until you have completely finished. I'll try and

9 remind you of that whenever we have a break, but if

10 I forget to do so, please bear it in mind. All right?

11 THE WITNESS: Yes.

12 SIR MARTIN MOORE—BICK: Now, is there anything you would

13 like to raise with me or ask me?

14 THE WITNESS: No, I haven't any questions.

15 SIR MARTIN MOORE—BICK: Okay, thank you very much.

16 Well, if you are ready to go, I will invite

17 Mr Millett to put some questions to you.

18 Yes, Mr Millett, when you're ready.

19 Questions from COUNSEL TO THE INQUIRY

20 MR MILLETT: Mr Chairman, thank you very much.

21 Mr Howard, good afternoon, and thank you very much

22 for coming to the Inquiry to give your evidence, we are

23 extremely grateful to you.

24 I hope that you can see and hear me clearly?

25 A. Yes, I can.

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1 Q. Thank you.

2 If you have any difficulty understanding the

3 questions I'm going to ask you, say so, and I can ask

4 the question again or I can put it in a different way.

5 If you feel you need a break other than at the

6 scheduled break times that you've been told about,

7 please let us know, we can do that.

8 I would ask you to keep your voice up, if you could,

9 please, so that our transcriber, whom you can't see, can

10 nonetheless get down clearly what you're saying on to

11 the transcript.

12 Also, when answering my questions, please, if you

13 wouldn't shake your head or nod your head, because those

14 don't go on to the transcript. You have to say "no" or

15 "yes" as the case may be. Yes?

16 A. I understand.

17 Q. Now, you have provided a witness statement to

18 the Inquiry, could I please take you to that. It will

19 come up on the screen in front of you {BRE00005771}. Is

20 that the first page of your statement?

21 A. Yes, it is.

22 Q. For the record, it's {BRE00005771}, and that's page 1.

23 Can we go, please, to page 74 in that document. You

24 will see a signature and a date, 15 July 2019. Is that

25 your signature?

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1 A. Yes.

2 Q. Have you read this witness statement recently?

3 A. Yes.

4 Q. Do you say that its contents are true?

5 A. I do.

6 Q. Have you discussed your statement or your evidence with

7 anybody before coming here today to give your evidence?

8 A. No, I haven't.

9 Q. I'm going to start with some questions on the subject of

10 your background, education, training and employment

11 history.

12 In your witness statement, you don't mention having

13 any qualifications relevant to fire safety. Can I take

14 it, therefore, that you don't have any qualifications

15 relevant to fire safety?

16 A. I don't have any qualifications relevant to fire safety.

17 Q. Do you have any formal qualifications at all?

18 A. No.

19 Q. Right.

20 Now, if we go to paragraph 2 of your statement

21 {BRE00005771/1}, you can see that you say that you

22 joined the BRE on 12 July 1999; yes?

23 A. Yes, that's correct.

24 Q. You say there that:

25 "Originally, my main responsibility was the

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1 development of fire testing facilities for fire  
 2 detection and alarm systems to Underwriter's  
 3 Laboratories standards (i.e. for the insurance  
 4 industry)."

5 You also say, at paragraphs 3 to 4 — and I'll  
 6 summarise — that between 1999 and 2006 you were  
 7 involved in the fire testing of cables, and also the  
 8 research and investigations into the Rose Park fires;  
 9 yes?

10 A. That's correct.

11 Q. And various prison cell and underground car park fires,  
 12 firefighter physiology and police investigations into  
 13 the fatal fires at Anglesey and St Neots; yes?

14 A. Yes.

15 Q. I summarised that for you.

16 Did you undergo any training to enable you to fulfil  
 17 those roles that you described in those paragraphs of  
 18 your statement?

19 A. For the first role — well, before I joined BRE, I was  
 20 working for the Loss Prevention Council, where I did  
 21 quite a lot of work on fire detection and fire alarm  
 22 systems —

23 Q. Right.

24 A. — from a certification point of view, so I was there  
 25 for a number of years. Before that I had a number of

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1 practical roles and jobs that contributed to my  
 2 experience in those areas.

3 Q. Can we go back to paragraph 4 of your statement, please,  
 4 where you identify your involvement in the research and  
 5 investigations into the fires you identify there.

6 Were any of those cladding fires or fires in  
 7 domestic premises?

8 A. The Rose Park fire was a care home. Various prison  
 9 cells speak for themselves. The fatal fire at Anglesey  
 10 was a flat, I believe, above a shop, and the fire at  
 11 St Neots was, I seem to recall, a care home.

12 Q. Right. But not a cladding fire? None of them were  
 13 cladding fires?

14 A. No, none of those were cladding fires.

15 Q. And none of those were investigations into fires in  
 16 high-rise residential buildings?

17 A. No.

18 Q. Now, towards the end of the 1999–2006 period, you say  
 19 that you were involved in carrying out large-scale  
 20 fire testing of sandwich panels for the LPCB approval  
 21 purposes, which is LPS 1181, I think.

22 A. Yes, the screen's not changed, I'm still on the same  
 23 page.

24 Q. Yes, that's because I haven't asked you to go to  
 25 paragraph 5 on page 2 {BRE00005771/2}. Let's go there.

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1 You say that.

2 The LPCB is the Loss Prevention Certification Board,  
 3 is it?

4 A. That's correct.

5 Q. Did you have any specific training for the work you  
 6 identify there?

7 A. Yes, I was trained by others within BRE to undertake  
 8 those tests.

9 Q. I see. Who trained you?

10 A. Two people mostly: it was Richard Colwell and  
 11 David Hoare.

12 Q. Right.

13 Did that training involve the use of the rigs at the  
 14 Burn Hall in order to carry out large-scale fire tests?

15 A. No, that's a different test. Those tests were actually  
 16 run in a facility in Middlesbrough, so — or off-site.

17 Q. I see. Can you tell us a little bit more, then, about  
 18 what was involved in these large-scale fire tests?

19 A. The 1181 test is essentially the fire testing of  
 20 sandwich panels. So you would instrument the system,  
 21 putting various thermocouples, set up fire source, set  
 22 up data loggers, basically ignite the ignition tools,  
 23 run the test for the period — the prescribed period of  
 24 time, record the data, make notes of the build, or  
 25 damage to the build, and produce a test report

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1 accordingly.

2 Q. Did any of those tests involve tests on ACM panels with  
 3 a PE core?

4 A. No.

5 Q. Did any of those tests involve testing combustible  
 6 insulation?

7 A. Yes.

8 Q. They did. Were those combustible insulation panels  
 9 separately from the sandwich panels or forming part of  
 10 the sandwich panels?

11 A. There was two different — well, you can have sandwich  
 12 panels, which are twin skin with a PIR core, or  
 13 polyisocyanurate core, but there was other systems  
 14 where — with combustible insulation in there behind  
 15 basically a built-up wall.

16 Q. Right. So quite similar to a BS 8414 test?

17 A. Well, no, not directly similar. They are similar in  
 18 terms of fire testing, but they're not directly  
 19 comparable because one is basically a self-contained  
 20 room, whereas a cladding test is a vertical spread of  
 21 fire.

22 Q. Now, in 2006 you tell us — the same page, paragraph 6,  
 23 just below where we've been looking {BRE00005771/2} —  
 24 you were made joint business group manager for  
 25 Passive Fire with Dr Sarah Colwell. So does that mean

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1 you sat alongside her, parallel to her, in that role?  
 2 A. Yes.  
 3 Q. You explain what the role was:  
 4 " ... managerial ... covering fire resistance  
 5 testing, reaction to fire testing, testing to BS 8414  
 6 Parts 1 and 2, LPCB activities, LPS 1181 testing and  
 7 'assessments'."  
 8 When you started in that role, as you have described  
 9 it there, how far advanced was the project to have  
 10 BS 8414 and the BR 135 criteria introduced into Approved  
 11 Document B as an alternative route to compliance?  
 12 A. I don't know the answer to that. It's not something  
 13 I was directly involved with at the time.  
 14 Q. Right. You may not have been directly involved at the  
 15 time, I understand that. Can you give us, though, any  
 16 insight into who that project was being led by at the  
 17 BRE at that time, 2006?  
 18 A. Sorry, which project would that be? The one to  
 19 introduce BR 135 into Approved Document B?  
 20 Q. Yes.  
 21 A. I don't know.  
 22 Q. Am I right in thinking you had nothing to do with that?  
 23 A. I wasn't directly involved in the cladding testing or  
 24 the amendments to Approved Document B, no.  
 25 Q. From your knowledge at the time, did Kingspan play any

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1 part in contributing towards the project to have the  
 2 BS 8414 test method and BR 135 criteria enshrined in  
 3 Approved Document B?  
 4 A. I don't know the answer to that.  
 5 Q. Can you provide at least an overview in summary of your  
 6 involvement in BS 8414 tests for the period 2006 to  
 7 2014?  
 8 A. My involvement — I would have witnessed a large number  
 9 of tests. I was down there for a large number of tests.  
 10 We did a lot of report reviews, standard reviews and  
 11 things of that nature, familiarisation with the test.  
 12 Q. In relation to those matters, who reported to you during  
 13 that period?  
 14 A. Erm ... sorry, I'm not sure what — directly in relation  
 15 to cladding?  
 16 Q. Well, in relation to BS 8414 tests.  
 17 A. I'm not sure of that, actually. It may have been  
 18 Phil Clark at the time, but he may have been working  
 19 somewhere else on those tests. I didn't really get  
 20 involved in cladding until a lot later. In that period  
 21 my focus was elsewhere.  
 22 Q. Right. When did you become involved in cladding, as you  
 23 refer to it?  
 24 A. It was — I think that's actually given in the  
 25 statement, the date when Tony Baker was promoted and

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1 I took on more of a role.  
 2 Q. Indeed, at paragraph 7 of the statement {BRE00005771/2}  
 3 you say that your involvement in cladding increased when  
 4 Tony Baker was promoted to the manager for  
 5 fire resistance in or around 2014.  
 6 What I'm really asking you about is who reported to  
 7 you during the period before that in relation to testing  
 8 to BS 8414, parts 1 and 2?  
 9 A. It would probably have been Phil Clark —  
 10 Q. Right.  
 11 A. — for those areas and to some extent Tony, but  
 12 Tony Baker also reported to me.  
 13 Q. Right, Tony Baker and Phil Clark.  
 14 Did you take steps to make sure that Tony Baker and  
 15 Phil Clark carried out their work correctly and  
 16 appropriately?  
 17 A. Yes.  
 18 Q. How did you supervise them?  
 19 A. Well, with respect — with regard to Tony Baker, he was  
 20 a senior member of staff. We had lots of discussions —  
 21 there was lots of activity around the fire testing. He  
 22 was also the author inherently involved in BR 135.  
 23 In terms of Phil Clark, again, there was a lot of  
 24 activity in the Burn Hall and reviews of files and  
 25 reports and data that was produced.

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1 Q. Let's see if we can break it down a bit more.  
 2 You tell us in paragraph 6 that you had a managerial  
 3 role covering, among other things, testing to BS 8414,  
 4 and in paragraph 7, that the involvement in cladding  
 5 increased in or around 2014.  
 6 So, with that in mind, could you tell us what your  
 7 methods were for supervising the work of those who  
 8 reported to you in that sphere of activity, namely  
 9 Tony Baker and Phil Clark as you have identified them?  
 10 A. Right. At that time, Dr Sarah Colwell was the main lead  
 11 on cladding.  
 12 Q. On cladding. Are you drawing a distinction between 8414  
 13 parts 1 and 2 testing and cladding?  
 14 A. No. Yes.  
 15 Q. So —  
 16 A. Sarah Colwell was the lead on BS 8414.  
 17 Q. So at that time, 2006 to 2014, Sarah Colwell was the  
 18 main lead on cladding —  
 19 A. Yes.  
 20 Q. — for which we can also read BS 8414 testing; what was  
 21 your role?  
 22 A. I was more involved in reaction to fire testing and the  
 23 other aspects. As it says there, we were looking at  
 24 developing installer schemes for passive fire  
 25 protection, 1181 testing.

