# OPUS 2 INTERNATIONAL 

Grenfell Tower Inquiry

Day 74

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## Opus 2 International - Official Court Reporters

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(10.00 am)
SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to
    today's hearing. Today we're going to hear from another
    witness formerly employed by Celotex.
        Yes, Mr Millett.
MR MILLETT: Yes, good morning, Mr Chairman.
        May I please now call Mr Jamie Hayes.
        MR JAMIE HAYES (affirmed)
SIR MARTIN MOORE-BICK: Thank you very much, Mr Hayes.
        Now, do sit down, make yourself comfortable.
        All right?
            (Pause)
        Yes, Mr Millett.
            Questions from COUNSEL TO THE INQUIRY
MR MILLETT: Mr Chairman, thank you very much.
        Mr Hayes, good morning.
A. Good morning.
Q. Can I begin by thanking you very much for coming to the
    Inquiry and assisting us with our investigations, we are
        extremely grateful to you.
            If you have any difficulty understanding anything
        I'm asking you, I am very happy to put the question
        again or in a different way so that you can understand
        me and I can understand you.
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    If you feel you need a break at any point, please let us know, we can do that. We do intend to take scheduled breaks at some point halfway through the morning and halfway through the afternoon.

Also, could I please ask you to keep your voice up, so that the transcriber, who sits to your immediate right, can get down everything you are saying. Also, please, if you nod or shake your head, it doesn't go on to the transcript, so please say "yes" or "no" as the case may be.

You have made two statements for the Inquiry, and I would like to show you the first of those, please. It's at \{CELO0010154\} of 11 March 2019. You can find it on the screen in front of you or, if you want to look at the hard copy, it's on the desk in front of you as well, but I will be showing you everything on the screen.

The date is 11 March 2019. Is that the first page of that document?
A. Yes, it is .
Q. Although the front page says 12 March 2019, if you go to page 31, please, you can see that on that page there's a signature over your printed name.

Is that your signature?
A. Yes, it is.
Q. Now, the date there is 27 August, and it says to have
been signed by instructed solicitors on 11 March 2019.
Can you just explain how that came about?
A. I believe from memory that we may have been working on the statement -- that's me and my legal advisers -until -- I wouldn't say the last minute, but I believe that there was a deadline for it to be submitted by, and I think it was finished very close to that deadline, and so perhaps they signed it on my behalf.
Q. Right. When they signed it on your behalf, did you instruct them to sign it, having seen and approved --
A. Absolutely, yes, that's correct.
Q. And then it was -- is this right? -- actually signed by you on 27 August 2019?
A. That's correct.
Q. Can you just explain the delay between the March and the August of that year?
A. I can't really explain that. I think that would have been -- my legal team, they presented it to me and said, " It seems that you have not signed this document and you need to sign it yourself, and so can you please sign this document yourself so that we can provide a proper signed" --
Q. Yes, thank you.

Have you read this witness statement recently?
A. Yes, I have.

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Q. Can you confirm that its contents are true?
A. Yes, I can.
Q. Now, there is also a second statement at \{CELO0012232\}, and that is the first page of that document. You can see, Mr Hayes, that it bears a date of 5 June 2020 at the top. Is that your second statement?
A. Yes, it is .
Q. If we go to page 5 in that document, you will see a signature over the date of 5 June 2020. Is that yours?
A. It is, yes.
Q. Have you read this second statement recently?
A. Yes, I have.
Q. Again, can you confirm that the contents are true?
A. Yes, I can.
Q. Have you discussed your evidence that you're going to give today with anybody before coming here today?
A. I have discussed it in a general way with my legal advisers.
Q. Right. But just to be clear, no one has prompted you as to what you should say in response to questions --
A. No, definitely not.
Q. -- I might be asking you?
A. No.
Q. Right.
I just want to begin with a number of questions about your background, if I may.
It's right that you joined Celotex in 2004, I think?
A. That's correct.
Q. That was in a temporary administrative role, wasn't it?
A. Yes, that's right.
Q. Before that, you hadn't worked in the insulation
industry at all, had you?
A. No, I hadn't.
Q. Did you have any technical experience at that point?
A. No, I didn't.
Q. And I think you got no tertiary education or technical qualification?
A. No, that's correct.
Q. You were then offered a permanent role as a customer services officer in the sales department; is that right?
A. That's correct.
Q. But, again, that's not or wasn't a technical position?
A. No, that wasn't.
Q. Is it right that from June 2007, you were a technical services officer, or a TSO, in the technical team of Celotex?
A. Yes, that's correct.
Q. As such, you were, I think, client - or customer-facing, weren't you?

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A. Yes, that's correct.
Q. Yes.

If we look at your statement, that is your first statement, can we please go to that at pages 2
\{CELO0010054/2\} and 3, bottom of page 2, top of page 3.
This is paragraph 7 under the heading "The Technical Team". You say:
"In or around June 2007, an opportunity arose for me to move to the Technical Team at Celotex. This was not a team with any expertise in technical product matters, but rather a customer support team focused on practical product application and part of the wider marketing arm of the business. The Technical Team sat squarely within the Marketing Department, alongside a specific Marketing Team."

Then you go on to say in paragraph 8 \{CEL00010054/3\}, at the beginning there, that:
"No qualifications were required for the position in the Technical Team."

Why was it called the technical team?
A. Because it would answer what were perceived to be technical enquiries regarding our products. So a typical enquiry would be, you know, "What particular product of yours might I need for my application?", which might be a floor or wall or a roof, and we would
also do U-value calculations, which were thermal calculations, and I think that they were perceived to be technical questions as opposed to, for example, in my previous role, we would field enquiries from our purchasing customers, and their types of questions would be, "How much does it cost? Can I have a delivery?" And so there was a clear distinction, I guess, between those two types of enquiries that were coming into the business.
Q. Yes, I see.

If the team's role wasn't technical in the sense of research and development or complex chemistry, is it right that some of the matters on which you were advising customers in that team called for a degree, at least, of technical understanding?
A. Yes, I think that's fair.
Q. Yes.

Now, you say, as I've shown you, in paragraph 7 on the page in front of you, that the technical team sat squarely within the marketing department. Does that mean that the development of new products was also overseen by the marketing team?
A. Yes, it does.
Q. Is it fair to say that Celotex's business model was really driven by the marketing team?

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A. Yes, that's correct.
Q. Was the technical team ever able, in your experience, to override the marketing department's marketing decisions on technical grounds?
A. No.
Q. So would you say that the technical team was really an adjunct to Celotex's marketing capabilities?
A. Yes, I would say that, and I think that the direct line of reporting I think always ended with the marketing director, as opposed to having a separate technical director, for example.
Q. Yes.

Now, you were promoted to technical services team leader, weren't you?
A. I was.
Q. When was that?
A. I believe it was January 2015.
Q. What did that involve, that new role?
A. So the business had been slightly restructured at that time, so there had never been a technical services team leader before, it was a created role, and so I took on responsibility for certain day-to-day tasks in terms of organising that team.

So, to give a couple of examples, the technical team, which was quite a small team, would split -- each
individual person would split their team between dealing with emails possibly in the morning, and then covering the telephones in the afternoon. So there was a rota, and I would create that rota.

To start with, that was pretty much the limit of my responsibilities, but over my time as a technical service team leader, I took on more responsibility in terms of administration of personnel, so I would, with my manager, assist with carrying out appraisals for people, and I also later on was given responsibility for signing off people's holiday requests, and also conducting return to work interviews when somebody had had a day off.
Q. Who was your manager? Who was your line manager at that time, or from January 2015 when you were promoted to technical services team leader?
A. It was Louise Garlick.
Q. Before that time, who was your line manager?
A. It was Rob Warren.
Q. I see.

As at the period 2012 to the end of 2014, who was your line manager? Was that Rob Warren throughout?
A. Yes, Rob Warren remained my line manager until I became technical services team leader, because I think that the same restructuring that changed Rob's role slightly was

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the same restructuring at the same time that I was made technical services team leader.
Q. Right.

How did your role relate to Debbie Berger's role once she had taken over the role of product manager on 1 October 2014?
A. So we moved into completely different reporting streams. So I would report to Louise Garlick. Louise Garlick reported to Craig Chambers, who was the CEO or managing director. I understand that Debbie reported to Paul Evans, who reported directly to Craig Chambers.
Q. Yes. So you were essentially in parallel with Debbie Berger?
A. Yes, we worked in different departments, but I would say that we were kind of peers, I guess.
Q. Yes. Okay.

I think you continued in that role, the role of technical services team leader, until you left Celotex?
A. That's correct.
Q. Just looking at your training, you say that no qualifications were required for your role, in fact any of your roles. Is that right?
A. That's correct.
Q. Given your work history before you started at Celotex, you wouldn't have acquired any technical expertise
before that, would you?
A. No.
Q. And I think it must be right then that you received no formal training for your position when you started.
A. That's correct.
Q. Given that you were being asked to offer practical advice on matters such as product application, did you have any concerns about your ability to fulfil your job description without any training?
A. Yes, I did at first. I think I mentioned in my statement that I felt quite overwhelmed by the position when I first joined. I was quite lucky because there was a lady that I worked with who was Burcu. She kind of took me under her wing a little bit and she would help me -- we would have break-out sessions, so if I had a question and I wasn't sure how to answer it or if I had heard terminology that I didn't understand, we might spend an informal sort of 15 minutes at her desk and she would run me through some things.
Q. In what years do you think that happened?
A. I actually don't think I started to have real confidence in my role for probably about 18 months.
Q. So 2006?
A. Yes.
Q. I see.

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Looking at paragraph 9 \{CEL00010054/3\}, which should still be on the page in front of you, if you go down a little bit on that page in your statement, you say in the middle of the paragraph:
"I did undergo some informal training in the processes and procedures needed for my new role, whereby I would be taken through how to answer certain queries using technical data help sheets and handy guides produced by Celotex ..."

Who was it who produced those guides?
A. That literature existed in the business before I joined the technical team, and so I don't know who wrote them, but I got the impression that some were older than others. So there might have been some which were dated quite a long time ago, there might have been several years before they had been updated, and then others which were more recent. I know that there was a gentleman called Peter Gibson --
Q. Yes.
A. -- who was technical manager, I think, and he may well have had a part to play. But I'm sure that the presentation of them and formatting them, putting them together, would have also been done by the marketing team.
Q. Now, you say five lines down within the sentence I have
been looking at that you were taken through how to answer certain queries.

Were those queries, in your experience, about the suitability for a product on an external wall construction above 18 metres?
A. No, they weren't. In fact, the vast majority of enquiries that Celotex received, I think, throughout the time that I was there was to do with houses. So a house that -- you know, a semi-detached house, a detached house, a terraced house, and very few of our enquiries, although some of them, were to do with larger types of buildings where those types of construction, like rainscreen, would be more common.
Q. Were those queries from time to time about fire safety of the products you were selling, Celotex was selling?
A. There would be questions about fire safety, but they would be very basic, such as, "Is your product class $1 ?$ ", for example, and to answer that would be simply to refer somebody to a product datasheet where the properties of the board were listed and it would confirm the product to be class 1.
Q. Yes, I see.

Now, you say in paragraph 9, as I've just shown you, that you relied on products' technical datasheets, and I think you refer there to an example of a datasheet and 13
you exhibit it. Let's go to that. It's \{CELO0008506\}, please.

Is this the kind of datasheet that you would use when answering customers' queries in general?
A. I have to say that I have had a chance to look through my statement and its exhibits, and I don't think that this is a very good example --
Q. Right.
A. -- of a datasheet, and the fault is entirely mine, but I think that when I was carefully proofreading my statement prior to signing it, which I would have done, I don't think that I checked every exhibit, and actually I think that a much better example could have been given of a datasheet than this one here.
Q. All right, then let's not press that point too much.

Let's move on to something which you would have seen, I think. \{CEL00000409\}. This is the RS5000 datasheet produced by Celotex, and this is issue 1 of August 2014.

Is this the sort of datasheet that you would have been familiar with?
A. Yes.
Q. Is your evidence, in effect, that you had no technical knowledge, but were wholly reliant on others within Celotex for the accuracy of the technical data contained
in documents such as these?
A. That's correct. I think what I would say is that, as my knowledge and experience grew, sometimes the technical team were asked to assist in preparations of these documents, mostly to do with thermal performance. So an example would be most of our product literature would contain U-value tables, which tells you if you have a certain construction and you use a certain thickness of insulation, this will give you a U-value of X. So the technical team would assist with producing those tables, for example, because they would be based upon calculations that we would do, and that table,
for example, would then be slotted into the document by the marketing team who were preparing it.
Q. Can we look at Mr Warren's witness statement, \{CELO0010043/4\}, please, and I would like to look with you at paragraph 16, at the bottom of the page there. Mr Warren says:
"Jamie Hayes was one of the more experienced members of the CTC team. He was assigned responsibility for providing training to the team and in particular to new starters."

Is that correct?
A. That is correct, and I believe that I do reference that also in my own first statement.

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Q. Then he goes on to say, about four lines down:
"I do not remember devising the remainder of the training and did not deliver it but my assumption, based on conversations with Mr Hayes and from looking at an overview describing the topics to be covered, was that it was a fairly comprehensive training programme delivered in modules and in person to the members of the team, which ranged from the basics of 'what is insulation' right through to understanding all you need to know in the technical process to be able to respond to customer queries."

## Is that accurate?

A. It became accurate. I was given responsibility for training new members of the team, in the technical team, and I did, for my own benefit, put together a spreadsheet which would show the different topics that you would cover, and this would mostly be, for example -- I'd have one topic and it would be cavity walls, and so we would do that on a morning, and in the training of that morning I would go through and I would say, "This is a cavity wall, this is very broadly how a cavity wall is built up, this is how our product would be used in that cavity wall, this is our datasheet, here is how you would perform a $U$-value calculation for that cavity wall".
Q. Okay, so you accept what Mr Warren says there

When you say it became accurate, was it as he says it was by 2012?
A. Yes, that's correct.
Q. To deliver the training that Mr Warren describes in his statement there, you would have had to have had some kind of technical understanding, wouldn't you, of the matters contained in the training?
A. Yes, that's correct.
Q. Were you yourself given any training as to those technical matters, or were those matters simply matters that you, as it were, picked up on the job?
A. It was entirely picked up on the job.
Q. Right. Indeed, you say at paragraph 12 of your statement, if we go to that, please, page 4 \{CEL00010054/4\}, that you picked up knowledge regarding practical application of products over time. That's your first sentence in that paragraph. So that would be correct, wouldn't it --
A. Yes.
Q. -- looking at what we're looking at so far?
A. That's correct.
Q. You also go on to say there, a little bit lower down the paragraph:
"At no point during my employment at Celotex did
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anyone ever check or test my knowledge of the product offering. There were no specified checks that the information we were providing to customers was correct. Nor were there any checks that the 'industry knowledge' I was obtaining was accurate."

You have confirmed the truth of that statement earlier in your evidence.

Was that the case throughout your time at Celotex?
A. Yes, it was the case.
Q. Now, let's go to \{CELO0008515\}, please. This is an internal Celotex draft document, and the reason I say that is that, if you look at the top of the page, under the words "Technical Briefing ", the first bullet point says "Draft".

Was it a draft or was it a final document, do you think?
A. So I wrote this document, and it was never a formal Celotex document, it was produced by me to assist me with training people, and so I would have put the word "Draft", and I think the reason I put the word "Draft" is because it was never a formal document, it was a document that I used.
Q. Yes, thank you.

You can see that it says:
"Introduction to fire regulations and standards.
"Incorporates buildings above 18m - requirements of compliance with fire regulations.
"Technical Briefing."
A. That's correct.
Q. And although it's a draft, you used it, I think is what you're saying.
A. Yes.
Q. And you drafted it .

If we go to the bottom of the page, there's the logo, as we can see -- we can't quite see it on the screen. I think you can just about see it, it says "СТС". That's the Celotex technical centre, I think, isn't it?
A. That's correct.
Q. And you sat in the Celotex technical centre. Who else did, in 2012, 2013 and 2014?
A. So some people came and went, so -- but I would do the best to --
Q. Sorry, I should perhaps narrow it down a bit.

Who were the main players throughout that period in that team?
A. So there was a gentleman called Sean Whelan, there was myself, there was Debbie Berger, there was a gentleman called Tom Elwell.
Q. Yes.

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A. I believe there was a gentleman called Richard Gifford, although I'm not $100 \%$ sure when Richard joined, and there was a gentleman called Jeremy Suttle.
Q. Yes, and we've seen his name in later documents.

If we go to page 2 in this document \{CELOOOO8515/2\}, we can see in the header that it's marked on the top left "JH", and I think that tells us you drafted it.
A. That's correct.
Q. And this is "Version 2 (draft) 26.10.2010".

Just looking at it briefly -- we will consider the content together in a moment -- staying on this page, these are the contents of the presentation, and you can see that it deals with standards of fire resistance for insulation, national standards, European standards and Scottish standards, and then requirements for buildings above 18 metres in height, external walls, at page 7 .

If you go to page 8 \{CELOOOO8515/8\}, you can see there's a reference about a quarter of the way down to "Technical Services Information Bulletin 26", and there are a number of parts of that.

Bulletin 26, does that tell us that there were historically a large number of bulletins, namely 25 , produced by this department?
A. So technical services information bulletin 26 is a document which I inherited. So when I took over, when

I went into the technical services team, I took over the desk of somebody who had left, and I believe that
name -- that person was called Philip Eden, and I inherited a black folder, and in that folder were some technical services information bulletins, including number 26, and I think there were some other ones as well, although I don't think that the set was complete necessarily.
Q. Right.
A. But I don't believe that any of those bulletins had been produced by the CTC, if you like, which is the technical department where I worked. I believe that they had all been produced by senior people within the business, and I actually -- I'm sure I exhibit this document and it will say who wrote it, but I believe it was Peter Gibson, who was the technical manager for Celotex, rather than somebody who sat within the technical team. Q. I see.

If we look a little bit lower down underneath that heading, it refers to the Building Regulations and, specifically, section B4 of Approved Document B, and the reference there to the requirement of limited combustibility. You can see that in the second paragraph.
A. Yes.

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Q. In the third paragraph under the heading "Technical Services Information Bulletin" you can see it says the position in Scotland as well, and in both paragraphs it says that the requirement is for the use of a non-combustible insulation product such as mineral wool. You see that?
A. Yes.
Q. So was it clear to you and to those that you were training, so far as you were aware, that one of the routes to compliance with Approved Document B for insulation on buildings above 18 metres was to ensure that the material was non-combustible?
A. Yes, I would have understood that. Just to clarify that, I think the understanding in the team was -- we had this document, and that document I believe is -I beg your pardon, we had technical services information bulletin 26 , and I think that, to produce this section of this document, I've effectively cut and pasted it in.
Q. Right.
A. But it's not something that we would think about when we did our jobs, because when people came to us, and they did, and said, "Do you have a product which is suitable for a building above 18 metres?" or "Do you have an alternative product to Kooltherm K15 for use in a tall building?", the answer was always, "No, we don't,
orry", and then they would move on.
So, yes, I had an awareness of this and had read and understood that document, but it was not something that we were required to understand the technicality of on a day-to-day basis.
Q. I follow. So the answer is: when you were asked for a material for use above 18 metres, the answer was no, and you didn't really need to know why no, but you knew it was no?
A. Yes.
Q. Then if we look underneath that, it says:
"Alternative compliance method:
"An alternative method of compliance with these regulations is to meet the performance criteria given in BR135 'Fire performance of external thermal insulation for walls of multi-storey buildings' (2003 edition) using data from full scale fire testing to BS 8414-1 or BS 8414-2. This specifies limits for both external and internal fire spread defined by a maximum temperature rise in given time period."
"BR 135 is the basis on which Kingspan are currently able to obtain specifications for Kooltherm, despite the fact that the product is combustible. We believe that the tested systems incorporate fire barriers to limit the spread of fire through the air cavity behind the

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## rainscreen.

"Celotex boards have NOT been tested to this standard but FR4000 [but corrected to 5000] could potentially meet the standard if it were to be tested. At this point in time we have decided not to pursue this line.

## "Summary

"Celotex boards can not be used in any external wall constructions if the building is above 18 m in height.
[And then this is in italics] This applies to all areas of walls, even those below 18 m ."

There are a different number of ways of emphasising, but it's crystal clear from that, isn't it, that at this point, October 2010, the alternative method of compliance set out in this document was also not available to Celotex?
A. That's correct.
Q. Yes.

If you go down a little bit further on to the next page \{CELOO008515/9\}, please, you can see there, this is a heading of "Timed fire resistances ". A little bit lower down that page, three-quarters of the way down the page -- there is quite a lot of technical text, and I'm summarising it, but that was about other tests under BS 476, wasn't it?

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A. Yes, this was not related to the above-18-metre test.
Q. No.
    Were you aware at this time of something called
    national class 0?
A. Yes, I was.
Q. And you were aware that this was entirely distinct from
the requirements for buildings above 18 metres as they
existed at that date?
A. Yes, I was.
Q. And you were aware that class 0 was something very
different from the concept of non-combustible or limited
combustibility?
A. I knew that they were different tests and that they
weren't necessarily interchangeable.
Q. Yes.
Now, can we go to \{CELO0008500\}, this is a copy of a training pack that you, I think, delivered, the same document again, and if we go to page 11
\{CEL00008500/11\} -- this is a copy that Debbie Berger has disclosed -- this is "Version 1 (draft) 25.10.2010", and there is a quiz:
"Training module: Fire standards and regulations; incorporating buildings greater than 18 m height."
And then there is a note:
"The quiz is designed to demonstrate comprehension
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of the training session and not the ability to memorise information."

Then if you go to page 14 \{CELO0008500/14\}, these are the questions, and they're questions about why Celotex products can't be used above 18 metres and what test meant that Kingspan could market K15 for use above 18 metres.

I've summarised those questions there, but you can see what they are. Am I right in my summary?
A. Yes, that's correct.
Q. We can see the answers at slide 9 \{CEL00008500/9\}, and if you go to slide 9 or page 9 of this document, here are manuscript answers to the quiz. There is a date at the top: 5 November 2010.

Was this an actual training session, do you think?
A. Yes, so I believe that I had also given some training in a much, much sort of reduced form to area sales managers who came into the business, and this is something that I had been asked to do by Chris King, and he asked me, in fact, I believe, to do some simple quizzes with area sales managers to check their understanding of what they had seen.

I don't think that it was necessary for the CTC members to undertake the quiz. I think that Debbie has done it probably for a bit of fun, because I was --

I would have trained Debbie in terms of the CTC, and so she's also taken the quiz, but it wasn't, I don't believe, something that you had to do or a standard that you had to meet. I think we've done it for a bit of fun.
Q. Yes, and at page 10 \{CELO0008500/10\}, we can see the answers to the four questions which represented the slide I showed you before, and particularly question 14. The answer to question 14 is:
"The fire test allowing Kingspan to use their phenolic product in 18 m and taller buildings is BS 8414-1 or BS 8414-2."

