

OPUS 2

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Grenfell Tower Inquiry

Day 64

November 3, 2020

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1 Tuesday, 3 November 2020
 2 (10.00 am)
 3 SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to
 4 today's hearing. Today we're going to hear further
 5 evidence from Mr Paul Hyett, so would you ask Mr Hyett
 6 to come in, please.
 7 MR PAUL HYETT (continued)
 8 SIR MARTIN MOORE-BICK: Good morning, Mr Hyett.
 9 THE WITNESS: Good morning.
 10 SIR MARTIN MOORE-BICK: Yes, Mr Millett.
 11 Questions from COUNSEL TO THE INQUIRY (continued)
 12 MR MILLETT: Good morning, Mr Chairman.
 13 Good morning, Mr Hyett. We were about to look at
 14 two pieces of Mr Sounes' oral evidence yesterday
 15 evening, and I would like now to show those to you, and
 16 then ask you one or two questions about what he said.
 17 First, can we please look at Mr Sounes' oral
 18 evidence at {Day7/22:14}. He says there:
 19 "Rainscreen cladding itself is quite
 20 straightforward, especially when you've got a concrete
 21 substrate. You've got -- if it were a new-build and --
 22 an ideal backing is a concrete background for
 23 a rainscreen cladding. So the existing building was in
 24 a sense no different to a new-build; it just happened to
 25 have a lot of people living in it. That's where the

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1 complexity arose."
 2 Can I then show you {Day10/19:1}, please. He says
 3 there at the top of the page:
 4 "The lower levels from a fire strategy perspective
 5 were much more complex, in my view, and I would have
 6 been aware of those and focusing on those. Then I would
 7 have read the whole report. I would have read the whole
 8 report in the context that it was the third version of
 9 the report, and that's where it was at the point in
 10 time. I wouldn't be going back and analysing it from
 11 the perspective of completeness of brief as you would at
 12 the start of a project."
 13 Now, the report he is talking about there is the
 14 Exova --
 15 A. Oh, I was going to ask. Okay.
 16 Q. For your benefit.
 17 A. Yes.
 18 Q. My question is: do you think that Studio E
 19 underestimated the complexity of the task?
 20 A. Well, what he says resonates with me in the sense of the
 21 rainscreen cladding. I can't remember his exact words,
 22 but he's implying that it is not too complicated, and
 23 the lower part of the building was, from the perspective
 24 of an architect. I have some sympathy with that view,
 25 but they're different kinds of issue. The lower part of

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1 the building involved substantial re-planning, and
 2 that's -- I used the term yesterday -- the shifting and
 3 manipulation of space, it's spatial planning, and the
 4 space has to be arranged both to be efficient and good
 5 for the residents, but it's also got to be safe in terms
 6 of particularly egress. So there was complexity down
 7 there, and I can well understand him pointing to that as
 8 being a demanding area.
 9 There was no such complexity with the rainscreen
 10 cladding, it was more a technical issue, but the
 11 geometries were complicated. We were looking yesterday
 12 at the model and the way the columns protruded beyond
 13 the spandrels, and the slots between the spandrel and
 14 the columns. So there was complex geometry to
 15 understand.
 16 So I don't think that I would dismiss the complexity
 17 of the rainscreen cladding work, but it was a different
 18 kind of problem.
 19 Q. I see, thank you.
 20 In general, would you agree that one aspect of
 21 professional competence is understanding the limits on
 22 one's own expertise and recognising when third-party
 23 expertise is required?
 24 A. Essential.
 25 Q. Is it your opinion that Studio E failed adequately to do

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1 so?
 2 A. Individuals failed, but the company as a whole also
 3 failed in that respect.
 4 Q. Now, in your report, I think you assess Studio E's
 5 performance against the RIBA Plan of Work in use at the
 6 time of the refurbishment, or at least the time that the
 7 refurbishment began. That's right, I think, isn't it?
 8 A. Yes.
 9 Q. I think you are also -- is this right? -- judging
 10 Studio E against the RIBA Job Book 7th edition 2007, and
 11 the Handbook of Practice Management 9th edition of
 12 May 2013.
 13 A. Yes, I did use both of those, yes.
 14 Q. I think they were both in force -- just confirm for
 15 me -- at the time of the refurbishment.
 16 A. Yes.
 17 Q. What about the ARB code of conduct? That was clearly in
 18 force at the time.
 19 Do you accept or agree, in your opinion, that
 20 a failure to comply with the ARB code of conduct does
 21 not of itself constitute unacceptable professional
 22 conduct or serious professional incompetence?
 23 A. Sorry, could you repeat that?
 24 Q. Yes, it's a slightly wide question, but one I have been
 25 asked to put to you.

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1 Do you agree that a failure to comply with the ARB
 2 code of conduct does not of itself constitute
 3 unacceptable professional conduct or serious
 4 professional incompetence?
 5 A. I don't think it necessarily suggests professional
 6 incompetence, but misconduct I would have thought it had
 7 to, because the code of conduct is something that we all
 8 have to comply with, and failure to comply with that --
 9 yes, I would agree.
 10 Q. Thank you very much.
 11 I'm now going to turn to a completely different
 12 topic, which is contract terms, and I want to ask you
 13 about your view in relation to the terms on which
 14 Studio E undertook work for the TMO and then Rydon, and
 15 the scope of Studio E's appointment.
 16 Now, just to be clear, before I embark on these
 17 questions, I'm not asking you to interpret the contracts
 18 or for any legal opinion from you. What I'm looking for
 19 really is your understanding and experience of how
 20 a reasonably competent architect would understand these
 21 things at the time.
 22 Now, do you agree that a large number of large-scale
 23 projects similar to the refurbishment project at
 24 Grenfell Tower are nowadays, or between 2012 and 2016,
 25 procured by way of design and build?

1 A. Yes.
 2 Q. And that it would have been unusual for the
 3 Grenfell Tower project not to have been procured via
 4 that method?
 5 A. Unfortunately, yes.
 6 Q. You say "Unfortunately". I'm going to park that as
 7 a question that itches to be asked, but we will come
 8 back to it in due course.
 9 Are projects procured by way of design and build
 10 always tendered at the same RIBA work stage?
 11 A. No.
 12 Q. What RIBA work stage generally, in your experience, do
 13 design and build projects get tendered?
 14 A. Certainly earlier than this one, in the territory of
 15 work stage D.
 16 Q. Is the architect always "novated" -- and I put those
 17 words in audible quotation marks -- to the successful
 18 design and build contractor following the tendering
 19 process?
 20 A. No.
 21 Q. Is it more common than not that the architect is
 22 "novated" to the winning contractor?
 23 A. Well, I've never read any statistics on this, but my
 24 experience tells me that, yes, it is more common than
 25 not.

1 Q. Right.
 2 Could we look at paragraph 2.2.8, please, of your
 3 supplemental report, that's {PHYS0000002/6}. Now, you
 4 say here, by way of a quotation from the guidance given
 5 in the RIBA Job Book at page 29 -- and you set out the
 6 quotation there, "Appointment of architect as consultant
 7 in design team", and there is a quotation there, that's
 8 the context for this. Then you identify the typical
 9 duties, and then you say at 2.2.8:
 10 "An architect should be well aware not only that it
 11 is important to ensure that the duties and scope of
 12 services to be provided at any and every stage of
 13 his/her involvement under a Design and Build contract
 14 are clearly defined, but also that it is his/her clear
 15 professional duty to ensure that this is done and
 16 properly recorded."
 17 Is it for that reason that you consider that it's no
 18 excuse for Studio E to rely on the proposition that,
 19 during the course of its work for Rydon, there was no
 20 signed agreement in place governing its obligations?
 21 A. Yes. That is correct. That is my view.
 22 Q. Thank you.
 23 A. A qualification: it's important to ensure duties are
 24 clear whatever the kind of procurement route.
 25 Q. Yes.

1 Are you aware of any challenges which the
 2 architectural profession generally faces in agreeing
 3 appropriate terms of appointment for these services?
 4 A. Am I aware of any challenges?
 5 Q. Yes.
 6 A. From what source?
 7 Q. Well, is it difficult, in practical terms, for
 8 architects to agree terms?
 9 A. Oh, yes, there can be a lot of cut and thrust around
 10 appointment terms, absolutely.
 11 Q. Right.
 12 Are there difficulties particularly in ensuring
 13 those agreements are agreed and then signed off before
 14 any work commences on a project from an architect's
 15 perspective?
 16 A. I've had that experience across the entire course of my
 17 professional career.
 18 Q. What about -- sorry.
 19 A. Yes, I have.
 20 Q. Is it right that it's also difficult, or there are
 21 challenges, when it comes to agreeing variations in the
 22 scope or terms of the appointment?
 23 A. Variations to a standard appointment or variations
 24 during the course of the project? That's a question.
 25 I'm not quite sure what you mean.

1 Q. Let's take it in a little bit more of a staged approach.
 2 What do you think Studio E should have done, as the
 3 putative reasonably competent architect, if Rydon had
 4 not agreed the terms of Studio E's appointment before
 5 any further work from Studio E was required, after Rydon
 6 had won the tender?
 7 A. Well, they can down tools or, put another way, never
 8 pick the tools up. That would be a very good starting
 9 point.
 10 I don't think it's fair of me to say that at the
 11 start of every job, following a novation, the contracts
 12 are all signed and everything is in place, but there
 13 must be clear indication to the architect that there is
 14 a defined scope of work, the fees are satisfactory and
 15 that things look good to go. Thereafter, it can take,
 16 I think, often, a good few weeks into some months for
 17 the lawyers to finally tie up the contract on a very,
 18 very large job. On a job like this, it might take,
 19 you know, a good few weeks. It shouldn't endure beyond
 20 three months. It certainly shouldn't endure through the
 21 entire process.
 22 Q. By through the entire process, do you include the
 23 construction process?
 24 A. Of course, yes. That was going to begin pretty quickly
 25 anyway.

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1 Q. What about in circumstances where the scope of
 2 Studio E's obligations was, in practice, changing over
 3 the course of the works? What would you expect Studio E
 4 to do if they couldn't agree specific terms with Rydon?
 5 A. Again, the codes of both -- well, certainly the code of
 6 the ARB and I believe, from memory, the code of the RIBA
 7 make it incumbent, an incumbent duty on the architect,
 8 to define any changes, and that must be done in writing.
 9 SIR MARTIN MOORE-BICK: Can I just ask you this: is there
 10 any understanding within the construction industry, by
 11 which I mean architects and contractors, about the terms
 12 on which the architect is working pending some revision
 13 to those terms between the lawyers over the period
 14 of weeks that you identified?
 15 A. I don't think there's any set document, I know of
 16 nothing in that form, but usually an exchange of letters
 17 would produce some clarity in that area. But it's
 18 certainly quite an uncertain period.
 19 SIR MARTIN MOORE-BICK: I mean, one possibility is that the
 20 contractor takes the architect on on the same terms as
 21 the architect had been working for the original client,
 22 unless and until those terms are changed. Is there any
 23 understanding to that effect or something similar?
 24 A. There's a section in my report that actually explains
 25 that, and the RIBA have a particular form of appointment

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1 for what's called contractor employers, and that would
 2 pretty well mirror the -- in fact, the only change is
 3 the title. The actual process of work that the
 4 architect would be expected to undertake mirrors that of
 5 a traditional appointment under D&B.
 6 SIR MARTIN MOORE-BICK: Thank you very much.
 7 MR MILLETT: Just to follow up on that, where the architect
 8 and the contractor, in this case Studio E and Rydon
 9 respectively, hadn't finalised the precise terms of
 10 their own engagement between themselves, would it be
 11 your opinion that architects would understand that they
 12 were being retained on the RIBA form of appointment for
 13 contractor employers?
 14 A. I think that would be -- well, certainly the lawyers
 15 would have a lot to say about that. I would consider
 16 that to be very risky. So if there was anything in
 17 there that I was absolutely set against, I would say,
 18 "This is still under negotiation, but this and that
 19 paragraphs of your proposed appointment are
 20 unacceptable".
 21 Q. Yes.
 22 A. So I would set that out pretty clearly.
 23 Q. Yes. It sounds from that answer that your view is that
 24 the reasonably prudent architect would simply not allow
 25 their retainer to continue without at least some form of

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1 document identifying their obligations after the tender
 2 had been awarded. Am I understanding you correctly?
 3 A. You are, and if I could add to that, once you are in
 4 contract, it's actually pretty difficult in this country
 5 to stop. I have experience of American contracts;
 6 downing tools, a term I used a few minutes ago, is
 7 relatively easy in America. It's not here. So once you
 8 start, you have to be in a position to resolve problems
 9 like that as you go along, or go through quite
 10 a complicated process of suspending and terminating
 11 work.
 12 Q. So you are of the view, I take it, that it would have
 13 been reasonable for Studio E to refuse to commence any
 14 work for Rydon until agreement as to the extent and
 15 nature of Studio E's obligations had been agreed?
 16 A. Yes. To be absolutely clear, I wouldn't hold back until
 17 the contract's absolutely signed, but I would want the
 18 principles sorted.
 19 Q. Right. And unreasonable of Studio E not to have done
 20 that, is that --
 21 A. I would use the word "unwise".
 22 Q. Yes, we have had that before. I'm going to press you
 23 a little bit. Unwise, but is it unwise to the extent of
 24 imprudent, unreasonably imprudent, by the objective
 25 standards we are examining?