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1 Q. Did you supervise Phil Clark and Tony Baker specifically  
2 in relation to their work on testing anything to  
3 BS 8414, parts 1 and 2?  
4 (Pause)  
5 A. Not directly, no, I don't believe I did. It was a joint  
6 role.  
7 Q. Indirectly?  
8 A. Sorry?  
9 Q. Indirectly?  
10 A. Yes, I would guess I was there and part of the  
11 management team for the department, but I can't remember  
12 specifically whether there was supervision of BS —  
13 whether I was directly involved in BS 8414, directly  
14 supervising either Tony or Phil Clark.  
15 Q. Who directly supervised Phil Clark and Tony Baker's work  
16 during the period 2006 to 2014 on BS 8414 tests?  
17 A. I think — well, I can't really recall, but I would  
18 expect it was Sarah Colwell.  
19 Q. Right.  
20 In percentage terms, roughly how much of the role  
21 would you say occupied your time in relation to the  
22 testing to BS 8414?  
23 A. Erm ... I ...  
24 (Pause)  
25 That's very difficult to answer. Possibly 10%, if

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1 that, maybe less.  
2 Q. That gives us an impression, at least, of the degree of  
3 your involvement during that period.  
4 Did you receive any specific training in relation to  
5 BS 8414 testing?  
6 A. Yes, we were down there — I was down in the Burn Hall  
7 quite a lot, witnessing tests, talking, discussing  
8 things with Tony Baker and Sarah Colwell, and things of  
9 that nature.  
10 Q. Right.  
11 Did you read during that period the 2003 second  
12 edition of BR 135 or the third edition published in  
13 2013?  
14 A. Yes, I would read the — I would specifically have read  
15 the 2013. I can't recall whether I read the previous  
16 version.  
17 Q. Right.  
18 Did you read the BS 8414—1 and BS 8414—2 standards  
19 published by the BSI?  
20 A. Yes.  
21 Q. Can we take it that you were familiar with both the  
22 standard and the criteria?  
23 A. Yes.  
24 Q. Now, in paragraph 7, which we have on the screen, you  
25 say that in 2014 your involvement in cladding increased,

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1 and we've established that means BS 8414.  
2 Does that mean that you became more heavily involved  
3 with the actual tests themselves?  
4 A. Yes, I did.  
5 Q. What was it about the promotion of Tony Baker that led  
6 to your increase in involvement in cladding testing?  
7 A. Because Tony Baker was largely responsible for the  
8 delivery of the tests up to that period, so with his  
9 promotion to fire resistance testing, there was  
10 a requirement for someone to oversee the activities and  
11 step into the role that he was vacating.  
12 Q. Yes, I see.  
13 By 2014, roughly — and it is roughly — how many  
14 BS 8414 tests and BR 135 classifications had you been  
15 involved in?  
16 A. I don't know, but that is information that I can — we  
17 can obtain, if necessary.  
18 Q. It's not necessary to have the precise number, but  
19 roughly, is it in the tens or in the hundreds?  
20 A. Tens, definitely.  
21 Q. Now, in 2016 you were promoted to director of  
22 fire testing and certification at the BRE, weren't you?  
23 A. Yes.  
24 Q. Are you still in that role at the BRE today?  
25 A. No.

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1 Q. What is your role at the BRE today?  
2 A. I no longer work for the BRE.  
3 Q. Right, where do you work now?  
4 A. I work for a consultancy company called International  
5 Fire Consultants.  
6 Q. Right. What's that called, International Fire  
7 Consultants? IFC?  
8 A. Yes.  
9 Q. Ah, IFC, right, I see, okay. How long have you worked  
10 there for?  
11 A. It will be a year in May.  
12 Q. What's your role there?  
13 A. I'm a principal consultant.  
14 Q. Now, given your background, would you say that at all  
15 times throughout the period from 2006, you had a good  
16 understanding of the regulations governing fire safety?  
17 A. Yes, I had a good understanding of the test methods and  
18 the application of the tests.  
19 Q. Did you have a good understanding of the  
20 Building Regulations relating to fire and, in  
21 particular, Approved Document B?  
22 A. In relation to certain tests that are run, but  
23 I wouldn't say at that time I was an expert in Approved  
24 Document B because it covers a large number of areas and  
25 a large number of disciplines.

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1 Q. So you understood well enough the role that BS 8414  
2 tests to a BR 135 criteria play within Approved  
3 Document B; yes?  
4 A. Yes.  
5 Q. Did you receive any training from the BRE or any other  
6 institution within the community, the testing community  
7 or the cladding industry generally, about Approved  
8 Document B and specifically BS 8414 within it?  
9 A. I received in-house training on the subject.  
10 Q. From whom?  
11 A. From Sarah Colwell, Richard Colwell, Tony Baker.  
12 Q. What form did that training take?  
13 A. It would have just been on-the-job training, basically  
14 going through the relationship and an understanding  
15 between how the test and classification relates.  
16 Q. I'm sorry, I was trying to interrupt you, not  
17 deliberately, but I may have done.  
18 You say "on-the-job training"; did you ever get sat  
19 in a conference room and given a slideshow about BR 135  
20 or BS 8414?  
21 A. I can't recall specifically, but yes, there were  
22 presentations that were developed and given at various  
23 times, so it's quite possible that I have gone through  
24 in-house training, but I don't remember specific —  
25 Q. To whom else was this in-house training afforded during

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1 this period?  
2 A. Sorry, you cut out for a second there.  
3 Q. Was this in-house training given to anybody else during  
4 this period?  
5 A. I can't recall. I think at the time Phil Clark was  
6 taking the lead on cladding or was delivery —  
7 responsible for delivery, and Tony Baker. Sarah Colwell  
8 was still involved at the standards and BR 135 level.  
9 I can't recall any other specific training to staff.  
10 Q. Do you remember whether Phil Clark himself actually had  
11 the benefit of the training presentations that you have  
12 described?  
13 A. I wouldn't recall, because he was actually involved in  
14 the cladding as I joined.  
15 Q. I see.  
16 Would you agree, as a matter of principle, that the  
17 purpose of BS 8414 is to test a cladding system as it's  
18 intended to be used on a building and thereby provide  
19 a full understanding of how that system as tested would  
20 perform in an actual fire?  
21 A. Yes, that's my understanding.  
22 Q. Was it always your understanding?  
23 A. Yes, I believe so.  
24 Q. Did you always understand that, in order to be compliant  
25 with Approved Document B, only a system which complied

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1 exactly and corresponded exactly with the system as  
2 tested would qualify?  
3 A. Yes, Approved Document B basically specifies systems  
4 should be classified to BR 135.  
5 Q. Was there ever a time that you can remember when you  
6 thought that if a system passed the BR 135 criteria  
7 having been tested under BS 8414, then a system  
8 different from the one tested could be used?  
9 A. That ... I think that is quite a — I can try to answer  
10 that. Approved Document B is advisory, it's guidance.  
11 So my understanding is that it is not the only route to  
12 cladding being installed or the agreement to include the  
13 cladding system to be installed on a building. So  
14 therefore you do not need BR 135 for cladding to be  
15 installed on the building. You would do to meet the  
16 requirements of Approved Document B.  
17 Q. Yes. I'm not sure I've put the question terribly  
18 elegantly or whether you've understood it.  
19 Was there ever a time when you thought that a system  
20 tested under BS 8414 which met BR 135 criteria could be  
21 applied in any different form, even if slightly  
22 different form, on a real building, from the system as  
23 tested?  
24 A. Well, as I said, BS 8414 is a test standard, BR 135 is  
25 a classification, but that is only the one route to

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1 compliance or agreement with ADB. So there is a process  
2 whereby you might not have the system as specified or as  
3 classified.  
4 Q. Yes, I understand that, but if you were following the  
5 alternative route to compliance, as it came to be known,  
6 was there ever a time when you thought that the rules  
7 didn't require that you replicated the system on  
8 a building as had been tested?  
9 A. If you're claiming compliance or if you are presenting  
10 that BR 135 is your route to compliance with ADB, then  
11 yes, the system should match what's on the building.  
12 Q. Was it always your view that it should match?  
13 A. Yes.  
14 Q. Was there a time when you thought it might not have to?  
15 A. Well, as I said, it's not the only route to compliance,  
16 so once you have that BR 135, then it is for others to  
17 determine compliance with the building regs.  
18 Q. If you were going to use that as your route to  
19 compliance, was there ever a time when you thought that  
20 the as-built didn't have to match the as-tested?  
21 A. No, if you're using it as your route to compliance, then  
22 it should match the BR 135.  
23 Q. Now, was there ever a time when you thought that the UK  
24 construction industry was not aware of that requirement,  
25 that the as-built must match the as-tested if you're

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1 going to use that as the route to compliance?  
 2 A. Was I ever aware?  
 3 Q. Yes. Was there ever a time when you thought that the UK  
 4 construction industry was not aware of the requirement  
 5 that the system as built must match the system as  
 6 tested?  
 7 A. Well, for those systems that are BR 135 classified, my  
 8 understanding was that that is the route to compliance  
 9 and the construction industry in the UK understood that.  
 10 Q. Indeed, so you thought they did understand that?  
 11 A. Yes.  
 12 Q. Did BRE ever take any steps to ensure that its clients  
 13 were aware of this, or thought it was necessary to spell  
 14 it out to clients?  
 15 A. Well, there was promotional activity around BS 8414 and  
 16 BR 135. There's — myself and Sarah Colwell and  
 17 possibly Tony Baker presented on the subject matter of  
 18 testing and meeting the recommendations within Approved  
 19 Document B.  
 20 Q. Do you agree that, given the classification reports, or  
 21 indeed test reports for that matter, refer only to the  
 22 particular system containing the components installed at  
 23 the time of the test, it's vitally important that  
 24 sufficient and accurate detail is provided within such  
 25 a report so that the components are readily

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1 identifiable?  
 2 A. Yes, if you're solely reliant — if you're on the BR 135  
 3 route to compliance or meeting the recommendations of  
 4 ADB, then the test reports and classification reports  
 5 should be accurate.  
 6 Q. Yes. Do you also accept that it's vitally important  
 7 that the component parts detailed in the report are  
 8 completely identified and there is nothing missing?  
 9 A. Yes.  
 10 Q. Now, paragraph 12 of your statement, if we can go to  
 11 that, please, top of page 3 {BRE00005771/3}, you say  
 12 three lines down within paragraph 12:  
 13 "BRE then carries out the large-scale fire test to  
 14 record time and temperature details as expressly set out  
 15 in BS 8414 Parts 1 and 2. If requested by the test  
 16 sponsor, BRE will produce a test report confirming the  
 17 nature of the test and recording the relevant time and  
 18 temperature data. Such a test report will not of itself  
 19 constitute any sort of classification."  
 20 Can we take it that you were aware that ADB  
 21 contained no mention of meeting the criteria in BR 135  
 22 pursuant to a BS 8414 test as an alternative route to  
 23 compliance until 2007?  
 24 A. Yeah. No — well, no, I don't know the answer to that,  
 25 because what I would have to do is review the previous

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1 version of Approved Document B. I'm familiar with the  
 2 2006 version, but I don't ... I wouldn't specifically  
 3 know what was in the previous version of Approved  
 4 Document B in regard to BS 8414 and 135.  
 5 Q. I follow. This may be a timing point.  
 6 You say in your statement you started being involved  
 7 with BS 8414 in 2006.  
 8 A. Yeah.  
 9 Q. That's the actual official date of the amendment(?), but  
 10 it didn't come in until April 2007.  
 11 A. Yeah.  
 12 Q. Do I take it that there wasn't a time when you were  
 13 involved with BS 8414 testing when BS 8414 and BR 135  
 14 were not within ADB?  
 15 A. That's correct, all — in my experience it was always  
 16 within that document.  
 17 Q. Looking at the period before 2006, and I appreciate it's  
 18 before you were involved in BS 8414 test, but from your  
 19 involvement at the BRE at that time, can you help us  
 20 understand why clients would want to have a BS 8414 test  
 21 before it had become enshrined as the test which would  
 22 sanction alternative route to compliance?  
 23 A. I wouldn't know the answer to that. Really I was not  
 24 involved at that time to 2006, so by the time I've got  
 25 involved, there was a recommendation within Approved

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1 Document B for the test and the classification method.  
 2 Q. Okay, thank you.  
 3 I would like then to turn to BRE standard operating  
 4 procedures.  
 5 During your time as joint business group manager for  
 6 passive fire testing, which as you have said was between  
 7 2006 and 2014, Mr Howard, and as director of  
 8 fire testing and certification at the BRE from 2014  
 9 onwards, those two periods, were you always familiar  
 10 with the BRE's standard procedures, at least so far as  
 11 your role —  
 12 A. Yes.  
 13 Q. — was concerned? Yes.  
 14 Were you responsible for ensuring that the standard  
 15 procedures were followed in respect of BS 8414 tests  
 16 which were carried out?  
 17 A. Yes, with others at the start, and as the career  
 18 progressed, yes, responsible.  
 19 Q. You told us a little bit earlier about your supervising  
 20 Tony Baker and Phil Clark. Can you tell us what your  
 21 system of supervision of those two BRE employees was?  
 22 Let's start with Phil Clark. What was your system  
 23 of supervising his work?  
 24 A. That was largely review of test reports and review of  
 25 files at that time. Until 2014, really, my involvement