So that was the answer.
Did you know at the time, or did you think at the time, that Kingspan had actually passed both of those two parts of BS 8414?
A. No, I don't believe that I did.
Q. Which did you think they'd actually passed?
A. I don't think at this time, and I think this is dated 2010, I would have given that any thought. So the reason there's a reference to both of those is probably from the technical bulletin, where it references both of those tests as being something that you could do, but I don't think at that time I would have looked at whether Kingspan had done one test or another test.

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Q. If we just go back to page 9 \{CEL00008500/9\}, just finally on this document, one of the answers to the quiz questions related to class 0 , and if you go to answers 7 and 8, you can see she's written down:
"Surface spread of flame - BS 476 - part 7."
Then under answer 8:
"Fire standard class 0 - BS476 parts 7 \& 6, surface spread of flame $\mathcal{E}$ propagate."

I'm assuming that you and she and those you were teaching understood at least that much.
A. Yes.
Q. That class 0 had these two parts to it.
A. I think, from memory, that was explicit on the Celotex literature. So if you looked at a product datasheet for FR4000, for example, I think there would be a section and it would say "Fire performance", and it would say "BS 476-6 and BS 476-7".

So, sorry to go on, but yes, the short answer is there was an understanding that class 0 was formed of those two tests .
Q. Yes, and we will come back to this question very shortly again when looking at a later technical bulletin.

Before I do that, can I take a sideways visit and ask you some questions about the corporate culture within Celotex.

You have already agreed with me, I think, that Celotex was largely marketing-led at the time you were there.
A. Yes.
Q. If we go back to your statement on page 6
\{CELO0010054/6\} at paragraph 16, if you look at that at the top of the page under the heading "Saint Gobain", you refer there to the acquisition of Celotex by Saint-Gobain in 2012, and you say:
"This acquisition changed some of the processes within Celotex, including changes to health and safety on production line, environment and facilities ."

Then in the last sentence you say:
"In my experience the acquisition also brought about a change in culture, particularly in the sense that there appeared to be increased financial pressure to develop new products applied to Celotex from Saint Gobain."

Then you go on to say:
"Even before this acquisition Celotex was largely marketing led given that those individuals at the top of the business had mainly originated from the Marketing Department. Celotex used to be owned by private equity group AAC Capital Partners and so the drive for profit making and increasing the company's share price had been
systemic in the Celotex culture for some time. However, it seemed as though this culture became heightened once Saint Gobain became involved."

Now, when you say Celotex used to be owned by a private equity group, AAC Capital Partners, et cetera, did you get the sense at that time -- and that's up to 2012, when the acquisition took place -- that the drive for profit was also a drive for revenues?
A. Yes, I don't think it was a secret from anybody in the business at any level that the intention was that the company under AAC -- that the goal of the management at that time was to make the business as profitable as possible in terms of how it would look on a balance sheet, and so to increase its value for somebody who was to buy it afterwards.
Q. Yes.

Then you go on to say, after the reference to conversations you had, that:
"... Saint Gobain had asked for a budget for increasing profits and that at least $15 \%$ of this increase would need to be attributed to new products. I remember thinking we were not allowed to simply sell more of our existing products to increase profits. For me this meant that there was a drive for innovation and a sense of pressure to increase profits at Celotex."
A. So, to give an example -- and I know we'll come on to

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this -- but after the first 18 -metre test failed, a second test was arranged incredibly quickly, and although it didn't seem that strange to me at the time, I look back on that now and think it's almost unbelievable that I think only a few months passed between the failure of a major test and how quickly a second test was arranged, authorised, paid for, and not to mention the fact that there were -- you would have to actually arrange to build a rig, which is to say have all the materials, have someone construct it, and so how quickly they turned around between 1 to 2 I think illustrates quite well that they were not prepared to wait any longer than was humanly possible to progress that project, and I guess the ultimate goal of that project was to have a product which could be sold to increase profits.
Q. Right. So, in a nutshell, are you saying the May 2014 second test of RS5000 which took place was really a manifestation in its clearest form of the culture which you describe at paragraphs 16 and 17 of your statement?
A. Yes.
Q. Now, I'm going to ask you some questions next about your understanding of Celotex products in general.

Can we start with \{MAX00000216\}, please, this is the
datasheet for Celotex FR5000, issue number 2,
January 2012, and if you look at the top right-hand corner of the document you can see that.

Now, FR5000 is or was a PIR board, wasn't it?
A. Yes.
Q. Did you understand that that meant that it was not, therefore, a product of limited combustibility?
A. Yes, I did.
Q. And therefore it could not be used on buildings above 18 metres?
A. Yes.
Q. We can see from the datasheet in two places, the first paragraph and the fourth bullet point, that it's described as having class 0 fire performance. In that fourth bullet point it says:
"Has Class 0 fire performance throughout the entire product in accordance with BS 476."

What did you understand the significance of FR5000 having class 0 to be?
A. I understood that meant it had received a pass in two separate BS 476 fire tests, 476-6 and 476-7.
Q. Yes. So you understood that the result of success in those two tests was that you got a class 0 classification for this product?
A. Yes.
Q. What was the significance to Celotex in marketing the product of that product having a class 0 classification?
A. I believe that Celotex introduced the FR4000 range, which was the first time that it had ever had a class 0 product, and that the driver for that was that Celotex had PIR products and it competed against lots of other PIR products in the market, but that their main competitor, if you like, was Kingspan, and Kingspan’s products were made of phenolic foam, and Kingspan's products were seen to be technically superior to all PIR products, because they had a better thermal performance and they also had a better fire performance.

So I believe that what the business wanted to do when it introduced the 4000 range was to step up its game and to, one, have a product which was or could be marketed as being more equivalent to Kingspan in terms of its technical properties, but also differentiate itself from other PIR.
Q. Right.
A. And I think that there were three key ways that they wanted to do that: one was to increase or improve its lambda value so that it would be -- I think at that time it would have gone from 0.023 to 0.022 , which would have been better than all of its other competitors in PIR; that it would have a class 0 fire performance, which
would match that of Kingspan's products; and that it would also have an improved thermal performance of its foil facers, and I think that's why they introduced it, and it was supposed to be kind of a premium PIR, I think.
Q. Leaving aside the benefit of having class 0 as a way of keeping up with or competing with Kingspan, my question was a slightly different one.
A. Sorry.
Q. What would class 0 signify to a buyer? What would it allow the buyer to do which, without class 0 , it couldn't?
A. Nothing, I don't believe. I'm not aware of any application that Celotex was offering products into where class 0 , or in fact fire performance in general, had any relevancy. So I believe that the -- that giving the product class 0 was solely a marketing proposition.
Q. Right. Okay.

Maybe you can't help me, but what did, if you look at the fourth bullet point down, the statement "Class 0 fire performance throughout the entire product in accordance with BS 476" signify?
A. I can remember a conversation at Celotex, and I know -I think that Lizzie Seaton was in the room and perhaps somebody else -- I'm sure there would have been someone

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else -- and there was I'm sure a section in Kingspan's literature where it said "class 0 for the core only" or "core only" or "class 0 for the foam core", and I think that there was an impression that that was not the correct way that you were supposed to test it, and that the reason that they had qualified that is because actually what you were supposed to do is test the product as you bring it to market.

So if you have a board which is comprised of a foam core and has a foil facer at the top and a foil facer at the bottom, that forms a complete product as you're selling it, and so therefore you should take that complete product, including all of its elements, and test it like that. And so I think that -- and I might be wrong -- when Celotex tested to class 0 , they tested it as it was, which is to say with the foil facers intact, and so you put that in and you receive your result.

So I thought it was supposed to be kind of a poke in the eye to Kingspan to say, "We've tested class 0 properly".
Q. I see. I mean, technically speaking, did the concept of class 0 throughout the entire product actually have any real meaning?
A. No, I don't -- I mean, I can only assume that if you
tested something to class 0 , you would submit your samples to the test body, they would do whatever tests were correct to do, and so, actually, to say it's throughout the product is -- again, is just a marketing proposition, I think.
Q. Right. Okay.
Either way, you were I think aware, as you have told us, that even though FR5000 had class 0 , whatever "throughout the entire product" might or might not mean, you knew that it couldn't be used in buildings higher than 18 metres?
A. Yes, that's correct.
Q. And you were therefore aware that there were requirements which products which could be used above 18 metres had to meet?
A. Yes.
Q. Yes.
Now, at paragraph 25 of your statement \{CEL00010054/9\}, you refer to the development of FR5000 and a product called FR4000. Just have 25 up on the screen. I'm not going to read it all out to you, but that's where you deal with this, and you say that the thermal conductivity of this product was improved, which then resulted in FR5000.
So was FR4000 effectively a predecessor to FR5000?
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A. Yes. So my understanding was that there was no
difference at all in that product from 4000 to 5000 , apart from the fact that it went from a lambda value of 0.022 to a lambda value of 0.021 . So it hadn't changed in respect of its fire performance, for example.
Q. Right.
Now, at paragraph 28 of your statement at page 9
\{CEL00010054/9\}, you say -- and, again, I' ll
summarise -- that RS5000 was not a new product but was
a re-branding of FR5000 to be used above 18 metres.
A. Yes, that's correct.
Q. And therefore there were no changes to the chemical composition that you knew about as between FR5000 and RS5000.
A. That's correct.
Q. The only difference, I think, is that unlike FR5000, RS5000 had passed, or purportedly passed, a BS 8414 test.
A. That's correct.
Q. To put it another way round, actually this same insulation board which you had called FR5000 had been subjected to that test and then renamed RS5000 so as to be able to get into the above-18-metre market.
A. That's correct.
Q. Now, I want to ask you some questions about your
involvement in the 18 -metre project.
In your statement -- I don't think we need to see
it , it 's paragraph 26 at page 9 \{CEL00010054/9\} -- you say that Jonathan Roper was given the task of the development of a product that could be used above 18 metres. If you want to look at it, we can certainly do that. Page 9, paragraph 26. Let's have that on the screen. You say:
"JR was a Product Manager within the Marketing Team. In late 2012, early 2013, he was tasked with the development of a product that could be sold in the above 18 metre market (RS5000), as well as a portfolio of other products and the management of how these products would be presented to the market."
A. Yes.
Q. Do you remember who gave him that task?
A. I believe he would have been set that task by his manager, who was Paul Evans.
Q. At paragraph 22, if you go -- well, actually, you can see it here. You say:
"JR was young at the time ... and had only been employed by Celotex for around 2 years; he had joined straight from university before he was tasked with this role and therefore had limited experience."

Did it occur to you to ask the question of anybody

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why it was that somebody so young and so inexperienced was being given this task, given the importance of the task?
A. No, I didn't.
Q. Did it cross your own mind? Did you ask yourself: I wonder why Jon Roper's got that job?
A. I think he was the only person who could have been given that job, because development of products was always managed by the marketing team and by product managers, and I think I understand that he was the only one at that time.
Q. You mean the only one available?
A. The only one completely, I think. I might be wrong, I apologise if I am, but it may have been that he actually comprised the entirety of product managers at Celotex.
Q. I'm not quite sure I understand that. You say --
A. I beg your pardon. So --
Q. -- he actually comprised the entirety of product managers. Do you mean he was the only person --
A. He was the only person who bore the job title product manager.
Q. I follow.
A. Sorry.
Q. Which I think he got as soon as he joined; is that
right?
A. No, I think that Jon was promoted to be a product manager. I think he -- when he joined, I think I said he had a mainly administrative role, and I believe that was about taking sales data that he was given and putting it into a spreadsheet for use by his manager.
Q. Yes. In fact, I think he was assistant product manager at first, he had that title .
A. Okay.
Q. Turning to Mr Evans, can I just show you paragraph 22 of your statement, while we've got it on the screen, or got that document at least on the screen, at the bottom of page 7 \{CELO0010054/7\} and top of page 8.

At page 7, paragraph 22, you say that, in the third line:
"PE [Paul Evans] was young when he joined Celotex and worked under CK [Chris King]."
A. Yes.
Q. "CK had a certain way of working, that I would describe as aggressive and he had a reputation for taking shortcuts. PE had no construction experience and as far as I was aware, he picked up everything he knew from CK."

When you say that there, do you mean that he picked up everything he knew about Celotex and the insulation

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business from Chris King?
A. Yes, I would.
Q. Are you implying as well that he shared the traits that you have described that Mr King had?
A. I don't think he shared the personality traits of Chris King, but I think in terms of how he would have approached his work in terms of managing his department and setting its goals, undertaking its tasks, I think he would have got that from Chris King. But they were different people in terms of their personality.
Q. In the way in which Mr Evans approached his work, would you describe him as aggressive and --
A. No, sorry --
Q. -- taking shortcuts?
A. -- I don't mean it as aggressive. So, no, I don't mean he's an aggressive personality. I don't think he got that from Chris King. He wasn't --
Q. No, leave aside his personality, but his style of management, was that aggressive? Punchy?
A. No, I don't think so. I'm just trying to explain myself clearly.

I guess in the way that projects were run at Celotex to bring new products to market, I think he would have taken that from Chris King, as in things should be done quickly. The most important things are having a product
which is saleable to the market, for example, which I think were things that he would have got from Chris King.

I don't think in terms of his personal style, which is to be aggressive, I don't think he took that from Chris King.
Q. No, I understand.

You go on to say of Mr Evans in the last sentence there:
" Effectively, he was promoted to Marketing Director without a lot of experience and in practice was able to make decisions within Celotex without any real checks or balances."

Was that a concern to you at the time?
A. No, it wasn't.
Q. If we go then to paragraph 26 again at page 9
\{CELO0010054/9\}, and come back to where we were before, you say there, after the reference to JR, in the last sentence:
"... JR reported directly to the Head of Marketing,
PE, who in turn reported to CC [Craig Chambers]. It was therefore my understanding that PE and CC oversaw or agreed to all final decisions that were made with respect to RS5000."

What was that understanding based on?
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A. I think that understanding is based upon the fact that I helped Jon with certain tasks on the 18-metre project, and I was involved with and witnessed conversations between all of those individuals with regards to the 18 -metre project, and from the things that I saw and the recollections that I have, I don't think that Jon would have had any autonomous decision-making with respect to that project and that he would have had to run everything past Paul.

I know that Craig was closely following that project, which was again a view that I formed from conversations I witnessed and also from, you know, my conversations with Jon, and my understanding was that Jon wouldn't have been given any decision-making power and he would not have been able to autonomously make any decision -- any important decision, I would say -- with regards to RS5000 or the project to develop it.
Q. Yes. Thank you.

Now, sticking on this page, if you look a little bit lower down the page to paragraph 28, Mr Hayes, you will see there that in the last three lines you say:
"JR's responsibility for developing RS5000 was therefore a significant responsibility, given that Celotex's ability to meet Saint Gobain's targets seemed to be heavily reliant on the success or failure of this
product."
Were you surprised that Mr Roper was given the task
of developing it, given his relative inexperience and
youth?
A. No, I don't recall thinking that at the time.
Q. Did you ask yourself at the time whether or not he was
tasked with doing what you say there because he was
inexperienced and would be therefore less likely to
challenge the decision-making?
A. That is not something that I would have thought at the time.
Q. Right.
If you go to paragraph 32 of your statement at
page 11 \{CEL00010054/11\}, two pages on, please, you say in the last line there:
"There was significant pressure on JR from PE at the top of the business to develop the product and do so quickly."
What made you think that?
A. So there were, I guess, a number of things that I witnessed which would inform that. I gave an example a moment ago about the length of time between the first and the second test, so that was one example. The conversations that I witnessed about how they needed a product which could be considered to be a new product
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in order to meet the budget in terms of certain amounts of profit coming from things which were considered to be new products. And I don't think, to my knowledge, that there were other projects running at the time which would have allowed to have met that target with different products, for example. So it was kind of RS5000, it has to be this product which is going to help us to achieve that goal.
And also just the level of interest that I saw. So an example would be the 18 -metre update meeting, which I suspect we'll come to, where Craig Chambers was at that meeting and he was, you know, very interested in that product -- in that project, I beg your pardon, and very involved in the discussions at that meeting, and that showed to me, because Craig was the managing director, that it was very important to the business.
Q. Yes.
It's right, I think, that in early 2013,
Jonathan Roper approached you and asked for your help in developing RS5000, or what was to become RS5000. Is that right?
A. That's correct.
Q. Although I think you say you weren't the most knowledgeable or longest-serving member of the team, presumably by that stage you had sufficient knowledge of
the FR product, FR5000, to be able to help him in the development of RS5000; is that correct?
A. Yes, so I think that -- yes, that is correct.
Q. You say at your paragraph 29 of your statement on page 10 \{CEL00010054/10\}, if we can go back a page:
"My involvement in the development of RS5000 was in my capacity as a TSO."

Does that mean that you had more technical expertise than Mr Roper?
A. I think in some areas, yes, that's fair .
Q. What areas?
A. So obviously I had been in the business longer than Jon, and my role had been in the technical department, so in areas such as the thermal performance of our products, their practical application in certain constructions, and the fact that I was able to do thermal calculations for our products I think would all have been things where I had a greater level of knowledge than Jon did.

I think that in terms of the fire performance of our products and in terms of fire testing of our products, I had never been involved in a project to develop a product before, I'd never been involved in fire testing, and my knowledge about the regulations to do with 18 metres were really solely based upon the technical bulletin which we looked at earlier, which

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said that, you know, effectively we don't have a product for this market.

So I think it's fair to say that in many areas my knowledge about our products and their application would have been greater than Jon's, but in terms of, you know, fire performance, fire testing, for example, I think we would have been starting off pretty much at the same place, which is at the beginning of the road.
Q. Yes.

Now, we've seen earlier your October 2010 training document, and I showed you some of that before. We might be able to take this a little bit more quickly.

Can we take it that the information set out in that training document was still in your mind and known to you when you became involved in early 2013 with Mr Roper on the development of RS5000?
A. I'm not sure I would say it was at the front of my mind. I obviously had the level of knowledge which is outlined in that document.
Q. Yes.
A. It wasn't knowledge that we put to use every day, because a lot of the enquiries which we received were to do with low-rise buildings, which is to say houses, and so queries regarding above 18 metres were relatively rare, although they did come through with a degree of
regularity .
Q. Yes.
Let's see if I can take this a little bit more shortly. You told us you were familiar with the fact that there was a distinction between class 0 , on the one hand, and the concept of limited combustibility on the other; you knew that?
A. Yes.
Q. You were familiar enough with the Building Regulations, and particularly Approved Document B, to know that there was an alternative route to compliance if you were going to apply insulation above 18 metres, namely a BS 8414 test in accordance with what was, in early 2013, BR 135 edition 2 from 2003?
A. Yes.
Q. And you were familiar, I think, with the requirements of BR 135, were you, namely that you knew that if you did a test under BS 8414, it was a full system test?
(Pause)
A. Yes, and I think that would have -- even if that wasn't front of my mind, I think we quickly understood that in terms of the project as well.
Q. Did you know or come to understand it that, under BR 135, the test that you did under BS 8414 in order to satisfy the BR 135 criteria would only apply to the
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system as tested?
A. Yes.
Q. Did you understand that the fire performance of the complete external cladding system was of critical importance?
A. That's something that would become apparent during the course of the project.
Q. At what point did that become apparent to you? (Pause)
A. So our knowledge increased as we went through the project, but an example which, again, I'm sure that we will come to would be: we had a meeting with a company called Sotech, and they talked to us about some testing that they had undertaken with Kingspan.
Q. I see. So the meetings in June and October 2013 with Sotech, the Eggintons?
A. I think that I was only at one of those meetings.
Q. Yes, we'll come to that. But I think in general terms you accept that, certainly at latest during the course of 2013, you came to learn that fire performance of the complete external cladding system as a system was of critical importance if you were going to do an 8414 test?
A. Yes.
Q. Yes.

Now, can we go to paragraph 39 of your statement, please, on page 13 \{CELO0010054/13\}. You say there:
"Our basic understanding at this point was that in order to be compliant under the relevant Building Regulations for a building above 18 metres it was possible to either: use materials of 'limited combustibility' (defined within the regulations) for all elements of the cladding system, this ruled out PIR and phenolic foam; or successfully complete the Test. Kingspan had therefore taken the latter option and passed the Test. It was decided that we would also undertake the Test and so we began seeking help with the components of our test rig."

Does that accurately and fully set out your understanding of the technical options facing Celotex in launching RS5000?
A. Yes.
Q. So putting it simply, you had to pass the BS 8414 test and meet the BR 135 criteria in relation to the system that you tested?
A. Yes.
Q. From what you knew at the time, did you think that others working with you on the RS5000 launch were aware of what you have set out there?
A. Yes.

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Q. Then can we look at BR 135, finally on this, just to get the absolute words in front of you and to get you to confirm them. This is at \{CELO0000584\}, please. This is a copy of the third edition of BR 135 which was published in the January of 2013, and we've seen from earlier evidence from Mr Roper that he became aware of it within Celotex not long afterwards, but during, I think, the May of that year.

Did you become aware of this edition at about that time as well, do you think?
A. Yes, I think that within Celotex or given to us -- I'm not sure who, possibly by Rob -- there was a copy of the second edition, and I think we came into possession of the third edition, I think -- possibly it might have been purchased for the sake of the project.
Q. Right.