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1 A. I think it's putting the project at risk as well as the
 2 firm.
 3 Q. Do I take it from that that a reasonably competent
 4 architect would do nothing to put the project at risk?
 5 A. Yes, that's correct.
 6 Q. Yes, thank you.
 7 Just a question from your perspective about Artelia
 8 as the employer's agent: from the perspective of the
 9 reasonably competent architect, would that person expect
 10 Artelia, as the employer's agent, to do something in
 11 circumstances where the employer's agent can see that no
 12 terms or at least principles had been agreed as between
 13 the contractor and the architect?
 14 A. Yes, absolutely.
 15 Q. And what would you expect?
 16 A. Well, as employer's agent, Artelia were responsible for
 17 a substantial part of the administration on the part of
 18 the client, and I can't think of anything more important
 19 in that administration process at the start than making
 20 sure that the contract's in place.
 21 Q. Yes, thank you.
 22 Can I then turn on just to ask you a question about
 23 Mr Crawford's evidence, and I'll summarise it.
 24 He said, and indeed Simon Lawrence of Rydon has also
 25 said, that Rydon "tended not to use architects so much".

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1 Indeed -- and I don't need to go to it, I think, with
 2 you -- Mr Crawford said in his oral evidence at
 3 {Day9/103:18} of the transcript -- we don't need to turn
 4 it up -- that he envisaged Studio E's role as being more
 5 responsive.
 6 Now, about that issue, on the assumption that,
 7 in fact, such conversations between Mr Crawford and
 8 Mr Sounes did take place, is it your opinion that
 9 Studio E ought to have produced and agreed with Rydon
 10 a clear record of exactly what was expected of Studio E
 11 by Rydon?
 12 A. Yes.
 13 Q. And it would be normal practice, I think you're saying,
 14 for an architect to do that as early as possible, rather
 15 than to wait until the end of the project.
 16 A. Yes.
 17 Q. Would a reasonably competent architect study carefully
 18 the terms of any formal agreement that it was entering
 19 at any stage to ensure that it wasn't taking on any
 20 legal responsibility for things over which it had no
 21 control or which it had not done itself?
 22 A. Right through the scale of projects I have been involved
 23 with, and you mentioned Optus yesterday, I've personally
 24 either been involved myself or somebody else in the firm
 25 has been involved. I can't imagine passing

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1 responsibility for negotiating a contract to parties
 2 outside the firm, even appointed lawyers. The architect
 3 has to remain involved.
 4 Q. Yes, and involved -- and I'll just ask the question
 5 again -- would a reasonably competent architect actually
 6 sit down and study the terms of the contract to make
 7 sure that he or she or it, the firm, wasn't taking on
 8 any responsibility for things over which it had no
 9 control or which it hadn't done?
 10 A. On the contract I just referred to, which is the most
 11 recent large one I've negotiated, every paragraph
 12 through an enormous document, over a number of
 13 individual days spread across weeks, was what each of
 14 the three firms of architects appointed did, and they
 15 did it together.
 16 Q. Yes, thank you.
 17 A. And I was the one that did it for --
 18 Q. That's your experience, and I completely accept that as
 19 an answer, but I'm just after your view of what the
 20 objectively reasonably competent architect would do.
 21 Would they sit down and study the terms of the formal
 22 contract to make sure that they were not taking on legal
 23 responsibility for things over which they had no control
 24 or things which they hadn't themselves done?
 25 A. I can conceive circumstances where the terms might be

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1 summarised, but the architect has to know what they have
 2 undertaken.
 3 Q. Yes, thank you.
 4 Can I then turn to a different topic still, which is
 5 design responsibility. Can we look first at your
 6 supplemental report, please, at {PHYS0000002/30}, and
 7 I would like to look with you, please, Mr Hyett, at
 8 paragraphs 2.3.20 and 21.
 9 At 2.3.20, you say:
 10 "2.3.20. Studio E also seems to be suggesting (for
 11 example at Opening Statement paragraph 13.6) that its
 12 duty to comment under its post-novation obligations to
 13 Rydon in relation to Harley drawings was restricted to
 14 matters of 'architectural intent' by which I understand
 15 it means matters of aesthetics and appearance only and
 16 did not extend to technical or compliance related
 17 matters.
 18 "2.3.21. I have seen no documentation to support
 19 this view, and such a restriction of duties is not
 20 consistent with my understanding of an architect's
 21 normal duties when receiving and reviewing specialist
 22 sub-contractor's information. In this respect I quote
 23 variously from the Schedule of Architectural Services of
 24 the Rydon/Studio E Deed of Appointment [and you give the
 25 reference] which contradicts this view entirely:

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1 "Seek to ensure that all designs comply with the
2 relevant Statutory Requirements, including Scheme
3 Development Standards' (item 8 at page 8).
4 "Examine Subcontractors' and Suppliers' drawings
5 and details, interface details, with particular
6 reference to tolerances and dimensional co-ordination,
7 finish, durability, appearance and performance criteria
8 and report to The Contractor' (item 27 at page 9)."
9 I've shown you that in full.
10 Is it your opinion that, to the extent that Studio E
11 appeared to consider that their duty was limited to
12 commentary in respect of architectural intent, they were
13 wrong about that?
14 A. Yes.
15 Q. Would any reasonably competent architect think that they
16 were right about that?
17 A. I don't think so.
18 Q. Now, can we look specifically at the two items you refer
19 to there within the deed of appointment. You have given
20 the reference within the text of 2.3.21, but we can look
21 at it. It's {RYD00094228/9}. Item 8, which is the
22 first of the two items, as you say, says:
23 "Seek to ensure that all designs comply with the
24 relevant Statutory Requirements, including Scheme
25 Development Standards."

1 Then if we look at item 27 on page 10
2 {RYD00094228/10}, please, the next page over, it says:
3 "Examine Subcontractors' and Suppliers' drawings and
4 details ..."
5 Et cetera, and I have read that already aloud into
6 the record.
7 My question about these two items is this: were
8 these services typical obligations as between
9 an architect and a design and build contractor in the UK
10 construction industry and the architects' profession
11 respectively between July 2014 and February 2016?
12 A. Well, again, I haven't surveyed the -- I haven't got any
13 evidence of that, but I certainly don't think they're
14 unusual.
15 Q. Right.
16 At paragraph 2.3.21 {PHYS0000002/30}, which we have
17 just looked at, you say:
18 "... such a restriction of duties is not consistent
19 with my understanding of an architect's normal
20 duties ..."
21 Then you set those out. You say at the end of that
22 paragraph, before the quotation, that the deed of
23 appointment "contradicts this view entirely". Do you
24 see that?
25 A. Sorry, I lost you at the first quote. Was that a quote

1 from the text here or what I just said?
2 Q. Yes, the text of what you have said. If you look at
3 paragraph 2.3.21 --
4 A. Yes.
5 Q. -- you say in the second line that the restriction of
6 duties is not consistent with your understanding of
7 an architect's normal duties.
8 A. Right.
9 Q. Then you say at the end of that paragraph that the deed
10 of appointment "contradicts this view entirely". Do you
11 see that?
12 A. Yes.
13 Q. Is it therefore your opinion that these services listed
14 at items 8 and 27 that I've shown you are not consistent
15 with a review merely for architectural intent, in other
16 words they go further than that?
17 A. Oh, yes, by architectural intent we're talking about
18 aesthetic appearance. Of course they go substantially
19 further than that.
20 Q. And what is the difference between a review for
21 architectural intent on the one hand and what is
22 involved in the performance of these obligations at
23 items 8 and 27 on the other?
24 A. Again, I don't know the definition, but I think a review
25 for architectural intent would be interpreted by most

1 architects to mean that, in terms of appearance, it
2 would be the same or very similar, and I think it would
3 relate more to elevations and finishes inside the
4 building as opposed to planning and organisation.
5 Q. Or, putting it more bluntly, does architectural intent
6 as you understand it encompass or include seeking to
7 ensure that all designs comply with relevant statutory
8 requirements, including scheme development standards?
9 A. On the interpretation I've just applied, no. No, it
10 wouldn't.
11 Q. And what about the next one, examining subcontractors
12 and --
13 A. No.
14 Q. Thank you.
15 Do you consider that the reasonably competent
16 architect ought to ensure that there's consistency
17 between the drawings and the specifications as developed
18 and issued out to tender, and the work undertaken by the
19 specialist cladding subcontractor developing the design
20 of the architect?
21 A. Well, if retained, novated, appointed, yes.
22 Q. Would that work go beyond review for "architectural
23 intent"?
24 A. Certainly, most certainly.
25 Q. Can we then look on in your report, the main report,

1 which is {PHYR000027/54}. I would like to look with
 2 you, please, at paragraph 2.10.27 where you say:
 3 "A fifth important issue is that of pre-fabrication
 4 and off-site fabrication ..."
 5 Six lines down in that paragraph, you see that
 6 there's a sentence which starts :
 7 "Metal specialised cladding panels require the
 8 preparation of fabrication drawings by the
 9 sub-contractor or its supplier and these in turn require
 10 inspection and effective sign-off by the architect
 11 and/or other consultants."
 12 What do you mean there specifically by fabrication
 13 drawings in respect of the metal specialised cladding
 14 panels?
 15 A. Well, those would be drawings prepared by the
 16 subcontractor, that's the first point. But it's very
 17 important that they're checked and checked carefully,
 18 and one of the major reasons for that is that metal is
 19 such an unyielding, unforgiving kind of material. With
 20 timber you can have tradespeople, skilled craftsmen
 21 on site that can work it, likewise with bricks, but once
 22 you get down to pre-formed metal panels and flashings
 23 and all the other paraphernalia that goes together with
 24 a system like that, it has to be made away from the
 25 site. That's almost universally true, I think. So