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1 in cladding was on the periphery and it was more  
 2 training and familiarisation. I wasn't directly  
 3 involved at the outset with projects in that time.  
 4 Q. When in 2014 did you assume a greater role in relation  
 5 to cladding and BS 8414 testing?  
 6 A. I wouldn't know without reference to the statement  
 7 and — if the date's in there. I couldn't guess the  
 8 month.  
 9 Q. I'm not sure you've given us those dates. You can't  
 10 recall, is that —  
 11 A. No.  
 12 Q. Right.  
 13 From 2014, whenever it was in that year, what were  
 14 the steps you would take to supervise Phil Clark's work?  
 15 A. There was more emphasis on a more methodical approach  
 16 for record-keeping, reviews, witnessing tests,  
 17 understanding issues with the testing system.  
 18 Q. You say there was emphasis on a more methodical  
 19 approach; do you mean there that you began to adopt  
 20 a methodical approach for record-keeping, reviews,  
 21 witnessing tests and understanding issues with the  
 22 testing system yourself?  
 23 A. Yes.  
 24 Q. Right. You're not saying that when you came in to  
 25 supervise him, you asked him to adopt a more methodical

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1 approach, or did you?  
 2 A. No, it's an ongoing process with labs, with fire testing  
 3 and laboratories, that we're constantly looking to  
 4 improve.  
 5 Q. Did you have periodic reviews of Mr Clark's work?  
 6 A. I didn't conduct any PDRs with Phil Clark until he  
 7 actually joined Passive, which was in, I think, 2016,  
 8 because the work — Phil actually reported directly to  
 9 Steven Manchester, who was a colleague that delivered  
 10 work for Passive for those areas, for cladding.  
 11 Q. Before 2016, who conducted PDRs, as you call them — is  
 12 it periodic development reviews? — with Mr Clark?  
 13 A. It would have been Steve Manchester, I believe.  
 14 Q. From your knowledge, how regular were those?  
 15 A. Yearly.  
 16 Q. Yearly. And what form did they take?  
 17 A. Sorry?  
 18 Q. What form did those periodic performance reviews take?  
 19 A. There would be a sit-down meeting, I would guess —  
 20 recalling what they were like, it was basically a review  
 21 of performance and then goals for the following year.  
 22 Q. Did anybody else review Mr Clark's work or his operating  
 23 procedures from 2014 onwards?  
 24 A. From — well, it would have been Steve Manchester for  
 25 the area up until he moved across to Passive, which

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1 I believe was 2016.  
 2 Q. Can we go to paragraph 52 of your statement, please, on  
 3 page 12 {BRE00005771/12}.  
 4 You say there, and this is in answer to the question  
 5 Q2(q):  
 6 "Have you at any stage of your involvement with  
 7 BS 8414 testing or classification to BR 135, been aware  
 8 of any deviation from standard or best practice (as you  
 9 understand it)? If so, please give full details,  
 10 including identification of the relevant dates, test  
 11 sponsor and tested system, with details of all  
 12 individuals involved."  
 13 You say at paragraph 49:  
 14 "I cannot recall any deviation from standard or best  
 15 practice. There is a continual process of improvement  
 16 as required by the standards against which BRE is  
 17 accredited."  
 18 Pausing there, those are UKAS standards which apply  
 19 to BRE.  
 20 A. UKAS are the accreditation body. The actual standards  
 21 are international standards.  
 22 Q. Can you tell me what that is?  
 23 A. 17025 for the testing, ISO 17025.  
 24 Q. Can we go to paragraph 52, and there is a question there  
 25 under (r):

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1 "If you have ever had concerns as to any aspect of  
 2 the BRE's BS 8414 testing, please describe the nature of  
 3 and reason for any such concerns. In respect of any  
 4 such concerns, what action did you take?"  
 5 At paragraph 52 you say:  
 6 "In or around March 2011, I raised an issue with  
 7 those involved in the testing that the test reports and  
 8 files were being returned to those involved in the  
 9 testing repeatedly with the 'same issues'. I had an  
 10 internal email exchange with Tony Baker, Tom Lennon and  
 11 Phil Clark to discuss and resolve this ..."  
 12 When you say "the same issues", what were those  
 13 issues?  
 14 A. I can't recall in detail, but it's possibly things like  
 15 missing paperwork, or the paperwork's not been filed  
 16 correctly, or certain items of paperwork not being  
 17 signed, project numbers are not attached to  
 18 documentation. I believe it was things of that nature.  
 19 Q. Right.  
 20 If you go to paragraph 53, you say:  
 21 "Following this exchange, we worked to improve BRE's  
 22 approach to reporting: by way of example, see the email  
 23 from Phil Clark dated 15 May 2013 attaching updated  
 24 copies of BRE's standard operating practice ..."  
 25 Now, when you say "we worked to improve BRE's

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1 approach to reporting", who are you referring to here?  
 2 A. Well, in the first paragraph, it was discussions with  
 3 Tony Baker, Tom Lennon and Phil Clark.  
 4 Q. I see. So you were all involved in an effort to improve  
 5 BRE's approach to reporting; is that right?  
 6 A. Yes.  
 7 Q. Right.  
 8 What changes were made? What changes were made as  
 9 a result of that?  
 10 A. I ... it's hard to recall. It's a very long time ago.  
 11 I think there was paperwork generated by Phil Clark.  
 12 Beyond that, without going back through the records at  
 13 the time, it's very difficult to recall. It might have  
 14 been things like more structure to the files, making  
 15 sure that we had the paperwork, correct paperwork.  
 16 Q. I'm going to that again in a moment, but just tell me  
 17 generally: what was your role in updating BRE's standard  
 18 operating practice?  
 19 A. Erm ... I can't recall. Possibly signed off or approved  
 20 standard operating procedures, but I can't recall what  
 21 I approved at that time or what I generated.  
 22 Q. Let's go to the email that you're referring to there.  
 23 It's at {BRE00005773/2}. We can see on page 2 that  
 24 Phil Clark sends Tony Baker and Tom Lennon, copied to  
 25 Steve Manchester and you, "Cladding test [drawings],

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1 data sheets", and he says:  
 2 "Tony/Tom, I have looked at the cladding procedure  
 3 and have updated some of the SOP and drawings. Please  
 4 could you have a look at the attached documents and let  
 5 me know if you have any comments and or addition. When  
 6 we are all back in I will convene a meeting to discuss  
 7 moving the cladding forward. Cheers, Phil."  
 8 Now, you got this email; did you read it, do you  
 9 think?  
 10 A. I believe I read that, yes.  
 11 Q. There are a number of documents attached. If you look  
 12 at the top, you can see what they are, because you  
 13 I think forwarded this email to yourself, do you see  
 14 that, on 26 June 2019, I imagine in preparation for your  
 15 statement.  
 16 You can see that one of the attachments is "Standard  
 17 procedures"; can you see that?  
 18 A. Yes.  
 19 Q. Stay in the same document run, if we could scroll down,  
 20 please, to page 5 {BRE00005773/5}, we see the first page  
 21 of the standard operating procedures document for  
 22 undertaking BS 8414 parts 1 and 2 tests. Is it right,  
 23 if we look at this — we can scroll together — the  
 24 first part of that document, pages 5 to 10, relates to  
 25 the pre-test set-up, doesn't it? If we could scroll the

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1 pages down, 5, 6, 7, 8, 9, 10. Do you see that?  
 2 A. Yes, I'm on page 7.  
 3 Q. Yes, and then 8, and then 9, and then 10. Same again.  
 4 If you go to page 6 within that run {BRE00005773/6},  
 5 let's just go back to that, can you see that there is  
 6 a requirement for an as-built drawing, a line drawing of  
 7 the as-built system showing the major components? Do  
 8 you see that?  
 9 A. Yes.  
 10 Q. That's how it's described.  
 11 I'm assuming that this version here is a mock-up, is  
 12 it, it's an example of how you might —  
 13 A. It's an example, yes.  
 14 Q. On pages 7 to 10, if we just scroll through those four  
 15 pages, we can see, just go back to 7 {BRE00005773/7},  
 16 "System and Components Photo Collection Sheet":  
 17 "To ensure photographs of the relevant and important  
 18 components are taken the following sheet is to be used  
 19 to collect and log images of the system and its  
 20 components."  
 21 Who was responsible for completing that task there?  
 22 A. That will be the project engineer responsible for the  
 23 delivery of the test.  
 24 Q. Right. Would that be the officer in charge?  
 25 A. Yes, it's the person responsible — yes, responsible for

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1 the test.  
 2 Q. Similarly in relation to the line drawing we saw at  
 3 page 6, who would be the person responsible for  
 4 completing that task, would that also be the project  
 5 engineer?  
 6 A. It should be, yes.  
 7 Q. Yes. So the project engineer or officer in charge,  
 8 whoever was running the test, was responsible for  
 9 filling in this run of documents; is that right?  
 10 A. Yes, it is, but it could also be others involved who the  
 11 project manager for the test delegated or asked to do it  
 12 as well. It wasn't exclusively the project engineer.  
 13 Others did get involved.  
 14 Q. If others got involved, was the system at the BRE such  
 15 that the project officer, project engineer or officer in  
 16 charge, would make sure that whoever did it, if it  
 17 wasn't them, had done it right, had filled in the form  
 18 correctly?  
 19 A. Yes.  
 20 Q. Yes.  
 21 Now, if we go back to page 10 {BRE00005773/10}, we  
 22 can see that there is a second part of this document,  
 23 and that is halfway down the page, "Standard procedures  
 24 for undertaking BS8414 parts 1 & 2 Tests", and it says:  
 25 "The BS8414 tests are undertaken on walls 1 to 4 in

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1 the BRE Burn Hall. The following working procedures  
 2 will assist while undertaking the test. The procedures  
 3 set out here are to be followed while undertaking the  
 4 test and do not refer to pre-test setup which is  
 5 described in the document 'Standard procedures for  
 6 undertaking BS8414 parts 1 & 2 Pre-test setup'.  
 7 Which we've already seen.  
 8 "Tasks can ... be undertaken by any member of the  
 9 test staff but must be confirmed by the nominated  
 10 officer."  
 11 Then you have:  
 12 "TO = Test Officer. OIC = Officer in charge. SO =  
 13 Safety officer."  
 14 Was this document created around the time of your  
 15 email that we've seen, May 2013?  
 16 A. I'm not 100% sure. I don't know the actual date of that  
 17 document.  
 18 Q. Do you — sorry?  
 19 A. It may have been. It may have been in response to that.  
 20 Q. Do you remember whether this document had a predecessor?  
 21 A. I believe there was a predecessor, but I'm not that  
 22 familiar with it.  
 23 Q. Right. Or is it the case that this document simply  
 24 formalised what had already become common practice  
 25 within the BRE?