If you look at page 33 \{CELO0000584/33\}, in this document, this is within annex B, as you can see from the top right-hand side of the document, and annex $B$ is about the performance criteria and classification for BS 8414-2. Dive straight into the middle of the annex. But if you look at that page, you can see on the right-hand side there are three bullet points, and underneath the bullet points it says:
"The classification applies only to the system as
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tested and detailed in the classification report. The classification report can only cover the details of the system as tested. It cannot state what is not covered. When specifying or checking a system it is important to check that the classification documents cover the end-use application."
Can we take it, Mr Hayes, that from the time you read this document in the first part of 2013, you were fully aware of those principles set out there?
A. Yes, and I'm not sure if my understanding came from reading this document or whether it was a combination of things that we were learning on the project, but I came to understand that the test was a test of the system that was on the rig on that day, and only covered what was tested and did not cover other things.
Q. So far as you could observe from those around you working on the RS5000 project, did they also know and understand the principles, if not the exact wording --
A. Yes.
Q. -- as set out in annex B there?
A. Yes.
MR MILLETT: Yes, thank you.
Mr Chairman, is that a convenient moment? I think
it's a convenient moment in the questions.
SIR MARTIN MOORE-BICK: Yes, very well.
    classification report can only cover the details of the
    system as tested. It cannot state what is not covered.
    When specifying or checking a system it is important to
        check that the classification documents cover the
            Can we take it, Mr Hayes, that from the time you
        ead this document in the first part of 2013, you were
        Yes, and I'm not sure if my understanding came from
        reading this document or whether it was a combination of
        understand that the test was a test of the system
        at was on the rig on that day, and only covered what
        far as you could observe from those around you
        uderstand the principles, if not the exact wording --
        Yes.
        as set out in annex B there?
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SIR MARTIN MOORE-BICK: All right? Thank you.
Would you go with the usher, then, please.
Thank you.
(Pause)
Thank you, 11.35, please.
(11.17 am)
(A short break)
(11.35 am)
SIR MARTIN MOORE-BICK: All right, Mr Hayes, ready to carry on?
THE WITNESS: Yes, thank you.
SIR MARTIN MOORE-BICK: Thank you very much.
Yes, Mr Millett.
MR MILLETT: Mr Chairman, thank you.
Now, Mr Hayes, am I right in thinking that you were the only TSO at Celotex involved in the testing of
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RS5000?
A. That's correct.
Q. Now, in terms of individuals, Rob Warren was also involved, wasn't he?
A. Yes, he was.
Q. To what extent was he involved in the testing, either in the design or the carrying out of the testing?
A. So Rob Warren was head of technical, so as well as managing our department he was basically the highest or most senior person technically within Celotex. So ... it might be helpful just to clarify that Paul and Rob and Jon were physically in very close proximity to each other, so possibly even Jon and Paul sharing an office or their offices being essentially right next to each other, so I think that it was very common for them to talk often, to share information, and I think that Paul and Jon would have leaned on Rob quite a bit for input, and he would have been involved in many discussions around the project.

Rob was present at key meetings, such as the 18-metre update meeting, which we may come to. I believe that Rob was present at both tests. He was certainly present at the first test that I was also present at. Rob was at the introduction training which was delivered by Jon and Rob to the Celotex technical

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centre team on the introduction of RS5000, and I think that Rob would also have been present, although I have to say I'm not sure whether this is the case, but it would be normal for him to be present at national sales conferences where new products are launched. So he may well have been at that event as well.
Q. Can we go to page 12 of your statement \{CEL00010054/12\}, please, and look at paragraph 36. You say there:
"Our initial considerations focused on figuring out what the rules and regulations were with respect to insulation for buildings above 18 metres and where we could find this information."

Then later on in that paragraph, you say:
"We knew that we wanted to compete with Kingspan's

## K15 ..."

Then you go on to say:
"... the starting point was Kingspan’s literature .
They had a publicly accessible data sheet and BBA certificate for their K15 product, as well as some literature on their website. We relied on no more than 10 relevant documents to provide this key information."

And you give some examples.
So do we take it from that that, although you had come to the project with the knowledge that we discussed just before the break about the BR 135 and BS 8414

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testing in general terms, your further researches took you to the Kingspan marketing literature?
A. Yes, that's correct.
Q. Yes.
Now, let's look at these documents, or some of them.
First, please, \{CELO0008509\}. This is a Kingspan technical bulletin, as you can see from the top left -hand corner, and top right-hand corner, third issue, September 2010.
Is this one of the documents that you looked at as part of your initial researches?
A. I believe so.
Q. It's called "Insulation for Ventilated Rainscreen Cladding Systems, Compliance with Approved Document B2". If you look at page 3 \{CELO0008509/3\} on that document, you can see that there is section 12.5 of ADB, which I think you were familiar with anyway; is that right?
A. Yes, we were familiar with that information from the technical bulletin number 26 , which then formed the basis for the document that I had produced, which I think gave this information.
Q. If you go to page 4 \{CEL00008509/4\}, at the top it says:
"Kingspan Kooltherm K15 Rainscreen Board is the first insulation board to achieve LABC Type Approval as a thermal insulation layer in rainscreen cladding
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systems. It remains the only insulation board that holds both BBA Certification and LABC Type Approval."

Was that statement there a factor in the decision that Celotex took later to obtain LABC registered details for RS5000?
A. I think that the fact that Kingspan had those accreditations would have informed Celotex's decision to get LABC approval.
Q. Yes.

Someone has written "expired" and underneath that "K15 week". I think that's what it says. Do you know whether those scribbles were on the document that you looked at, or whether somebody within Celotex added those?
A. That looks like my handwriting.
Q. Right.
A. And I wonder, looking at this document and the fact that it looks to be a scan or photocopy-type document, I wonder if this version of it has actually been taken off my desk, possibly.
Q. Right. Do you know what you meant by "expired K15 week"?
A. They might be separate notes, so it might be that "expired" is one note, and that possibly refers to LABC, although I don't remember why I wrote that now, and then
"K15 week" might be a different note, and referred to something different. But I don't remember now what -why I wrote that, "K15 week", or what that means.
Q. Right.

Then you can see a little bit lower down, just to finish this page off, it refers in the third paragraph down to the LABC type approval:
"... thus eases the planning process for projects incorporating Kingspan Kooltherm K15 Rainscreen Board, and applies in all situations shown on Diagram 40 of Approved Document B Volume 2, including those parts of a building more than 18 m above ground (Figure 5)."

And there in figure 5 is diagram 40 of Approved Document B, "Provisions for external surfaces or walls", which on the right-hand side there refers to class 0 as being the classification for fire for the requirement of external wall surfaces.

When you looked at that, did you ask yourself what the relevance of K15 having class 0 was, by reference in particular to diagram 40 as they've set out on the page there?
A. No, I don't believe that I did. I remember, when I first saw diagram 40, being quite confused as to what it actually meant, and whether it was referring to the performance of the cladding or the performance of

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insulation, but I believe what diagram 40 is talking about is the performance of the cladding rather than the performance of the insulation board, and I would have formed an opinion, I think, at some point, although I'm not exactly sure when, that actually that diagram is not relevant to insulation performance.
Q. Indeed. As such, did you then begin to question the reliability of Kingspan's marketing material such as this?
A. I don't remember querying that part of it or feeling that that particular part of it was -- I don't remember paying a lot of attention to that particular part of it, although there certainly were parts of Kingspan's literature that we found confusing, and not really clear how it matched what we were seeing as enquiries coming into the business.
Q. Right.

Can we go to \{CELO0008510\}, please. This is Kingspan's datasheet for "Kooltherm K15 Rainscreen Board, Insulation for rainscreen cladding systems", and at the top right-hand corner you will see that it was the ninth issue, March 2011. Do you see that?

Was this also one of the Kingspan documents that you looked at as part of your researches?
A. Yes, we definitely would have looked at the

Kooltherm K15 literature. Whether this was the exact dated version that we saw, I don't specifically recall, but if this is the version which was current at the time, which would have been, you know, 2013, then yes, it would have been.
Q. Yes.

Let me show you the third bullet point down on the right-hand side. It says:
"Successfully tested to BS 8414:2002, can meet the criteria within BR135 and is therefore acceptable for use above 18 metres."

First, given that the reference to 8414:2002 was a reference to part 1 , did you understand that, at that time, K15 didn't have a pass at BS 8414-2:2005?
A. Yes, I believe we became aware of that during the project and as we looked at their documentation.
Q. Did you also become aware of the fact that, notwithstanding that Kingspan had not had a pass at BS 8414-2:2005, nonetheless it was being used on steel frame constructions? Did you know that?
A. Yes, I think I would have done.
Q. What did that tell you about the way Kingspan was using or not using the tests to sell its Kooltherm K15?
A. I think initially it told us that they had managed to gain wide market acceptance for their product, with lots 61
of different types of constructions, I think, not only the variants of the steel frame to masonry, but possibly with lots of different cladding types as well, and they had managed to do that on the basis of -- I think the literature only references a single test that they had completed.
Q. Then sticking with the wording, as I've shown you, it says in that bullet point:
"... can meet the criteria within BR135 ..."
Now, you told us earlier that, at least come the first part of 2013, you had read annex B of BR 135 and understood that the criteria there only applied to the system as tested. Was that so when you looked at this document?
A. Yes, I think we would have had that awareness as we reviewed this document.
Q. Then when you go on to see the words that follow it :
"... and is therefore acceptable for use above 18 metres."

The "therefore", did you think that that meant that Kingspan were saying that K15 could be used in any system, or were they saying only in a system exactly the same as the system tested?
A. I think -- and it's difficult to say exactly when you formed a view, because I've obviously looked at these
documents many times from the beginning of our RS5000 as I sit here today, and so it's sometimes difficult to say what was in my mind at that time, but I believe we would have formed a view that this was a piece of clever marketing, and that they were trying to imply that their product could be used with a wide variety of different constructions.
Q. Even though --
A. Even though that was not strictly speaking correct.
Q. Right.

When you say clever marketing, let me just press you just a little : did it occur to you at the time when you read this that the statement "and is therefore acceptable for use above 18 metres" was misleading?
A. I don't -- I think at the time we would have wondered how they were able to do it, and possibly we might have thought: is there a trick that we've missed? So, for example, did they have an engineering report or a technical judgement which might have meant that they were able to show that they could be used with other systems? Maybe they had some testing that they hadn't referenced on their literature.

So I think certainly initially it was: how are they able to do it? So I don't think we would have necessarily formed the opinion at the very beginning:

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Kingspan are doing something wrong, there's something rotten here. I think it would have been how, how are they doing it, would have been the question to start with.
Q. Did you note when you read that that there is no caveat or disclaimer here that K15 can only be used in the same system as that tested?
A. I think, to be fair, I probably would read the whole document and see whether that has been placed into context somewhere else. So I can't immediately recall what's on the other pages of this document, but perhaps they have included a caveat somewhere else. But I would agree that if you look at that statement in and of itself, that is misleading.
Q. Yes.

Well, let's look a little bit lower down, page 6, just to make sure that we don't only take a partial look at the document. Go to page 6 \{CELO0008510/6\}. Right-hand side, under the heading "Fire Performance", you can see there, there is a reference to class 0 at the top, and then it says, halfway down underneath the test:
"Kingspan Kooltherm K15 Rainscreen Board in the construction specified in the table below, when subjected to the British Standard fire test BS 8414:2002
(Fire performance of external cladding systems. Test methods for non-load bearing external cladding systems applied to the face of a building ), has achieved the result shown."

And it sets out the construction and the result.
It says, under "Result":
"The tested product meets the criteria stated within BRE 135 (Fire performance of external thermal insulation for walls of multi storey buildings) and is therefore acceptable for use above 18 metres in accordance with the Building Regulations/Standards."

Did you read that?
A. Yes, I'm sure that we would have done.
Q. Did that strike you at the time as a disclaimer or caveat?

## (Pause)

A. I think they're trying to strongly imply that you could use that in multiple constructions, but it sort of doesn't make logical sense, because on the left -hand column they've provided details of a system that passes, but on the right-hand side they are, I think, strongly implying that because of that test you can use it in any building above 18 metres.
Q. And was that a thought you had at the time when you looked at this document as part of your initial

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researches?
A. I think we would have come to that conclusion at some point, but as I said, I think initially when we looked at it, I think the thought would have been: how have they done it? Is there something that's not clear? Have they got, you know, something up their sleeve, I guess, which would allow them to make that statement? Q. Yes.

Now, looking a little bit later in the year, 2013, can we go to \{CEL00003008/2\}, please, first of all. About a third of the way down the second page there, you can see that there is an email sent on 18 October, you can see that, from Jonathan Roper to you, "Kingspan CTC Enquiry", and Jonathan Roper I think says:
"Anything I've missed?"
Then there is set out:
"Purpose - To gain further information on what recommendations Kingspan are giving in regards to the use of K15 in buildings above 18 m .
"Project - First project of this scale
"Student Accom/Commercial
"Metsec frame, cement particle board, Nvelope (NVI) bracket systems with Trespa Meteon 2 mm panels rivet fixed.
"Objectives -
-" Is K15 applicable with all cladding systems ( 2 mm or 3 mm aluminium panels TRESPA/MARLEY etc) as their BBA certificate states the test used a cementious board as the overcladding?"

Then there are further objectives and questions set out underneath that.

The third one you can see is:
"Which particular system was tested to BR 135 and what assurances can they give that it covers all cladding systems?"

Was this exercise one which was part of a mystery shopper exercise to try to find out more about K15?
A. I believe that's exactly what it was.
Q. Right. If we scroll up, I think we can see how this turns out.

You go back to Jamie Hayes(sic) on 18 October, bottom of page 1 , top of page 2 , and then on page 1 \{CE:00003008/1\}, if we just go up to that,
Jonathan Roper sends an email to Debbie Berger, 18 October 2013, copied to you:
"Hi Debbie,
" If you are still happy carry out the mystery caller scenario on K'span, could the three of us get together early afternoon today?
"See the brief below ..."
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Now, we have seen the first bullet point and the third bullet point questions.

Is it right that, by this stage, you and Mr Roper were aware that the BR 135 certification only covered the tested configuration and components? I think that's right, isn't it, looking at BR 135, as we did earlier?
A. Yes, I think that's correct, yes.
Q. What prompted you to ask these two questions about the breadth of the application of K15?
A. I think it goes back to what we were just talking about when we could see how Kingspan were marketing their material, and confusion within Celotex of how they had been able to be widely accepted, and just trying to find out some more information about how they were able to do that, about what they were telling customers and how they would answer enquiries to potential customers.
Q. Right. So the idea would be to pose as a potential customer with a student accommodation type building and ask those questions and see what they said?
A. Yes. I think a key part of it was to try and get them to send us a copy of their test report.
Q. Right.

The email at the top of this thread on page 1 suggests that Debbie Berger may have carried out the mystery shopper exercise. Do you know whether she did?
A. She did.
Q. Do you know what the results were?
A. Yes, I think that it was undertaken in the same room with me and Jon, and that Debbie was on the phone and we were listening in, although I don't think we had the technical capability to listen to both sides, so it may have been that we were just listening to Debbie's half of it. But I'm sure she would have fed back what happened in the conversation when the conversation finished.
Q. When you say you're sure she would have done, did she?
A. Yes, she did.
Q. What did she say?
A. Well, in fact, we could hear ourselves how the conversation was progressing, and I believe that when she spoke to an operative of the Kingspan technical centre, they told her explicitly that Kingspan was suitable for her project, and I believe that she then said, " Brilliant, can you please send me a copy of your test report", and then I understand -- my understanding is that the person that she was speaking to became quite nervous, backed down, and said, "Oh, no, we can't do that, and in fact what you'll need to do is submit your full enquiry to us in writing, and I'm not able to help you any further on the telephone".

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Q. Did you submit a request in writing or did Debbie Berger?
A. No.
Q. You just stopped at that point?
A. Yes, because I think we realised it was not going to be possible to push that any further.
Q. Right.

Why did you think that it wasn't going to be possible to obtain Kingspan's test report?
A. I think we had formed a view that that would be very closely guarded, and I think that it wasn't entirely unusual for information to come into the business from Celotex's partners, so it might be that a distributor that we had a relationship with or maybe another -- or a specifier that we had a relationship with would perhaps give us documents that they had got from other companies that you wouldn't be able to ask for directly, and I think from the fact that we hadn't ever heard of anybody having seen their test report, I think we formed a view that they were very careful not to release it to anybody or to allow it to be seen by the open market.
Q. Yes. I mean, after all, that was, it seems, the same practice that Celotex followed, not to let test reports out because --
A. That's absolutely correct.
Q. So did it play in your thinking that because Celotex were also similarly very guarded about their own test reports, they wouldn't expect Kingspan to be any different?
A. I'm not sure that I formed that view, because I think the kind of test reports that we would have had previously wouldn't have been so relevant, so they would be things like a class 0 test report, and I'm not sure how that would be relevant to a customer or that we had very often been asked for those.
Q. Right.

Can we then turn to meetings that you had with IFC and Sotech. You referred to Sotech earlier on in your evidence.
A. Yes.
Q. Can we go to your statement at page 13 \{CEL00010054/13\}, please, and look at paragraph 39. We have looked at this before, I think. You confirmed that, and you say there that once you had understood that the options were either to use materials of limited combustibility or successfully tested to BS 8414 -- and I'm summarising there -- you say, if you look in the last sentence:
" It was decided that we would also undertake the Test and so we began seeking help with the components of our test rig."

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Do you remember when the decision was made to seek help with components of the test rig for the test?
A. I don't know. So my role on the project was to help Jon, really, with tasks as and when I was asked to do so, so my work on the project represented a fraction of a percentage of my time, which was spent primarily doing my day-to-day work, which is answering customer enquiries. So I think Jon would have arranged this meeting, have asked me to go with him, I would have got permission to do that from my line manager, which would have been Rob Warren, and I would have attended the meeting with him.
Q. Right. And who was it who made the decision who undertake the test?
A. I think the decision would have been made by -primarily by Paul Evans and Craig Chambers.
Q. Did you yourself have a discussion with Craig Chambers about undertaking the test?
A. No, but I was present at a meeting that Craig was at, which was the 18 -metre update, and actually I think perhaps that meeting was when a decision perhaps was made to undertake the test.
Q. Right.

When you refer to the 18 -metre update meeting, was that a meeting on 4 November 2013 for which Mr Roper

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produced some slides?
A. Yes.
Q. Right. We may come to that later on, but can I just ask you, in light of the decision to undertake the test, about some of the meetings with IFC and Sotech.
If we can go to paragraph 40, the next paragraph of your statement, you say:
"In or around May-June 2013 JR arranged a couple of meetings at the IFC and I went along with him on at least one occasion. We met a person called Peter and a lady, whose name I cannot now recall; the lady would later come along to the first BRE test with us."
Pausing there, was that Peter Jackman?
A. Yes, it was.
Q. And the lady, was that Dr Parina Patel?
A. Yes, and actually since I submitted this statement, I found a business card for that lady, and her name was Parina Patel.
Q. Right.
If we go to \{CELO0010340\}, this is an email run at the end of May 2013, and if you look at the second email down on that page, this is an email from Jonathan Roper to you, 28 May 2013:
"Jamie,
"Peter at IFC has asked if we can make a 2 pm
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appointment next Monday to discuss above 18 m ."
Then if you look at your response to him at the top of page 1, you go back to him the next day and say:
" It 's ok with me Jon.
"How long is the journey?"
It looks as if the meeting had been fixed for
3 June 2013, which was the next Monday. There is
a meeting later on, on 22 June 2013, for which we have
notes, but we don't have any notes of any meeting early in June 2013.

Did the meeting take place, do you think?
A. Wow. Erm ... I ...

## (Pause)

I was at one meeting, I believe, at IFC's offices, but I can't actually remember the date that that was.
Q. I think it was October, in fact.
A. Okay.
Q. We will come to the note of that in a moment. But you don't recall meeting IFC in June at all?
A. I may be getting the two different ones confused.
Q. Right.
A. I remember one meeting, but $I$ don't remember the date of it. But I think I say in my statement that I may have been at more than one meeting.
Q. Right. It may be we can disentangle this a little bit.

It seems that there was a meeting in October 2013. Let me just show you the note of that, because it's a meeting at which Sotech were also present. \{CELO0011052\}. We can see that this is a meeting on 3 October 2013 to discuss the above 18 metres fire test. You can see that, at that meeting, John Egginton from Sotech was there and David Cooper from IFC was there, but not Peter Jackman or Parina Patel, but you were there at that meeting.
A. So I think that was the meeting with IFC, and that was at their offices --
Q. Right.
A. -- which I attended, and I think that, in this meeting, we're at Sotech and David Cooper has driven to meet us at that meeting.
Q. Fine. So you met IFC people twice but you had one meeting with the IFC at their offices?
A. Yes.
Q. Right. We will come back to that.

We'll take that off the screen and go to paragraph 41 of your statement, if we can, please, also on page 13 \{CELO0010054/13\}, as you can see in front of you. You say there:
"From our meeting with the IFC, we established that a Field of Application Report ('FOAR') involves an

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expert's opinion that a product was acceptable for use in a way similar and not identical to the way tested in the test rig."

Now, as far as you recall it, is this right: it was the IFC who told you that a field of application report was possible?
A. Yes, we'd met with Peter and Parina, and possibly another member of their team. Peter gave the impression of being extremely experienced. He was a character, and he was not shy in putting forward that he was a heavy-hitter, and he talked about how he had effectively, in his memory, drafted the Hong Kong fire regulations, and, yes, they gave the strong impression that it might be possible to use an 8414 test and, from that test, produce a field of applications report which would allow some components of that rig to then be varied.
Q. Did Mr Jackman or Dr Patel identify any official guidance or industry practice which allowed a field of application report to be used in conjunction with a BS 8414 test result?
A. Not that I remember. They may have referenced some standards which I don't now recall.
Q. Right.

Now, just to go back then to the meeting on

3 October, the note of which I have just shown you, you deal with that at paragraphs 42 and 43 of your statement, over the page, page 14 \{CELOOO10054/14\}, and you set out your recollection of that.

We can look at the note of the meeting, as I say. It's at \{CELO0011052\}, which is what we just looked at a moment ago, and I would like to go back to with you.

It says -- and this is we think Jon Roper's note. Can you confirm that?
A. I actually believe that I wrote this.
Q. You thought you wrote this?
A. Yes.
Q. Okay.

Under "Fire test ":
"Very problematic to pass - Kingspan failed twice with standard cavity barriers."

Just on that, do you remember who said that?
A. Yes, that would have been John from Sotech.
Q. Then third bullet point down:
"Still no idea how Kingspan support the use of decorative cladding as their fire test uses a non combustible cladding."

Do you remember who said that?
A. I think that is -- that note is intended to show, I think, a view that was formed by the people at that

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meeting together, as opposed to one person saying that.
Q. So that was a joint no idea?
A. Yes.
Q. Right.

Then the reference to decorative cladding, as you can see in that third bullet point, is also referred to in the second bullet point:
"John at Sotech sceptical about pass with decorative cladding."

What did you understand by the phrase "decorative cladding"?
A. Well, as I look at that today, I'm not sure I remember exactly what is meant by that. I think that it is either a reference to any cladding which is a normal cladding panel, and by a normal cladding panel I mean something that you could actually -- was put to market to be a cladding panel of a building, as opposed to the cement board that Kingspan had used. But it might also refer to -- because I think -- and I might not have remembered this correctly, but I think that Sotech specialised in certain types of cladding, and I think that they did aluminium cladding and high-pressure laminates, and so it may have been, when he's -- maybe when John is talking about decorative cladding, he's thinking the types of cladding that he uses, which is to
say aluminium and high-pressure laminates, and might not, for example, include things like fibre cement panels, which I don't think John ever got involved in.
Q. Were you aware that Sotech had previously met Jon Roper in June 2013 and told him that they had attempted to test to BS 8414-2 using Kingspan K15 and had failed?
A. No, I was not aware of that, but I think that the same conversation happened at this meeting, and John -- or not the same conversation, but John did reference testing with Kingspan and failing during this meeting.
Q. Right. Were you given any details about the failed Kingspan tests?
A. Yes.
Q. What did they say?
A. Well, I got the impression that he wasn't supposed to talk about it because he had possibly been under a non-disclosure agreement, but he made his own decision that he would do so anyway, and he described them as failing quite badly, and I think he made the comment that one of them had failed so badly that there had been concerns from the BRE that it was going to set the roof of the burn hall on fire .
Q. Right. Indeed, at paragraph 42 you do say that Sotech told you that K15 had failed badly using aluminium cladding.