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1 getting those things right, so that they're delivered
 2 right in terms of the programming of the construction,
 3 is essential, otherwise great delays can arise very
 4 quickly, with big knock-on effects.
 5 Q. Other than delays, what are any other risks that you can
 6 identify?
 7 A. Well, the failure of the product to look as it should
 8 when it arrives, the failure of the product to fit as it
 9 should when it arrives, which might be a problem with
 10 assembly, but the failure to fit might lead to breaches
 11 of code, so there's another example.
 12 Q. When the architect, that is the reasonably prudent
 13 architect, is signing off these fabrication drawings,
 14 can you give us an idea of the sort of detail that they
 15 would be checking in order to give what you call the
 16 effective sign-off?
 17 A. There would be an ordered process, and marking up the
 18 drawings is very, very common as they go, a notepad to
 19 the side, but I think that it would be important for
 20 an architect to check and read the entirety of the
 21 drawing, that's all the spatial arrangements, all the
 22 drawn lines, but also all the words and all the
 23 dimensions. I'm not necessarily suggesting that every
 24 single dimension has to be ultimately ratified, but the
 25 principal dimensions have to be understood and

22

1 signed off by the architect, and any specification
 2 notes, that all needs to be read and understood.
 3 Q. You have referred to the fabrication drawings, I think,
 4 of the specialist subcontractor. That's Harley in this
 5 case, is it?
 6 A. Yes.
 7 Q. Do you consider that Studio E were under any obligation
 8 to examine or sign off CEP's fabrication drawings, so
 9 far as they ever saw them?
 10 A. Well, they're a subcontractor of Harley.
 11 Q. Yes.
 12 A. So as far as the architect's concerned, I think as far
 13 as those drawings -- well, firstly, Harley have a duty
 14 to pass through sufficient material in the form of
 15 drawings and specification information for the architect
 16 to be satisfied that the work has been properly
 17 understood and is being properly developed.
 18 Q. I see, so --
 19 A. If CEP's drawings are amongst that, then they would have
 20 to check them, yes.
 21 Q. Yes, I see. But essentially I think you're saying that
 22 it would come with the Harley work?
 23 A. Yes.
 24 Q. Yes.
 25 Going back to the question of architectural intent

23

1 for a moment, is it in your experience common practice
 2 within the architects' profession for the architect to
 3 limit its or his or her obligation to review the
 4 drawings and details of the specialist subcontractor
 5 only to review for adherence with architectural intent?
 6 A. Are you referring there to the stamp that was used on
 7 the drawings?
 8 Q. Well, the stamp or the idea behind the stamp.
 9 Let me ask the question again: is it common in the
 10 profession or was it common in the profession at the
 11 time for the architect to limit their obligation to
 12 a review of the drawings and details for architectural
 13 intent?
 14 A. Yes, but I think the term "architectural intent" there
 15 means something slightly different. That is -- do you
 16 want me to explain?
 17 Q. Yes, please.
 18 A. That would be that the design work as shown on the
 19 drawings and incorporated into the specification as
 20 issued by the architect -- and that's not just its
 21 appearance, that's the whole lot -- has been properly
 22 understood, interpreted and applied to the
 23 subcontractor's drawings.
 24 Q. Right. So architectural intent isn't simply aesthetic,
 25 I think that's what you're telling us.

24

1 A. In that context, no.
 2 Q. I see. But the definition, I think, of "architectural
 3 intent" that you have just given us is a very broad one,
 4 which encompasses a wide range of obligations, including
 5 drawings and incorporation into the specification as
 6 issued. What about materials?
 7 A. Well, as far as they're described on the drawings, and
 8 any specification that has been issued, yes, they would
 9 be included.
 10 Q. So do you understand the expression "architectural
 11 intent" to be absolutely everything which the architect
 12 intends through the drawings and the specification?
 13 A. In the context of that checking, yes.
 14 Q. I see. So is that how you understood the stamp? Maybe
 15 we are getting ahead of ourselves a little bit in the
 16 questions, but let's deal with it now. Is that how you,
 17 as the expert architect, would have understood the idea,
 18 "architectural intent", or the stamp that used the
 19 expression?
 20 A. Yes. There will be more detail on that question, I'm
 21 sure, but yes, and I cannot imagine that an architect
 22 would see drawings and specification passing through
 23 from the subcontractor that departed from the intent of
 24 the architect as expressed in his own work, his or her
 25 own work, without raising questions or alarm bells.

1 Q. Right.
 2 If the use of the expression "architectural intent"
 3 was intended to be a limiting one, limited perhaps
 4 simply to matters of aesthetics, would you expect that
 5 limitation to be recorded clearly in a formal
 6 appointment document between the architect and the
 7 design and build contractor?
 8 A. Without any doubt whatsoever.
 9 Q. Can we then look at the transcript for {Day38/8:3},
 10 please.
 11 Before I ask you that, just arising out of the last
 12 answer: would you expect the definition of
 13 "architectural intent" therefore to cover the things
 14 included in items 8 and 27 of the deed of appointment
 15 that we looked at earlier? So compliance with statutory
 16 requirements, et cetera, and --
 17 A. Yes, yes.
 18 Q. You would?
 19 A. I was trying to remember exactly what was in those, but
 20 yes.
 21 Q. Yes. Fair enough. 8 is statutory requirements, and 27
 22 is subcontractors' and suppliers' drawings and details,
 23 with particular references to tolerances, dimensional
 24 co-ordination, finish, durability, performance,
 25 et cetera. I mean, that's what it said.

1 So you would expect those matters to be covered,
 2 would you, by the expression "architectural intent"?
 3 A. Architectural intent is what is shown on the architect's
 4 drawings. The specialist subcontractor will be
 5 developing fabrication information and more detailed
 6 information, I'm talking about screw sizes, washers,
 7 right down to very, very detailed component selection or
 8 manufacturer.
 9 I don't want to go beyond what's on the architect's
 10 drawings and specifications. I accept that there would
 11 be another layer that the subcontractor may well be
 12 involved in. That layer may be generally described in
 13 engineers' or architects' specifications, it may not at
 14 all.
 15 So I would restrict it to architectural intent being
 16 the proper application of what has been shown on the
 17 architect's drawings and specifications.
 18 Q. What about specifically item 8, which is checking for
 19 statutory compliance? Would your understanding of the
 20 expression "architectural intent" encompass the
 21 adherence to the subcontractors' drawings with statutory
 22 requirements?
 23 A. Well, I think there's another clause in that Rydon
 24 appointment that deals with that anyway, if I remember
 25 rightly, but the architect's work should comply with

1 statutory compliance anyway, so it would follow,
 2 I think.
 3 Q. I see. So can we leave it this way: whatever
 4 architectural intent might or might not include, it
 5 would always include ensuring that the drawings that
 6 came up from the specialist cladding subcontractor to
 7 the architect for review or approval complied with the
 8 statutory obligations?
 9 A. Yes, that is correct.
 10 Q. Yes.
 11 Can we then look at Mr Lamb's evidence, {Day38/8:3}.
 12 He was asked the question by Ms Grange:
 13 "Question: Who, in your view, had ultimate
 14 responsibility for checking and approving the drawings
 15 you were producing? Who did the buck stop with?
 16 "Answer: The architect."
 17 He was then asked at line 7:
 18 "Question: Right. And that would be consistent
 19 with what we've just looked at and your understanding of
 20 the process?
 21 "Answer: That's correct, yes."
 22 Do you agree with Mr Lamb on this point?
 23 A. Yes, with the proviso that it always depends on the
 24 appointment terms that the architect is engaged by.
 25 Q. Yes, and having seen the terms --

1 A. Yes, in this case.
 2 Q. -- in this particular instance, what do you think?
 3 A. Yes, sorry, I anticipated your question. Yes.
 4 Q. Yes.
 5 Might the answer depend on the particular issue in
 6 question, for example the dividing line as to the
 7 responsibility for a drawing might be different
 8 depending on what the item in question is? Is that
 9 a fair qualification?
 10 A. Yes.
 11 Q. So might it be the case -- and tell me if this is
 12 wrong -- that on matters of engineering, for example
 13 fixing cleats or connecting bolt sizes or the viability
 14 of a fabricating component, might well be the
 15 responsibility of Harley as opposed to that of the
 16 architect?
 17 A. Yes, and I think I had alluded to that earlier on.
 18 Q. So there might be a dividing line where you draw the
 19 distinction between the two?
 20 A. Yes, and if I wasn't clear about that, I'm sorry,
 21 because I think a few questions ago I made that point.
 22 Q. Thank you, you did, and that's clarified that.
 23 When a drawing is stamped "Approved for
 24 construction" by the cladding subcontractor, what, in
 25 your opinion, does that mean to the reasonably competent

1 architect?
 2 A. Exactly what it says. I would probably extend that to
 3 approved for fabrication, because they've actually
 4 stamped it and you can't construct it if it hasn't been
 5 fabricated. So I would say that that is a drawing
 6 that's been stamped as compliant with all the
 7 requirements and good to go.
 8 Q. Would I be right to take it from that answer that you
 9 think that the drawing stamped "Approved for
 10 construction" would be a complete and accurate
 11 representation of everything that would be required in
 12 respect of the particular component or detail which is
 13 shown in the drawing?
 14 A. Yes, and there's some questions no doubt that will
 15 follow about whether those drawings should have been so
 16 stamped at those various stages, but I'm sure we'll come
 17 on to that.
 18 Q. Now, would a competent architect ever look at a drawing
 19 stamped "Approved for construction" and reasonably think
 20 that it was effectively incomplete or in progress as
 21 more information came through?
 22 A. No, it would be a strange thing to do. If the drawing's
 23 not complete, it's not complete. If the architect's
 24 checking work hasn't been carried out, it hasn't been
 25 carried out. So I wouldn't be persuaded by a stamp.

1 I wouldn't be persuaded that the stamp told me that
 2 I haven't got the checking job to do.
 3 Q. No. From what you're saying, it tells us that it's not
 4 your experience of industry practice that a drawing that
 5 is stamped "Approved for construction" was essentially
 6 telling the architect that the drawing was incomplete or
 7 work in progress.
 8 A. Well, the architect has the duties that the architect
 9 has under the appointment, full stop.
 10 Q. I think you are telling us that an architect would read
 11 "Approved for construction" as a final and complete
 12 depiction of what was in the drawing, nothing more to
 13 do?
 14 A. I'm saying that the architect has duties to carry out.
 15 If that drawing's arriving for the first time and the
 16 architect hasn't checked it in accordance with his
 17 duties/her duties under the contract, then that checking
 18 process needs to take place. If that drawing's got
 19 an "Approved for construction" stamp on it, I wouldn't
 20 be persuaded by that stamp. I wouldn't accept that that
 21 tells me I've no longer got the checking job to do.
 22 Q. I understand that, but would he read the words "Approved
 23 for construction" as a representation by the
 24 subcontractor that the drawing was in some way
 25 incomplete?

1 A. I can't understand what they meant by that stamp.
 2 Q. Right.
 3 Could we go to paragraph 2.3.2 of your supplemental
 4 report at {PHYS0000002/25}, please. You say in
 5 paragraph 2.3.2:
 6 "It is not the case that because a contractor, or
 7 specialist sub-contractor such as Harley, had
 8 responsibility to 'complete detailed design ...' (as
 9 referred to under paragraph 12.14 of Studio E's Opening
 10 Statement), that this in any way relieved Studio E from
 11 its duty to carry out and complete its own design work
 12 in relation to the external wall in accordance with its
 13 obligations under Work Stages E and F1. I deal with
 14 this point more extensively below."
 15 What do you say in respect of Studio E's work at
 16 work stages F2 and following?
 17 A. Well, they didn't have a duty to carry out F2 after the
 18 novation, because although their original appointment to
 19 the TMO included for all work stages I think through to
 20 L, and therefore at that point in time it was
 21 anticipated at the very least that they would see all of
 22 that work through, that appointment was suspended.
 23 Now, they could have, as the Chair has just
 24 intimated, been transferred over or novated to Rydon on
 25 the basis that they would carry out exactly the same

1 duties but for Rydon rather than the TMO. But the form
 2 of appointment was changed, and the Rydon appointment
 3 was a completely different document.
 4 However, on examining that document, it demands --
 5 "demands" is probably the wrong word -- it requires work
 6 that I would describe as being included in a normal
 7 interpretation of F2. So going to the Rydon
 8 appointment, they were required to continue work on
 9 detailed design.