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1 A. I believe it's the latter, but I haven't got ...  
 2 I haven't got any information to say — or what  
 3 paperwork was in place at that time. I believe there  
 4 was a document prior to that.  
 5 Q. Right.  
 6 Was this document created as a result of a project  
 7 to improve BRE's approach to reporting, as I think  
 8 you've said at paragraph 53 of your statement  
 9 {BRE00005771/12}?  
 10 A. Yes, I believe that was the case.  
 11 Q. So that's the product of it.  
 12 Let's look at one or two of the other standard forms  
 13 bearing on test procedure which were also attached to  
 14 the 15 May email.  
 15 If we can go back to the email, you will see the  
 16 attachment. This is {BRE00005773/2}, please, just to  
 17 show you the email. At, I think, page 3 — I think we  
 18 can probably use page 2. You can see that one of the  
 19 attachments there is, in the second line, "Cladding Test  
 20 Data File and Report Preparation Sheet"; do you see  
 21 that?  
 22 A. Yeah.  
 23 Q. It's right, isn't it, that that document has a checklist  
 24 which includes requirements, such as receive client  
 25 system specifications, undertake a component check and

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1 obtain samples, construction survey, photographs and  
 2 final construction photographs taken, doesn't it?  
 3 A. I'm not familiar with that document, but if that's ...  
 4 Q. Right.  
 5 A. But ...  
 6 Q. Well, maybe we can show you that. Do you remember  
 7 whether, before we do, that was a document created in or  
 8 around the 15 May email as part of the same project?  
 9 A. I believe it was.  
 10 Q. Right.  
 11 What would be involved in checking the components of  
 12 the test rig?  
 13 A. Measurement of components, identification from  
 14 labels ... I'm not sure there's much else I can add,  
 15 really.  
 16 Q. Right. And you'd expect those tasks to be carried out  
 17 fully, accurately and completely, would you?  
 18 A. Yes.  
 19 Q. Would you expect the officer in charge or the project  
 20 engineer to compare the drawings received from the  
 21 client for the rig to be built with the as-built test  
 22 rig?  
 23 A. Yes, if you're including items that go into the report,  
 24 then they should be checked.  
 25 Q. Would you expect that person to record clearly and

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1 completely the details of each component of the test rig  
 2 as built?  
 3 A. Yes.  
 4 Q. What would the purpose of taking samples be?  
 5 A. I'm ... well, for the standard testing, if you're doing  
 6 a test contract with a test sponsor, I think you're  
 7 unlikely to take test samples. You probably need to  
 8 take test samples if the certification board, the LPCB,  
 9 were involved in the project.  
 10 Q. Right.  
 11 A. There was additional requirements.  
 12 Q. Right. We'll come back to the question of process later  
 13 in your evidence.  
 14 Can I then turn to the chronological story and start  
 15 with Kingspan's BR 135 classification.  
 16 I would like to ask you first about the BRE's  
 17 relationship with Kingspan and some of the tests to  
 18 BS 8414 sponsored by Kingspan and carried out at the  
 19 BRE.  
 20 Just confirm for me that you were not involved with  
 21 Kingspan's first official BS 8414 test to part 1 of that  
 22 standard on a system comprising K15 carried out on  
 23 31 May 2005.  
 24 A. No, I wasn't.  
 25 Q. Did you have any involvement with the creation of the

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1 test report for that test later in that year, 2005?  
 2 A. No.  
 3 Q. Before you assumed your joint management role with  
 4 Sarah Colwell in 2006, had you ever had any dealings  
 5 with Kingspan?  
 6 A. Yes, it's very likely that I conducted 1181 tests at the  
 7 site in Holywell on sandwich panels.  
 8 Q. If you can remember it, who were your contacts at  
 9 Kingspan for that purpose at that time?  
 10 A. A gentleman by the name of Jay Humphries, and  
 11 Martin Gilbride.  
 12 Q. Did they have anything to do with BS 8414 testing, do  
 13 you know?  
 14 A. At that time?  
 15 Q. At that time.  
 16 A. No.  
 17 Q. Later?  
 18 A. There was an 8414 test conducted for Kingspan Limited,  
 19 which is the panels division, and I believe all those  
 20 have been submitted in evidence.  
 21 Q. Now, let's turn and see how we go with this given your  
 22 lack of involvement personally, but let me see if I can  
 23 understand one of the more systemic questions.  
 24 {KIN00000134}, please. This is the BRE report,  
 25 which is the classification report, dated

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1 28 September 2015, for Kingspan K15, based on the  
 2 BS 8414 test done in 2005. Do you see that?  
 3 A. Yes.  
 4 Q. Now, you I think had quite a lot of involvement in the  
 5 production of that report, didn't you?  
 6 A. That's correct.  
 7 Q. Yes.  
 8 Just pausing there, is a ten-year delay between the  
 9 date of the test and the date of the classification  
 10 a normal occurrence at the BRE in your experience?  
 11 A. No.  
 12 Q. If we look at page 2 {KIN00000134/2}, we can see that  
 13 the report was prepared by Vida Gaubsaite. I'm sure  
 14 I mispronounced her name, and I don't want to do that.  
 15 How do you pronounce her surname?  
 16 A. It's difficult. Vida Gaubsaite. Like you, it's  
 17 a difficult one for me to get my tongue around.  
 18 Q. Right, okay. We'll call her Vida. And you signed it as  
 19 well on 28 September.  
 20 A. That's correct.  
 21 Q. We will come back to the report in detail in a moment,  
 22 but in paragraph 41 of your statement at page 10  
 23 {BRE00005771/10}, let's just look at that, you tell us  
 24 in general, in answer to the question:  
 25 "What checks are carried out by the BRE before

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1 a BR 135 report is approved?"  
 2 You set out there a list of five checks that would  
 3 be carried out. You have set them out there and I won't  
 4 read them out to you.  
 5 Could you explain in practical terms how the  
 6 relevant BRE employee carries out those checks?  
 7 A. On the BR 135 classification?  
 8 Q. Yes. You say:  
 9 "... the relevant BRE employee will check the  
 10 following ..."  
 11 A. Yes, it would be from the published test report.  
 12 Q. Would the relevant BRE employee, whoever it was, go  
 13 behind the test report that's published and look at the  
 14 underlying data?  
 15 A. Not usually, you would take the data that's presented in  
 16 the test reports.  
 17 Q. In what circumstances might the relevant BRE employee go  
 18 behind the data stated in the published test report?  
 19 A. Only if there were — if, on review of the test report,  
 20 there was — there were concerns raised, but usually the  
 21 BR 135 is issued against the test report. It would only  
 22 be if something was spotted in the test report that you  
 23 may go further.  
 24 Q. Just help me, then. Under (c), looking at the check  
 25 under (c):

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1 "That any observations in the relevant test report  
 2 have been reviewed and support the 'mechanical  
 3 performance' section of the draft classification  
 4 report."  
 5 Does that involve looking at the test reports or the  
 6 documentation or observations made in the test report  
 7 itself, or do you just take those observations and lift  
 8 them straight into the classification report?  
 9 A. No, it would be a review of the test observations.  
 10 Q. As stated in the published test report?  
 11 A. Yes.  
 12 Q. Not in any underlying documents?  
 13 A. No.  
 14 Q. I follow.  
 15 This relevant employee, who would it normally be?  
 16 Would it normally be the officer in charge of the test?  
 17 A. It would usually be the person who is writing the test  
 18 report, who does the classifications and ...  
 19 Q. Was it normal for the person writing the classification  
 20 report not to have written the test report?  
 21 A. No, it's not normal.  
 22 Q. So is this right: that, in fact, the production of  
 23 a classification report for the relevant BRE employee  
 24 would be a relatively straightforward exercise because  
 25 they're essentially just checking their own work?

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1 A. It should be, it should be a cut — there should be —  
 2 information within the BR 135 should be a mirror of what  
 3 is in the test report.  
 4 Q. When I say checking their own work, what I mean is, as  
 5 you describe, making sure the test the classification  
 6 report reports on, that person has already recorded in  
 7 the test report?  
 8 A. Yes.  
 9 Q. So just bearing with me so far, it wouldn't be normal  
 10 for there to be a ten-year delay between test report and  
 11 classification report, and it wouldn't be normal for the  
 12 employee writing the classification report to not also  
 13 have written the test report? That is your evidence so  
 14 far; yes?  
 15 A. That is not normal procedure, no. You would normally  
 16 have the project engineer or test engineer writing both  
 17 the test report and producing the classification .  
 18 Q. When you produced the September 2015 BR 135  
 19 classification report based on the test done on Kingspan  
 20 in 2005, did you discuss the test report which is dated  
 21 8 December 2005 with its author?  
 22 A. No, I didn't.  
 23 Q. Why is that?  
 24 A. Because I've discussed it with — there was  
 25 a conversation between — because I believe the author

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1 was Phil Clark. I can't recall who — was the author  
 2 Phil Clark or Dave Hoare? Is it possible to have  
 3 a look?  
 4 Q. At the original 2005 report?  
 5 A. Page —  
 6 Q. It is, and we will come to it in due course certainly,  
 7 but can we rest with the general question at the moment?  
 8 Let me ask you this: did you have a conversation  
 9 with Phil Clark, who was certainly the primary author of  
 10 that report on 8 December 2005? My question is: why is  
 11 that? Why didn't you have a discussion with him about  
 12 it, given that you weren't the author of the test  
 13 report?  
 14 A. Because I didn't think it was something that was  
 15 necessary. We'd been asked to produce a classification  
 16 report on a report issued by BRE.  
 17 Q. Given that this was unusual, and given the norm that the  
 18 person writing the test report would do the  
 19 classification report, why not simply have  
 20 a conversation with him about a report that was produced  
 21 ten years before to make sure you understood what it was  
 22 you were reviewing?  
 23 A. Because, as I said, I didn't believe it was necessary at  
 24 the time. BRE had issued a test report, the report was  
 25 signed off, the report was approved. The consultation

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1 went on within the department as to whether we should do  
 2 it. I didn't feel it was necessary to discuss with  
 3 Phil Clark.  
 4 Q. When you produced this classification report, did you  
 5 review any hard copy or electronic files of data  
 6 underlying that test report?  
 7 A. The data that was reviewed was that presented in the  
 8 test report.  
 9 Q. So, help me, when you produced the classification  
 10 report, you only had in front of you the 2005 test  
 11 report?  
 12 A. Yes.  
 13 Q. Are you telling us you didn't have any of the hard copy  
 14 or electronic documents underlying the 2005 test report?  
 15 A. No.  
 16 Q. Right. Well, we'll come back to that in a moment.  
 17 Can I just ask you to look at Vida's witness  
 18 statement, {BRE00005627/11}, please. She says in her  
 19 statement at paragraph 47:  
 20 "Stephen Howard of BRE reviewed the technical file  
 21 and my draft of the classification report, and  
 22 subsequently authorised the final draft of that report."  
 23 She says that you reviewed the technical file. Is  
 24 she right?  
 25 A. I don't believe I reviewed the actual test file.

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1 I think the technical file being referred to was the  
 2 technical file produced for the classification report,  
 3 because you open a technical file for each project, or  
 4 a file for each project. If that file was available  
 5 then I don't recall going back to that and reviewing.  
 6 Q. What was on the technical file?  
 7 A. The technical file would have been — well ... I would  
 8 imagine on the technical file was the paperwork, the  
 9 quotation, correspondence associated with the production  
 10 of the classification report.  
 11 Q. Any technical data?  
 12 A. The technical data was based on — would only be the  
 13 test report, I believe.  
 14 Q. Are they not —  
 15 A. I don't recall reviewing that report — reviewing the  
 16 file.  
 17 Q. So it's not a technical file at all, really, it's  
 18 a correspondence file comprising the original test  
 19 report and the correspondence with the client about the  
 20 production of the classification report?  
 21 A. That's correct, that is my understanding.  
 22 Q. You see, the reason I'm asking you is that Mr Hoare in  
 23 his witness statement, David Hoare — and I don't think  
 24 we need to go to it, but it's at {BRE00005622/11},  
 25 paragraph 42 — says that his understanding is that the

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1 original test file for the 2005 Kingspan K15 test is no  
 2 longer available. Is that right?  
 3 A. Yeah, I don't believe we located the file.  
 4 Q. Right.  
 5 A. I don't believe that we located the actual physical test  
 6 file that (inaudible) for the storage of notes, data,  
 7 printed off photographs and things like that.  
 8 Q. I see.  
 9 Did you look for the original test file when setting  
 10 about your task of preparing the classification report?  
 11 A. Yes, I believe we looked.  
 12 Q. I'm assuming from what Mr Hoare says and your agreement  
 13 with it that you couldn't find it; is that right?  
 14 A. I don't think it was ever located. If it was located,  
 15 it would have been provided to the public inquiry. So  
 16 I don't — there is a mechanism there to confirm whether  
 17 we ever located it, but it's not clear to me whether we  
 18 did or not.  
 19 Q. Given that the practice was to use the test report only  
 20 as the basis for the classification report, what was the  
 21 purpose of trying to find the test file?  
 22 A. So that you could collate all the paperwork regarding  
 23 that project in one place again, so that — it was just  
 24 good practice so that we recovered the file, placed it  
 25 back in the system along with the classification report.