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That's not in your note. Why is it not in your note?
A. I'm not sure. I think in the first paragraph I've got "Very problematic to pass - Kingspan failed twice with standard cavity barriers", perhaps I felt that covered that, or perhaps I was trying to show -- trying to be more formal, perhaps, in terms of how this document is laid out, rather than being anecdotal, I suppose, or ... Q. Right.

Can we just look at paragraph 42 \{CEL00010054/14\}.
You say in the last part of that paragraph, three lines up from the end, that:
"... John Egginton from Sotech, who informed us that Sotech had undertaken a Test with Kingspan which had failed badly using aluminium cladding and following that, Sotech had no further involvement with the testing of Kingspan products."

So although it's not in your note, you're confirming, are you, here today, that that was the subject of discussion at that meeting?
A. Yes.
Q. Although it's not in your note?
A. No, that's correct.
Q. So can we take it from that meeting that you were aware as a result that aluminium rainscreen panels would not
likely have passed with RS5000 either?
A. Yes.
Q. Now, do you remember whether there was any discussion of ACM panels, aluminium composite material panels, at that meeting?
A. I think at that time, I don't think I would have necessarily understood what ACM was or what the difference between ACM and aluminium was. So I understand now that there are differences between solid aluminium and aluminium composite materials, I understand that there are differences between aluminium composite materials, but I don't recall that I understood that well at the time that I wrote that note.
Q. Had you not come across ACM panels in the course of your by then eight or nine years at Celotex?
A. I'm sure that I would have come across them. So just to try and expand upon that a bit, many of the enquiries that we received into Celotex were for low-rise buildings, so rainscreen enquiries would have been a lot rarer. But also, the major part of our job in technical was to perform $U$-value calculations for people, and when you do a U-value calculation for a rainscreen cladding application, it doesn't matter what the actual rainscreen panel is .
Q. I follow. I follow.

Going back to the note, if we can, at \{CELO0011052\}, you can see in the first bullet point it says, "Very unlikely to pass".

Was that your view or something that was said at the meeting, just to be clear?
A. I think that is a record of a consensus which was formed at that meeting.
Q. Right. I mean, did John Egginton or David Cooper say: you, Celotex, are very unlikely to get what became RS5000 to pass a BS 8414 test?
A. I don't remember that explicitly . My impression was -and I have to be careful, because I've seen a lot of evidence and documents, but I think I'm correct in saying that the impression that I had at the time was that John didn't like Kingspan very much, he didn't like them as people, he didn't like their product, he liked mineral wool, and that he I think equated PIR and phenolic foam with being quite ... he saw them in the same way, I think. So I think that he would have had the view that if Kingspan haven't passed, you are not going to pass.
Q. Looking at the fourth bullet point, it says:
"Very unlikely to pass on the basis that Celotex FR5000 is slightly better than Phenolic
(according to IFC testing )."
Can you explain what that means?
A. I think that goes back to the meeting that we had had with IFC, and they had expressed a view to us that they felt that FR5000 might have a slightly better performance than phenolic foam in terms of fire, and therefore you might be able to do slightly more with it in terms of passing a test than you would be able to do with phenolic foam.
Q. Right. I would just like to try to understand the sentence, "Very unlikely to pass on the basis that Celotex FR5000 is slightly better than phenolic". Why would it be very unlikely to pass if FR5000 was better than phenolic?
A. Because -- I guess because you would need to be not just a little bit better than Kingspan, you would have to be a lot better, and that perhaps small variances between PIR and phenolic are not going to be enough to overcome the fact that Kingspan had seemed to have failed quite badly.
Q. It still doesn't quite explaining the words in the sentence "on the basis that Celotex FR5000 is slightly better than phenolic". If Celotex FR5000 was better than phenolic, wouldn't that mean that it was more likely to pass than Kingspan?

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A. Yes, it would.
Q. It doesn't say that, though?
A. No, it doesn't.
Q. So can you explain?
"Possible idea to design 'double cavity fire barrier '."
Who said that at the meeting?
A. I think it was an idea which was put forward to us by John at Sotech.
Q. Would that be an unusual feature in a construction, in your experience as it stood at the time?
A. No, I don't think so. I think at that point in time we didn't really understand what were the parameters that would make a test more or less likely to pass, so when John came up with the idea of having a double cavity fire barrier, I think we probably thought: oh, that's a pretty good idea, maybe we can take that away and have a think about that.
Q. Right. Did he say that he had used one?
A. No, I think he was spitballing, I don't think --
Q. Spitballing? Can you just explain what that means?
A. Yes, sorry, I think he was just sitting there and giving ideas off the top of his head. I wasn't aware that he was saying, "There is this product in the market that you could use", I think he was saying you could kind of make that yourself, if that makes sense, by using two products which are commonly available and combining them into one.
Q. Right, okay. Is that something you had thought of

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yourself before or --
A. No.
Q. -- was this news to you?
A. In fact, our knowledge of fire barriers, I think, as we stood there at that meeting was virtually zero.
Q. He was the one who came up with this idea of the double cavity fire barrier as a possibility?
A. Yes, but just to -- what he meant there was a metal tray with a mineral wool on top, and that is a completely different concept from what would later become the fire barrier with the missing material.
Q. I follow.

Can you go to page 2 \{CELO0011052/2\} in this
document, please. At the top of that page, you see there in the first bullet point it says:
"On the basis that the fire test is going to be a close call (if we can even pass it) I think we can not rely on the field of applications report allowing a breathable membrane over the face of the insulation."

Does that bullet point record your own thoughts or something that was said during the meeting by somebody, or anybody else?
A. Yes, this is to do with positioning of breathable membranes. So in our literature for rainscreen cladding, and there was literature for rainscreen
cladding because it was used or was suitable for use on low-rise buildings, Celotex showed that a breathable membrane would be positioned on the outside face of the insulation, which means that, in a fire event, the flame would hit the breathable membrane before it hit the insulation.
Q. Right.
A. Kingspan had always shown the breathable membrane behind the insulation, where it's hidden away between the insulation and the sheathing board, and my thought here was: oh, you know, we need to think about this, because actually if we have the breathable membrane in the position where it has always historically been required to be for Celotex, you know, isn't that going to cause a problem? And my thought there is that the field of -because I don't think it would be common to put the breathable membrane in the test itself . So I'm trying to raise the thought there about I don't think a field of applications report, such as might be produced by IFC, is going to be -- allow you to -- or account for the fact that you have this breathable membrane over the front face of the insulation.

It wasn't a concern that anybody else was really interested in, and what happened in the end was that Celotex changed its position on where the breathable

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membrane should be, and basically said, "We're going to pick it up and move it behind the insulation, the same as Kingspan would".
Q. Is it fair to say that the upshot of this meeting was that you came away not particularly optimistic about the prospects of passing a BS 8414 test for RS5000?
A. Certainly with the types of cladding that John did, which were various types of metal claddings and high-pressure laminates.
Q. Those types of cladding were -- is this right? -- fairly representative of a wide range of cladding panels being used in the market?
A. Yeah, I don't think at this time, or really much later, I really ever understood what the percentages were of what types of cladding panel would be most commonly used. So let's say that you have 100 buildings, would 60 of those buildings be ACM and 20 of those buildings be fibre cement and eight of those buildings be terracotta? So I don't think I really understood what percentage of the market those types of cladding panels would be.
Q. Did you have any views at the time about the representative nature of the cladding panel that Kingspan had used in order to pass their 8414 test?
A. Yes, I think the feeling was that it was completely

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unrepresentative of any panel which would ever be used in real life.
Q. Right.
Can we look at \{CELO0000615\}, please. This is a copy of Kingspan's October 2008 BBA certificate, which has been disclosed to the Inquiry by Celotex.
Was it in Celotex's possession because you had considered this document as part of your research, do you think?
A. I'm sure that it would have been, yes.
Q. Right.
Now, let's just look at the first page of it.
Three-quarters of the way down you can see "Behaviour in relation to fire ", under the heading "Key factors assessed", and it says:
"The boards will not contribute to the development stages of a fire. The product has been tested to BS 8414-1:2002 for one specific construction on masonry walls (see section 7)."
Did you read that, do you think, at the time when you looked at this?
A. I' \(m\) sure that we would have done, yes.
Q. Yes, and if you look at section 7 , page 5
\{CEL00000615/5\}, at the bottom of the page there it says:
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"The following fire tests have been undertaken:
"to BS 8414-1:2002 for masonry substrates."
It identifies the build-up there, and in the second line it refers to the 6 -millimetre thick cement particle boards.

So when you saw this, you would have realised, would you, that the panels which had been used on the exterior face of the test rig by Kingspan was a 6-millimetre thick cement particle board?
A. Well, I think there was a bit more confusion than that, because I think in the document that we looked at together a short while ago, which was their datasheet, it described the cladding as being a 6-millimetre non-combustible board.
Q. Yes.
A. And I think our basic understanding at the time was that cement particle boards weren't normally non-combustible. So, actually --
Q. Right.
A. -- it's not just the fact that that's not a normal cladding board; I think there seems to be some inconsistency between the BBA certificate and Kingspan's literature .
Q. Okay, thank you.

While we're on this, you can see under section 7.1,
under the heading "Behaviour in relation to fire ", it says:
"The product is classified as Class 0 or 'low risk' as defined in the documents supporting the national Building Regulations. The product, therefore, may be used in accordance with the provisions of:
"England and Wales - Approved Document B, paragraph 8.4, Volume 1 and paragraphs 12.5, 12.6 and 12.7, Volume 2 (see also Diagram 40)."

Did you see that at the time?
A. I'm sure that we would have done, yes.
Q. Did you ask yourself what the relevance of section 12.7 of ADB was, given that, on any view, K15 was never a material of limited combustibility?
A. Well, I think that Approved Document B has those paragraphs, and some of the paragraphs talk about it has to be of limited combustibility and some of those paragraphs talk about that you could use an 8414 test. So I'm not sure, as I sit here, whether paragraphs 12.5, 12.6 and 12.7 are the paragraphs which talk about it being of limited combustibility or whether they are the paragraphs which talk about it being able to have an 8414 test.
Q. Well, take it from me that section 12.7 relates to materials of limited combustibility. That's what it

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deals with.
A. Okay.
Q. It sounds to me as if that didn't strike you at the time as a strange reference, given that, on any view, K15 was never going to be and never was a material of limited combustibility.
A. I have to say, I don't remember, because I'm not sure whether we would have looked at that and said, "Okay, it 's saying that it can comply with Approved Document B" and formed the view that that was because it had been tested to 8414 , or whether we would have actually looked at it in the level of detail where we got out Approved Document B, went to those paragraphs and said, "Okay, what's going on there?"
Q. You never did that.

I mean, just to be clear, what it's saying is that the product is classified as class 0 , and then goes on to say, "The product, therefore, may be used in accordance with the provisions of ", et cetera, paragraph 12.7.

Did you make the link between the two and ask yourself: how could it be that a BBA certificate could say that, because a product was classified as class 0 , it therefore satisfied the provisions of paragraph 12.7, which was about limited combustibility?
A. I think we and I would have known enough to know that that was not correct.
Q. Right. So did you therefore wonder how Kingspan's BBA certificate could be remotely reliable?
A. I think that we did view it as being unreliable. I think that we did -- were confused as to how they had got generic wording in their BBA certificate to say that it was or to imply that it was acceptable on, you know, pretty much any -- and didn't -- I think we were surprised that it didn't contain wording clarifying further that the test would apply to a single tested system and that it wasn't clearer in that respect. But I'm not sure I would have looked at it and cross-referenced those paragraphs and said, "Okay, it seems to be getting confused between class 0 , which is only to do with cladding panels, and insulation ".

So I'm not sure I would have formed that view at the time.
Q. Right.

Can we look at paragraph 48 of your witness statement at page 16 \{CELO0010054/16\}. You say there:
"The discrepancies and lack of transparency in the record of the cladding used in the Kingspan publications also suggested to our team that they had undertaken and passed the Test using one type of board and latterly

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referenced the additional use of other types of cladding with their product in their marketing materials. PE, JR and RW collectively wanted to include a panel on the Celotex test rig that could and would be used by the market as it was tested."

Did you think at the time that, if in fact Kingspan had undertaken and passed the test using one type of board and then referenced the additional use of other types of cladding with their product in their marketing materials, that would have been a legitimate approach?
A. No, I think there was an awareness amongst those individuals, I include myself, and the business, that actually that was not a correct approach to take.
Q. So I don't want to put words in your mouth, Mr Hayes, but did you take the view at the time that Kingspan were using the test that they had undertaken and then essentially misusing it to market K15 into a wider set of applications than was legitimate?
A. Yes, that is the view that I formed.
Q. Yes.
A. I think that is a view that was formed over the course of the project, because we explained earlier how, when we were looking at Kingspan's literature , it didn't -that view of, "They're doing something wrong" was not immediately formed, it was: how are they doing this? Do
they have extra testing? Have they got field of application reports and engineers' judgements which allows their product to be used? And I think it -- the view was formed over the course of the project that no, they probably didn't have those things, and therefore they have managed to find some way to get their products accepted without the correct documentation to support it .
Q. Does it come to this: that by the end or towards the end of 2013, you had done enough work to form the view -and tell me if this isn't fair -- that the market into which you wanted to launch what became RS5000 had been skewed by Kingspan's marketing literature?
A. Yes.
Q. I want to turn to the design of the February 2014 test, and as a run-up to this in chronological terms, we discussed earlier very briefly the meeting on
4 November 2013. Do you remember attending such
a meeting with Mr Roper, Mr Evans and Mr Warren?
A. Yes, I do.
Q. We can, just to confirm this, look at the document which convenes that meeting, \{CEL00003011\}, please, just to confirm that that's the invitation to the meeting, and the attendees at that meeting. Is that right?
A. Yes.

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Q. Now, we can see that one of the attendees was Craig Chambers. Do you remember whether he was there?
A. I'm sure that he was.
Q. Do you remember him being there?
A. I definitely remember him being there.
Q. Right.

Let's look at the slides, then, from the meeting, which Mr Roper told us that he prepared. \{CELOO011199\}. I would like just to scroll gently through the first eight slides just to set the context and refresh your recollection about what was presented at the meeting.

If we could turn to page 2 , you can see there is Approved Document B, and section 12.5.

If we could turn to page 3 , we can see that here is a description of BS 8414 in both of its formats, and the principle.

If we go to page 4, we can see that here is $\operatorname{BR} 135$, a reference to that, and some very basic data about that, but says in the first bullet point, "Large Scale Test".

If we go to page 5 , we can see the diagram taken from annex B about high-rise buildings and fire propagation up the exterior.

If we can go to page 6 , we see "Ventilated Façade Market" and some figures there, rigid board market

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estimated at 5 to 7 million there in the last bullet point.
Then in the next slide, page 7, "External Cladding Materials ", and a long list, and you can see there the fourth one down is aluminium composite, and underneath that steel and then zinc, stone, fibre cement, building boards/carrier boards.
The last bullet point there, "Building
Boards/Carrier Boards", had you actually yourself come across those being used as an external cladding material on a building?
A. No.
Q. Can you help us as to your understanding about the order in which these cladding materials are set out? Does it go from the most common to the least common, or is it just random, do you think?
A. I believe it's probably random.
Q. All right.
A. But I didn't -- I mean, I think Jon put these together, but it doesn't look to me that there is any kind of order to that.
Q. If we look at page 8 , slide 8 , these are the cladding manufacturers.
Then at slide 9 \{CELO0011199/9\}, we've got
"Kingspan K15", and we have five bullet points there:
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-" Tested To BS 8414-1 Onto Masonry
-" Non-Combustible Substrate Required
." BBA Certificate
-" LABC Approval
-" Fire Barrier Testing."
If we go on to slide 14 \{CELO0011199/14\}, we can then see five options. Did you think that these were alternative routes that you thought Celotex might be able to follow? When I say you, I mean you, plural, at the meeting.
A. Yes.
Q. The first one is:
"Worst Case Scenario With Field Of Application Report."
What did you understand by worst-case scenario?
A. Well, I think the most likely explanation for that is that worst case means cladding with the worst performance. So you would take -- you would try to find the worst performing cladding that you could that you might still pass with.
Q. Right, I see. Then use an FOAR with it?
A. Yes.
Q. I follow.
The second is:
"System Route (Limits Scope- Requires
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## Re-Education)."

Was there any discussion at the meeting about what re-education was needed?
A. So this is -- I have to be careful because actually I don't remember the meeting that well, but I've seen and heard so many things that I'm just trying to limit myself to what I knew at the time.
Q. Yes, thank you.
A. But I think it refers to going out and telling the market, "Kingspan are wrong, everything you have been doing is wrong, actually you shouldn't have been using those products with all different types of cladding, you should have been using it only exactly as it was tested ".
Q. Right. Was there a view taken at the meeting, as best you recall, about whether that was really realistic?
A. I don't remember that. I'm sure that there would have been conversation around that, as it's a talking point on that slide.

I have to be careful to try and -- you know, what I remember at the time. I would say that if there was conversation, it would be extremely unlikely that any of the people at that meeting, in terms of decision-makers, which is Paul or Rob or Craig, would have wanted to go down that route.

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Q. Then we have two bullet points, test and launch with or without BBA and LABC, and then, "Opt Out Of Above 18 m ".

Was there any serious discussion at the meeting about whether you should opt out of the 18 -metre project?
A. I don't remember very well. I think that possibly Rob may have given the opinion that Celotex should either launch with a system and say, "This is the only system in which you can use our products", or we should opt out. But I think that Craig and Paul were keen to move the project forward and to at least proceed to do some testing. I'm not sure if a clear decision was made as to whether -- how it would be marketed later. I'm sure there is a reference somewhere to Craig Chambers saying, "Well, let's get a pass and worry about it later ".
Q. Right. You say you're sure there is a reference; is there a reference you have seen?
A. A document that I have seen, where it says something like, "Craig is of the opinion that this is not worth worrying about until we have a test pass".
Q. Right. So was the upshot of the meeting -- well, you tell me: what was the upshot of the meeting? What decision was made as a result of this meeting about each of these options?
A. I'm not sure that a decision was made at that meeting
about any of those options. I think a decision was made about what would happen next, which is to say that Celotex would go forward with an 8414 test, and I think there's maybe another slide which is coming where it shows the choices of cladding panels which might be selected, and I think a decision was made that the 8 -millimetre fibre cement panel option would be selected.
Q. Indeed, if you go to slide 15 \{CELO0011199/15\}, we can see three choices there:
-" ACM Panel With Improved Barrier System (<50\%)
-" A2 Panel With Standard Barrier (80\%)
-" Cement Particle With Standard Barrier (90\%)."
So, having shown you that, are you saying that the decision was made that the 8 -millimetre fibre cement panel option would be selected, namely option 2 , A2 panel?
A. Yes, that's correct.
Q. The $80 \%$, was that the $80 \%$ pass chance?
A. Yes, I believe so.
Q. Right.

Is it right that, at this stage, Celotex wanted to use a cladding that was representative of what people would actually use in practice?
A. Yes, that's correct.

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Q. In other words, priced reasonably, was as aesthetic as possible and not too thick. I think you say that in your statement.
A. At this point, I think there is a strong view that Celotex don't want to go down the same route as Kingspan, and they want to use a panel which is representative of what people might use, and to market that openly.
Q. You say at paragraph 48 of your statement -- if you just go to that, please, at page 16 \{CEL00010054/16\} -- as we've seen, I think, before, there was a collective desire to use a panel that could and would be used by the market as it was tested. I've shown you that.

Did that include or exclude what Mr Egginton described as decorative cladding?
A. I think that Marley Eternit would be described as decorative cladding. I think it would meet that definition.
Q. Yes.
A. And I think that when John is talking about a decorative cladding, he might be looking at it from his own perspective, which are the materials that he's involved in, which is high-pressure laminates and aluminium.
Q. Right.
A. But I think that the view was formed by Celotex that
there were types of decorative cladding, if you like, or representative claddings, which actually could pass an 8414 test.
Q. So is your recollection that you decided to use 8-millimetre Marley Eternit, which was in fact used at the first test, despite Sotech's reservations as expressed to you about the prospects of passing with decorative cladding?
A. Yes, and I think that slide which says $80 \%$ shows that, actually -- well, demonstrates that there was some confidence in that selection.
Q. Yes, I see.

If we stick with your statement, paragraph 49, please, and go over the page \{CEL00010054/17\}, I just want to ask you about something you say there. You say at the top of the page:
"Considering all of this, it was collectively decided, with PE making the ultimate sign off, that we would use 8 mm of Marley Eternit fibre cement cladding, which was common in the marketplace, and at an A2 reaction, had a good fire rating. This would allow us to be transparent with the list of materials used in the test."

Now, you say "with PE making the ultimate sign off"; was that because PE, Paul Evans, was ultimately the

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decision-maker in respect of the first test and what should comprise the components in the first test?
A. Yes, and that doesn't mean that Paul would have chosen those components, but it means that ultimately he would have to agree to and make a decision on what would happen next and what they would be. So obviously lots of different options were spoken about, and people had an opportunity to present a view. But, as I said before, my understanding is that Paul would ultimately make all final decisions as to what would happen.
Q. Yes. You say he would make all final decisions as to what would happen; that's your general --
A. Yes.
Q. -- view, knowledge, evidence about his role in this project?
A. That's right. I think Jon was closely supervised, but I don't think Jon had any autonomous decision-making process, and they would work very closely together. As I said before, the contact between individuals is not just based upon meetings, for example, where you see, "Here's a meeting and here's a record of a meeting"; I mean, they're virtually on top of each other in their proximity, so they would converse informally a lot, I think.
Q. We will come to look a little bit more closely at that
in due course, Mr Hayes.
Just on this paragraph, in the last sentence of paragraph 49 there at the top of the page, you say:
"This would allow us to be transparent with the list of materials used in the test."