10 Q. Would it be normal for an architect to consider that,
 11 where a specialist subcontractor has assumed design
 12 responsibilities to the design and build main
 13 contractor, the architect is thereby relieved from its
 14 own obligation to fulfil the duties that it's contracted
 15 with the client, his original client, to undertake, at
 16 least where the retainer direct by the client has not
 17 been formally terminated?

18 A. I think we're going to get into considerably complex
 19 territory here in interpreting the word "design".
 20 Could you ask the question again?

21 Q. Yes. All right, let me try it without the word "design"
 22 in it then.
 23 Would it be normal for an architect to think that
 24 where a specialist subcontractor, such as Harley in this
 25 case, has assumed responsibilities to the design and

1 build contractor, which would include design in some
 2 respects, the architect is thereby relieved from its own
 3 obligation to fulfil those obligations that it has
 4 contracted with its original client to undertake?

5 A. The obligations -- my understanding as an architect are
 6 that the obligations that I would have had to the client
 7 originally imposed on me a duty to carry out that work
 8 and to complete it. In circumstances where I hadn't
 9 completed it, I needed to make it jolly clear that
 10 I hadn't.
 11 So the subsequent appointment of a subcontractor to
 12 further develop that work doesn't release me from my
 13 duties to make sure that that work in its original form
 14 was correct.

15 Q. Yes. So --

16 A. I think we're on to code here. I'm anticipating that's
 17 the background, but perhaps I shouldn't anticipate.

18 Q. When you say, "We're on to code", can you just explain
 19 what you mean?

20 A. I'm talking there about the architect's obligations to
 21 make sure that the design work done in the documentation
 22 at employer's requirement stage complied with the
 23 Building Regulations and ADB2.

24 Q. I see what you mean, yes.
 25 So do I take it from that answer that the architect

1 remains obliged to undertake and fulfil the duties that
 2 it contracted to fulfil under the original appointment
 3 from his original client, in this case the TMO,
 4 notwithstanding the appointment of a main contractor and
 5 his subcontractor?

6 A. I think -- it's a legal point, I'm sure, but I think the
 7 responsibilities for the work that was done for the TMO
 8 remained live. That would be my understanding of it.
 9 Having accepted the novation, signed or not, from
 10 Rydon, I would understand that I had the same
 11 responsibilities as those that I've just described,
 12 repeated in terms of my duty to Rydon and through Rydon,
 13 because Rydon had assumed design responsibility, but
 14 they then produced a back-to-back contract, so I carried
 15 the duty twice.

16 Q. Thank you. You're quite right that I put it to you as
 17 a legal point, but actually what I was after was your
 18 understanding as a professional, and you have given me
 19 that, so I'm grateful for that.
 20 Would it be your understanding as an architect that
 21 if the architect thought that his or the practice's
 22 obligations were in some sense being restricted or
 23 whittled down as a result of the design and build main
 24 contractor and its subcontractor coming in, then the
 25 architect ought to seek a variation to the

1 responsibilities that he had undertaken to the client?

2 A. An absolute clarification. And if I may add here, we're
 3 dealing with very important issues, principally safety,
 4 and I'm not restricting that to the issues of fire, I'm
 5 talking about a host of other issues, panels falling off
 6 buildings, all sorts of things. So it's very, very
 7 important to make sure that the work is being properly
 8 carried out, and there should be no room for ambiguity
 9 about who is carrying these duties, and if the architect
 10 feels that his terms of appointment aren't allowing him
 11 to do the job properly, then he should make it
 12 absolutely clear.

13 Q. Thank you very much.
 14 Can I just close this point off, then, and I suspect
 15 that you have given us the answers already, but I just
 16 want to close it off by reference to your report.
 17 Can we turn the page to page 26 in this report
 18 {PHYS0000002/26}, please, and look at paragraph 2.3.6.
 19 You say there:
 20 "Whilst this is a legal matter upon which the
 21 Inquiry will decide, it is my opinion that Studio E are
 22 correct in asserting that under Design and Build
 23 procurement design responsibility for work hitherto
 24 carried out for KCTMO as incorporated into the
 25 Employer's Requirements documentation did indeed pass to

1 the contractor. However, Studio E is quite wrong in its
2 apparent belief that with that assumption of design
3 responsibility on the part of Rydon as Design and Build
4 contractor, Studio E's design responsibility
5 respectively was, and would be, absolved in terms of
6 work done hitherto under its appointment to KCTMO and
7 under novation to Rydon."

8 Now, you say Studio E is quite wrong there. Could
9 you just explain why Studio E is quite wrong, as you
10 say?

11 A. Well, I believe that the Rydon documentation makes it
12 clear that Studio E is responsible for its design work
13 anyway. I think I've referred to that somewhere else in
14 this part of the report. But let me read it again,
15 please.

16 Q. Yes, of course.

17 (Pause)

18 A. No, Studio E have accepted in the novation the design
19 and build contractor has principal, immediate
20 responsibility to the client under the terms that they
21 entered into for past work, so they assumed
22 responsibility for work done by the design team and
23 architect pre-novation, and they accepted it for all
24 work that would be done post-novation. That is what the
25 Rydon document essentially laid out. That was with the

1 client.
2 The Rydon document also made it clear that the
3 architect was carrying responsibility for work, and it's
4 listed 1:5 drawings. There's a host of work actually
5 described that Studio E would be responsible to Rydon
6 for.

7 So I don't think that they can suddenly -- that they
8 can introduce the idea that their responsibilities fall
9 away in this fashion.

10 SIR MARTIN MOORE-BICK: Mr Millett, I think Mr Hyett would
11 be the first to accept that the nature of the legal
12 obligations arising from the original appointment, the
13 novation and so on are essentially matters of law,
14 aren't they?

15 MR MILLETT: Yes.

16 SIR MARTIN MOORE-BICK: On which he probably can't help us.

17 MR MILLETT: No, that's right, which is why I think he
18 prefaces this paragraph --

19 SIR MARTIN MOORE-BICK: Yes.

20 MR MILLETT: -- with the words, "Whilst this is a legal
21 matter". I think I have got the answer, but I'm simply
22 seeking to close this off by relating the "Studio E is
23 quite wrong" view with the previous answers he's given.

24 SIR MARTIN MOORE-BICK: Well, that's his view about whether
25 Studio E's view of the contractual relationships is

1 correct or not, but I'm not sure his view on that is one
2 which we really need to pursue, is it?

3 MR MILLETT: Very well, we will leave that where it lies.

4 Can I then turn to another topic, which is
5 compliance and specification of materials generally.

6 I'm going to ask you some questions about the
7 regulatory regime at the time of the Grenfell Tower
8 refurbishment and the specification of materials in
9 general terms, and then we're going to look more
10 specifically at the actual materials, so the ACM and the
11 insulation, and then the cavity barriers.

12 Can I ask you to go, please, to your report at
13 {PHYR0000027/46}. I want to go to paragraph 2.9.2.
14 It's a long paragraph, I'm not going to read it all out
15 to you, but you set out the relevant quotations from the
16 requirements of B3 and B4 of the Building Regulations.
17 Before you do that, you say this:

18 "In relation to the issue of fire, the requirements
19 and intentions of the Building Regulations 2010, as at
20 the time of construction of the 2012-16 Works were, in
21 my opinion, absolutely clear: the fire should have been
22 impeded from breaking out of the 'compartment' in which
23 it started, and in circumstances where any break-out
24 occurred, the spread of fire should thereafter have been
25 consistently impeded (the word 'inhibited' is typically

1 used in this context)."

2 Then you quote.

3 Then you go on at paragraph 2.9.4 at the foot of
4 that very same page to say:

5 "It should therefore be clear all whose work is
6 required to comply with the Building Regulations that
7 the regulations are essentially descriptive of intent as
8 opposed to being prescriptive of method. This point is
9 fundamental: the reason being, in brief, to permit
10 innovation in design and construction as opposed to
11 placing designers and constructors in a metaphorical
12 'straight-jacket'."

13 But if you go over the page to page 47
14 {PHYR0000027/47}, at paragraph 2.9.8, you say:

15 "Despite their brevity the Building Regulations make
16 absolute demands and are inclusive in scope and ordered
17 with clarity."

18 Then at 2.9.6, just a little bit above that, you say
19 in the second line:

20 "... that no competent architect could ever credibly
21 claim to be unaware of the importance of designing
22 responsibly in relation to fire, both in terms of
23 spatial arrangements with respect to facilitating rapid
24 escape, when necessary, for occupants through designated
25 protected routes and in terms of materials and methods

1 of construction.”
 2 Now, I have put a lot of that to you just to bring
 3 it all together in one place.
 4 Do you agree that a reasonably competent architect
 5 responsible for the initial design of the overcladding
 6 system at Grenfell Tower ought to have been aware of the
 7 requirements of B3 and B4, and also B2, of the
 8 Building Regulations?
 9 A. Yes.
 10 Q. Is it your opinion that the reasonably competent
 11 architect would understand that that meant that, first,
 12 the integrity of the structure must be preserved for
 13 a reasonable period pursuant to B3(1)?
 14 A. Yes.
 15 Q. And also that the spread of fire and smoke must be
 16 delayed for a reasonable period both internally and
 17 externally pursuant to B2(1), B3(3) and B3(4) and B4(1)?
 18 A. Yes.
 19 Q. Is it your opinion, as a result, that that would require
 20 the reasonably competent architect to consider the
 21 precise build-up of the external wall structure and its
 22 elements in order to understand whether it, as a system,
 23 could resist the spread of fire for a reasonable period?
 24 A. Yes.
 25 Q. Now, can we go to your supplemental report, please, at

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1 {PHYS0000024/60}. I want to show you section 2.7, and
 2 you entitle that as, "Theme F: Four routes to compliance
 3 (Studio E Opening Statement paragraph 9.0 et seq)".
 4 You start by saying:
 5 "I agree with Studio E's Opening Statement that
 6 there are four possible routes to demonstrating
 7 compliance of a design proposal for a rainscreen façade
 8 (in terms of the entire wall construction of which it
 9 forms a part) with the requirements of the Building
 10 Regulations."
 11 Then you say:
 12 "As I have already made clear, from the evidence
 13 which I have seen there is no indication that any of the
 14 alternative avenues to compliance were either explored
 15 or pursued by Studio E or the design team."
 16 Now, before June 2017, and specifically I'm really
 17 interested in the period 2012 to 2016, were you aware of
 18 there being a number of different routes to compliance
 19 with functional requirement B4 of the Building
 20 Regulations?
 21 A. No.
 22 Q. You weren't?
 23 A. No.
 24 Q. Just to be clear, you weren't aware that there was the
 25 linear route or the 8414 route or the --

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1 A. The question was about 4. I knew that one had to either
 2 design to comply with ADB, with the approved document,
 3 or one could find alternative methods and take guidance
 4 on them, but I wasn't aware of the specific nature of
 5 each of those different routes.
 6 Q. Would you expect a reasonably competent architect either
 7 to have a level of familiarity when confronted with
 8 an overcladding structure or to obtain such familiarity
 9 during their initial research on being appointed to such
 10 a project?
 11 A. I would expect them to obtain -- well, I wouldn't expect
 12 them necessarily to have that knowledge, but I would
 13 expect them to obtain it as they began to prepare their
 14 work.
 15 Q. Very briefly, I think you agree that Approved Document B
 16 requires, at section B4, under section 12.5, that
 17 external walls should either meet the guidance given in
 18 section B4, paragraphs 12.6 to 12.9 on the one hand --
 19 A. Yes.
 20 Q. -- the one route, or alternatively meet the performance
 21 criteria set out in BR 135, using data from a full -scale
 22 test under BS 8414.
 23 A. Yes, yes.
 24 Q. Do I take it that, as at 2012 to 2016, did you know of
 25 the existence of BR 135 or had heard reference to

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1 full -scale BS 8414 tests?
 2 A. I knew about full-scale testing; I wouldn't have been
 3 able to rehearse the exact standards. I would have had
 4 to either take advice or look at the documentation.
 5 Q. Yes.
 6 A. But I knew of the process.
 7 Q. Again, are these things which you would expect
 8 a reasonably competent architect to become familiar with
 9 at the start of the project?
 10 A. Yes, the way we work is to develop a design work with
 11 an array of issues that we're going to need to
 12 investigate and understand as the work proceeds, and so
 13 that would be a routine part of the work.
 14 Q. Right. Yes, thank you.
 15 Now, can I show you Technical Guidance Note 18
 16 issued by the BCA in June 2014 as issue 0, which is at
 17 {CEL00001284}, please.
 18 I think I can probably take this quite quickly,
 19 because if you go to page 2 {CEL00001284/2} -- and this
 20 is a document that we've seen in the record a number of
 21 times now with some of the factual witnesses -- you can
 22 see at the top of the page it says:
 23 "Where the building exceeds 18m in height, the BCA
 24 recommends three options for showing compliance with
 25 paragraph 12.7 of AD B2."