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1 Q. But if the classification report was going to be based  
 2 solely on the data appearing on the face of the  
 3 published test report, what was the point of going back  
 4 to the original test file comprising the data underlying  
 5 the test report?  
 6 A. Only from a filing and procedural basis, that you've  
 7 located a file, but there was no real necessity for us  
 8 to access the original project file.  
 9 MR MILLETT: Right.  
 10 Mr Chairman, is that a convenient moment?  
 11 SIR MARTIN MOORE-BICK: Well, does it suit you, Mr Millett?  
 12 Presumably it does.  
 13 MR MILLETT: I'm stranded between the beginning of one  
 14 topic —  
 15 SIR MARTIN MOORE-BICK: All right. We'll take the  
 16 opportunity, since you have stopped.  
 17 Mr Howard, as I said, we're going to have a break  
 18 during the afternoon. We'll take that break now. We  
 19 will start again, please, at 3.30, and let me remind  
 20 you, please, not to talk to anyone about your evidence  
 21 or anything relating to it over the break. All right?  
 22 THE WITNESS: Yes, sir, I understand.  
 23 SIR MARTIN MOORE-BICK: Thank you very much. See you at  
 24 3.30, then, thank you.  
 25 (3.15 pm)

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1 (A short break)  
 2 (3.30 pm)  
 3 SIR MARTIN MOORE-BICK: Welcome back, everyone. We're going  
 4 to continue hearing from Mr Howard.  
 5 Mr Howard, are you there? Can you see me and hear  
 6 me all right?  
 7 THE WITNESS: I can see and hear you, thank you.  
 8 SIR MARTIN MOORE-BICK: Thank you very much, and you're  
 9 ready to carry on.  
 10 THE WITNESS: I am, but I'm not full screen at present for  
 11 some reason.  
 12 SIR MARTIN MOORE-BICK: Ah, well, now, if you — I hesitate  
 13 to give anyone technical advice, but in the top  
 14 right-hand corner of the reduced screen that I have,  
 15 there is a button called "View", do you have that?  
 16 THE WITNESS: Yes.  
 17 SIR MARTIN MOORE-BICK: If you click on that, you should get  
 18 various options, one of which is full screen.  
 19 THE WITNESS: Thank you very much.  
 20 SIR MARTIN MOORE-BICK: Oh, good, I managed to work  
 21 the oracle. There we are.  
 22 Right, well, if you're ready to carry on, I'll  
 23 invite Mr Millett to ask some more questions.  
 24 Yes, Mr Millett.  
 25 MR MILLETT: Thank you very much, Mr Chairman.

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1 Mr Howard, can I ask you, please, to go to page 10  
 2 of your witness statement {BRE00005771/10} and look at  
 3 paragraph 40 with me, please. You say in that paragraph  
 4 there — I should actually show you the question at the  
 5 foot of page 9 {BRE00005771/9}, first, if you could be  
 6 shown that, because it's important you see the question  
 7 you're answering. It's Q2(k):  
 8 "What information/documents are normally provided to  
 9 the author of a BR 135 report following a BS 8414 test  
 10 report on the same system?"  
 11 If you turn the page to paragraph 40, you see that  
 12 you say there:  
 13 "The classification report author will also have  
 14 access to any photographs and/or videos which may not  
 15 have been included in the test report, as well as access  
 16 to the test file generally."  
 17 How does that square with what you were telling us  
 18 earlier on about the classification report being based  
 19 solely on what appeared on the face of the test report?  
 20 A. Well, if you are BRE staff and you are working within  
 21 the department that was dealing with cladding or fire,  
 22 then you would have access to the records and the  
 23 storage. So it's fact that you would have access. But  
 24 the BR 135 is generated on the basis of the test report.  
 25 Q. Right. So let's just get back, then, to my question:

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1 when a classification report author sat down to prepare  
 2 the classification report, would they use the underlying  
 3 test data that you referred to here, such as photographs  
 4 or videos or the test file itself, or would they solely  
 5 work from what appeared on the face of the test report?  
 6 A. They would solely work on what was in the test report.  
 7 Q. So what was the purpose of the classification report  
 8 author having access to the photographs or videos or the  
 9 test file generally?  
 10 A. I think it was just a statement that if necessary and  
 11 they had specific questions, or they identified  
 12 something in the test report that they are unclear of,  
 13 then they have access to further information. Usually  
 14 you would just — well, you would base the  
 15 classification report on the test report.  
 16 Q. I follow. But does paragraph 40 mean that when you came  
 17 to be the classification report author in respect of the  
 18 2005 test report in 2015, you didn't have access to the  
 19 photographs or videos not included in the test report or  
 20 the test file?  
 21 A. No, we based the classification report on the test  
 22 report.  
 23 Q. So that put you as the author of the classification  
 24 report in an unusual position; yes?  
 25 A. Yes.

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1 Q. Can we go to paragraph 50 of the same statement, please,  
 2 which is on page 12 {BRE00005771/12}. You say there:  
 3 "The BRE is sometimes asked to test 'building  
 4 specific' systems where there can be a conflict between  
 5 the test standard requirements ... and what is needed  
 6 for the sample. In such cases, any deviations will be  
 7 noted in the relevant test report and a view will be  
 8 taken as to whether the system can be satisfactorily  
 9 classified to BR 135."  
 10 Would that be an instance where, as a classification  
 11 report author, you would need to look at the underlying  
 12 test data?  
 13 A. No, because it should be in the test report. Deviations  
 14 should be recorded in the test report.  
 15 Q. Can we look at Mr Clark's witness statement, please,  
 16 {BRE00005768/11}, paragraph 50, please. You can see  
 17 that he says there, in answer to the question:  
 18 "What documents are provided to the BRE employees  
 19 tasked with preparing, writing or approving a BS 8414  
 20 Test Report?"  
 21 He says:  
 22 "A test file would be prepared as part of the  
 23 process for testing, which included any relevant  
 24 information pertaining to the system installed and which  
 25 had been tested. This would include items such as

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1 drawings of the system, provided by the client, any  
 2 delivery notes of materials received by BRE, notes taken  
 3 by the Test Officer detailing the construction of the  
 4 test sample, photographic evidence of the construction  
 5 and any construction materials used. It would also  
 6 include a set of photographs taken before, during and  
 7 after the test, a set of handwritten or typed  
 8 observations, set of drawings showing the positions of  
 9 the thermocouples and the channel number assigned to  
 10 each instrument."  
 11 Do you agree with that list he set out there?  
 12 A. Yes.  
 13 Q. It appears, we can see from other test files, that  
 14 an assortment of other documents were also usually  
 15 included in the test file, such as email correspondence.  
 16 A. Yeah, things like financial information potentially  
 17 would be included in the test file, quotations,  
 18 invoices.  
 19 Q. So correspondence?  
 20 A. Some correspondence, yes.  
 21 Q. Some correspondence.  
 22 Now, if we can go to page 58 of your witness  
 23 statement {BRE00005771/58}, please, let's go back to  
 24 that, I want to look at paragraph 252. The question  
 25 you're being asked here, question 8(a):

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1 "What documents and information were made available  
 2 to you?"  
 3 This is in the context of the September 2015  
 4 classification report you authored.  
 5 You say:  
 6 "I had a copy of the original test report (i.e. Test  
 7 Report 220876 ... the fire test data and notes from the  
 8 test itself ..."  
 9 Do you see that? You cite —  
 10 A. Yes.  
 11 Q. — the exhibit numbers of your exhibit.  
 12 It's right, I think — and we can check it if you  
 13 like — pages 634 to 649 is just another copy of the  
 14 original test report, isn't it?  
 15 A. Would it be possible to see that? Because —  
 16 Q. Yes, of course, absolutely, {BRE00005773/618}, please.  
 17 I'll just show you your exhibit. I just wondered  
 18 whether you would recognise the numbers.  
 19 If you go to page 618, you can see where the start  
 20 of the test report is.  
 21 A. Yes.  
 22 Q. If you go to page 634 {BRE00005773/634}, there is  
 23 another one. Yes? It's just another copy of the test  
 24 report. Yes?  
 25 A. Yes.

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1 Q. It seems to have gone in twice.  
 2 653 {BRE00005773/653}, that's a further copy of the  
 3 drawing of the test rig already included in the test  
 4 report, isn't it?  
 5 A. Yeah.  
 6 Q. 654 to 677 {BRE00005773/654}, it's some 22 or 23 pages,  
 7 is contemporaneous email correspondence relating to the  
 8 request for and preparation of the classification report  
 9 in 2015, isn't it?  
 10 A. Yeah.  
 11 Q. We can scroll through the pages if you like, but --  
 12 A. No, if that's what --  
 13 Q. Yes.  
 14 So, in fact, is it right that the only  
 15 contemporaneous documents from the time of the BS 8414  
 16 test that you had available to you when you prepared the  
 17 classification report in September 2015 are the three  
 18 pages of notes that we can see on page 650  
 19 {BRE00005773/650}, if we can go to that? Can you see  
 20 them there?  
 21 A. Yes, I think that information was located, but I cannot  
 22 actually recall where we found it.  
 23 Q. No. Just to be clear, that's 650, and if we can look at  
 24 651 and 652 for completeness -- I said it was three  
 25 pages -- confirm with me that those are the notes on the

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1 file you reviewed; yes?  
 2 A. Yes, if I've submitted those in evidence, but as I said,  
 3 the review for the BR 135 would have been based on the  
 4 test report.  
 5 Q. Based on the exhibit I've shown you, we've seen two  
 6 copies of the test report, we've seen the drawing, we've  
 7 seen the 2015 correspondence and the three pages of  
 8 contemporaneous documents, do you agree that you didn't  
 9 have a complete test file for the 2005 test to work from  
 10 in accordance with the usual things that you might have  
 11 normally?  
 12 A. Yes, that's correct.  
 13 Q. You didn't have access to the delivery notes or the full  
 14 set of photographs showing the construction and the  
 15 components?  
 16 A. No.  
 17 Q. You wouldn't have been able to double-check the  
 18 components of the test rig?  
 19 A. No, the BR 135 was based on a signed-off test report.  
 20 Q. You didn't have the test videos?  
 21 A. I don't believe so, no, but the usual practice is to  
 22 issue the BR 135 against the test report.  
 23 Q. And you didn't have access to any of the email  
 24 correspondence from the time of the 2005 test?  
 25 A. No.

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1 Q. Before we look at the classification report itself, can  
 2 I look with you at some of the correspondence leading up  
 3 to its production.  
 4 Can we go to page 53 of your witness statement  
 5 {BRE00005771/53}, paragraph 234, please. At 234 you're  
 6 answering the question from the Inquiry, question 8,  
 7 "your recollections as to the preparation of [the  
 8 classification report] dated 28 September 2015, a copy  
 9 of which is attached for your reference". That report  
 10 was prepared by Vida and approved by you for  
 11 Kingspan Insulation Limited.  
 12 If we look at paragraph 234, your answer, you say:  
 13 "As far as I am aware, the first contact I had  
 14 regarding what would become Classification Report  
 15 P101812-1000 was when I received an email from  
 16 Connor McIntosh of BRE on 19 August 2015: see  
 17 pages 519-523. Mr McIntosh had forwarded an email from  
 18 Adam Heath of Kingspan on the same date, which stated as  
 19 follows ..."  
 20 And you've set it out. He says:  
 21 "On a slightly related topic, it has come up in  
 22 discussions recently that we never commissioned  
 23 a classification report for our BS 8414-1 test (attached  
 24 for reference). This test was originally completed in  
 25 2005. I have 3 questions really:

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1 "Can a classification report be issued for this  
 2 test?  
 3 "How much will it cost?  
 4 "What is the timescale for delivery in the event  
 5 this is possible?  
 6 "Any guidance you can offer here would be much  
 7 appreciated."  
 8 Now, that is at {BRE00005773/520}, your exhibit, but  
 9 you cite from it so we can stick with your witness  
 10 statement:  
 11 "235. In his covering email to me, Mr McIntosh  
 12 wrote:  
 13 "'Any thoughts on this one below? Test completed in  
 14 '05 and they're wanting a classification report for  
 15 it.'"  
 16 Then you replied on 21 August as follows:  
 17 "We would need to go through and check that it is  
 18 ok. In principal though, I can't see why we wouldn't  
 19 classify."  
 20 What do you mean when you say that you would need to  
 21 go through and check it's okay? Okay for what?  
 22 A. Well, you would need to go through and review the test  
 23 report against the test standard, make sure the test  
 24 standards that was used was the correct version to be  
 25 classified by BR 135.