It's right, isn't it, that this transparency was important, because anybody who wanted to rely on a BR 135 classification would need to know exactly what the tested system was, wouldn't they?
A. That's correct.
Q. Is it right to say that you saw such transparency as a positive factor which would distinguish Celotex from Kingspan?
A. Yes.
Q. And that's because, as I think you confirmed earlier, there was a view within Celotex at the time that the Kingspan approach was not transparent, to put it at its lowest?
A. Absolutely correct.
Q. And that Celotex did not want to copy that approach?
A. No, they didn't at this point in time.
Q. They didn't at this point in time. That qualification is an interesting one. Do you mean that, at a point later, Celotex did start to want to copy that approach?
A. Yes.

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Q. Now, we'll come to it, but in a sentence, can you tell me when?
A. Well, from my perspective, it was after the second successful test to 8414.
Q. You mean the second test, which was successful?
A. Yes.
Q. There was only one successful test.
A. I beg your pardon, I misspoke.
Q. No, I just want to be absolutely accurate.
A. Yes.
Q. So May 2014.
A. At some point after that, things would go wrong.
Q. Right.

Just focusing on the 8 millimetres of Marley Eternit at the time it was selected, that's a cement or cementitious fibre board, isn't it?
A. Yes.
Q. Did you think at the time that that was genuinely representative of what was commonly used in the market as a cladding panel?
A. Yes, I did, and although I didn't have an idea of how much of the market it made up, I think I had an understanding that it would be-- it would limit the product in some ways, because if you have lots of different cladding panels available in the market and
they have lots of different fire ratings, and you are going to have one in your test which has a pretty good fire rating, that is going to limit you to what you could use, and I think there was still this idea that a field of applications report would open that up, and that there would be the possibility of using fibre cement, but also anything else which was at least as good as that.
Q. At least as good in fire performance terms?
A. Fire performance, yes.
Q. Let's turn to the February 2014 test.

You attended that test, I think, didn't you?
A. That's correct.
Q. At Watford.
A. Yes.
Q. At the BRE Burn Hall there.
A. Yes.
Q. And that system that was tested included an 8-millimetre Marley Eternit Natura cladding.
A. That's correct.
Q. Is it right that the fire was extinguished early, at 26 minutes, because the flames were extending past the top of the rig?
A. That's correct.
Q. Now, you say in your statement at paragraph 54, if we

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can just go over the page \{CEL00010054/18\}, in the first line:
"Myself, JR, PE and RW did not understand at the time that flames out of the top of the structure would constitute a Test failure."

Now, I just want to show you what Mr Roper says in his statement and just ask you about the difference.

Can we go to \{CELO0010052/12\}, please. I would like to look at paragraph 5.27 in the middle of the page there. He says he attended the test, and in the second line:
"The test did not go well and was stopped after 26 minutes. There was an obvious failure as the flames reached the top of the test rig before the specified time."

He says it was obvious. You say that you didn't understand at the time that flames out of the top of the rig would constitute a test failure.

Can you account for the difference in understanding between you?
A. So I can only speak for my own recollection, but my memory is that the primary result that you have to get is outlined in BR 135, and it's to do with the temperature rise of the thermocouples. But I think that that temperature rise is limited to the first


15 minutes, so it says you must not raise the temperature by X within the first 15 minutes of the test, and so even though the test is stopped at 26 minutes, you have the potential that actually you have -- you would have met that criteria . So my memory is that there was confusion between all of us, including Jon and Rob, that we weren't sure whether just because the test had been stopped at 26 minutes, which was early, whether we might still be able to pass the test.
Q. I see. So it wasn't obvious to you that the fact that the test had been stopped at 26 minutes was a sure sign that it had failed?
A. No.
Q. Right.

Now, you say Phil Clark was present. Do you remember him saying anything about what he could see?
A. I don't, really. I know that he would have said that, "The test is stopped because the flames are extending above the top of the rig ", but I don't think he explained explicitly that that meant it had failed.
Q. Right. So I think I've got your thoughts at the time, at least: that you didn't think that the flames extending past the top of the rig necessarily meant that the test had failed?
A. No, although I know now that that is not correct.

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Q. Yes, I see.

Now, Mr Roper goes on to say at paragraph 5.28, in the second line there:
"Phil told me he shared Rob's view that the insulation had performed relatively well but that the cladding panel had cracked and that once fire had entered the cavity there was not much that could be done."

Do you remember being party to that conversation?
A. No, I don't remember that. I think that -- I don't think it was a formal conversation where everybody goes off into a meeting room. I think that people are standing around. So you've got the test rig, you've got guys who are sort of making sure the fire's out, I think that David and Parina are there from IFC, and you've got people standing in sort of different groups in different places. So I don't remember being party to that conversation.
Q. Right.

Let me show you paragraph 5.29. Mr Roper says:
"Following the end of the test, Rob, Ian Cooper, Phil and I [note you're not referred to there] had a discussion whilst at the BRE testing centre. Phil said that he had 'seen worse fails' and suggested that Celotex might want to strengthen the outside of the test
rig in order to counteract the cracking of the Marley Eternit panels. I told Phil that the Marley Eternit panels were also available in 12 mm (in addition to the 8 mm panels used in the test) and Phil responded that he thought that thickening the panels to 12 mm might suffice ."

Pausing there, were you party to that conversation or did you know about it?
A. Not that I remember.
Q. Right. He goes on:
"Phil also joked that Celotex could use a 6 mm cement particle board like Kingspan ..."

Again, were you party or privy to that discussion or did you hear about that?
A. I don't remember that or remember Phil offering that comment.
Q. Do you remember whether the BRE gave any advice in relation to the design of a test that might pass that you were aware of at that time?
A. I think that Jon later told me about the comment from Phil that the 12 -millimetre board might be enough to make it pass. I'm sure that a view was formed that the test had done pretty well, that it was seen to be a very close failure, and that a small change such as the addition of 12 millimetres thickness would be enough to

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put it over the line.
MR MILLETT: Right.
Mr Chairman, I have four or five more questions before coming to the end of this topic.
SIR MARTIN MOORE-BICK: Would you rather finish the topic now?
MR MILLETT: I would rather finish the topic now, if that's all right with the panel and the witness.
SIR MARTIN MOORE-BICK: All right. You are happy to go on for another five minutes or so?
THE WITNESS: Absolutely, please do.
SIR MARTIN MOORE-BICK: Thank you.
Yes, Mr Millett.
MR MILLETT: Thank you, Mr Chairman.
After the test, you drove Mr Roper back to the office. Do you remember that?
A. I think that Rob was driving, and then --
Q. Right.
A. -- someone was in the passenger seat and one of us was in the back.
Q. Right. Do you remember that Mr Roper called Paul Evans en route --
A. I do.
Q. -- to tell him the result of the test?
A. Yeah.
Q. Do you remember, from your side, hearing what he told Mr Evans?
A. I think I'm correct that the call was on speakerphone.
Q. So you could hear both sides of the conversation?
A. Yes.
Q. Can we go to paragraph 54 of your statement on page 18 \{CEL00010054/18\}. You say in the third line:
"... we discussed the fact that we felt as though the fact that the Test had been stopped before the 30-minute mark suggested the rig had not passed but that if the rig could pass the thermocouple data it might just pass."

Was it you who said that?
A. No. I believe actually it was primarily a conversation between Jon and Paul.
Q. Right.
A. I think the bit about the thermocouples might have been discussed in the car before that call.
Q. I see, that's before the call.

Then you go on to say at paragraph 55:
"JR telephoned PE from the car as he wanted to find out how the First Test had gone ..."

The "he" would be PE there:
"... he seemed extremely keen to find out from the BRE as soon as possible what the outcome of the First 113

Test was. There was a lot of emotion from JR and PE related to the First Test result."

Why do you say that?
A. I think it was very clear from the conversation. Paul was -- sounded very disappointed that it had passed(sic), but also he was telling Jon, "Okay, do you think it might have passed? When do you think we can find out? Okay, you need to get on to Phil, you need to get on to the BRE and find out."
Q. Right. When you say a lot of emotion, can you be bit more specific?
A. So very fast talking. You know, when people speak, you can hear their tone goes up and becomes higher. There's a lot of quick backwards and forwards. He's expressing that, you know, "We need to find out as quickly as possible ". And also hope, as in, you know, "Oh, so you think we might have passed? So there's a chance that we passed? Yeah, okay, we need to explore that. We need to get on to them."
Q. Okay, thank you. You've brought that to life very well.

Can I just ask you to look at paragraph 56 at the bottom of the page. You say:
"Following pressure applied from JR on the BRE to inform us of the First Test result, PC telephoned JR confirming that we had failed the First Test on the
basis of the fire emerging from the top of the structure. My involvement in the wider discussion that ensued following the failure was limited."

When was the telephone call from Phil Clark to Mr Roper, do you remember?
A. So I never witnessed the telephone call. I think it would have been something that I was told about, possibly by Jon. My impression was that it was fairly quickly after the first test or after the date of the first test, possibly within a couple of days.
Q. Right, I see. So this is something Jon Roper passed on to you, but you weren't on that call?
A. No.

MR MILLETT: I see. Thank you very much.
Mr Chairman, is that a convenient moment? I've come to the end of this topic.
SIR MARTIN MOORE-BICK: Yes, that suits you, does it?
MR MILLETT: Yes.
SIR MARTIN MOORE-BICK: We will have a break now, Mr Hayes, so we can all get some lunch. We will come back at 2.05, please.

Again, I have to ask you, please don't talk to anyone about your evidence or anything to do with it while you're out of the room.
THE WITNESS: Thank you.
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SIR MARTIN MOORE-BICK: All right? Thank you very much.
(Pause)
Thank you, 2.05, please.
( 1.05 pm )
(The short adjournment)
( 2.05 pm )
SIR MARTIN MOORE-BICK: Right, Mr Hayes, all ready to carry on?
THE WITNESS: Yes, sir.
SIR MARTIN MOORE-BICK: Thank you.
Yes, Mr Millett.
MR MILLETT: Mr Chairman, thank you very much.
Mr Hayes, can I ask you to go to your statement at page 19 \{CEL00010054/19\}, please and look at paragraph 58. You say in the beginning of that paragraph there:
"Given that we thought we had narrowly failed the First Test and utilising the detail in the report, we started to draw conclusions about what caused the fire to spread to the top in the way that it did."

You identify the cladding and the fire barriers as issues, but you then go on to say at the end of the paragraph:
" Collectively, we were content with the remaining components in the rig, including the use of RS5000,
which did not change from the First Test to the Second Test."
Do you know who made the decision to carry out a second test?
A. Erm ...

## (Pause)

Sorry, I don't mean to pause, I'm just trying to be accurate, because I suspect that the information would have been given to me by Jon informally, but my understanding is that the test -- the decision to undertake a second test would have been made by Paul Evans and Craig Chambers.
Q. Right.
If you just look up at the top of the page, at the end of paragraph 56 , you say in the last sentence there:
"The decision to undergo a Second Test was ultimately made by upper management and eventually filtered down to me via JR."
By upper management, do you mean ...?
A. Paul and Craig would have ultimately made that decision, I believe.
Q. Right.
Do you know whether Craig Chambers and Paul Evans were involved in a detailed discussion of the components of the failed test and an examination of what precise
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components had failed and how they could be improved for a second test?
A. No, I don't. There was not a discussion that I personally witnessed.
Q. Right.
Can we then turn to the design of the second test.
I think you were involved in discussions about potential amendments to do your best to ensure a pass of the second test, weren't you?
A. Correct.
Q. That was with Mr Roper; yes?
A. Yes.
Q. And Paul Evans?
A. Yes.
Q. And Rob Warren too?
A. That's correct.
Q. Would you say that Paul Evans was closely involved in those discussions?
A. Yes, and I don't think it was a formal process or a meeting; I think there would have been lots of discussions, so I might have had a discussion with just Rob, I might have had a discussion with just Jon, there might have been a discussion when all four people were in a room. But rather than being -- we'll have a meeting and there' ll be a date and an invitation, it
was just people were in very close proximity to each other.
Q. Right. But you have explained -- so sorry, I cut you off, do you want to continue?
A. No.
Q. You have explained where physically Paul Evans' and Jon Roper's offices were, you say one on top of the other. Where was your office in relation to theirs?
A. Downstairs in the same building.
Q. So how often every day would you encounter them and discuss matters, business matters?
A. Most days I wouldn't see them, and that is because my day job was to answer the phones and answer emails, which was in a separate office on a separate floor.
Q. Right.
A. So actually I wouldn't go upstairs, because we had our own kitchen facilities and things like that, I wouldn't go upstairs and I wouldn't see them the vast majority of days.
Q. I see. So you wouldn't bump into them on a daily basis?
A. No, not necessarily. Not that there was any
segregation, it was just that -- so you might see someone coming into the front of the building because there was a shared front door, but ...
Q. Okay.

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One of the changes that was made as between the first test and the second test was the decision to increase the thickness of the Marley Eternit cladding panels from 8 millimetres to 12 millimetres, wasn't it?
A. That's correct.
Q. Yes. Do you know who made that suggestion?

## (Pause)

A. I don't know who made that suggestion. I think it would have come out from discussions amongst people and been generally agreed.
Q. We know that Jon Roper was involved in that discussion, because he told us. What about Paul Evans? Do you know that he was involved in that discussion?
A. Yes, he was.
Q. How do you know that?
A. Because I believe I would have been present at discussions where it was being discussed where he was in the room and an active part of that discussion.
Q. Right.

Did Mr Roper ever tell you that he had discussed that thickening of the exterior cladding panels for the test with Mr Clark of the BRE, Phil Clark?
A. Yes, he did. It was discussed, and I think that Jon told me that Phil had suggested to him that a thickening of the cladding panels may well be enough to take the
test from a failure to a pass.
Q. Now, you have said that, in your understanding,

Celotex's aim was to test a fairly representative system. Did you have any concerns, after the first test and in designing the second test, that in using a cladding panel of that increased thickness of 12 millimetres instead of 8 , that might undermine that approach and consequently the likely marketability of RS5000?
A. I think I thought at that stage that using a thicker cladding panel -- it would still be an actual product which people use, so 12 -millimetre Marley fibre cement would still be a panel which was advertised and offered to the market and used by people, so in that respect it would still be representative. But I think I would have thought that it would narrow down the options of what people would be able to use, because I think the idea had always been that a field of applications report might be able to take something which had been tested and passed and then allow people to maybe change some components.

So the awareness was that if you went from 8 millimetres to 12 millimetres, you're using something which is thicker, so that is going to limit what you can do with it, because of --

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Q. Yes, I see.
A. Sorry.
Q. Yes, I see.

If you go to paragraph 60 of your statement, please, on page 20 \{CELOO010054/20\}, you can see there that you say in the first line:
"... it was decided that the Marley Eternit cladding was still a marketable choice of product and that increasing the thickness could be the most effective way to improve its performance."

Did you have any concerns that, if RS5000 passed, it would still be marketable only if used with Marley Eternit panels of that thickness, in other words 12 millimetres, or you say that it was still possible but limited, more limited than 8 millimetres?
A. It would limit it. I think if you have a market and you have lots of different cladding panels with lots of different fire ratings, the one that you have tested, I think the feeling is you're going to be limited to anything which is as good as that or better. So the higher up you go with what you've tested, everything below that line now is something which you're not going to be able to do. So --
Q. Yes, I follow.

Staying with paragraph 60, Mr Hayes, you go on in
the middle of that paragraph to say:
"Given the level of urgency I sensed from PE and JR, the fact that authorisation was given so quickly for the Second Test and my knowledge of the new product budget from Saint Gobain, I felt that there was significant pressure from upper management to pass the Second Test. This was heightened by the fact that the Test was so expensive. We didn't want to be in a position where 12 mm cladding got us closer but the test was still failed."

When you refer to significant pressure from upper management to pass, what do you mean by that?
A. So after the first test, and as I explained before, things happened very quickly. So I think the project had started in 2014 and I think the first test was in February, and so that's a reasonable amount of time for, I guess, research and thinking about what things are going to happen. So now discussions are happening very quickly, so there's discussions happening around: okay, what are we going to do with the second test, how is that going to pass?

I know just from speaking to the tasks that Jon was given. So he had a lot of things to do. Some of those things I helped him with, for example to contact the people who had built the rig to start with and get them

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to build a second rig. We would have to order all of the materials for that, which is to say everything which goes into building that rig, from the steel frame to the sheathing board to the -- well, the insulation of course is ours -- to the cladding panels. He's got to arrange with the BRE for another test rig. In fact, I think that the BRE didn't have a rig available for us to test as quickly as they wanted to re-test, and I think they had three rigs available, and two of them were steel frame rigs and one of them was a masonry rig, and the masonry rig I think is concrete blocks inside a frame, and I actually think that because Jon had been told he had to do it as quickly as possible, they actually paid the BRE an extra $£ 5,000$ to knock out the blocks so that a steel frame could be installed.
Q. Oh, right.
A. So I think they -- I think I'm correct in remembering this, that they actually paid more money to fast-track it, that's a kind of way to say it.
Q. Right.

Do you know, just following that up a bit, whether that extra $£ 5,000$ was in the original budget for the second test or whether Joe Mahoney had to be re-approached to expand the budget to include that extra payment?
A. I'm afraid I don't know that.
Q. Can I ask you, you say "upper management", you refer to "upper management" being behind the pressure; can you just tell us who that was? Was that, again,
Craig Chambers and Paul Evans?
A. Yes, so I know from Jon, of course, that he is being given these instructions by Paul, and those instructions are, "Okay, you need to do this, you need to do that, it needs to be as quickly as possible ".

In terms of -- so there's a degree of assumption when I'm saying that that pressure is coming down from Craig to Paul to Jon, and that -- I guess that assumption and that impression is formed from some of the things that I said earlier, so discussions about an imminent budget in -- being given to Saint-Gobain and people from Celotex having to travel to Paris to deliver that budget, and that budget -- a key part of that budget was that it had to be from new products. Only RS5000 would satisfy that requirement.

I knew that Craig followed the project very closely. So, as an example, the meeting that we had, which was the update meeting that we discussed earlier, Craig was an active part of that discussion. It wasn't a case of Craig sort of sitting back there and saying, "Oh, okay, you bring me up to speed, and, okay, crack on". My

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impression of that meeting was that he understood the technical nuances around the testing very well, and that he was very keen in that meeting for that project to go forward and as quickly as possible.
Q. Was that the 4 November 2013 meeting?
A. Yes, that's correct.
Q. Were there any meetings between November 2013 and May 2014 that you were at with him?
A. No.
Q. Or that you were aware of where he had attended which had discussed the project?
A. No, and I wouldn't necessarily have expected to have been invited to those.
Q. Okay.

Now, did you think at the time that there would be any consequences for you personally if the second test failed?
A. No. No, I didn't.
Q. No. Can we look at paragraph 61, same page \{CELO0010054/20\}. You say:
"61. I therefore went to JR, RW and PE with a suggestion that we also include an additional board of material behind the cladding, just at the point of the fire barriers. This, in conjunction with the thicker cladding would increase the time it took for any fire to
progress through the cladding and consequently climb the rig.
"62. The board I suggested was a 6 mm magnesium oxide board placed behind the cladding (the 'Additional Material '). This would be used in conjunction with the now 12 mm thick layer of the cladding. JR and PE agreed to adopt this approach in principle with PE having the final sign off. However, they also decided to amend the thickness of the cladding at the point where the Additional Material was placed, from 12 mm to 8 mm thick, to try and ensure continuity of the cladding surface across the rig."

Now, just breaking that down a little bit, it looks from that -- and I've read it all to you -- that you were the person who suggested the 6-millimetre magnesium oxide board; yes?
A. That's correct.
Q. And they were the ones -- they, JR and PE -- who came up with the amendment of the thickness of the 12 -millimetre cladding to bring it down to 8 to try to ensure continuity of the cladding surface throughout.
A. Yes.
Q. Yes.

Now, just looking at that a little bit more closely still, are you saying that you made the suggestion of

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the 6-millimetre magnesium oxide result of the pressure that you observed or felt to do the best that you could to stop the second test failing ?
A. Yes.
Q. So you were the one who came up with the 6-millimetre magnesium oxide. How did you come up with that idea?
A. I think it had been -- when we had had the discussions at Sotech, John Egginton had given the idea that perhaps the test could pass with an improved fire barrier, and so I kind of -- that was the seed of -- that fire barriers are an important part of what might make the test pass or fail. So that's kind of where the idea that fire barriers are an important part of that system is.
Q. Just to be clear, is that your note of the 3 October 2013 meeting, \{CELO0011052\}, fourth bullet point down, where we saw earlier reference --
A. Yes, the reference to fire barriers.
Q. Yes, I see.
A. So I think that suggestion which had initially been put forward by John before the first test, we were now or I was now revisiting in my mind, and I think part of that was to look at the fire barriers that Kingspan had used on their successful test, because I think they described it as being a stainless steel aluminium grille
product, which, although I don't think they named it -so I think in some way we found out what that had been called, and it became apparent that that was no longer available. So it seemed that John's idea of using a double system was not going to work, because actually one of the things of the two was actually no longer available, and I don't think that there was any similar products available and, as I understand it now, I actually don't think such products -- which is to say a stainless steel cavity barrier -- are actually very common at all.

So then I guess the mind turns to: fire barriers are important; how else could the performance of the fire barrier be improved? And I think the feeling was after the first test that, once the cladding panels had cracked, fire moved into the cavity which is between the insulation and the cladding panel and then travels up within that cavity, and it's the job of the fire barriers to stop that happening. So the fire will go up in that cavity but, once it hits the fire barrier, the fire barrier will stop it and it won't go any further, and I think that we thought that the fire barrier is not very effective once the cladding has gone, because the cavity is between two things, something at the front and something at the back, and
then the cavity fire barrier blocks that gap. So if you have the thing at the front, you have the thing at the back and you have the fire barrier, then the fire is stopped on its journey. So if any of those three things are no longer there, for example if the cladding panel is cracked and fallen away, you will still have the fire barrier, but would fire actually go around the barrier and continue, and so the barrier would be ineffective. Not because the barrier itself has failed, but because I guess that part of the construction has failed.

So the feeling was: if the cladding panel is still there, then the fire barrier will do its job, and that will contribute to a passing of the test. So the idea of reinforcing the cladding at the point of the fire barrier means that the fire barrier will now be able to do its job, retard fire from moving up, and of course that is the pass and fail criteria of the test. So, therefore, hopefully that will contribute to it successfully passing the test.
Q. Two questions from that.

Was it you, first, who came up with the idea of reinforcing -- your word -- the cladding at the rear face of it where the fire barrier would meet it?
A. I remember it being my idea, yes.
Q. Secondly, was it you who came up with the idea of magnesium oxide as the material which you would place there as the reinforcement?
A. I believe so, but I don't think that was a conscious choice of saying, "Okay, what would be the best material to do this? I think magnesium oxide would be a good choice ". I think it was because magnesium oxide was being used already as the sheathing board.
Q. Yes.
A. And so it was logical, "Okay, we can just use more of the same".
Q. Okay, so can we just cut a long story short in this sense --
A. Sorry.
Q. No, I'm not being critical at all of your answer, it's helpful to hear exactly what the thinking was.