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1 Then there are three options there set out: option 1
 2 is the use of materials of limited combustibility;
 3 option 2 -- and I'm summarising it -- is a full -scale
 4 test to satisfy the criteria in BR 135; and option 3 is
 5 a desktop study report from a suitable independent UKAS
 6 accredited testing body, for example the BRE.
 7 Now, you can see that those are the three options
 8 there.
 9 Were you familiar with this document when it was
 10 published in June 2014?
 11 A. No.
 12 Q. What about its successor, issue 1, issued a year later
 13 in June 2015?
 14 A. No. No.
 15 Q. Were you aware that, in June 2015, a fourth option was
 16 presented, namely a preparation of a holistic fire
 17 engineering report, as another route to compliance?
 18 A. Not at the time. I've become aware through researching
 19 for this report, but not at the time.
 20 Q. Right. But again, looking at those options, whether
 21 it's three options as at June 2014 or four options as at
 22 June 2015, would you expect a reasonably competent
 23 architect to become familiar with these when presented
 24 with an overcladding project?
 25 A. I would expect an architect to start by looking at ADB2

1 and deciding whether there was any reason to go outside
 2 ADB2.
 3 Q. Yes. I can put this to you: ADB2 also in fact
 4 includes -- although not within section 12, I think --
 5 what became the fourth option in June 2015, namely the
 6 holistic fire engineering approach.
 7 A. Yes.
 8 Q. That was already in the Building Regulations, so it
 9 wasn't a new thing in June 2015.
 10 A. Yes, I've learned that during the course of this
 11 research.
 12 Q. Right.
 13 Can we look at paragraph 4.4.8, please, of your
 14 report at {PHYR0000029}.
 15 A. May I make one further point?
 16 Q. Yes.
 17 A. The option here that talks about a full -scale test, that
 18 kind of work is pretty complicated to set up. It's
 19 time-consuming and it's expensive. I wouldn't expect
 20 a project like this to normally introduce that as
 21 an option. An architect wouldn't routinely say, "Oh, we
 22 would like to set up a full -scale test ". Such testing
 23 has to be very exact, the entire wall has to be
 24 assembled, et cetera, et cetera. It would be very
 25 strange to go off down that route unless there was

1 an imperative for doing so. The normal route would be
 2 to take the ADB2.
 3 Q. By which you mean -- I think people have called it the
 4 linear route.
 5 A. Yes, correct.
 6 Q. Just to be clear for everyone watching, does that mean
 7 simply the selection of materials which were either
 8 non-combustible or genuinely of limited combustibility?
 9 A. Correct.
 10 Q. And so far as the exterior wall is concerned, genuinely
 11 compliant with the fire classifications ?
 12 A. Correct.
 13 Q. Can I ask you then to look with me at where we were
 14 going, which is your report at {PHYR0000029/104},
 15 please. I would like to go to paragraph 4.4.78 there in
 16 the middle of the page. You say:
 17 "I would not expect an architect, a specialist
 18 cladding contractor or rainscreen contractor to be aware
 19 of the advices and circulars as issued by the BCA, but
 20 I would certainly expect a Building Control Department,
 21 either through direct membership of the BCA, or
 22 indirectly through their membership of the LABC, to be
 23 properly informed of such advice."
 24 Now, I've shown you that.
 25 Can I also show you your report at another part,

1 {PHYR0000028/4}, please, and at paragraph 3.1.8 there
 2 you say, in the middle of the page:
 3 "I thus show and describe, through a combination of
 4 diagrams and specification notes, an outline of some of
 5 the key features of such an over-cladding scheme. These
 6 would form the basis for routine discussions with
 7 manufacturers, suppliers and the Building Regulations
 8 Officers in preparing a scheme that would satisfy the
 9 requirements of the Building Regulations and be
 10 compliant with the guidance in the Approved Documents.
 11 It is important to note that this kind of work cannot be
 12 fully developed without such discussions which, as
 13 I will show in Section 4, were not conducted with
 14 appropriate effect."
 15 Now, just to be clear, by "Building Regulations
 16 Officers", do you mean building control?
 17 A. Yes.
 18 Q. BCOs, building control officers?
 19 A. Yes.
 20 Q. Is it your opinion that a reasonably prudent architect
 21 would normally involve the building control body in
 22 preparing their initial scheme design?
 23 A. This is pre-tender, pre-employer's requirements. Yes.
 24 It depends on the complexity and size of the job,
 25 of course, and how familiar the architect is with that

1 particular type of work, but in the circumstances here,
 2 pretty big and complex job, and Studio E's experienced
 3 in this territory, I would certainly expect them to
 4 engage with the Building Regulations department.
 5 Q. Can we be a bit more precise at what stage you would
 6 expect them to do that? Was it before they put pen to
 7 paper or after they developed their scheme --
 8 A. No, no --
 9 Q. -- employer's requirements?
 10 A. No, building control departments are terribly busy and
 11 getting access to them can be difficult at times. So
 12 the architect, I think, has a professional duty to get
 13 him or herself sorted out and carry out a code review,
 14 understand the basic issues that are going to have to be
 15 dealt with, develop the in-principle proposition, then
 16 set up a meeting or meetings in order to establish that
 17 there's general acceptance to that. And with that
 18 meeting, there may be some specific questions as well.
 19 Q. Right. So do I take it from that answer that
 20 a reasonably competent architect would use
 21 building control as a check to make sure that the design
 22 that the architect had prepared thus far was compliant?
 23 Or rather, would -- yes, was compliant with the
 24 Building Regulations?
 25 A. I don't like the word "check" there.

1 Q. No, I agree with you. It wasn't perhaps a well chosen
 2 word.
 3 A. Sorry, I mean no disrespect by that.
 4 Q. No, but I want to know what your opinion is.
 5 What would be the purpose of an architect going to
 6 building control with a drawing?
 7 A. With design and build work in particular, where the
 8 Building Regulations application is usually, I think, in
 9 by far the majority of cases, issued by the builder
 10 after the builder's been appointed, it's very important
 11 to ensure that the principles of the design have been
 12 properly sorted, and many builders would wish to see
 13 some kind of comfort that dialogue had taken place and
 14 principles had been agreed. Sometimes local authority
 15 control departments are willing to issue what's called
 16 a letter of comfort. Other times the architect will
 17 rely on notes that they took at those meetings.
 18 But I think being comfortable that the principles
 19 are correct and have been properly interpreted -- you
 20 used the word "checking". I don't like "checking"
 21 because it suggests transferring of responsibility. But
 22 being comfortable, being assured, as far as reasonably
 23 possible, that I think is good.
 24 Q. Just to go back to --
 25 A. Sorry, there may be some issues -- I beg your pardon.

1 There may be issues which require interpretation. There
 2 are options. You can read the regulations -- you can
 3 read the guidance. Not the regulations; the regulations
 4 are clear. But you can read the guidance and interpret
 5 it, it might mean this or that. I could put -- I'll use
 6 an example -- a cavity barrier in a variety of positions
 7 around the column, I would just like to discuss that,
 8 and those sort of issues might be issues that one seeks
 9 guidance from the building control department on.
 10 Q. Right.
 11 Do I take it from that -- and forgive me if this is
 12 reaching into the dark a little bit -- that the approved
 13 documents, such as Approved Document B, are so
 14 susceptible of different views about what they mean that
 15 it would be normal for an architect to consult
 16 a building control officer, as it were, an expert on how
 17 to interpret the Building Regulations?
 18 A. Well, "so susceptible" suggests a general weakness.
 19 I think my experience is that they provide a pretty good
 20 guide, but nevertheless there are still areas that one
 21 might wish to double check, and there may be, for want
 22 of a ... I was going to use the word "safe". I don't
 23 like the word "safe". But an example would be the
 24 cavity barrier over the top of a window. The windows on
 25 this building, the top frame of the window actually

1 abutted the concrete soffit, the concrete slab. Some
 2 windows are set 300 millimetres down from a concrete
 3 slab. There is a requirement that there is
 4 a cavity barrier to the top of the window. There is
 5 also a requirement there is a cavity barrier at the
 6 point of the compartmentation. That would suggest that
 7 it's two cavity barriers. It may be that the design
 8 could double up, for want of a better term, could use
 9 one single arrangement to meet both of those
 10 requirements. That might be an issue for discussion
 11 with the fire consultant and with the
 12 Building Regulations department.
 13 Q. I see.
 14 In the process of these discussions, would you
 15 expect that an architect might become aware of
 16 Building Control Alliance guidance, such as
 17 Technical Guidance Note 18?
 18 A. Might do, but I don't think there's any -- I have no
 19 sense that an architect should discover that.
 20 Q. Ms Menzies, in her report -- I'll just give the
 21 reference, it's paragraph 172 at {BMER0000004/45} -- is
 22 of the opinion that a local authority building control
 23 is not required to adhere to the guidance issued by
 24 bodies such as the LABC or the BCA, and she confirmed
 25 that view in her oral evidence at {Day29/78:5}. That's

1 her opinion.
 2 You say in your report here that you would have
 3 expected a building control department to have been
 4 informed of the BCA advice. Is that right?
 5 Well, let me put it differently : does her opinion
 6 that she has expressed both in her report and orally
 7 change your view in any way?
 8 A. No. I'm not a building control officer , but I think
 9 a building control department should be aware of such
 10 information. I don't think they necessarily have to be
 11 directed by that information, it would depend on the
 12 issue, but I think that they should be aware of it .
 13 It's very important to stay up to date as far as
 14 possible. Organisations like the BCA are mopping up,
 15 for want of a better term, all sorts of information from
 16 a variety of sources, it's like the RIBA for us, and
 17 feeding through information to those in the field who
 18 are working, and it's very useful to get that kind of
 19 guidance. Why would one not want it?
 20 MR MILLETT: Thank you very much.
 21 Mr Chairman, we are sort of mid-topic, really , and
 22 there is no reasonable prospect of finishing it before
 23 the coffee break.
 24 SIR MARTIN MOORE-BICK: Shall we give in, then, and have
 25 a break now?