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1 Q. The email that Mr McIntosh forwards to you that you  
2 recited was also forwarded to somebody called  
3 Damien Ward. Who was he?  
4 A. Damien worked within the LPCB of the Passive Fire  
5 department.  
6 Q. Why was he involved in this?  
7 A. It was just a case of obtaining an opinion from someone  
8 else that — on this matter, really. It was just  
9 a question of a colleague to see if they had any —  
10 raised any concerns.  
11 Q. Who made the decision that the report was okay, as you  
12 put it?  
13 A. Me, by signing off the classification report.  
14 Q. What told you that the report was okay?  
15 A. Well —  
16 Q. What were you measuring the okayness against?  
17 A. Because the report was issued against a version of  
18 BR 135 that was current and could be classified to —  
19 sorry, the report was issued against a version of  
20 BS 8414 that would be classified to BR 135.  
21 Q. At that stage, did you check with anyone more senior  
22 than you as to whether it would be appropriate to issue  
23 a classification report based on this test report?  
24 A. No.  
25 Q. Why is that?

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1 A. Because there was — it is something that the test lab  
2 does a lot of throughout the year. Not on test reports  
3 that old, I admit, but issuing classification reports  
4 for tests was within the responsibility of the  
5 department.  
6 Q. Given the special circumstances here, namely the decade  
7 of delay between the test and the classification, and  
8 the absence of the original test file with the sorts of  
9 documents to which the classification report author  
10 would normally have access, given those two things, why  
11 didn't you just check with somebody more senior than you  
12 as to whether it would be appropriate to issue  
13 a classification report based on this test report?  
14 A. Because my view was that the classification report was  
15 just a statement of pass/fail. The classification  
16 report refers to a test report that was issued to  
17 BS 8414—1, and the classification report is no more than  
18 a statement of pass/fail against that statement, to  
19 BR 135.  
20 Q. Let's go to page 525, please, of your exhibits, that's  
21 {BRE00005773/525}. If we look down the page, you can  
22 see that here is an email from Adam Heath, halfway down  
23 the page, on 25 August 2015, timed at 12.38, to you,  
24 copied to Adrian Pargeter and Connor McIntosh. It's  
25 titled "BS 8414—2 ... with 140mm K15 behind Terracotta",

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1 and that's the subject of the first two paragraphs of  
2 this email. But I'm interested in the third paragraph,  
3 which says this:  
4 "The business is also interested in getting  
5 a classification report for our BS 8414—1 test from  
6 2005. Is this possible, and what are the time and cost  
7 implications?"  
8 You respond, as we can see from the email just above  
9 that, if that can be scrolled down so you can see it,  
10 a little bit later that day, to Adam Heath at 15.03:  
11 "Adam,  
12 "Please find attached the report for the Terracotta  
13 test."  
14 Then in the last paragraph or sentence of that email  
15 you say:  
16 "I think we have the other classification report in  
17 hand — I will check and let you know.  
18 "Regards  
19 "Stephen Howard."  
20 What did you mean by "in hand"?  
21 A. I expect I meant that it was being produced. We'd made  
22 a decision we were going to do it, and it was — someone  
23 was drafting the BR 135 report.  
24 Q. At that stage, had somebody gone through and checked  
25 that it was, as you put it, okay for the report to be

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1 issued as per the earlier email we saw?  
2 A. Well, I wouldn't recall, but it does say that I need to  
3 check and will come back to him the following week.  
4 Q. Right.  
5 When you say, "I think we have the other  
6 classification report in hand", what had already  
7 happened in relation to the production of that  
8 classification report that you were telling him?  
9 A. I think it was a discussion along the lines of: we were  
10 reviewing the test report and with a view, if we could,  
11 to produce a classification report.  
12 Q. Had —  
13 A. It says, "I think it's in hand". I hadn't actually  
14 checked at that point as to where we'd got to.  
15 Q. Do you know, had you actually started work on the  
16 production of a classification report?  
17 A. Given the dates, I can't say categorically, but we  
18 probably reviewed the test report and had a look to see  
19 if there was anything that would prevent issuing of  
20 a BR 135. But you would go through and check the report  
21 before issue of the classification.  
22 Q. Indeed. I just wanted to work out from you what work  
23 had already been done when you sent this email to  
24 Mr Heath.  
25 A. Well, we'd located the test report, it's probably been

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1 reviewed, it's been discussed, I've sought advice or  
 2 opinions from other people as to whether we should do  
 3 it, and I think that reflects the stage we were at.  
 4 We should be able to tell, because the agreement to  
 5 do it actually would be a quotation. So if it's  
 6 critical, the timelines, there should be a quotation  
 7 which is at the point where we have basically committed  
 8 to do it.  
 9 Q. Further up the email chain, 524 {BRE00005773/524}, at  
 10 the top of that page, we can see an email from you to  
 11 Vida copied to Damien Ward on 3 September 2015 in which  
 12 you forward to Vida the email chain and the test report  
 13 itself, and you say:  
 14 "The test report is here [and you identify it on  
 15 your system].  
 16 "Can you go through and correct, but you need to  
 17 check that what they are saying is correct, — Photos etc  
 18 are in the same place.  
 19 "You ... need to write the classification report —  
 20 [an] example is attached."  
 21 Then you ask for a quotation, go down a bit further,  
 22 you identify the report, it seems. I don't know whether  
 23 that's a different report, but it looks like it's got  
 24 a different number. Can you just tell us what's the  
 25 difference between the report and the test report?

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1 A. The first one was, I believe, an ongoing project. So  
 2 there's two sets of correspondence there.  
 3 Q. Oh, I follow, I'm sorry. So the first one is not the  
 4 report and the second one is?  
 5 A. The second one then refers to — if you — the 300  
 6 number, 303930, is a test report, I believe, I don't  
 7 think it was a classification report, for a different  
 8 project, and the 220876 was the 2005. So there's two  
 9 subject matters on that email.  
 10 Q. I see, so the first part of the email is about one  
 11 classification report, the second, "can you quote for  
 12 a second classification report", that's this report, the  
 13 2005 report?  
 14 A. Yeah.  
 15 Q. You say:  
 16 "Need to check on issue levels of BR135 ..."  
 17 What do you mean by that sentence?  
 18 A. Well, just basically to check which issue ... the issue  
 19 level of the document and BR 135. I think what I meant  
 20 was: have a read of BR 135 and make sure that the issue  
 21 levels of 135 and the standard actually match. I can't  
 22 be 100% sure.  
 23 Q. Did you ask Vida to carry out any particular checks  
 24 given that the BS 8414 test had been carried out some  
 25 ten years previous?

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1 A. Not specifically, because test reports, as I said, are  
 2 statements of fact. The checks that would be made were  
 3 whether the issue level of BR 135 that was current would  
 4 allow classification to the standard that was used at  
 5 the time for the test.  
 6 Q. When you say the issue level, do you mean the most  
 7 recent date of publication?  
 8 A. Yeah, with technical documents they usually say when  
 9 they're revised or up-issued. It's usually issue 1,  
 10 issue 2, issue 3, so we'd work to the latest version.  
 11 Q. I see what you mean. So BR 135 in 2015 would have been  
 12 the third edition, you call that the third issue.  
 13 A. Sorry, yes. Third edition.  
 14 Q. Right, I see.  
 15 Did Vida carry out any particular checks, do you  
 16 know?  
 17 A. I don't know, I haven't — without going through the  
 18 file or — I wouldn't know and ...  
 19 Q. Right.  
 20 Did you ask yourself why it was that Kingspan was  
 21 asking for this classification report ten years on after  
 22 the test?  
 23 A. I did, and I think the response was, "We never actually  
 24 asked for one at the time".  
 25 Q. Did you wonder to yourself what lay behind Kingspan's

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1 request? Why did they suddenly want one now, given that  
 2 they hadn't asked for one at the time, nor asked for one  
 3 at all during the intervening decade?  
 4 A. I don't know the actual reasoning as to why they needed  
 5 a particular — needed a BR 135 now. No. To me that  
 6 wasn't — it — technically or procedurally whether we  
 7 can issue a classification document, the reasons why,  
 8 I didn't assume.  
 9 Q. Did you ask yourself how it was that Kingspan had  
 10 managed only with a test report but no classification  
 11 report for K15 in that ten-year intervening period?  
 12 A. Erm ... did I ask myself ... well, I think the answer to  
 13 that is: I was aware that the test report was being used  
 14 in support of cladding systems being installed on  
 15 buildings, but the level of detail I had of that was  
 16 minimal because you had very little visibility as a test  
 17 lab as to what the manufacturers are actually doing with  
 18 the test data that they have or test reports that they  
 19 have.  
 20 Q. Did Kingspan ever give you a reason why they wanted the  
 21 classification report now and had never asked for it in  
 22 the intervening ten years?  
 23 A. No.  
 24 Q. No.  
 25 Can we go to {BRE00005071}, please. This is

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1 an email — I think you need to go to the bottom of  
2 page 1 for it — from Adam Heath to Vida on  
3 8 September 2015 at 15.23, relating to this  
4 classification report as well as the terracotta test,  
5 which I think was the subject matter of the other report  
6 that you had asked her to write. He says:

7 "Dear Vida,

8 "Thanks for the prompt response. On a slightly  
9 related topic, topic, it has come up in discussions  
10 recently that we never commissioned a classification  
11 report for our BS 8414-1 test (attached for reference).  
12 This test was originally completed in 2005. I have  
13 3 questions really ... "

14 We saw this before.

15 Then if you go up the page, to the next email up, we  
16 can see that Vida forwards that email on to Tony Baker  
17 on the same day:

18 "Dear Tony,

19 "Please, be so kind to advice[sic] regarding our  
20 client request below."

21 Then above that we can see that Tony Baker responds  
22 to Vida on 9 September and he says:

23 "This is not a straight forward one; in theory we  
24 could issue a classification document, however I can  
25 understand why one was not issued for this test as it

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1 seems like an indicative type test. BS 8414 and BR135  
2 is a system test and classification system and from what  
3 I can see from this report, there is no external weather  
4 protection system included (e.g. render system or rain  
5 screen cladding). Whilst they have a cement board  
6 overladding, I doubt this would be considered  
7 a complete system. Data such as this has been  
8 misrepresented in the market in the past.

9 "I suggest this question should be passed by  
10 Steve Howard and/or Debbie Smith before a response is  
11 sent."

12 So this is what Vida is doing at that date.

13 The first question is: were you asked the question,  
14 "Should we issue a classification report?", as suggested  
15 by Tony Baker?

16 A. Yes.

17 Q. And did you discuss with Tony Baker the fact that it  
18 appeared from the test that there was no external  
19 weather protection system, but instead a cement board  
20 overladding?

21 A. I don't recall talking to him, no.

22 Q. Did you discuss with him the fact that this looked like  
23 an indicative-type test?

24 A. Well, no, I didn't.

25 Q. Did you discuss with him the observation made by

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1 Tony Baker to Vida here that data such as this had been  
2 misrepresented in the market in the past?

3 A. No, I didn't discuss those elements specifically with  
4 him against this — in regard to that classification  
5 report.

6 Q. From your own knowledge at the time, was it the case  
7 that data such as this had been misrepresented in the  
8 market in the past?

9 A. I wasn't aware of misrepresentation of that report, but,  
10 as I said, I had very — we had very little visibility  
11 of what was being accepted on what basis for compliance  
12 with or meeting the recommendations of ADB.

13 Q. Clearly Tony Baker has got the concerns he's expressed  
14 in this email. Do you know whether he had  
15 a conversation with Debbie Smith about these matters?

16 A. I don't know that.

17 Q. Do you agree that the concerns expressed by Tony Baker  
18 in his email to Vida on 9 September 2015 were serious  
19 matters which deserved consideration by the BRE?

20 A. Well, I don't actually agree with the statement that it  
21 was an indicative test report.

22 Q. Why don't you agree with that statement?

23 A. Because if you issue an indicative test report,  
24 procedures within BRE is to mark the test reports as  
25 indicative or not to issue an indicative report at all.

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1 We had — we were looking at a test report that was, in  
2 my consideration, compliant with what was going on at  
3 the time.

4 Q. Now, if you go to page 557 in this exhibit run  
5 {BRE00005773/557}, we can see that this is an email from  
6 Vida to you on 14 September 2015; right? The subject:  
7 "FW: BS 8414-2 Kingspan Phenolic insulation system  
8 classification report", and there is an attachment,  
9 which is a draft:

10 "Stephen,

11 "Please check the draft of Kingspan Phenolic system  
12 classification report.

13 "Thanks,

14 "Regards,

15 "Vida ... "

16 Do you see that?

17 A. Yeah.

18 Q. If you look below that, what she is forwarding to you is  
19 an email also to you, or maybe in fact it's just part of  
20 the email chain with this below it, she says, same day:

21 "Good morning Steven,

22 "Please, can you check the quotation for  
23 Kingspan Insulation (but also please see below Tony  
24 notes)."