Does it come to this: you thought that the best way of getting this to pass the test was to keep the cavity in place, as opposed to having the panels crack, and therefore the best way of doing that would be to reinforce them with a non-combustible substrate, the same as you were already using as the sheathing board --
A. Yes, that's correct.
Q. -- namely magnesium oxide? Yes, that's very helpful thank you.

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Now, you say in paragraph 61 \{CELO0010054/20\} that you went to JR, RW and PE with that suggestion. Do you remember when you went to them with that suggestion?
A. I don't remember exactly when that was. It was at a time after the first test and while thoughts were being turned to how the second test -- the composition of the second test would be put together. I don't believe it was, as I said before, a kind of a formal meeting or a gathering when people were there, and I think it was a combination of informal discussions.

So I can remember, for example -- and I think I say this later -- having just an informal discussion with Rob Warren about it, just the two of us, and that was downstairs in the technical centre offices, and I think I can remember having a chat with Jon Roper about it when it was just the two of us, and I think I can remember a conversation where everybody was in the room.
Q. Right.

I want to focus on Paul Evans, because I think you'll perhaps know in general terms from his evidence that he, I think I can safely say, denies being told about the 6 -millimetre magnesium oxide. Perhaps that's a mischaracterisation of his evidence, but I want to get your evidence.

How clear in your mind do you recollect telling

Paul Evans that you should use or they should use a 6-millimetre magnesium oxide board behind the cladding?
A. I can remember a specific conversation, although not in a huge amount of detail, and it was, I believe, upstairs where Paul and Jon's office was, and Paul was there, and Jon was there, and I was there, and it was a conversation around this idea. And from that specific recollection, but from also my general impressions as well and many other things that I witnessed, there's no doubt at all in my mind that Paul Evans knew about the missing material. And I would go further, and I think I say this in my statement, that Paul would have to ultimately make the decision that that was what was going to be the composition of the second test rig.
Q. Yes. You say there is no doubt in your mind at all about that?
A. None whatsoever.
Q. Thank you.

He -- and, again, I don't want to misrepresent his evidence -- denies that. How can you account for that? (Pause)
A. The short answer is I can't, and that I can only speak for my own testimony, and anything that I say would be a ... I'm not sure what the word is, a kind of

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supposition on my part.
SIR MARTIN MOORE-BICK: I was going to interrupt and thought I had better let the answer run on, but I don't think it's for this witness to say whether he can explain Mr Evans' evidence, is it?
MR MILLETT: Very well.
I think the answer was a perfectly elucidating answer.

Now, given that Celotex had used magnesium oxide as the sheathing board for the February test, you knew it was non-combustible. Perhaps that was the idea. Yes?
A. Yes.
Q. Had you had any conversations with Mr Clark of the BRE about using magnesium oxide as a reinforcement panel behind the thickened rainscreen or cladding panel?
A. No.
Q. Did you have any conversations with anybody else at the BRE about that?
A. No.
Q. You were, I think, aware -- and you say this in your statement at paragraph 72 \{CELO0010054/23\} -- that this was not representative, that is the addition of a reinforcing magnesium oxide board behind the cladding panel, of what would commonly be used in the market.
A. Yes.
Q. Given that it wasn't representative of what would commonly be used in the market, why did you suggest it?
A. I think in my mind it was for a couple of reasons. One would be there was still on the table this idea of the field of applications report, so it could be that, whilst it was not representative, if the test passed really, really well, there might still be the opportunity for a field of applications report to allow people to later on, you know, change that component.

And the other thing is I don't think it had -- well, there may have been discussions which I was not party to, but in my mind I thought there was still the potential for Celotex to offer that as a complete system to the market, albeit with a hugely reduced scope of perhaps people who might be interested in that, but there may still be people who would want to do that, based upon the fact that PIR was still going to be a lot thinner than Rockwool and would -- or mineral wool, and that would solve some problems, and possibly if the market became more educated to the rules, which is to say things should be a proper system as opposed to how Kingspan was doing it, then, you know, there still might be people who would find that attractive.

And there was also a feeling, I think -- and I thought at the time it was a feeling shared by others,

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but perhaps it wasn't -- that, "Let's just get over the line, let's get a pass and let's see what happens later ".
Q. So just on that last part of your answer, was the main reason to suggest the magnesium oxide there in order to maximise the chances of a pass?
A. Yes, it was.
Q. You were also aware that any BRE classification, BR 135 classification, would only apply to the tested system and nothing else?
A. I was aware of that, yes.
Q. So if the intention was to be transparent about the tested system, an unrepresentative test wasn't going to be of much use. Did you understand that?
A. I knew that it would be of less use.
Q. Right.

Can we go to paragraph 72 of your statement, please, \{CELO0010054/23\}. You say there at the bottom of the page:
"From conversations between JR and PE to which I was privy, I was aware that there were concerns that a rig with the Additional Material present would not be representative of what the market would want to use in their buildings. I was the most junior person in the room at any of these conversations. It was not usual to
include extra material at specified points throughout a building and it was a matter of common sense that it would be burdensome and more expensive to incorporate into any such construction. Based upon their concerns regarding the marketability of the product and I assume the opinion they must have formed about the likelihood that the rig would have passed the Second Test without the Additional Material (based on the view expressed by PC), a decision was made and conveyed to me that it would not be referred to within the BRE's Final Report or included in Celotex marketing of the rig. I was not involved in the making of this decision and I cannot recall who specifically told me, but it is most likely to have been JR or PE."

Was the intention always to conceal the use of what you have defined as the additional material?
A. No. Well, for me, definitely not. And I don't believe, and I didn't believe, that that was in the mind of other people prior to the passing of the second test. Although -- and that really is my testimony. But looking at other evidence I've seen, it may have been in the mind of others, but for me, there was no doubt in my mind that, up until after the second test, the intention had always been that we would work with what we had got.
Q. Now, you say at the top of page 24 \{CELO0010054/24\}

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within paragraph 72 "a decision was made". To the best of your recollection, Mr Hayes, who made that decision?
A. I've given this a lot of thought, because when I put together this first statement, I couldn't remember and don't remember who specifically told me that, what the conversation was, who was present and when it was, and I knew and was told that this was likely to be an extremely critical point, and so I've tried hard to remember that. But I simply cannot remember exactly what the occasion was when I was told or who told me, and so I've written that it is most likely to have been Jonathan Roper or Paul Evans.
Q. Yes, as you say in the last sentence, and you can't improve on that sitting here today?
A. I can't, and I wish that I could.
Q. That's very fair, thank you.

Did that decision, when conveyed to you, come as a surprise?
A. Yes, it did.
Q. Did you have any concerns at the time that that decision was made and conveyed to you that concealing the presence and identity of the additional materials, as you define them, was a dishonest way of presenting the test?
A. Yes, I believed and believe and know it to be wholly
wrong and dishonest.
SIR MARTIN MOORE-BICK: Mr Millett, do you mind if I just interrupt and clarify one thing?

Mr Hayes, if we look at the top line of the document on the screen, you're saying that a decision was made within Celotex by the people you suggest that it "would not be referred to within the BRE's Final Report".

Now, that suggests that a decision was made in relation to the form of the BRE report. Is that what you mean to say?
A. Yes, I believe that's correct.

SIR MARTIN MOORE-BICK: Now, that suggests that someone in Celotex either had spoken to the BRE or intended to speak to the BRE to make sure that it wasn't mentioned. Is that what you recall?
(Pause)
A. I'm just taking a moment to try to be accurate.

I don't think that's what I'm saying, and the reason I'm taking some time is because I have seen many other pieces of evidence. I'm trying hard to think what I would have known at the time.

But I know a couple of things. One of the things is that the official BRE position is that actually the report is based upon information that you provide to them, which is to say they would expect you, I believe,

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to say, "This was the rig that was -- these were the components that were used". And also I think, and this is where I'm trying -- because I've seen evidence about this, is that they sent through a draft report which did not mention that material.

So it could be that there was a degree of opportunism in there where, instead of actually saying to the BRE, "Don't include this ", that perhaps they're going to take the opportunity to not correct a mistake that the BRE has made, albeit I believe that there was an individual person at the BRE who was aware of the presence of the magnesium oxide board on that rig, and I've no doubt that we will come to that shortly.
SIR MARTIN MOORE-BICK: Yes, all right. Thank you.
MR MILLETT: Mr Chairman, we will come, I think, to examine that evidence a little bit --
SIR MARTIN MOORE-BICK: I'm sure we shall, but the particular formulation of his recollection seemed to me to suggest that it was worth exploring.
MR MILLETT: Yes, no, absolutely, it is, and we will come to some documents a little bit later on that exact point. But thank you for that, that's very helpful.

Can I then just ask you to look, please, at paragraph 62 of your statement, page 20 \{CEL00010054/20\}, please. You say there -- and we have
been through this already -- in the third line:
"JR and PE agreed to adopt this approach in principle with PE having the final sign off."

Were you aware of whether the decision had to be signed off by anybody senior to Mr Evans, or was Mr Evans, as you say, having the final sign-off?
A. No, I'm not aware that that would be the case. I think
that -- in that respect, I think Paul would be able to make that decision.
Q. Right.

Do you know whether, when making that decision, that sign- off, Mr Evans went to Mr Chambers or sought the approval of anyone more senior in adopting the approach you've described?
A. No, I don't know. My knowledge at the time would have been that I wouldn't have known that. I think Craig Chambers was the only person who was senior to Paul, who reported directly to him, and there were no other layers of management between Paul and Craig.
Q. Right.

Have you any reason to believe, to the best of your recollection, that Mr Chambers was involved in that decision?
A. No.
Q. Can we go to \{CELO0003089\}, please. This is really
a timing point. This is an email, halfway down page 1 , from you to Rob Warren on 26 February about a meeting with the cavity fire barrier manufacturer, "Also now on the rota". This is shortly after the first failed test, about two weeks later.

At that stage, meeting the cavity fire barrier manufacturer, was that Siderise?
A. It was, yes.
Q. Was there discussion at that stage of the use of the 6 -millimetre magnesium oxide in conjunction with the fire barriers, or did that come later?
A. No, there was no discussion with Siderise about that at all.
Q. Right.

We then turn to the May 2014 test itself . Can we look at \{CEL00008508\}. This appears to be a copy of a design. Page 1 is the design of the rig for the second test, isn't it? At least in terms of the location of the thermocouples.
A. Yes, it is .
Q. Then page 2 \{CELOO008505/2\} is a copy of your notes of the materials for the second test, and I think you say that you used this to assist Mr Roper in ordering the materials; is that right?
A. Yes, I think the primary purpose of this is to work out
how much of every different component you might need.
Q. Right.

Halfway down that page we see, under "Rails ":
"Magnesium oxide ( 6 mm ) 6x2.88m2."
So you had decided by that stage, or at the time you wrote this document, that that's what you needed.

Are you able to tell us when you think you generated this document or wrote it?
A. I'm not, but I believe that it is ... I guess towards the end of the period of time between the first and second test, because this is not a document where we're thinking about what we're going to do; this is a document, I guess, we know what's happening, actually what Jon's got to do is go and get all this stuff together and get it delivered down to the BRE, and I think what I'm helping with there are how much of different things you might need.
Q. I see. So we see the magnesium oxide 6 millimetres, we see the Marley Eternit 12 millimetres, and the measurement for that, and then we see, "Eternit ( 8 mm ) $6 \times 3.6 \mathrm{~m} 2$ ".
A. Yes.
Q. And that's a reference to the thinner cladding material. Do you know where you bought the magnesium oxide 6 millimetres from, as opposed to the magnesium oxide

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12 millimetres, which was the sheathing board, which we can see referred to at the top of this page?
A. No, I actually don't know where that was ordered from.
Q. The reason I ask is because we haven't seen a delivery note for that material. Do you think you acquired it from the same source as the 12 -millimetre sheathing board or a different source?
A. I have to say, I wasn't involved in that aspect of it. Equally, I've never seen or been shown that document. I think it would be odd to have gone somewhere else. The only reason that you would go somewhere else is if whoever you were buying the 12 millimetres from said, "Oh, yeah, you can get 6 millimetres, but we don't particularly do it, you will have to go somewhere else".
Q. Were you involved in that?
A. No.
Q. As far as you can tell us, do you know how long in advance before the test it was delivered to the BRE?
A. I don't remember when any of these or would have known when any of these things were delivered to the BRE, but I think that because the entire timeframe between the first and second test was so quick, I'm guessing that a lot of this stuff is likely to have been done sort of just in time, if that makes sense.
Q. Yes. Well, we can get a sense of that from the delivery
notes of the other materials, which tend to be in April.
From your knowledge, do you know who would have signed for this material at the BRE?
A. No, I don't.
Q. Right.
A. I think the BRE Burn Hall was on their overall site, so I remember that, having to get on to the overall site, you actually went through a checkpoint with a guard and a barrier. So I would think that they would have a proper goods-in delivery system where somebody would have to go to the barrier and they'd say, "I've got this invoice and it's got to go there", and they'd say, "Okay, you go to there", and I think I remember, actually, that Phil, who I believe practically ran the Burn Hall, it was very common for them to receive materials from everybody, because they were doing lots of testing with lots of different people, so they were having materials being delivered for tests all the time, and so I think they would have had a proper procedure for goods-in, if you like, where they would have a person who would sign things, check things in.

And, of course, they were dealing with
manufacturers' property, and so they would have to make sure that things were put into a secure area and wouldn't be lost or misplaced or damaged.

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Q. So far as you know, was Phil Clark aware that 6 millimetres of magnesium oxide was to be used in this test in the way you have described?
A. Yes.
Q. How do you know that?
A. Because of the conversation that I heard between Jon and Phil Clark, but also, in a more general sense, the Burn Hall was a facility which had three test rigs and then a couple of offices attached to it, and I think that Phil ran it and was based there, so his main office was in the same building, and I think that they did lots of tests of different types, and I think that he would have been constantly -- because of the layout of it, I think he would have been constantly walking past that rig and looking at it every single day from its initial day one of construction to its last day of dismantling.
Q. Do you know how long it took to construct?
A. I don't. I would -- but from the first test, I believe there was a few days' worth of labour.
Q. How long was it up for after the test, do you know?
A. I don't know, but I believe that they were quite keen to get things down, because it might be that somebody else wanted to use that rig for their own test.
Q. You didn't attend the second test, but you did attend the rig afterwards.
A. I did, yes.
Q. What was the point of looking at the rig after the test?
A. Because I was interested in it, and because, frankly, it was just a day out from my normal job, which was pretty much a call centre type role, and it was, "Let's have a day out, let's do something different", drive up there with Jon, probably have some lunch, have a day out from doing my normal duties.
Q. How many times did you visit the test rig after the test?
A. So I think I put in my statement that I was there on at least one occasion.
Q. Yes.
A. It would not be impossible that it was two. So to be fair to myself, I've said it might have been more than one occasion.
Q. Yes, you did.
A. But I ...
Q. Can we look at paragraph 67 of your statement at page 22 \{CEL00010054/22\}, please. I'm going to read it all to you. You say:
"At a visit to the rig after the Second Test, I recall a conversation between PC [Phil Clark] at the BRE and JR [Jon Roper] where, when asked by JR, PC agreed that the rig had passed the Second Test so easily

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that he suspected that it would have passed even without the Additional Material, just using the thicker cladding. My recollection of the conversation is that it was led by JR and PC's opinion in this regard was expressed in agreement with JR. We were on the second floor in an office looking down at the Second Test rig; we all got on well with PC and he was telling us about what it was like to work at the BRE, including that they had dealt with the burning of the cows when the mad cow outbreak occurred."

Now, it looks from that as if you're saying -- can you just confirm for us, Mr Hayes -- that Phil Clark knew about the 6 -millimetre magnesium oxide sitting behind the 8 millimetres of Marley Eternit.
A. Yes, that is correct.
Q. Are you in any doubt about that?
A. No doubt at all .
Q. Indeed, as we can see from the photographs from the test, it was obvious that there were two kinds of cladding panel being used because there are two different colours.
A. Yes.
Q. One is white, and that's the 12 -millimetre Marley Eternit, and one is orange, and that's the 8-millimetre Marley Eternit, isn't it?

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A. That's correct.
Q. I think you make the same point at paragraph 80 of your witness statement. Just visit that, please, page 26 \{CEL00010054/26\}. You say there:
"Although at the time I did not turn my mind to whether the BRE as a body had an awareness that the Additional Material was omitted from the report, and I do not now believe that it did, I knew that PC, an individual representative of the BRE had such awareness and was content in himself that the Additional Material would not have made a difference to the Second Test result. I took comfort from this and it supported my decision not to challenge the omission of the Additional Material going forward."
Is the basis of your belief as you state it there that Phil Clark knew about the additional material at the very least because he had acknowledged the fact during your mad cow conversation, if I can call it that? Is that right?
A. Yes, that is correct.
Q. Phil Clark was the senior consultant at the BRE and had signed the report. He signed both the draft and the final version of the full test report; that's right, isn't it?
A. Yes.
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Q. Why do you seek to draw the distinction that you do here at paragraph 80 between Phil Clark as an individual and the BRE as a corporate entity?
A. I think that probably at the time of doing my first statement, I think it felt fairly obvious that this was a very important and serious matter, and that it is likely a question would be: do you think the BRE as a body knew, and I think I probably tried to address it in advance.
Q. Right. Why do you say you don't think the BRE as a body was aware, even though Phil Clark was? What's the basis for the distinction that you're making?

## (Pause)

A. Well, one, I don't think it is very likely that actually the BRE as a body would undertake those actions; and, secondly, I guess because of the chain of events later, in terms of the provision of the draft test report and the email asking Phil to remove a photograph which showed the missing material.
Q. Right. I don't wish to be rude, Mr Hayes, but that sounds a bit like speculation.
A. Okay.
Q. Is that fair, that in fact, the basis on which you're drawing that distinction is speculative?
A. So perhaps a better way to do it is that I knew that

Phil knew. Yes, so perhaps I'm speculating now, and perhaps that is speculation in my statement, although it's my belief, but that belief is based upon just an assumption of mine rather than a specific knowledge, I suppose.
Q. Right.

Are you suggesting from what you know that Phil Clark kept the additional material secret from Stephen Howard, who I think was his boss at the BRE?
A. I've never actually considered that point, but I think that he would have had to have done that, because -- and I'm not sure I would have known this at the time, but I understand now that there is a process within the BRE where the report is peer reviewed, and those people have to or should look at the notes that Phil and his team put together and the photographs and plans and other things, and so there must have been a -- well, a failure in communication, to put it one way, between the time where Phil does his report and the time when the BRE or another person at the BRE peer reviews and authorises that report.
Q. Is your evidence that he knew that you, Celotex, were intending to conceal the presence of the additional material, and that he went along with that but didn't share that with either Stephen Howard or the peer-review

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team?
A. I think to draw a clear distinction between what I know and what I'm assuming, what I know is that Phil Clark knew about the missing material or the 6 -millimetre magnesium oxide; I cannot say to you that I know or have any factual basis to make the claim that he did or didn't discuss that or conceal it from other people at the BRE.
Q. If Phil Clark knew about the presence of the additional material, are you able to explain why none of the drafts and the final version of the full test report makes any reference to the 6 -millimetre magnesium oxide or the 8 millimetres of Marley Eternit?
A. No, I'm not.
Q. Are you saying that your view at the time, understanding at the time, was that even though Phil Clark had that knowledge -- well, what was your understanding at the time of the fact that even though, as you say, Phil Clark had that knowledge, there was nonetheless no reference to those materials in the test reports?
A. So obviously there is a draft test report, so Phil has put together that draft test report, but I think at that period of time, there are no drawings of the second test, so he's relying on drawings from the first test which don't show that material.
Q. He would have known that they were inaccurate, though, wouldn't he --
A. Yes.
Q. -- come the second test?
A. But then why do a draft report at all then before you
have all the information that you're supposed to have in order to produce it?

So the answer is I don't know why the first test report came through without that missing material.
Q. Did you ever discuss it with him?
A. No, I never discussed it with Phil.
Q. Did you think at the time that Phil Clark had deliberately omitted reference to the additional material or had just accidentally overlooked it, even though he knew about it?
SIR MARTIN MOORE-BICK: Well, Mr Millett, I wonder whether that's something we ought to ask this witness.
MR MILLETT: Well, I think it is, because --
SIR MARTIN MOORE-BICK: If he has some grounds for drawing a conclusion one way or the other, he can tell us what they are.
MR MILLETT: It's the same point as I think you put to the witness.

Can I try a slightly different way, then, and maybe we'll come to it in a moment, but when you saw the

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reports come back without the reference to it, given the fact that you knew Mr Clark knew about the presence of the additional material, what was your understanding about the reasons why it wasn't referred to?
A. I don't know, and I don't know whether it was that he had just put together the draft report, and that report would be on the basis that it was a draft and it would be brought up to date by Celotex providing updated information, and that it was never intended to be more than exactly that: a draft, and it didn't matter that it was not accurate. That seems to me to be the most likely explanation.
Q. Now, just continuing a little bit more with this theme, you say -- and the Chairman has picked this up with you before -- that the decision was made by Celotex that the presence of the magnesium oxide would not be referred to in the report.

Given, as we've established, that it wasn't identified in the draft, did that mean a decision not to correct the draft so as to provide a complete description of the system, or does it mean that there was a prior agreement or decision that the draft shouldn't contain reference to the magnesium oxide?
A. Well, the short answer is: I don't know. I am aware, looking at evidence and hearing other people's evidence,
of a kind of timeline, if you like, which is that -- I'm referring to things here which I don't really have contemporary knowledge of, but we know that ... well, I guess we know there was a board meeting where the material was discussed. There was another meeting, I think, between Paul and Jon and Paul Reid, and that seemed to be the morning that the first draft of that test has arrived. So they obviously are in possession of a test report at this point in time. It doesn't have the missing material in it. And so the question is: is then a decision taken which is opportunistic, "Okay, you know, here we have a test report, the missing material's not in it, we could go on from here", or actually was it something that was -- a decision had been made earlier than that, and actually no matter what happened, they were going to not reference that material?
Q. I see.

Do you recall any discussions yourself with Phil Clark or anybody else from the BRE about the omission of the 6 -millimetre magnesium oxide or the 8 millimetres of Eternit?
A. No, so the only evidence that I have in terms of Phil's knowledge is that conversation which I witnessed, although I think that there is strong documentary

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evidence to show that he knew in -- which is to say the photograph which was asked to be removed from the test report.
Q. Right. I'm going to come to that now.