1 MR MILLETT: I think it would be sensible, thank you.
 2 SIR MARTIN MOORE-BICK: All right, thank you.
 3 Mr Hyett, we will have a short break now. Come back
 4 at 11.35, please. And, again, while you're out of the
 5 room, please don't talk to anyone about your evidence.
 6 THE WITNESS: I will not.
 7 SIR MARTIN MOORE-BICK: Thank you very much. Would you like
 8 to go with the usher.
 9 (Pause)
 10 11.35, please. Thank you.
 11 (11.18 am)
 12 (A short break)
 13 (11.35 am)
 14 SIR MARTIN MOORE-BICK: Right, Mr Hyett, ready to continue?
 15 THE WITNESS: Yes, I am.
 16 SIR MARTIN MOORE-BICK: Yes.
 17 MR MILLETT: Mr Hyett, I'm afraid we were mid-topic when we
 18 broke, but if we can go back to it .
 19 Can we look at the transcript for {Day9/9:8},
 20 please. I want to show you something that Mr Crawford
 21 said in his evidence to the Inquiry. He says here:
 22 "I would say the way that, as an architect , you use
 23 building regulations is much in the same way you use
 24 an encyclopedia; ie you don't read it from front to
 25 back, you look at the documents as they become relevant.

1 So, for example, 2014, I had done dozens of projects , so
 2 in each project you would look at the regulations that
 3 were relevant to that, pertinent to that project or
 4 pertinent to what you were doing on that project. So
 5 part B I was familiar with because I had worked on
 6 projects where clearly that was a large part of the
 7 building, and the fire strategy is fundamental in any
 8 project ."
 9 Do you agree, first of all , that a fire strategy is
 10 fundamental in any project?
 11 A. Yes.
 12 Q. Do you think that a reasonably competent architect would
 13 be familiar or become familiar in broad terms on
 14 a project with the B3 and B4 requirements of the
 15 Building Regulations?
 16 A. On a building project of this type, yes, of course.
 17 Q. Do you agree with Mr Crawford's characterisation of the
 18 use of the Building Regulations in the same way as one
 19 might use an encyclopedia?
 20 A. I would like to qualify my answer in that respect. Yes,
 21 the word "encyclopedia" is an interesting one, but yes,
 22 it's a reference document that you use and work with as
 23 you develop your design. However, I think it's very
 24 good at some point in an architect's career for them to
 25 have actually been completely through the

1 Building Regulations and, in this case, since they
 2 developed -- I didn't have them when I trained -- the
 3 approved documents, so that one has a general
 4 familiarity with the whole lot. That wouldn't lead to
 5 you being competent to remember it all ; you would have
 6 to work the document thereafter in that way described,
 7 as a sort of encyclopedia. But you need a general
 8 understanding of what's there and what you're expected
 9 to deal with.
 10 Q. Just following up on that, you say you think it's very
 11 good at some point in an architect's career for them to
 12 have actually been completely through the
 13 Building Regulations.
 14 In an architect's training as it stood in the years
 15 up to and perhaps including 2012, 2013, 2014,
 16 particularly , what point in an architect's career would
 17 the need or opportunity to go through the
 18 Building Regulations as a single corpus arise?
 19 A. In preparation for part 3 examination.
 20 Q. Right. Is that the only one?
 21 A. To go through the whole lot in that way, yes, and the
 22 way I did it was it took the form of a structured course
 23 as part of part 3, and we were introduced to various
 24 aspects.
 25 Q. Yes.

1 A. That's a longer answer. The short one is: that would be
2 the point.

3 Q. Right, I see that. And if you hadn't done part 3, you
4 would never get the holistic overview of the entirety of
5 the approved documents?

6 A. It's certainly very much less likely. It's a very
7 convenient way of doing it.

8 Q. Yes, indeed.

9 Can I then ask you to go to {PHYS000005/19}, please,
10 your supplement at report, and let's look together,
11 please, at paragraph 3.3.4.3. You're there dealing with
12 submissions made by Exova. I just want to look at (b).
13 You say:

14 "... I agree:
15 "(b) that the extent to which that the extent to
16 which specialist fire consultant input is needed in such
17 situations would depend on the route to compliance that
18 is adopted."

19 Then you go on in the next paragraph, 3.3.4.4, to
20 say:

21 "The corollary of this is also true; that is, that a
22 specialist fire engineer should not normally be required
23 to assist an architect in interpreting and applying the
24 guidance of ADB2 with respect to specifying the
25 materials within, and designing the arrangements for,

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1 and external wall, or an overcladding system as applied
2 to an external wall."

3 Now, on those two passages, let me just ask you
4 a number of questions.

5 First, is it your opinion that a reasonably
6 competent architect is expected to be capable of
7 interpreting and applying the guidance in ADB as far as
8 it relates to an overcladding system?

9 A. Yes.

10 Q. You don't say, I think -- and tell me if I'm wrong --
11 you don't mean to say that when the linear route is
12 adopted, in other words compliance with each of
13 paragraphs 12.6 to 12.9 of Approved Document B,
14 a fire engineer, if appointed or consulted in any other
15 way, is relieved from any obligations to provide advice
16 and guidance on the linear route.

17 A. Absolutely not. If they're appointed, they're
18 appointed.

19 Q. But you agree that the external flame spread rating of
20 a product may need to be verified by a fire engineer?

21 A. That's the information as given in a manufacturer's
22 documentation?

23 Q. Or a certificate.

24 A. Well, forgive me, but "verified by" suggests that there
25 would be some kind of a re-testing of that. Should

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1 I interpret that to be that the fire consultant would
2 explain that part of it, or are you actually asking me
3 whether they would re-test it in any way? I'm sure
4 you're not.

5 Q. Well, there may be a debate about what verification
6 should involve, but from an architect's point of view,
7 where an architect did consult a specialist
8 fire consultant, would the reasonably competent
9 architect -- let me ask it openly: what would
10 a reasonably competent architect expect the reasonably
11 competent specialist fire consultant to do by way of
12 satisfying themselves that a particular product had the
13 relevant external flame spread rating?

14 A. I would expect the specialist fire consultant to examine
15 the certificate provided, BBA in this instance, and to
16 ensure that that was clear and compliant with ADB2.

17 Q. And do you think that a reasonably competent architect
18 might be expected to seek advice from a specialist
19 fire engineer if they were uncertain as to whether
20 a particular product was of limited combustibility?

21 A. If they're uncertain, they must obtain certainty from
22 somewhere, and that would be the place to go.

23 Q. Thank you.

24 In these paragraphs of your report, do you mean to
25 say that the specialist fire engineer, in this case

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1 Exova, had no obligation to carry out compliance checks
2 on stage reports or other design material produced by
3 Studio E pre-tender in order to satisfy itself that the
4 guidance in ADB had been adhered to?

5 A. Well, that suggests that I've said that. I certainly
6 wouldn't --

7 Q. I see.

8 A. -- wish that to be the interpretation.

9 Q. No, thank you, that clarifies that.

10 In your report, I think it's right that you consider
11 only the first route to compliance with the
12 Building Regulations, which people in this Inquiry have
13 called the linear route.

14 A. Yes.

15 Q. Is that right?

16 A. Yes, that is correct.

17 Q. And I think you have measured Studio E's professional
18 standards only against that route to compliance and no
19 others.

20 A. That's correct.

21 Q. Why is that, can you just explain?

22 A. Two reasons. In the absence of any stated alternative
23 route, that is the default position. Secondly,
24 I remember that in their own technical review of their
25 work, they stated that compliance had been achieved.

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1 I believe that's correct.
 2 Q. Just on the first of those answers, you say in the
 3 absence of any stated alternative ; stated where?
 4 A. Well, with a submission to a building regs department.
 5 The architect would set -- or the documentation would
 6 set out the way in which the design had been developed.
 7 Q. I see. So you say that where they hadn't said that they
 8 pursued, for example, an 8414 full-scale test, the
 9 default is that they would have pursued or be taken to
 10 have pursued the linear route?
 11 A. Yes, and before the break I said that it would be
 12 unusual, for example, to undertake a full test, so such
 13 a route would have to be made clear.
 14 Q. Yes, I see.
 15 Now, you have heard evidence from a number of
 16 witnesses, perhaps, saying that the Building Regulations
 17 and the associated guidance are not fit for purpose, and
 18 that's a general view.
 19 Just in general terms, do you agree with it?
 20 A. Well, there are two different issues there: the
 21 Building Regulations, and then the approved documents.
 22 If we restrict the Building Regulations conversation
 23 to the issue of overcladding and fire, I think they are
 24 abundantly clear, and I think, insofar as they go, they
 25 are fit for purpose. The ADB2 documentation is a much

1 more substantial document and it's pretty complex, and
 2 we've seen Dame Judith's report on this. I think there
 3 is more difficulty with that document.
 4 Q. Regardless of the degree of complexity or
 5 comprehensibility of ADB, on which I suppose opinions
 6 may reasonably differ, is it your opinion that Studio E
 7 failed to follow ADB or any other recognised route to
 8 compliance?
 9 A. Yes.
 10 Q. Did that failure fall below the standard of the --
 11 A. Yes.
 12 Q. -- reasonably competent architect?
 13 A. Sorry, I anticipated the conclusion of that, but yes.
 14 Q. Thank you.
 15 Do you think that the decision as to which route to
 16 compliance with functional requirement B4 of the
 17 Building Regulations the design should take is
 18 a decision for the architect?
 19 A. Not solely, but the architect here was lead consultant
 20 and would have to garner opinion from anywhere that it
 21 might be relevant, but then ensure that a strategy was
 22 adopted and clearly understood.
 23 Q. Yes. Perhaps by the word "decision", I mean ultimate
 24 decision.
 25 A. I think so, yes.

1 Q. What would your view be in respect of the proposal to
 2 overclad Grenfell Tower specifically? Was Studio E the
 3 ultimate decision-maker in respect of what route to
 4 compliance should be taken?
 5 A. Yes, they were driving the process.
 6 Q. In your opinion, should that decision reasonably have
 7 been taken on the basis of a consultation with
 8 a fire safety engineer, given what Studio E did and
 9 didn't know and what experience they did and didn't
 10 have?
 11 A. Yes. It follows from answers that I've given earlier.
 12 An architect has to assess their own ability, experience
 13 and competence and, in circumstances where they hadn't
 14 done a building of this type, I think that they should
 15 ensure that they're receiving that advice from
 16 somewhere. In this instance, the fire engineers were
 17 appointed, so it would follow logically from that that
 18 they should ensure that they have got the advice that
 19 they need to do their work properly and to assure them
 20 that they're doing their work properly. They should
 21 receive that advice and confirmation from the
 22 fire consultant.
 23 Q. Would you expect the reasonably competent architect to
 24 have reached the decision about which route to
 25 compliance with the functional requirement in B4 before

1 the tender process?
 2 A. Yes.
 3 Q. Does that tell us that the reasonably competent
 4 architect wouldn't be relying on the input of
 5 a specialist cladding subcontractor to make a decision?
 6 A. No, no, absolutely not, no. No, absolutely not.
 7 Q. No.
 8 Now, forgive me for this question, but were you
 9 aware as at 2012 to 2016 that there was a distinction
 10 between non-combustible materials, materials of limited
 11 combustibility, and combustible materials?
 12 A. Yes.
 13 Q. I've used the years 2012 to 2016; I think there are
 14 others who want me to ask that question on the basis of
 15 the period prior to June 2017 as well.
 16 A. Yes.
 17 Q. I take it the answer must be yes.
 18 A. Yes.
 19 Q. In practice, how would the reasonably competent
 20 architect go about discovering whether, for the purposes
 21 of the linear route to compliance that he had selected,
 22 a material was of limited combustibility within the
 23 meaning of ADB, and specifically paragraph 12.7?
 24 A. I think broad descriptions of materials may be contained
 25 in ADB, but essentially it's going to be certificates