25 And then she has highlighted those:

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1 "Hi Vida,  
 2 "This is not a straight forward one ..."  
 3 Et cetera, et cetera, and you can see the whole of  
 4 the block text which I read to you originally from the  
 5 9 September email from Tony Baker to Vida. She is  
 6 passing this on to you, Mr Howard.  
 7 A. Yeah.  
 8 Q. You would have seen the text of this. So this question,  
 9 although maybe not necessarily posed directly by  
 10 Tony Baker to you, was certainly passed on to you by  
 11 Vida, wasn't it?  
 12 A. Yes.  
 13 Q. Yes.  
 14 Did you have a discussion with either Vida or  
 15 Debbie Smith or Tony Baker about the concerns raised by  
 16 Tony Baker in his email to Vida we've seen?  
 17 A. I believe I discussed it with Vida.  
 18 Q. Right. Can you tell us, please, the nature of those  
 19 discussions?  
 20 A. I think I would have discussed through concerns raised,  
 21 that she's raised with me, and the reasoning why  
 22 I thought it was still appropriate to issue  
 23 a classification report.  
 24 Q. Right. Well, let's see if we can get a little bit more  
 25 into the detail.

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1 You received this email from Vida on 14 September.  
 2 In fact, you get it twice, because we can see you're  
 3 sent it at 8.42 and then again later that morning when  
 4 she sends the report, because it's part of the same  
 5 email string. At what point did you have the discussion  
 6 with Vida on the matters the subject of Tony Baker's  
 7 email?  
 8 A. I can't recall an exact time. If we can go up — are we  
 9 talking about the same report, or is that a different  
 10 classification report?  
 11 Q. We're talking about the classification report based on  
 12 the 2005 test.  
 13 A. I would have discussed it with her. I can't remember  
 14 an exact time, but I was aware of this as an issue. I'd  
 15 seen the emails. I didn't — my view is we're issuing  
 16 a classification report against a BRE test report that  
 17 isn't an indicative or marked as one, against a tested  
 18 system.  
 19 Q. So what did you tell Vida? Did you tell her, "Yes, it's  
 20 straightforward, we can issue this because it's not  
 21 an indicative—type test"?  
 22 A. Yes, I think that was my view, but whether  
 23 I communicated that with her directly I'm not — I can't  
 24 recall.  
 25 Q. What led you to think that this was not

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1 an indicative—type test?  
 2 A. Because the test — when you issue indicative — the  
 3 usual BRE practice is not to issue test reports for  
 4 indicative tests, they just issue a letter. If you do  
 5 an ad hoc or indicative—type test, it's made very clear  
 6 in multiple places in the test report that it's  
 7 an indicative test.  
 8 Q. Now, you can see the reasons in this email that Mr Baker  
 9 gives and which Vida is passing on to you that morning,  
 10 and he says, and you will have seen, that:  
 11 "BS 8414 and BR135 is a system test ... and from  
 12 what I can see from this report, there is no external  
 13 weather protection system included (e.g. render system  
 14 or rain screen cladding)."  
 15 Did you agree with Tony Baker on that point?  
 16 A. Yes, I think — yes, there was — it wasn't a render  
 17 system or rainscreen cladding, it was a single board  
 18 system.  
 19 Q. Yes, and he says it's a cement board overcladding, and  
 20 then goes on to say:  
 21 " ... I doubt this would be considered a complete  
 22 system."  
 23 Did you agree with Tony Baker on that?  
 24 A. Erm ... yes, I — to some extent, yes.  
 25 Q. In that sense, if that's what Mr Baker meant by "it

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1 seems like an indicative type test", you were agreeing  
 2 with his observation, weren't you?  
 3 A. Well, no, I don't believe that it was an indicative  
 4 test. As I said, we'd — BRE had issued a full test  
 5 report against a tested system. We don't comment on —  
 6 beyond what it requires in the standard about system  
 7 configuration, and in fact we shouldn't. So if we'd  
 8 issued a full test report, we don't comment on sample  
 9 suitability for placing on the market, we're not  
 10 involved in the design; it's a classification report  
 11 issued against a test report which was in accordance  
 12 with BS 8414.  
 13 Q. Indeed, Mr Howard, and in a sense that's the point.  
 14 You're right that the test report was not marked  
 15 indicative, but nonetheless Mr Baker is telling Vida,  
 16 and she you, that it looked in substance to be  
 17 indicative because the cement board overcladding would  
 18 mean that it couldn't be considered a complete system,  
 19 and you had agreed with that. So in that sense you were  
 20 agreeing that, in substance, the test was only  
 21 indicative.  
 22 A. No.  
 23 Q. I don't understand your answer. Why was it not  
 24 an indicative—only test if in fact the cement board  
 25 overcladding that was being used was not representative

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1 of cladding systems out there in real life?

2 A. Because we don't — because what you are doing is

3 testing a system to a standard, and we don't comment on

4 the system designs or anything like that. Providing the

5 sample, and that can be any configuration, meets the

6 requirements of BS 8414, ie in terms of size,

7 configuration and things of that nature, in my view

8 that's classifiable to BR 135. We don't comment on the

9 relationship between sample and what's placed on the

10 market.

11 Q. Clearly Mr Baker had this concern, because he could see

12 what the system comprised, saw that it had only a cement

13 board overcladding, and that told him that it looked

14 like an indicative test. Why didn't you go back to

15 Mr Clark, who had written the original test report, and

16 discuss this question with him?

17 A. Because I was confident that the test report that had

18 been issued was a full test, because I seem to recall

19 now, with the number of people involved, with their

20 experience, my understanding was that they would not

21 have issued an indicative test report in that way.

22 It's ... BRE does not issue indicative test reports that

23 look very close to — or bear any resemblance to full

24 test reports.

25 Q. Well, to be fair to Mr Baker, he doesn't say it's

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1 an indicative report, he says an "indicative type test".

2 So he has chosen his words carefully — at least I'm

3 assuming he did, we can ask him when he comes — but he

4 has raised this concern with you that it might be

5 problematic to issue a classification report because of

6 the nature of the overcladding used, namely only

7 a cement board as opposed to a render system or

8 rainscreen cladding. That was his concern. Why did you

9 not share that concern?

10 A. Because what you're doing — because the system complied

11 or could be tested to BS 8414, and that defines whether

12 you can classify. We're not commenting on the

13 suitability of the product, we're not involved in

14 design. All we are saying is: the system can be tested

15 to BS 8414, part 1, it's met these temperature

16 limitations or it's performed so the temperature

17 limitations didn't go above this, that is all the

18 classification report is saying. It's not

19 an endorsement of design.

20 Q. So can we take it from this evidence and the exchange

21 we've just had that you disagreed with Mr Baker?

22 A. Yes, I think he said it's an indicative-type report.

23 I don't agree. It looks like a full report to me, and

24 I don't think — and I think at that point we possibly

25 disagree or he needs to speak to himself, but I think

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1 it's — we don't get involved in system design. We

2 don't comment on the system design.

3 Q. If you were disagreeing with Tony Baker, why didn't you

4 seek to have a conversation with him and discuss his

5 concerns with him before instructing Vida to continue

6 with the drafting?

7 A. Because if you read in the emails, he has raised the

8 matter with me and considered it appropriate for me to

9 make the decision, and at the time I just considered the

10 matter was closed. I viewed it as quite reasonable to

11 issue a BR 135 classification against that.

12 Q. I see. So you saw that he put it on to Vida to pass

13 this question by you. You disagreed. How did you

14 express your disagreement to Vida?

15 A. I can't remember whether I discussed it or whether —

16 I doubt whether it had been an email exchange because

17 basically we were in very close proximity in the office.

18 Q. Did you actually address your mind to these concerns?

19 Did you actually sit down and look at the make-up of the

20 2005 test rig and actually ask yourself whether Mr Baker

21 was obviously wrong or there was something in what he

22 was saying?

23 A. I'd considered his comments.

24 Q. Right. And then you just dismissed them, did you?

25 A. Well, I took the decision, for the reasons I've

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1 outlined, that I thought it was within the scope of

2 BS 8414-1 to issue — I think the test samples were

3 within the scope of the standard and therefore it's

4 within the scope of BR 135.

5 Q. You see, the basic thrust of Mr Baker's concern was the

6 last sentence of the main paragraph there:

7 "Data such as this has been misrepresented in the

8 market in the past."

9 Now, you told me earlier, in answer to my question

10 whether that was something you were familiar with, you

11 said, "Not really, no". I probably misquoted you, but

12 that was the gist of it. But here you are being told

13 that in terms by Mr Baker. Were you not concerned to

14 get to the bottom of what that was about?

15 A. I think we were aware or there had been discussions of

16 misrepresentation of test reports in the past. I didn't

17 think really it was ... if the test had been conducted

18 in accordance with the standard, then that's not

19 a reason — sorry, that is a reason to issue a BR 135.

20 Q. But this is a red light, isn't it, or a blue light,

21 telling you that data such as this test report, done on

22 a system which was not representative of what was out

23 there in the market, has "been misrepresented in the

24 market in the past"? Were you not concerned, before

25 instructing Vida to complete the classification report,

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1 just to understand what the nature of that problem was?  
 2 A. No, because it's — what we are doing at that point is  
 3 issuing a classification report against a test report.  
 4 Now, accept those test reports or documents, as far  
 5 as — well, my view, and still is, are going into  
 6 a professional environment of architects,  
 7 building control, and suchlike. Now, if — we were just  
 8 fulfilling issuing a classification report, which  
 9 I still believe it's valid, against a test that we  
 10 conducted.  
 11 Q. Despite the risks of misuse?  
 12 A. We don't regulate the market. Fire test labs do not  
 13 regulate the market in that way.  
 14 Q. You don't regulate the market, no, but you are  
 15 responsible for classifying the results of tests which  
 16 are then used in the market.  
 17 My question is: why were you prepared to classify  
 18 the data in the test report, given the warning from  
 19 Tony Baker that data such as this has been  
 20 misrepresented in the market in the past, without  
 21 getting to the bottom of what that meant?  
 22 A. I think I had enough knowledge of what was going on in  
 23 the market and concerns raised that it wasn't —  
 24 I didn't feel it was an issue that we could resolve over  
 25 whether we issued a classification report or not.

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1 I still stand by that the issue — the classification  
 2 report is valid.  
 3 Q. So let me just be very clear about this, Mr Howard, you  
 4 were prepared to go ahead and sanction the issue of  
 5 a classification report based on test data which, such  
 6 as this, had been misrepresented in the market in the  
 7 past, without further investigation of what that was  
 8 about?  
 9 A. Erm ... well, as I said, I think I was aware of  
 10 misrepresentation concerns and I don't think it directly  
 11 related to this issuing of this classification. I think  
 12 they are separate issues.  
 13 Q. Right. Let's just look at that a little bit more.  
 14 What were the misrepresentation concerns of which  
 15 you were aware?  
 16 A. This — what was the actual date of ... I think there  
 17 was an email dated somewhere around 2010 and subsequent  
 18 information that claims were being made against  
 19 insulation was things like limited combustibility and  
 20 things of that nature, or combustible insulation was  
 21 of ... being claimed to be limited combustibility.  
 22 Q. Yes, you may be referring, I don't know, to the LABC  
 23 certificate for K15. Is that something you knew at the  
 24 time of this email or something that you have picked up?  
 25 A. Probably not, no, the dates are not clear.