Can we look, please, at \{CELO0001350\}. This is the email of 1 July 2014 which attached the first draft of the test report which had been dated 2 June 2014, which goes back with notes on it from Jon Roper to Phil Clark, and we can see the beginning of the email at the foot of page 1. We can see you were copied in to this email, as was Paul Evans.

If we go to page 2 \{CELO0001350/2\}, you can see in the second paragraph:
"As previously discussed, could you also replace figure 18 with the attached photographs as we want to show a close up of the condition of our insulation below and above fire break with the intumescent fired off. If you feel you also have a suitable photograph, then please include."

Now, when you saw this email, did you understand that Jon Roper was asking the BRE to remove what, on the face of the report, was the only element of the report which showed the presence of the magnesium oxide layer?
A. Yes, I did.
Q. Did you know anything of the background to that request?

| A. I believe in my statement I may have referenced | 1 |
| :--- | :--- | ---: |
| a conversation which I witnessed regarding that | 2 |
| photograph. I believe -- my memory isn't brilliant, but | 3 |
| I have a memory of being upstairs in possibly Jon's | 4 |
| office and Paul Evans was there, they were discussing | 5 |
| the photograph and the reasons for the removal of that | 6 |
| photograph, and I think it was because it clearly showed | 7 |
| the missing material which they didn't want to appear in | 8 |
| the report, and that the purpose of asking Phil to | 9 |
| remove that photograph was for no other reason than to | 10 |
| remove a photograph which was, I think, a dead giveaway, | 11 |
| if you like, that that missing material was on the test | 12 |
| rig. | 13 |
| Q. Did you yourself have a discussion about the request to | 14 |
| remove that photograph from this draft test report with | 15 |
| Jon Roper? | 16 |
| A. No, I think that was the only ... I think that was the | 17 |
| only discussion that I was part of or witnessed, was | 18 |
| that one discussion which I've just outlined. I don't | 19 |
| think I had a separate discussion with Jon about it. | 20 |
| Q. What about Paul Evans? Did you have a discussion with | 21 |
| Paul Evans about the removal of this photograph from the | 22 |
| report? | 23 |
| A. No. | 24 |
| Qou didn't. | 25 | 157

Nonetheless, you could see from the email that he was copied in to the email and to the request. What was your understanding at the time about how much he was involved in or knew about that request?
A. I think he absolutely knew exactly what that was, and I would imagine that it would have been -- well, I don't know, and I don't want to, again, say things that I don't know, but my understanding and everything of how Paul had been the ultimate decision-maker up until then, that would lead me to believe that he would have asked Jon to do that. And again, there's absolutely no doubt in my mind, based upon that conversation which I witnessed, that Paul was completely aware of the reason for that photograph being asked to be removed, and I think it's most likely that actually he had asked Jon to do that.
Q. Was it your view or understanding at the time that Celotex was engaged in a deliberate attempt to create a misleading test report?
A. Yes. That's exactly what was happening.
Q. Were you concerned about that?
A. I was very concerned about that.
Q. Why didn't you challenge it?
A. It's not an easy answer -- question to answer. My understanding was, and now, is that a decision had been
made by the senior management of Celotex. I didn't know who I should speak to or who I could speak to. I lacked, I guess, the life experience to find the right way forward, and it was a ... it was a failure of courage and a failure of character and a failure of moral fibre on my part not to do so.
Q. Mr Hayes, thank you for that answer.

Now, just turning back to Phil Clark again, I just want to see if I can understand what was going on, to the best of your recollection, and obviously I'm not asking you to peer into his mind, I want your understanding.

If, as you say, Phil Clark knew about the presence of magnesium oxide in the test, and also knew that there was no reference to it in the list of components of the test as described in the report, why did you think he put figure 18 in at all if it would have, as it did, reveal the presence of magnesium oxide?
A. I don't know. I think that it's a very obvious photograph, because that photograph shows all of the outer cladding removed, and not only -- and the only thing that is left in that photograph is the 6 -millimetre magnesium oxide at the top, but also, very importantly, it shows a section of magnesium oxide board which has been left at level 2. So that photograph, if

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you wanted a photograph which was a clear illustration of the presence of that material, you could not have chosen a clearer photograph, and I wonder if -- I wonder why he's done that, I wonder if he has actually done that deliberately to say, "Look, here you go, this is the missing material".
Q. Now, we know about the request to remove it. We also know that it was left in when the final report came through at the end of July.

Are you able to enlighten us as to why the BRE or Phil Clark personally left the photograph in, as what became figure 19 ?
A. Whatever answer I give would be a guess, because I actually don't know.
Q. Right. Well, then, that's the answer.
A. Okay.
Q. Now, I'm going to try to cut a long story short with this.

Do you know from your knowledge that the drawings for the rig, for the purposes of the final report, were not updated to show the presence of the 6 -millimetre magnesium oxide or the 8 -millimetre Marley Eternit Natura?
A. Yes, I am aware of that.
Q. Do you know why that was?
A. I believe that at that time a decision had been made that that missing material was not to be referenced within the test report, and I would say that it is a deliberate action to say to the BRE, "Here are the plans that you need to use in your report", and the reason that the drawings do not show that material is because they are being deliberately left off to aid in that process.
Q. And who was involved in that particular decision, the decision about the drawings?
A. I think it would have stemmed from the decision for that material not to be shown, because once that decision has been made, it logically follows that you have certain tasks to do which will follow on from that decision. And really I think that everything that happened after that, whether it's the photograph, whether it is the drawings, whether it is -- and I'm sure we'll come to this -- the production of later marketing materials and literature, I think everything stems from that decision. And so it would be a -- if you have made that decision, it's going to be a necessary -- one necessary task will be to get the drawings updated and to make sure that material is not shown.
Q. Now, on the screen in front of us we've still got the email chain of 1 July 2014. Can I ask you to go back to

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that email string and look at the top, please, of page 1 \{CELO0001350/1\}. This is another email from Jon Roper on that same day, 1 July 2014, to Paul Evans and copied to you, subject "FW: Test Report Comments". It says: "Paul,
"We'll discuss in more depth later on when we do the official handover but I've spoken to Luke @ Simco this morning and he expects to have the updated drawings of the rig complete by tomorrow if not end of week.
"I've asked him to send these through to you in my absence. Can you please run these by Jamie to check all the details and send through to Phil @ BRE the relevant drawings to replace figures $4,5 \& 6$ of the test report. Phil will then implement these into the report with the other amends and put forward to Steve Howard (his boss) to complete and sign off."

Then in the last paragraph, he says:
"Jamie is aware of what needs amending on the drawings so he will be able to identify that the correct changes have been made."

Do you accept that you were involved in the changes or lack of changes to the drawings?
A. Yes, I do.
Q. Did you have a conversation with Mr Evans, as indicated by Jon Roper here, about the relevant drawings that
should be sent to Phil at the BRE?
A. I'm not sure that I did. I don't remember, I'm afraid.
Q. Did you have input into the actual changes in the drawings? Did you have a discussion with Simco about what changes should be made?
A. No, I never had any direct contact with them ever, at all, I don't believe.
Q. Did you identify that the correct changes had been made, as Jon Roper indicates you would do in the last paragraph of that email?
A. So there are changes that need to be made to the drawings, and they're changes which would need to be made anyway, because -- moving aside the missing material -- there were actually legitimate changes between the first rig and the second rig, and the primary one being the change of thickness from 10 millimetres to -- sorry, from 8 millimetres to 12 millimetres for the main cladding.
Q. Yes.
A. And I think there were also some errors on the first drawing which had always stood, and I think one of those errors was the thickness of the plasterboards, for example, on the steel framing system.
Q. Thank you.

As you told us before, the drawings that, as far as 163
you know, went to the BRE were incomplete because they omitted any reference to the 6 -millimetre magnesium oxide or the 8 -millimetre Eternit?
A. That's correct.
Q. And that was deliberate?
A. Yes.

MR MILLETT: Yes.
I'm going to turn to product literature.
Mr Chairman, this may be a convenient moment for a break.
SIR MARTIN MOORE-BICK: Yes, it probably is, isn't it?
Well, we'll have a short break now, Mr Hayes. We will come back at 3.35, please, and while you're out of the room, no talking to anyone about your evidence or anything related to it, please.
THE WITNESS: Thank you very much.
SIR MARTIN MOORE-BICK: Thank you very much.
(Pause)
Thank you, 3.35, please.
(3.17 pm)
(A short break)
(3.35 pm)

SIR MARTIN MOORE-BICK: Right, Mr Hayes, all ready to carry on?
THE WITNESS: Yes, sir.
SIR MARTIN MOORE-BICK: Thank you.
Yes, Mr Millett.
MR MILLETT: Mr Hayes, can I just revisit two things in your evidence.
First, when the decision was first made to add the additional materials to the second test test rig, was that when a decision was made also to conceal it as best you could from the public, or was that decision made later?
A. No, I think that we touched upon this earlier, and in my mind there was no doubt at all that -- until after the second test, certainly for me, and I can't speak for others, that there was only good intentions to do things correctly. I'm not aware of any feeling to conceal that material until after the second test.
Q. Doing the best you can, do you know when or how long after the second test that decision was made?
A. No, I don't.
SIR MARTIN MOORE-BICK: Mr Hayes, I feel I ought just to press you a little further on that, because there are others who may have other views about this.
It might be said that the rig as proposed for the second test was so far from being a representative rig of what might be produced in practice as to be useless unless one did suppress the existence of the magnesium

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oxide boards. What do you say about that?
A. I think it's similar to a question that I have answered, and I think that I expressed that: first of all, there was a kind of, I believe, "Let's worry about it later" attitude, which is to say, "Okay, well, let's get a test done and we'll see what we can do with that"; that there were still thoughts that a field of applications report route might be available, even though the test itself would not be representative, that people may be able to use that test data and extrapolate from it in a field of applications, especially if the result was very good, I guess, so to speak. So --
SIR MARTIN MOORE-BICK: I have to say, at the moment I'm finding it difficult to see how anyone could have thought that data derived from a rig that was so far removed from anything likely to be built in practice could be the subject of any useful field of application report.
A. I think you're absolutely correct and, as I sit here today, I don't believe that it could be.
SIR MARTIN MOORE-BICK: That raises the question, you see, whether you really did believe what you're telling us.
A. Because I think that there was not a great level of understanding, certainly from myself, as to exactly what a field of applications report would look like, how
far it would be able to go. So we'd had the meeting at IFC where Peter had expressed the view that, yes, you know, you could get a field of applications report, there might be wide variety of scope that that could be the case, and it would depend upon the performance of the test in that -- you know, as it had performed on the day.

It may also have -- no, and that's my answer.
SIR MARTIN MOORE-BICK: All right. Thank you.
Now, Mr Millett, you had another question and I rather jumped in ahead of you.
MR MILLETT: No, no, I want to follow up on that, if I may, Mr Chairman.

You say that the decision to conceal it came later, and that the decision beforehand was just to go ahead and get the test done and maybe you could get a field of application report for it.

What was it about the results of the test that meant that you could no longer be candid and open and honest about the presence of the additional materials which then caused the decision to conceal it to be made?
A. Well, I think there's an assumption there that I had been part of those discussions or part of that decision, and so therefore I would be able to illuminate you on that, but the reality is that -- and I also think

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there's a difference between when a decision was made and when a decision was communicated to me, which may be different things. And so ... sorry, just to circle back to the question -- which I kind of have actually forgotten what it was.
Q. That's okay, let me try it a different way.

You told us that, as far as you were aware, before the test was done, the idea was to be open about the presence of additional material because maybe you could get a field of application report which would allow that very unusual and unrepresentative make-up to be used in practice. You get the results of the test. What was it about the results of the test that meant that Celotex changed its mind and thereafter decided to conceal the presence of the additional material?
A. The answer to that question briefly is: I don't know.
Q. Did you ever seek to find out, given what you told us about your belief that there would be openness and candour about the presence of the additional material before the test?
A. No.
Q. Why is that?
A. I don't know. I think I was unhappy with what I'd been told, and I didn't feel that anybody would want to perhaps have that discussion with me.
Q. Did you even seek to try?
A. No, I think I had a clear impression of what was going to occur and what they wanted to do.
Q. Is it really right that before the test you really thought that Celotex were going to be open and honest about the presence of the additional material?
A. Yes, that is correct.
Q. The other question I wanted to visit with you is the rationale for the presence of the magnesium oxide layer. You say that it was to reinforce the cladding, at the back of the cladding, where it met the fire barriers.

We had taken from other evidence that it was, in a sense, to protect the thermocouples at level 2 and at the top of the rig from getting too hot. Is that part of the thinking, or was that part of the thinking, or was it simply to do with reinforcing the cladding panels so that they stayed intact?
A. Well, I think that those things are related, because, as the fire travels up, you then trigger the failure conditions of the test, which is to say the thermocouple raise in temperature, and so by having an effective fire barrier design, you are increasing the, I guess, performance of the rig, and that helps you to achieve that success and that success is based around the thermocouples.

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Q. Right.

Putting it slightly shortly -- or let meask it openly and shortly: why did you decide to apply the additional 6-millimetre magnesium oxide at the level 2 thermocouples and at the top of the rig as opposed to anywhere else on the rig?
A. I think it would have been related to the position of the level 2 thermocouples.
Q. Right.
A. And I also think it would have been related to flames going off the top of the rig as well.
Q. How would the presence of the magnesium oxide prevent the flames coming up from the top of the rig?
A. It would be exactly the same reason, because the -I think the flames coming out the top of the rig, they would be coming out of that gap, and so if you have a cavity barrier which addresses that gap, then that will not happen.
Q. I want to turn to product literature --

SIR MARTIN MOORE-BICK: I'm sorry, Mr Millett, I'd now like to follow up on your question.

Do you know who actually decided where the magnesium oxide boards would be placed? Because there is no drawing for anyone to follow, is there?
A. No, there isn't, and I ...

SIR MARTIN MOORE-BICK: Do you know who took that decision?
A. No, I don't, is the short answer. It may be that it came out of -- as a consensus, or perhaps it is just that is logically where they would need to be positioned.
SIR MARTIN MOORE-BICK: Well, if you think about it, some magnesium oxide boards were delivered to the BRE's Burn Hall, or wherever they stored them. Patch Jones I think was the person who actually built the rig; is that right?
A. I'm not sure who actually constructed the second rig.

I think that might be correct from evidence. My --
SIR MARTIN MOORE-BICK: Well, someone did, anyway.
A. Yeah, sure.

SIR MARTIN MOORE-BICK: Whoever was in charge of constructing the rig must have either been given free hand to decide what to do with these boards which, on the face of it, didn't have any place on the rig, or was told either what to do with them or where to put them.
A. Well, I think --

SIR MARTIN MOORE-BICK: Who told whom what to do with them, if you know?
A. The first thing is you're correct, there's no way that the person building it, which is to say Patch Jones, would have decided where they were going to go, so he

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would have received a clear instruction from Celotex to do that. I think in terms of who told him, I think that would have been Jon, because Jon was at the rig, directing it, and some of that memory -- or some of that understanding is not contemporaneous, but I have seen Jon's statement.
SIR MARTIN MOORE-BICK: Right.
A. So -- but, equally, I don't think that Jon would have been there on the day going, " Hmm , where are we going to put this? I think they've got to go there". I'm sure that it would have been decided before then where they're going to go in a general sense. "Okay, this line needs to go here, which is below the second level thermocouples, and yes, we've got one at the top as well".
SIR MARTIN MOORE-BICK: All right. Thank you very much.
Yes, Mr Millett.
MR MILLETT: Just following up on what you told
the Chairman, is what you told the Chairman something that Jon Roper told you, or are you just trying to piece together the --
A. Honestly, I think I took that from Jon's evidence, where he describes, actually, I believe, that he was there and telling him what to do.
Q. I see. So you can't add, by reference to your own
recollection of the events at the time, to what Jon Roper has already told the Inquiry?
A. No.
Q. Right, I see.
Can I then turn to product literature.
Overall question: did you have any input into the drafting of the product literature for Celotex RS5000 when it was launched in August 2014?
A. Yes, I did.
Q. Let's see how we go.
Can you tell us in general terms which parts of that product literature you drafted?
A. I was asked to make contributions to a document which
was called the rainscreen cladding specification guide.
Q. Any other document, like the datasheet or the compliance guide?
A. I was asked to contribute a blog, which was to be placed on the Celotex website. That is the only recollection that I have, both then and now, of my contribution to the literature.
I was shown an email, and that email references me, although I'm not included in it, and it says -- I think it's an email to Tina Smith, and it says "Jamie, can you please" -- "Can you please go to Jamie and get three to six bullet points about the installation of RS5000 for
the rainscreen cladding application sheet", which is different from the datasheet, but I've got no memory and there's no evidence to say that she ever did that.
Q. Okay. Can I pick you up on the specification guide, \{CELO0000013/3\}, please. This is the specification guide, and if we look at the third page, we can see the introduction to that document.
Did you draft any of that?
A. Yes, I did a draft of some of that and sent it to Lizzie Seaton, and I think that that draft was then used to come up with this final version.
Q. I have a document to show you, but perhaps we can take it more quickly. The first three paragraphs of that page and the first two sentences of the fourth paragraph I think, from the record, are what you drafted; is that right?
A. Erm ... yes, you're absolutely correct. So there is an email which basically says exactly what I said to Lizzie, so that can be referred to. But if you are telling me that that matches the first three paragraphs and the first sentence, then I'm prepared to accept that.
Q. Let me just do it very quickly, if I can.
\{CEL00009596\}, please. This is an email chain between you, Jonathan Roper, Lizzie Seaton and Rob Warren
relating to the rainscreen cladding literature. On page 3 \{CEL00009596/3\} you send an email saying, "Please find attached design considerations". Do you see that?
A. Yep.
Q. What's attached I think is a draft. That's at \{CELO0009590/4\}, please, and the introduction, if you look at the bottom of the fourth page, it says:
"Buildings with a storey height greater than 18 m have additional requirements under the national building regulations.
"Please refer to our separate compliance guide or contact the Celotex Technical Centre for assistance."

Did you draft that?
A. Yes, I did.
Q. Yes, and that refers to the compliance guide.
A. Yes.
Q. Then if you go to \{CELO0009579\}, this is an email of 3 June 2014 where you emailed Mr Roper and Mr Warren with some draft wording for an introduction. Do you see that? There is, underneath it in italics, a block of text. Can you see that?
A. Yes, I do.
Q. Just cast your eye down that. I'm not going to spend time reading it all to you.

If you go back to the specification guide, perhaps
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we can keep that on the screen and look at the specification guide at \{CELO0000013/3\}, this confirms your evidence, I think, that the first three paragraphs and the first two sentences of the fourth paragraph of the introduction are the same.

Just casting your eye back and forth, you can see that you were the one, I think, who had put that into your 3 June email and it found its way into the introduction.
A. Okay, yes.
Q. Yes?
A. Yeah.
Q. Now, you can see that, on the right-hand side of the page -- well, you can see on the left -hand side of the page that your email stops where it says:
"Celotex RS5000 is uniquely positioned to help meet these goals. Celotex RS5000 is a premium PIR solution ..."

Then it stops at that point, dot dot dot, but if you cast your eye to the right-hand side, someone has added the words "for use in rainscreen applications and suitable for use in building above 18 metres in height".

Do you know who put that wording in to the final version of the specification guide in that paragraph, because it doesn't appear in your email?
A. No, I don't
Q. Did you know where it came from? Do you know, or did you know at the time where it came from?
A. I know it's consistent with how Celotex wanted to market the product. I didn't know where those words had come from. I think I know now, from other people's evidence, that they were taken from a Kingspan document.
Q. Right.

At the time, did you see the specification guide, and particularly those words there which follow on immediately from the words that you had drafted?
A. Yes, I would have seen this document after it had been produced.
Q. Did you think at the time that those words were -- well, let me put it to you that those words are, on the page, thoroughly misleading, aren't they? Because they suggest that RS5000 can be used in any building above 18 metres, regardless of whether the construction of the cladding system on such buildings is the same as that which had passed the test.
A. Yes, I would agree with that.
Q. Did the fact that those were thoroughly misleading words occur to you at the time?
A. Yes, I think it would have done.
Q. Yes. So can we again cut a long story short by saying

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that, at least in this respect, you knew that Celotex was marketing RS5000 on the basis of a thoroughly misleading statement about its potential for use in buildings over 18 metres?
A. Yes.
Q. Yes.

I think you said you had had nothing to do with the compliance guide; is that right?
A. That's correct.
Q. Drafting of the compliance guide.

Now, the launch presentation happened in early
August 2014. Can we go to \{CELO0001228\}, please. This is an email to you and Rob Warren from Jonathan Roper on that day, which attaches a draft of the CTC presentation for 4 August, with some slides and some FAQs at the end. Do you remember receiving this document?
A. I'm not sure if I remember receiving it -- if I remember receiving it at the time, but I have -- I've seen this document and also the coming presentation.
Q. Did you understand the purpose of this document to be to make sure that you and your fellow TSOs, who would handle technical queries as they might come in in relation to RS5000, would know all about it and be able to answer questions about it in advance of or perhaps shortly after the launch?
A. Yes, I do.
Q. Did that presentation go ahead, do you know?
A. Yes, it did.
Q. Were you there?
A. Yes, I was.
Q. Do you know who delivered it?
A. It was delivered primarily by Jon Roper --
Q. Right.
A. -- but there was -- but Rob Warren delivered a section at the end.
Q. Can we look at \{CELO0001229\}, please. This is the CTC launch presentation of 4 August 2014, as you can see. Is that the same set of slides as you saw?
A. I'm not sure, because I know from looking at other evidence that there was also a similar document for the sales launch, and I think that they are different in some respects. So I think if that date is correct, 04/08/14, to the email we just saw, where it -- well, I'm not sure whether it did say that, did it?
Q. I'm just wondering whether this is the same set of documents that you saw or whether there was a difference.

Let's see how we go. Can we go to slide 18 \{CEL00001229/18\}.
A. Okay.
Q. Here is a list of products, five of them in all, which are described as the "Latest Addition To Our '5000' Range".
A. Yeah.
Q. Was that in the slide pack that you had seen?
A. I believe so, yes.
Q. Right.

Now, it describes RS5000 as the latest addition to our 5000 range. In fact, as I think you told us earlier, it wasn't; it was essentially FR5000 re-branded, wasn't it?
A. That's correct.
Q. So, on the face of this slide, this was a false and misleading statement to your own sales team, wasn't it, to the extent that it described Celotex RS5000 as a latest addition? It was already in the range.
A. Yes, in that sense, that's correct, yeah.
Q. Was that fact well understood within the СТС, namely the fact that, actually, Celotex RS5000 was not remotely a latest addition; it was simply Celotex FR5000 got up with a new number?
A. I think it was a -- I think that people came later to understand that. I think it was a kind of an open secret, because our understanding was that, although we knew that to be the case and it was discussed amongst
the technical team and the people within the technical team knew that it was the same product physically, it was an instruction that that was not to be revealed to customers.
Q. Now, Jonathan Roome in the sales team told us -- and this is the gist of his evidence -- that he wasn't aware that RS5000 wasn't a new product.