1 provided by manufacturers of their product.
 2 Q. We will come back to that in some detail, but you say
 3 certificates .
 4 Could we then just turn to ADB itself,
 5 {CLG00000173/95}, please.
 6 A. Sorry, I apologise there, the word "certificates" is
 7 resting heavily on my mind. Manufacturers' literature
 8 and information would be certainly the first guide, in
 9 some areas may well call for certificates to support
 10 that literature .
 11 Q. Would it be your experience that manufacturers would use
 12 the certificates as part of their literature ?
 13 A. Yes, yes.
 14 Q. Can we then look at what is in front of us, which is
 15 paragraph 12.5 of ADB. That says:
 16 "The external envelope of a building should not
 17 provide a medium for fire spread if it is likely to be a
 18 risk to health or safety. The use of combustible
 19 materials in the cladding system and extensive cavities
 20 may present such a risk in tall buildings."
 21 A. Yes.
 22 Q. Do you agree that that provided a clear warning to the
 23 reader --
 24 A. Yes.
 25 Q. -- against the use of combustible materials in the

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1 cladding system?
 2 A. Yes.
 3 Q. Was there anything unclear to the architectural
 4 profession, so far as you know, about what that was
 5 saying?
 6 A. No, it's perfectly clear to me.
 7 Q. Do you accept or agree that a reasonably competent
 8 architect should take into consideration that warning in
 9 respect of combustible materials when considering the
 10 specification of such materials in an external wall
 11 structure?
 12 A. No doubt whatsoever.
 13 Q. And again, the overall functional requirements of
 14 adequately resisting the spread of fire and whether the
 15 use of combustible materials would comply with that
 16 objective, same question again?
 17 A. Yes.
 18 Q. Do you consider that, whichever route to compliance with
 19 the functional requirements of B4 is chosen,
 20 a reasonably competent architect ought to have been
 21 aware of the dangers of using combustible materials
 22 within an overcladding structure?
 23 A. Yes.
 24 Q. And does it follow from that that you are of the opinion
 25 that Studio E ought to have sought assurances from

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1 a fire safety engineer, if they couldn't get there
 2 themselves, as to the safety of these materials when
 3 used as part of the system as a whole?
 4 A. There's an awful lot of materials and components go into
 5 that wall, but the broad answer to that is yes.
 6 Q. Yes.
 7 Could we turn to {SEA00000169}, please. This is
 8 Studio E's NBS specification. Now, the one I'm going to
 9 show you is actually dated 30 January 2014. In fact,
 10 the version that went to tenderers is dated
 11 28 November 2014, but there's nothing that is materially
 12 different about this document. This is just the final
 13 version of it.
 14 My first question is: have you yourself ever
 15 compiled a specification using the NBS software similar
 16 to that used by Studio E when they came to compile this
 17 document?
 18 A. No, I haven't myself. Earlier on I've used predecessors
 19 to that, and handwritten and drawn together
 20 specifications, that was early in my career. But no,
 21 I haven't.
 22 Q. So you have done a specification, but not on the NBS
 23 software?
 24 A. No, I've certainly written some substantial
 25 specifications, in days when we used ink and a pen,

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1 I'm afraid.
 2 Q. Leave aside the software point. Just in principle, do
 3 you accept that a specifier using the NBS system,
 4 whether it's software or hardware, has basically got
 5 three options: either to compile a performance
 6 specification, a prescriptive specification, or
 7 a proprietary specification?
 8 A. Yes.
 9 Q. And each of those, breaking them down, a performance
 10 specification, am I right, is one where the desired
 11 outcome of the material is specified?
 12 A. Correct.
 13 Q. And a prescriptive specification is one which provides
 14 the full details of the product type, the material, the
 15 workmanship, but doesn't specify the particular product
 16 to be used?
 17 A. Correct.
 18 Q. And the proprietary specification, the third of these,
 19 is one which actually names the specific product to be
 20 used in order to achieve a particular outcome, whether
 21 it's --
 22 A. Yes, that's my understanding.
 23 Q. -- an aesthetic or functional outcome.
 24 A. Yes.
 25 Q. Is it right that, in your experience, a specification

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1 may well combine a number of these different approaches?
 2 A. Yes.
 3 Q. You're familiar, I'm assuming, with the
 4 NBS specification?
 5 A. Yes.
 6 Q. Do you agree that, as regards the external façade of
 7 Grenfell Tower, which is part H92, the rainscreen,
 8 within this NBS specification, Studio E's specification
 9 adopted for the most part a proprietary approach?
 10 A. Yes, I think that's correct, yes.
 11 Q. And that's, just to be clear for those listening,
 12 because it named specific products.
 13 A. Yes.
 14 Q. It also said that Studio E had latitude or were giving
 15 latitude to tenderers to choose a similar or equal
 16 product.
 17 A. Yes, and that's a sort of cultural issue of design and
 18 build.
 19 Q. You say it's a "sort of cultural issue of design and
 20 build"; can you explain what you mean by that?
 21 A. The general idea is that contractors should be free to
 22 find equal alternatives to ensure that they've got the
 23 most -- usually the most economic solution. Contractors
 24 frequently have their own supply chains. They're buying
 25 in bulk across many, many contracts, and they can use

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1 that muscle to drive prices down in favour of their
 2 particular company. So they may well have preferential
 3 routes to satisfying a specification which would lead
 4 them to seek to use alternative equivalents.
 5 Q. You say "equal alternatives" in that answer, but also
 6 "alternative equivalents". I want to get a better feel
 7 for what exactly you mean by equal or equivalent.
 8 Do you mean that the freedom given to a contractor
 9 is an economic one, but it doesn't extend to changing
 10 the functionality or performance of the primary choice?
 11 A. Not without agreement.
 12 Q. Right. So within similar or equal, is it your opinion
 13 that that expression used in the industry denotes
 14 a different material but of the same performance
 15 quality?
 16 A. It might do. I'm thinking more frequently of
 17 a different product, a different manufacturer, achieving
 18 the same, but it might be a completely alternative
 19 material.
 20 Q. But achieving similar or equal what?
 21 A. Outcomes in terms of a range of things. The function,
 22 a good example, I think, might be the zinc versus ACM;
 23 an appearance which is acceptable, that might relate to
 24 panel sizes, joint sizes, et cetera; a visual appearance
 25 that is satisfactory; but also a performance in terms

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1 of, you know, the effectiveness of keeping weather out,
 2 durability, a range of issues.
 3 Q. Fire safety?
 4 A. Yes, of course, yes.
 5 Q. You say, "Yes, of course", as if it's a given.
 6 A. It's a given on everything that we do, yes.
 7 Q. So similar or equal you interpret as similar or equal in
 8 terms of fire performance as well as aesthetic
 9 appearance?
 10 A. Yes, it would have to comply with the basic requirements
 11 that had been set out.
 12 Q. Yes.
 13 Am I right also that the starting point in a tender
 14 is the product actually contained in the specification
 15 as the primary choice?
 16 A. Yes.
 17 Q. That's your lynchpin.
 18 A. Yes.
 19 Q. Am I right in thinking that Studio E could as
 20 an alternative approach have specified a set of
 21 operational requirements and then leave it to the
 22 tenderers to identify the materials that they would use
 23 in order to satisfy those requirements?
 24 A. Yes.
 25 Q. And could a performance specification requiring

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1 compliance with fire safety requirements in the
 2 Building Regulations have been drafted as a means by
 3 which to achieve greater input from the design and build
 4 contractor in ensuring that the fire safety of whatever
 5 products were used was achieved?
 6 A. Yes.
 7 Q. Was it unreasonable for Studio E not to have taken that
 8 approach?
 9 A. Well, they've got other issues to think about. There is
 10 the planning consideration, the building has to achieve
 11 approval under planning, and the planners are going to
 12 be very concerned about the appearance of material, and
 13 so it's not unusual, in fact it's very sensible, to get
 14 as many of those sort of issues dealt with as soon as
 15 possible.
 16 Time is always the killer here. You need to nail
 17 the design principles as early as possible. So I would
 18 suggest that it would be better to be as prescriptive as
 19 possible as early as possible.
 20 Q. I see.
 21 Just following on from that, do you agree that,
 22 under a design and build procurement method, as we have
 23 here in the case of Grenfell Tower, if the architect
 24 uses a specification which specifies the precise
 25 products to be used, so proprietary, rather than

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1 specifying the desired outcome by reference to
 2 performance criteria, the architect assumes
 3 responsibility for making sure that the products are --
 4 A. Yes.
 5 Q. -- for their contemplated use, compliant with the
 6 Building Regulations?
 7 A. Unless they've stayed otherwise, yes.
 8 Q. Compliant with the Building Regulations?
 9 A. Yes.
 10 Q. And if Studio E didn't seek to satisfy itself that the
 11 materials being specified, even as alternatives,
 12 complied with the Building Regulations, then they fell
 13 below the standards of the reasonably competent
 14 architect?
 15 A. Yes, correct.
 16 Q. Yes.
 17 Can we look at paragraph 2.10.24 of your report.
 18 That's at {PHYR0000027/53}, please. This is under the
 19 heading, "Some Pros and Cons in Relation to Design and
 20 Build".
 21 At paragraph 2.10.24, the second paragraph down, you
 22 say:
 23 "The second issue relates to process. Under
 24 traditional procurement the architect has far greater
 25 control for selecting and specifying the buildings

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1 materials and components. Under Design and Build the
 2 architect usually shows indicative arrangements which
 3 may frequently be less developed at tender stage. He
 4 may frequently be asked to obtain tenders on a variety
 5 of options - for example cladding - as occurred at
 6 Grenfell Tower. Indeed, even after appointment the
 7 successful builder may introduce major changes to the
 8 specification during design development and value
 9 engineering."
 10 Is what you're saying here, just to be clear,
 11 a generic feature of design and build contracts?
 12 A. Yes.
 13 Q. Is it your opinion that, whatever major changes are made
 14 to the specification by the contractor during design
 15 development and perhaps value engineering, a reasonably
 16 competent architect would regard his responsibility as
 17 confirming compliance of the materials which are
 18 specified with the Building Regulations?
 19 A. Yes. I'm afraid this answer will be a little longer, if
 20 you'll permit me, but it of course depends on the point
 21 at which the project is put out to tender, it depends on
 22 whether the architect is novated and transfers --
 23 responsibility effectively is retained. But essentially
 24 the answer is yes.
 25 Q. Yes. So unless he is specifically instructed, you say

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1 that the architect's obligation to confirm compliance of
 2 the material specified with the Building Regulations
 3 remains undiminished?
 4 A. If the architect is retained, that is correct.
 5 Q. Yes.
 6 Could we look at {RYD00094357}, please. This is the
 7 design and build contract, and it's the first page,
 8 dated 30 October 2014. This is the executed version of
 9 the contract between the TMO and Rydon.
 10 If we go to page 87 {RYD00094357/87} of that
 11 document -- it's actually a pack of contract
 12 documents -- we can see under "Project particulars",
 13 A10, "Design", that it's stated:
 14 "All design work completed to-date (RIBA
 15 Stage E) ..."
 16 Do you see that? This is the penultimate entry
 17 down:
 18 "Design: All design work completed to-date (RIBA
 19 Stage E) ..."
 20 So it's the pre-penultimate --
 21 A. "Consultants Novation", that's the one, isn't it?
 22 Q. Just above that.
 23 A. "Design", oh, I see. I beg your pardon.
 24 Q. It says:
 25 "Design: All design work completed to-date (RIBA

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1 Stage E) is included with this Tender Document ..."
 2 A. I'm just reading it, yes.
 3 Q. My question is: does that include technical design?
 4 A. Well, there is technical design within stage E.
 5 Q. Yes.
 6 A. So as far as it had gone, or should have gone under
 7 stage E, and also as far as it actually had gone, yes.
 8 Q. Is it right that, regardless of when the contract such
 9 as this is put out to tender, the materials that go into
 10 the specification have to be checked for compliance?
 11 A. The architect produces information which in this case
 12 Artelia draw together and issue, and that information
 13 has to be checked, correct.
 14 Q. Yes. Put it another way: would a reasonably competent
 15 architect do his stage E work without ensuring that the
 16 materials or products which are specified up to that
 17 point are compliant with the Building Regulations?
 18 A. The key qualification you have used is "up to that
 19 point". That is correct.
 20 Q. Yes. And up to this point on this project,
 21 November 2013, which results in this document, would you
 22 have expected Studio E, as the reasonably competent
 23 architect, to have ensured that whatever products were
 24 specified or stipulated in the NBS specification were
 25 compliant with the Building Regulations?