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1 Q. Right. So let's be clear: mid-September 2015, what  
 2 data, to your knowledge at that time, had been  
 3 misrepresented to the market?  
 4 A. I think there was an email from Tony Baker, and I think  
 5 it was dated around 2010, raising issues, and again,  
 6 I don't remember specifics, but there had been issues  
 7 over misrepresentation of data in the cladding market.  
 8 Q. That was something you knew at the time, was it?  
 9 A. Not specifically, but I was aware of it at the time of  
 10 issuing the 2015 classification report.  
 11 Q. Given that you were aware at least in general terms of  
 12 some perhaps vague concerns about clients misusing test  
 13 data such as this, why were you prepared — without any  
 14 further investigation — to go ahead and sanction the  
 15 preparation and publication of a classification report?  
 16 A. Because I felt it was a valid request. The test report  
 17 was valid, and therefore you could issue a BR 135  
 18 against that document.  
 19 Q. Despite your knowledge of the risks of its misuse; yes?  
 20 A. Why would it ... I don't understand the misuse aspect.  
 21 The test report is a test report on data. The  
 22 classification is a pass/fail statement against the test  
 23 report.  
 24 Q. We have been, I think, round this track a number of  
 25 times, Mr Howard. I'm going to suggest to you that you

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1 simply ignored Mr Baker's warning, you didn't discuss it  
 2 with him, you had no meaningful discussion with Vida  
 3 about it, and you just instructed her to get on and  
 4 issue the classification report without stopping to  
 5 think about what Mr Baker was telling you.  
 6 A. No, I had considered the issue and I felt it was right  
 7 and within procedure to issue the BR 135. No, I didn't  
 8 discuss it — I cannot recall discussing it with  
 9 Mr Baker, but I did discuss it with Vida.  
 10 Q. Now, can we go to {BRE00003446/2}, please. This is  
 11 an email, at the very bottom of page 2, of  
 12 21 October 2013 to you, Mr Howard.  
 13 A. Yeah.  
 14 Q. Now, this is before the 2014 year that you give in your  
 15 statement for when you became more involved with  
 16 cladding, so do we have to bear that in mind?  
 17 A. Possibly, but let's proceed.  
 18 Q. Indeed. Let's proceed.  
 19 It looks as if Mr Roper's email to you is in the  
 20 black text and your response to him that you send on  
 21 24 October is at the foot of page 1 {BRE00003446/1}, if  
 22 you can just go to that, and then we'll go back to this  
 23 email on page 2.  
 24 At the foot of page 1 you go back to him and say:  
 25 "Thanks for the email — Please see below.

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1 "Ps."  
 2 Then go to the top of page 2 {BRE00003446/2},  
 3 please, of the email run, where we were, to see what it  
 4 is that he's asking you, and what you're saying.  
 5 In the second paragraph, Mr Roper says to you, "The  
 6 example I can give" — in fact I probably ought to read  
 7 you the first paragraph as well so you have the full  
 8 context:  
 9 "Stephen,  
 10 "Without having the through the wall system details  
 11 to hand, I cannot give a full explanation on the  
 12 differences between the systems. However, as an example  
 13 we would be looking to test using an ACM panel with  
 14 baffled joints with a cavity of 38mm between the  
 15 cladding and the substrate in [conjunction] with NHBC  
 16 guidelines. If we tested this system and passed and  
 17 somebody wanted to use an open jointed ACM panel with  
 18 a cavity of 50mm with exactly the same brackets,  
 19 insulation, fire barriers and cement particle board,  
 20 could this be covered in a report stating so?"  
 21 Then you give your answer. Essentially you're  
 22 saying desktop, I think, but let's look at the next  
 23 paragraph:  
 24 "The example I can give is for one of our main  
 25 competitors who produce both PIR & phenolic insulation,

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1 they have successfully tested a product to BS 8414—1  
 2 onto a masonry wall using merely a [cementitious] board  
 3 as the outer face. Not only does this not cover the  
 4 majority of the market in which they are used but the  
 5 [cementitious] board doesn't actually represent  
 6 a drained back and ventilated rainscreen system.  
 7 However, we are aware that this product is used in  
 8 buildings above 18m using a wide variety of  
 9 constructions, some on to masonry, some onto steel frame  
 10 with ACM panel cladding, terracotta etc. We are  
 11 [surprised] that they feel confident enough to allow  
 12 their product to be used in buildings their fire test  
 13 doesn't cover, unless they have a report to say other."  
 14 Your response to that, as you can see, is:  
 15 "If the products are LPCB approved, then we can act.  
 16 If we have issued a test report on a system then the  
 17 onus is on the building owner and building control to  
 18 ensure that the system being installed is covered by  
 19 a test report. I am not sure that I have much more to  
 20 add."  
 21 That's the full run of that email I want to show  
 22 you.  
 23 My first question is this: did you understand  
 24 Mr Roper in that correspondence to be referring to  
 25 Kingspan and their 2005 test?

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1 A. Yes, this infers it's Kingspan, but it doesn't  
 2 specifically say that.  
 3 Q. No, it doesn't, which is why I asked you. You  
 4 understand it to mean Kingspan, even though not  
 5 specifically (inaudible).  
 6 Did you agree with Mr Roper that cementitious board  
 7 did not represent a drained back and ventilated  
 8 rainscreen system?  
 9 A. Sorry, I missed that.  
 10 Q. Well, let me put it differently.  
 11 A. Sorry, you just glitched out for a second. Sorry.  
 12 Q. Did I? I'm sorry about that. If we can go back to the  
 13 document, please, you can see in the second block of  
 14 black text he says, four lines down:  
 15 "... the cementitious board doesn't actually  
 16 represent a drained back and ventilated rainscreen  
 17 system."  
 18 Now, in the blue text below it, which is your  
 19 answer, you didn't disagree with him. Can we take it  
 20 therefore that you did agree with Mr Roper that  
 21 a cementitious board did not represent a drained back  
 22 and ventilated rainscreen system?  
 23 A. No, because I would not answer — I would not get into  
 24 that sort of discussion with a client in that way. So  
 25 no, I haven't agreed with him.

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1 Q. No, I can see you haven't agreed with him, and  
 2 I understand the reasons why you might not express  
 3 yourself one way or the other.  
 4 Let me ask it this way, then: did you agree in your  
 5 own mind, even if not expressly, with Mr Roper's  
 6 statement that cementitious board doesn't represent  
 7 drained back and ventilated rainscreen system?  
 8 A. No, I don't agree.  
 9 Q. So you disagreed, did you? You thought he was wrong,  
 10 did you?  
 11 A. I think at the time I didn't have sufficient knowledge  
 12 of all the different variations, but it's not uncommon  
 13 to have cementitious boards on ventilated rainscreen  
 14 systems.  
 15 Q. Mr Roper was telling you that a cementitious board as  
 16 the rainscreen, which is what it was, was not  
 17 representative of cladding systems being installed out  
 18 there in the real world. I note your answer that you  
 19 didn't have sufficient knowledge, but you didn't in fact  
 20 have sufficient knowledge or experience to say that he  
 21 was wrong about that, did you?  
 22 A. Well, from my experience, I didn't agree with it,  
 23 because I'm aware that there were cementitious boards  
 24 being used in the market.  
 25 Q. Used in the market as an outer layer on a rainscreen

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1 (Connection lost).  
 2 Yes?  
 3 A. Yes. Sorry.  
 4 Q. Right.  
 5 The email at the very least tells you, doesn't it,  
 6 or at least strongly suggests, that Kingspan was selling  
 7 K15 on the basis of a BS 8414 report build—up with  
 8 a wholly unrepresentative system? That was what he was  
 9 telling you, wasn't it?  
 10 A. That was his opinion.  
 11 Q. You didn't, I think you have told us, have enough  
 12 experience at that time to disagree with him?  
 13 A. Possibly not, no. But as I said, I'm aware that there  
 14 are cement—based boards used as rainscreen cladding.  
 15 Q. Well, what type of cementitious board was used as the  
 16 outer layer of a cladding system at the time of the  
 17 tests, 2005, do you know?  
 18 A. I can't recall without looking at the report and seeing  
 19 what it was called in the report.  
 20 Q. So when you received this concern from Mr Roper that you  
 21 were being told about —  
 22 A. Yeah.  
 23 Q. — did you seek to investigate it further or did you  
 24 just dismiss it out of hand or —  
 25 A. I think if you look up at the email chain, there's

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1 a request to him to provide examples of claims in the  
 2 market. So he was specifically requested to forward on  
 3 examples as to what the issue was, ie what claims were  
 4 being made by whom. So that email that is being shown  
 5 is — there's more of it that goes — that starts  
 6 earlier.  
 7 Q. Yes, I've seen that in relation to a specific comparison  
 8 between one system and another and the possibility of  
 9 extrapolation. I understand that. Really what I'm  
 10 asking you is what you did with the concern expressed by  
 11 Mr Roper to you in the second paragraph about the  
 12 cementitious board —  
 13 A. The trigger would have been because he was asked to  
 14 provide examples. There's two emails that are  
 15 interleaved, so if you look — if we go back up, there's  
 16 a request to him to send through examples.  
 17 Q. We've seen your response to this part of the paragraph.  
 18 Just look at it again, at the bottom in blue. You say:  
 19 "If we have issued a test report on a system then  
 20 the onus is on the building owner and building control  
 21 to ensure that the system being installed is covered by  
 22 a test report. I am not sure that I have much more to  
 23 add."  
 24 Were you not concerned at the time that Kingspan was  
 25 deemed to be or at least being said to be

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1 misrepresenting the report that they obtained from the  
 2 BRE in the market?  
 3 A. As I say, this is the end of an email string. So,  
 4 essentially, there's a request earlier for him to send  
 5 examples of his concerns and misrepresentation of the  
 6 product in the market. It's — as you go up the email,  
 7 I can't — it's in that section there. At that point,  
 8 I was expecting contract information or marketing  
 9 information or something to support his claim. That  
 10 would have been the trigger to take this further. If  
 11 you look — as I said, if you go up the email, there is  
 12 a request there for more information.  
 13 Q. There is one certainly — I'm not going to stand here  
 14 and scramble around in the emails, but certainly on  
 15 page 3 {BRE00003446/3} there is a request from you to  
 16 him on 21 October to answer the question that he has  
 17 asked you in the email below that on 18 October, foot of  
 18 page 3, top of page 4 {BRE00003446/4}. Is that what you  
 19 are talking about?  
 20 A. Yes.  
 21 Q. Right. Certainly. But this comes later in the piece.  
 22 Really what I want to end with is I just want to put  
 23 to you or ask you: did you take any action at all  
 24 internally within the BRE in response to Mr Roper's  
 25 concerns as expressed in that paragraph?

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1 A. The trigger would have been more information supplied by  
 2 Mr Roper.  
 3 Q. And in the absence of any more information —  
 4 A. No.  
 5 Q. — you didn't do anything?  
 6 A. No, the trigger would have been more information from  
 7 Mr Roper.  
 8 Q. You see, you don't say in the paragraph in blue, "Could  
 9 you please give me more information about the  
 10 cementitious board and your concerns about it", do you?  
 11 What information did you need?  
 12 A. Well, we'd need to — well, we would need — well,  
 13 ultimately you would need enough information to either  
 14 go to Trading Standards or support a complaint to either  
 15 Trading Standards or the approval body that there was  
 16 client misrepresentation in the market, but you would  
 17 need evidence of that.  
 18 SIR MARTIN MOORE-BICK: How are you getting on, Mr Millett?  
 19 MR MILLETT: I've come to the end of this line, really,  
 20 I just want to ask one more question.  
 21 Why didn't you ask Mr Roper for more information on  
 22 his allegation so you could explore it?  
 23 A. I thought I had. I thought I'd asked for examples of  
 24 misrepresentation in the market.  
 25 Just because a system hasn't got BR 135, as I said

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1 earlier , Approved Document B is advisory or guidance,  
 2 and there's other methods for buildings — or cladding  
 3 systems to be accepted onto buildings. Now, without  
 4 full data as to that process, there's very little  
 5 comment that you can make.  
 6 Now, I genuinely thought that I'd made it clear that  
 7 we needed detailed examples, and that — I acted on that  
 8 basis.  
 9 MR MILLETT: Yes, thank you.  
 10 Mr Chairman, is that a convenient moment?  
 11 SIR MARTIN MOORE—BICK: I think it is, yes.  
 12 Well, Mr Howard, we're going to call it a day there;  
 13 we will finish for the day. I'm afraid I have to ask  
 14 you to come back again Monday of next week to continue,  
 15 but I think you were expecting that?  
 16 THE WITNESS: Yes, I'm prepared.  
 17 SIR MARTIN MOORE—BICK: Yes, all right. So we'll resume,  
 18 then, at 10 o'clock on Monday. Please remember, over  
 19 the weekend — it's obviously particularly important —  
 20 not to talk to anyone about your evidence or anything  
 21 relating to it. All right?  
 22 THE WITNESS: That's understood.  
 23 SIR MARTIN MOORE—BICK: Thank you very much, and we will  
 24 look forward to seeing you on Monday, then.  
 25 THE WITNESS: Thank you.

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1 SIR MARTIN MOORE—BICK: Thank you very much.  
 2 10 o'clock on Monday, thank you.  
 3 (4.35 pm)  
 4 (The hearing adjourned until 10 am  
 5 on Monday, 1 March 2021)  
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