Was there a plan within Celotex to conceal that fact from the sales team?
A. I don't know.
Q. Well, you can help us, I think. Do you know of whether or not there was a plan within Celotex to conceal the fact that RS5000 was in fact FR5000 re-branded from the sales team?
A. I'm not sure to what extent they did understand that. It's obviously presented here on this slide as being a new product. My recollection is it was a kind of an open secret and that most people at Celotex knew that they were the same product.
Q. Why would you have an open secret? What was the purpose of that?
A. I think it was to be not revealed to customers, and --
Q. Right.
A. -- an example of that would be: let's say that
somebody's ordered by accident FR5000, and they've got
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it on their building site waiting to go on to their building -- I mean, put aside the fact of whether it was or wasn't suitable to be done so -- and they rang up and said, "Oh, we've ordered the wrong thing, we've got FR5000 instead of RS5000", I believe that they would have been told, "No, you have got the wrong thing, you will need to send it back and get the right thing ", even though, in reality, it's the same product.
Q. That is an odd idea, I have to confess. Why not just get the sales team or your people to say, "Don't worry, FR5000 has now passed an 8414 test and you can use it ", subject of course to the numerous caveats that we see in the marketing literature and other things?
A. They obviously did not want that to be the case.
Q. I have to suggest to you that was because they wanted to drive sales of RS5000 as if it were a new product when it wasn't.
A. That may -- yeah, I would say that is correct.
Q. I'm putting that to you. Is that the case? Is that the fact?
A. I believe so, yes.
Q. Right.

Slide 39 \{CELO0001229/39\}, then, please, "Compliance Guide". It says in the third bullet point there:
"Reference Point For Above 18 Metre Enquiries \&

Should Be Attached To Every U-value Calculator /Email Sent."

At the top of that it says:
-" Guide To Complying With AD B2 For Buildings Above 18 Metres In Height
-"Details The Tested System."
When it says "Details The Tested System", that was actually untrue, wasn't it?
A. That's correct.
Q. When it says "Reference Point For Above 18 Metre Enquiries", that was encouraging sales colleagues, or perhaps CTC colleagues, to rely on a slide that all of you knew, you, Jon Roper and Paul Evans -- is this right? -- to be misleading?
A. That is correct.
Q. And it's misleading because it didn't detail the system as tested.
A. That's correct.
Q. Similarly, slide 40 \{CELO0001229/40\}:
"Q. Do You Have A Solution For Buildings Above 18 Metres In Height?
"[Answer:] Yes, Celotex RS5000 has successfully met the performance criteria in BR 135 \& therefore is acceptable for use in buildings above 18 metres in height."

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Again, that was a thoroughly misleading and dishonest statement because everybody at Celotex knew that the fact that it had passed that test didn't make it acceptable for use in all buildings over that height.
A. Yes, I would agree.
Q. We see your comments coming back on these at
\{CEL00010362\}, and you say:
"Hi Jon,
"Looks brilliant."
And you give comments on lots of slides here.
Now, allowing for any differences in the slides that we've shown you, you don't raise the concerns relating to slide 18 , slide 39 and slide 40 that I've shown you. You don't say, "Those are misleading, you can't possibly put those out".
A. No, I don't.
Q. Why is that?
A. Because a decision had already been made and communicated to me that this is the way that Celotex is intending to market that material, and, as I said previously, all of the work that happens after that is on that basis, and so I'm proceeding on the basis that that decision has been made, and limiting my feedback to other areas.
Q. Now, you see in the middle of that email, under
$\begin{array}{lr}\text { "Slide } 23 \text { ", you ask a question: } & 1 \\ \text { "Are we going to push RS5000 for masonry outer leaf } & 2 \\ \text { as well? What is our position on masonry outer leaf and } & 3 \\ \text { 18m?" } & 4 \\ \text { Is the reality that you knew that the only position } & 5 \\ \text { that you could hold, or that CTC people taking calls } & 6 \\ \text { could hold, was that masonry outer leaf was outside the } & 7 \\ \text { scope of the system as tested because the system had } & 8 \\ \text { been tested under part } 2 \text { and not part 1 of BS } 8414 \text { ? } & 9 \\ \text { That is correct. I think there was a feeling that, due } & 10 \\ \text { to the nature of masonry, as in that it's not really } & 11 \\ \text { a rainscreen cladding, it could not be anything other } & 12 \\ \text { than robust, because to break into the cavity, fire } & 13 \\ \text { would have to go through bricks, which it would never } & 14 \\ \text { do. } & 15 \\ \text { Now, I would agree with you now that, looking back } & 16 \\ \text { on that, that is an erroneous thought, because it's } & 17 \\ \text { not -- it wasn't for us to actually form that opinion, } & 18 \\ \text { but nevertheless that was the basis for that comment. } & 19 \\ \text { Can I just ask you one or two questions about the actual } & 20 \\ \text { marketing of RS5000 from your perspective. } & 21 \\ \text { Can we go to your statement, please, at page } 26 & 22 \\ \text { \{CEL00010054/26\} and look at paragraph } 81 . & 23 \\ \text { You say there, in the fourth line down: } & 24 \\ \text { "We then started taking customer enquiries on RS5000 } & 25\end{array}$
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after launch in autumn 2014. Potential customers contacted the Technical Team to ask if they could use our product in above 18 metre projects and I would say, potentially they could, but that they should consider their decision in conjunction with a document which detailed the Test, this being the Celotex compliance guide."

Then you go on in the next paragraph, 82 , to say:
"We were strict with customers and were careful to say to those enquiring about buildings above 18 metres that they could not use our product, unless they were using it in accordance with the compliance guide."

At paragraph 83 you go on to say, in the second line:
"... I was thorough in informing customers that RS5000 should be used in accordance with this design. I tried to do the best that I could as far as I could."

Now, the problem is, isn't it, that the compliance guide didn't in fact show the design which was actually tested, did it, because it concealed the presence of the additional material?
A. That's correct.
Q. Ditto, nor did the BS 8414 report.
A. That's correct.
Q. Therefore, when you say you were strict with customers
and referred them to the compliance guide, you were referring customers to a compliance guide that you knew was dishonest and misleading.
A. That's correct.
Q. So, in reality, you were a part, weren't you, of continuing to perpetrate the fraud on the market?
A. Yes, that is correct. Although to -- no, that's fine.
Q. Well, no, do you want to add anything?
A. Yes. So, first of all, the way of dealing with customer enquiries was an explicit work instruction from Celotex senior management to our department. I did not make a decision or have any part in a decision or authority to make a decision to conceal the additional material. I had a belief in my heart that if somebody were to follow the guidance in the compliance guide, even though it was misleading, that it would be based upon a design that would pass -- would have passed if it was tested that way.

I didn't have any control over how Celotex had chosen to go down that route, although I absolutely accept that I knew about it and didn't do what was right in raising it. And what was under my control was -- and you may feel this is entirely insufficient, but it was to at least diligently ensure that people did receive the compliance guide.

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But that having been said, and with that context, I completely agree with your question that I was indeed referring people to a document which was fundamentally incorrect.
Q. You say in that last answer that you had a belief in your heart that if somebody were to follow the guidance, it would be based on a design that would pass; I have to suggest to you, Mr Hayes, that you had no basis at all in thinking that the design as described in the compliance guide and the specification guide would have passed, namely without the additional material?
A. I think there is some basis for that, and I'm not trying to retroactively make excuses for behaviour which wasn't correct, but I think it is fair to say that there was a basis for that, and the basis of that was the conversation with Phil Clark, and again I don't want to come across as trying to excuse behaviour which wasn't correct, but I think it's fair and relevant to raise the fact that that design was tested after Grenfell and in fact did pass.
Q. But that wasn't known to you at the time.
A. No. I accept that completely.
Q. And the conversation you refer to with Phil Clark was really pure speculation as between the two of you, because there had been no such test.

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A. Yes, I also accept that, but I think that Phil would have had a level of experience and expertise so that his opinion, if you like, and it was only an opinion, but it would have carried some weight with me.
Q. I just want to look at one example of you giving advice.
Can we look at \{CELO0001397\}, please. This is
an email chain in early March 2013, Mr Hayes, between
Simco and "Celotex, Technical" in relation to a
Bowmer + Kirkland project at ONB, which I think stands for One New Bailey. Do you remember that?
A. Erm ...
Q. We can look at it.
If we go to \{CELO0001397/2\} and over to page 3, we can see that Mr Ross, Eric Ross of Simco, sends an email to "Celotex, Technical" about U-values, saying that they've quoted for RS insulation on the above project, One New Bailey, Salford, ONB.
If you go to page 3 \{CELO0001397/3\}, he goes on:
"The Main Contractor/Client had some concerns regarding BBA certification, which you answered in the attached e- mail, however they have since came back again with the below comments."
The comments are set out below. That refers back to you.
Would this email chain have come through to anyone
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in the technical team other than you, or would it have come to you specifically , do you think?
A. I'm really not sure. Does it say? Does it not say on the ...?
Q. No, it doesn't. If we go back to page 2
\{CEL00001397/2\}, we can see that it comes to the technical team. Bottom of page 2, Eric Ross to "Celotex, Technical ".

We can see that you answer him at the next email up at page 2. You say:
"Thank you for your e-mail."
4 March. Do you see that?
A. Yes, can I --
Q. It's from "Celotex, Technical", but it goes out in your name.
A. Sure.
Q. Would it have come to you directly or would it have come through someone else to you?
A. It would have come, by the looks of it, to the technical address, which is an open inbox, which is --
Q. I see.
A. -- available for the team to see.
Q. Right.

I think we can see the response to this, or an email chain relating to it, \{CELO0001397/5\}, please, and over
on to page 6, we can see that there had been an earlier discussion relating to RS5000, and halfway down that email you can see it says:
"Please find below $\mathcal{E}$ attached response from Celotex regarding the BBA issue, I hope this is sufficient?"

Then it is set out:
"As stated in Approved Document B2 (ADB) ..."
Did you write that response, do you think?
(Pause)
A. No, I don't believe so. But, I mean, I'm now looking at this document possibly for the first time, and I don't have a memory of writing that.
Q. Right. If it wasn't you, who else might it have been in your technical department?
A. Has it come from the technical department or has it come from somebody else at Celotex, or ...?
Q. Let me see if I can do this two slightly different ways. It's a very complex email string to run around.
A. I have to say, yes.
Q. But if we go to page 2 \{CEL00001397/2\} we can see that you send an email to Eric Ross, as I showed you before, on 4 March 2015, and you say:
"Thank you for your email.
"I [am] happy that the statement we made previously is suitable and correct. Celotex RS5000 has been

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successfully tested to BS8414 part 2 and so can be considered for use in buildings above 18 m ."

I can probably take the question just on that. That wasn't correct, was it?
A. No.
Q. In fact, it was false and misleading to say that it could be considered for use on buildings above 18 metres merely by reason of the fact that it had passed that test.
A. I would agree with you.
Q. Yes.
A. Yes, although it is the Celotex-determined response to queries regarding RS5000.
Q. Right. So that was the party line, as it were, that you were pumping out?
A. That's -- yes.
Q. Yes.

Just to finish off the point, then, if we could go back to the email on --
SIR MARTIN MOORE-BICK: Would you just like to comment on the next paragraph?
A. Again, that is -- our position is that we are open about the system, so again, that is part of the Celotex position, which is that enquiries will be dealt with by providing the U-value calculation for --

MR MILLETT: But that was false, though, wasn't it? Your position was that you were very far from open about the system that you had tested, because the system that you had tested included the additional material about which you were very far from open.
A. I would agree with that, yes.
Q. So, again, that's a false and misleading statement that you, yourself, were giving Eric Ross; yes?
A. Yes.
Q. If we then go to page 5 \{CELO0001397/5\}, there is a longer version of the response which I think you were picking up in this email, halfway down the email that Eric Ross sends to Simon Martin, under the words I showed you, and there we can see three paragraphs on that page ending with the words:
"... and therefore complies with the requirements of ADB for buildings that exceed 18 metres in height."

Again, I think you agree, false and misleading; yes?
A. Yes.
Q. Yes.

Then on the next page, page 6 \{CELO0001397/6\}, you say:
"Celotex RS5000 has also achieved Local Authority Building Control (LABC) approval for use in rainscreen cladding systems. Please find this attached confirming 193
that the product is suitable for use in masonry and steel frame constructions, has achieved the performance criteria set out in BR 135 and has a thermal conductivity of 0.021 ..."

Did you send him the LABC certificate that was issued by the LABC at the end of August, do you think?
A. I think I'm getting a little bit confused because wasn't the question: had I written that? And that doesn't seem --
Q. Right. It certainly seems to have come from Celotex and the technical department; is that wrong?
A. It may well be wrong, yes, perhaps that has come from a different place within Celotex, and in fact some of those words look familiar because I think there is something in evidence where perhaps Jon Roper has produced a -- isn't there in his evidence an email where he gives a standard set of words to be used in dealing with enquiries? And that seems similar to this.
Q. Right.
A. So perhaps it's come from a salesperson, for example.

So if the question is: do I remember writing that set of words? Then the answer is: no, I don't. But if he says that has come from Celotex, then there must be another email which Celotex can provide from their servers which would tell you exactly who indeed has said
that and where it's come from.
Q. Right. The only reason I ask is if we go back to the second page of this email run \{CEL00001397/2\}, as I showed you, the first paragraph says that you said:
"I [am] happy that the statement we made previously is suitable and correct."
A. Yes.
Q. Without getting hung up on whether it was you personally or Mr Roper or another department, you are certainly standing by the statement as we see set out at length.
A. Okay.
Q. Do you accept that?
A. Yes, I do.
Q. Therefore, you were repeating the false and misleading statements contained earlier on.
A. Yes.
Q. You referred in that last paragraph, as I showed you on page 6, to the LABC certificate. Was that a reference to the LABC certificate that had been issued at the end of August 2014?
A. Yes, and I think, to be fair, there's every possibility that somebody has come in with this enquiry, and I have been in a position where I've had to affirm the Celotex line, if you like, which is to say, "Yes, you can consider the product, here's a copy of the compliance

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guide", but without a specific memory of it, I'm not able to say that I looked at every one of those paragraphs and said, "Okay, yeah, yeah, yeah, I'm affirming that ". It may well have been that I had no choice but to say, "Yes, we stand by it ", because for me to take any action would be to say, "No, that's not correct", which was not the position of Celotex to say that.
Q. Can I then turn to January 2015 and Grenfell itself . \{CEL00000453\}, please. Now, this is an email, if we go halfway down that page, from Jonathan Roome to you on 19 January 2015. If you go over the page \{CELO0000453/2\}, you can see that it forwards to you an email that Jonathan Roome has received from Daniel Anketell-Jones at Harley.

Now, you may not have known this at the time, but Daniel Anketell-Jones was the designer on the Grenfell Tower project. This email isn't about the Grenfell Tower project, at least not on its face. It says:
"Good Morning Jon,
"Sorry - but got a headache for you!
"We are being asked by one of our clients to see the test results and certificates for the RS5000 insulation.
"They want to know exactly how it was installed when
tested to BS 8414-2:2005, who carried out the testing, how it was fixed, what it was covered with, what cladding was used, what support structure, etc and most importantly the results. Drawings and or photos of the test set up would help show how it was installed, but I imagine these form part of the test results anyway.
"They also want to see the certificate and results
for the test to $\mathrm{BS} 476 \mathrm{Pt7}$ (fire class rating), showing the index rating achieved during the test.
"Could you sort this out for us please? We are hoping to put this forward on most of the cladding jobs, so having this information to hand would be most useful."

That comes to you from Jonathan Roome. He says, if you go to the bottom of page 1 \{CEL00000453/1\}:

## "Hi Jamie,

"Do we have test results for RS5000 for the BS476 Pt7 (fire class rating) as Dan mentions below.
"I can always go and visit Dan to discuss the 8S8414:2 test results in person."

Then you respond to him and say:
"Hi Jonathan,
"I am afraid I do not have access to that document.
"I imagine that this will be a controlled document and only available through marketing. I am not sure if

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there would be a requirement for a non-disclosure agreement etc?
"Please speak to Debs in the first instance and if necessary she will have a chat with Paul."

Now, first of all, when you saw the email from Daniel Anketell-Jones that Jonathan Roome emailed to you, and he says, "I've got a headache for you", was that the kind of request for details that you were beginning to receive or had been receiving since the launch of RS5000 in August?
A. That seems to be very detailed in terms of how he's laid things out and the things that he's asked for, but we were receiving enquiries, I can't think of any ones in -- specifically, but I think that we would have received enquiries about the use of the product above 18 metres, and it's possible that some of those enquiries would have asked for things such as test data.
Q. Right.

Now, you say that you didn't have access to that document. Why didn't you have access to the full 33-page BRE test report?
A. I don't think that Jonathan Roome is asking me for that document. I think he's asking me for the BS 476-7 document.
Q. Right.
A. And that document is to do with the surface spread of flame testing and not to do with the above-18-metre test.
Q. I see. So you did have access to the BS 8414 full test report, but you are saying not the BS 476-7 test; is that right?
A. The Celotex technical centre did not have access to either of those test reports. I believe that I personally had a copy of the 32-page test report because Debbie had sent it to me on a previous occasion, but the team or the department would not have access to either of those documents, and in respect to his specific request, which is $476-7$, I did not have and would not be expected to have access to that document.
Q. Right.

Mr Roome told us that his experience was members of the sales team didn't have access to test reports. Did that apply to you as a member of the technical team?
A. Yes, that's correct.
Q. Given your role in the test and in seeing the draft test reports for RS5000, that wasn't correct, was it? You did at least have access to those documents?
A. I personally had a copy of the 32 -page test report for the 8414 test. That was because of, I guess, my being on the project and my relationship with Debbie. The

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department as an entity were not to have a copy of that test report, and the department and me personally would not have had any other test reports relevant to Celotex products.

I'm sorry if that's not clear. I've tried to be clear.
Q. Did you know of a general requirement, if that's the right word, in Approved Document B in at least two places that designers, when considering external wall constructions, should carefully check the test reports to ensure the compliance of products with the test results? I'm paraphrasing Approved Document B, perhaps unsurprisingly.
A. No --
Q. Were you aware of that?
A. Yes, I was.
Q. How did you think designers would be able to go about complying with that guidance if Celotex, in relation to a Celotex product, were simply going to refuse access to those test reports on the grounds that they were controlled?
A. I don't think that they would be able to.
Q. Did it occur to you at the time that by pursuing a policy of not allowing designers to see test reports and check the data in it, you were disabling them from
complying with the requirements under ADB?
A. I don't think I thought about it in those terms, but I did realise that it was ridiculous, really, that they would not have that access to that document.
Q. Right. Did you take that view up with anybody within Celotex and try to encourage people to be a little bit more open so that designers could actually test these products?
A. I think it comes down to exactly the issue with the missing material. They had a -- I think a -- well, first of all, there was a deliberate misleading in terms of the tested system, but I also believe that they did not want to encourage people to ask questions about the specific details of the test.
MR MILLETT: Right.
Well, Mr Hayes, thank you very much for your
evidence generally. I have come to the end of my questions.

Mr Chairman, is this a convenient moment?
SIR MARTIN MOORE-BICK: Yes, I think it is .
MR MILLETT: I'm sorry it's taken a little bit longer. SIR MARTIN MOORE-BICK: No, that's all right.

Mr Hayes, although counsel says he has come to the end of his questions, we always have a break at this point, first of all to let him just check that there's

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nothing he hasn't covered, but also so that we can consider questions from others who are not here but who are following the proceedings.

So we will have a ten-minute break, is that enough?
MR MILLETT: Yes, Mr Chairman, I think that would suffice.
SIR MARTIN MOORE-BICK: Well, we'll say ten minutes unless
you tell us you need more later on.
MR MILLETT: Very good, thank you very much.
SIR MARTIN MOORE-BICK: We will stop for ten minutes, I hope it won't be any longer, and then you'll come back and we'll see if there are further questions.
THE WITNESS: Thank you.
SIR MARTIN MOORE-BICK: So 4.40, and no talking to anyone about your evidence while you're out.
THE WITNESS: Yes, sir .
SIR MARTIN MOORE-BICK: All right? Thank you very much. (Pause)
Mr Millett, if it turns out that more time is required, you can let us know.
MR MILLETT: Yes, thank you.
SIR MARTIN MOORE-BICK: 4.40 otherwise. Thank you.
( 4.30 pm )
(A short break)
( 4.45 pm )
SIR MARTIN MOORE-BICK: All right, Mr Hayes, we will see if

Mr Millett has found some more questions for you.
Yes, Mr Millett.
MR MILLETT: Mr Hayes, I just want to ask you one or two questions about Mr Warren's involvement.

Did you discuss the presence of the magnesium oxide and the other additional material with him before the test, the second test?
A. Yes.
Q. Did Mr Warren know exactly what was going into the second test, to the best of your recollection?
A. I think I said earlier and in my first statement that I discussed it as an idea with Rob, and that I had a specific recollection of talking about it as an idea with Rob. I don't recall a specific conversation with Rob after the test about its presence. So ... so that's the answer.
Q. Right.

Following up on that, from what you know from what you saw or heard from other people, or heard particularly from Mr Warren, did you know or think that Mr Warren had known about the decision following the second test to conceal the use or presence of the additional materials?
A. It's not an easy question to answer. I think it's fair to tell the Inquiry that I have a relationship with Rob,

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worked with Rob for many years, worked with him after Celotex, stayed in touch with him. Rob is a person that I like and have respect for.

At the time of my first statement, I wasn't sure whether Rob was aware of that material. I think, looking back at it, the fact that Rob-- I'd had a discussion with Rob about the idea to use it, and just things that I've now seen to show that it was being discussed at senior management level -- the answer is I'm not sure. The balance of probability is that he -well, that's it.
Q. Right, okay.

Can I just ask you one or two other questions about the RS5000 test datasheet, \{CEL00000411\}, please. You can see on this page -- I know you had no input into this document, as you I think told us, but presumably you saw this --
A. Yes.
Q. -- in and after August 2014 because of your role in the technical services department.

You can see that it says it's been tested to class 0. Do you know when those class 0 tests were, the tests to BS 476-6 and 7? Do you know when those were?
A. No, I don't, and testing to class 0 would not have been something that I had ever been involved with.


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