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1 A. Yes, they should have been compliant from the moment
 2 they were first introduced.
 3 Q. Yes.
 4 A. And they should have been checked on the way through.
 5 Q. Yes, thank you.
 6 Now, if we go to your supplemental report at
 7 {PHYS000002/46}, we can see paragraph 2.4.15.
 8 I asked you about technical design. Here at the top
 9 of the page you give some more detail about what that
 10 is, and you say:
 11 "Technical design (usually prepared/provided by
 12 consultant design team): drawings which give information
 13 that is adequate to describe the elements of
 14 construction in sufficient detail to establish fitness
 15 for purpose, buildability and in principle compliance
 16 with Building Regulations."
 17 So it looks very much from what you say there that
 18 tenderers, when they were considering the contract
 19 documents, would be entitled to expect that there was
 20 compliance of the materials specified with the
 21 Building Regulations and that that had been checked and
 22 confirmed?
 23 A. Correct. I think this is one of four bullets, actually,
 24 this is three of four bullets. I think there's an
 25 earlier one.

1 Q. Well, let's turn the page, then, back to page 45
 2 {PHYS000002/45}.
 3 A. The answer is: correct, you are correct.
 4 Q. Yes, okay. Just to give it context, so that everybody
 5 can see it, if we go back to page 45, you can see the
 6 first of the bullet points.
 7 A. Yes, that's right. Sorry, it helps me orientate myself.
 8 Q. Absolutely, and you are here examining technical design
 9 stage E, and you are explaining what is involved in that
 10 stage.
 11 A. Yes, correct.
 12 Q. I think the answer is yes.
 13 We touched on this earlier, but just to confirm it
 14 when we're looking at this, would it have been usual for
 15 the tender documentation to be discussed with building
 16 control before it was issued to the potential tenderers?
 17 A. Not in its entirety, but aspects of it I would have
 18 expected the design team to have shared with
 19 building control, both in the form of meetings and in
 20 the form of submissions, information sent before the
 21 Building Regulations application is made, sent through
 22 and comments passed back.
 23 Q. Would a design and build contractor be entitled to
 24 proceed on the basis that, since an NBS specification
 25 like this was part of design that had been taken to at

1 least work stage E, the materials or products specified
 2 in it were compliant with the Building Regulations?
 3 A. That's a legal point, I think.
 4 Q. Let me put it differently, then.
 5 Would a reasonably competent architect anticipate
 6 that a design and build contractor would regard
 7 themselves as entitled to proceed in that way?
 8 A. Yes, I would certainly do that, but I would like to
 9 again qualify that answer: in my experience, a competent
 10 design and build company, and I've worked with many,
 11 carries out a substantial review at the point of
 12 accepting the job. They've looked at it very carefully
 13 through the tender documents and they've won the job, so
 14 it's sleeves rolled up and, "Let's have a really
 15 thorough check because, guys, we're taking this lot on,
 16 so we need to be pretty sure that anything that's
 17 missing is identified and, you know, let's have a good
 18 thorough check on what we've got".
 19 Q. Following on from that, would it be your view that,
 20 since the design and builder taking this lot on, as you
 21 put it --
 22 A. Sorry, it's a bit informal.
 23 Q. That's fine, because it's clear. But would it be your
 24 view that the design and builder taking this lot on
 25 would have a really thorough check themselves, but that

1 wouldn't absolve the architect from having done its
 2 previous check to satisfy itself that the materials and
 3 products it was specifying in the NBS specification were
 4 compliant with the Building Regulations?
 5 A. If I may, the issue of checking is I'm sure going to
 6 come up a lot, and I think there's checking upon
 7 checking with this job, and I don't like too much
 8 checking. What I like is the correct process of
 9 analysis at the right time by the right people.
 10 The contractor I don't think is necessarily
 11 competent to carry out the check, although some
 12 contractors employ their own architects. I don't think
 13 we should assume that they carry out the check. What
 14 they should be doing is satisfying themselves that the
 15 work has been thoroughly checked, and that would take
 16 the form of, "You guys are coming on board as our
 17 architects. What processes have you been through?
 18 Let's look at some of the issues that have been
 19 developed along the way. We have the following
 20 questions from the point at which we were preparing our
 21 tender. We'll bring them all to the table because we
 22 won the job. Here we go."
 23 Q. I follow. Thank you very much.
 24 So the answer to the question is that the reasonably
 25 competent architect would expect to be asked by the

1 incoming design and build contractor, assuming they were
2 competent, that that architect had carried out
3 sufficient checks itself to make sure that the materials
4 specified in the specification were compliant with the
5 Building Regulations?

6 A. That is correct, and the competent architect that's
7 doing the work needs to be checking their work at every
8 single stage as they go through.

9 Q. Can we look on at your supplemental report at page 25
10 {PHYS000002/25} -- it's behind, actually, in the same
11 document -- and I would like to look at paragraph 2.3.3.
12 We looked at 2.3.2 earlier. At 2.3.3 you say:

13 "It is also my opinion that any obligation on the
14 part of the sub-contractor to 'complete the design in
15 accordance with the designated code of practice' (see
16 paragraph 12.14 of Studio E's Opening Statement) does
17 not impose an obligation upon that sub-contractor to
18 undertake a checking role or to assume responsibility
19 for any or all past work of the architect. Further this
20 most certainly does not exonerate the architect for any
21 design failures in its own past work that are not
22 'picked-up' by the subcontractor."

23 Then you also say, if we can just look at another
24 part of this report at page 31 {PHYS000002/31},
25 paragraph 2.3.25 on that page, sixth line down there:

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1 "There is no indication whatsoever in this ..."
2 Which is, I should tell you, H92, paragraph 210.
3 That's what you're referring to, which you can see above
4 on the page, but you say:

5 "There is no indication whatsoever in this that the
6 Design and Build contractor or its sub-contractor
7 (respectively Rydon or Harley) had either
8 a responsibility to check the broad assumptions and
9 principles upon which Studio E's work had been based, or
10 that Rydon and/or Harley would be absolving Studio E of
11 responsibility for the work that it had done in this
12 connection."

13 When you say "absolve" there, do you mean assume
14 responsibility in place of Studio E?

15 A. Correct.

16 Q. Right.

17 Finally, can we look at {PHYS000005/54}. It's also
18 your supplemental report, but it's a different section
19 of it. Let's look at paragraph 6.3.4, you say there,
20 after some qualifications:

21 "Those qualifications aside, I agree with Harley's
22 implied suggestion at paragraph 20 that it was 'entitled
23 to proceed on the basis that ... when compiling the NBS
24 for the Project' Studio E's work, as provided under the
25 Employer's Requirements, was compliant with the

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1 requirements of the Building Regulations and the
2 guidance contained withing ADB2."

3 Now, I just want to be clear about what I've just
4 put to you there.

5 You are professing no expertise, are you, as
6 a specialist cladding subcontractor?

7 A. No.

8 Q. Can you just explain the basis on which you consider
9 that you can express an opinion about whether what
10 Harley themselves did was reasonable?

11 A. Well, having worked with subcontractors of a variety of
12 disciplines, not -- because the principles are in many
13 ways similar, not the same, across different aspects,
14 but here we're talking about cladding. Having worked
15 with subcontractors through main contractors, I've
16 gained an experience of the way they think and they
17 work, and so it's based on that.

18 Q. I see. So this is your opinion as an experienced and
19 reasonably competent architect about what you in that
20 role would expect Harley, as the reasonably competent
21 subcontractor, to do?

22 A. Yes, but may I qualify that a little?

23 Q. Yes.

24 A. I have listened to -- I wrote this before I heard
25 evidence and the evidence has come across a long period

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1 of time. I don't want to imply with this that
2 a subcontractor has no responsibilities for their own
3 work, and it's important here to remember that Harley
4 had offered themselves, through their own documentation,
5 as experts in overcladding buildings, and part of the
6 decision -- and we heard this from the evidence of
7 Mr Maddison, I think -- to select Rydon and, through
8 Rydon, Harleys was based on their past experience, and
9 I think that can be taken into account by an architect.

10 Q. Yes.

11 A. And I don't think a subcontractor can just say, "Well,
12 we breezed up, we've got no responsibility even to
13 comment on anything, we'll take it all blind". You
14 would expect them to have some substantial knowledge
15 which they would inform their work with, and they would
16 raise questions if they thought something was
17 fundamentally wrong.

18 Q. Thank you.

19 Can I then turn to a different topic, which is the
20 ACM material. I want to ask you some questions about
21 the compliance of and the selection of Reynobond PE 55
22 aluminium composite panels, which were the rainscreen
23 material used at Grenfell.

24 Would you expect a reasonably competent architect to
25 be aware, first, that ACM panels were manufactured at

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1 the time with different cores, a PE core and an FR core?
 2 A. No.
 3 Q. Is that, therefore, particular specific knowledge that
 4 an architect, you would expect, would obtain as part of
 5 their preparation for the initial design of a rainscreen
 6 cladding system if appointed on a project such as
 7 Grenfell Tower?
 8 A. Yes.
 9 Q. Were you yourself aware during the period 2012 to 2016
 10 that ACM panels came with a PE and an FR core?
 11 A. No.
 12 Q. Would you expect a reasonably competent architect to be
 13 aware of the fire performance properties of ACM panels
 14 in general, aluminium composite panels in general?
 15 A. Yes. Yes.
 16 Q. Could we look at your supplemental report, please, at
 17 {PHYS0000002/52}. Let's look together at
 18 paragraph 2.5.10 on that page at the top of the page
 19 there. You say:
 20 "It would have been impractical, and indeed it was
 21 not part of my instructions, for me to investigate and
 22 provide 'contemporaneous examples of the approach of
 23 a reasonable body of the profession' for this kind of
 24 work (as has been suggested at paragraph 8.16 of
 25 Studio E's Opening Statement). On that basis I simply

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1 do not know in any detail what had, at the time of the
 2 Grenfell fire, been done elsewhere although I am aware
 3 that widespread problems have been reported, as
 4 suggested at paragraph A1.4 of the RIBA Expert Advisory
 5 Group on Fire Safety's report (19 October 2017)
 6 submitted to Dame Judith Hackitt during her review. How
 7 similar the various pieces of design work relating to
 8 any such problems are to the work that Studio E carried
 9 out for Grenfell Tower, I cannot know. As previously
 10 stated, even if I was to be presented with such a body
 11 of evidence - for example evidence that many other
 12 over-cladding projects to existing residential tower
 13 blocks in the UK revealed widespread and basic failures
 14 to meet the requirements of the Building Regulations,
 15 such as are evidenced within the work of Studio E, at
 16 Grenfell Tower, I would remain equally critical of
 17 Studio E."
 18 Now, I've read that to you in full. There are some
 19 questions that follow from that.
 20 If architects in the UK were routinely specifying
 21 ACM panels with a PE core prior to June 2017, should
 22 this not weigh in your analysis of the steps that
 23 a reasonably competent architect ought to take when
 24 considering the compliance and specification of those
 25 products?

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1 A. I think so, but this paragraph was intended to comment
 2 on the work of Studio E across the entire overcladding.
 3 It wasn't specific to just ACM.
 4 Q. No, I understand that. So I think the answer is you
 5 think so.
 6 I appreciate that this paragraph is a more general
 7 paragraph than just on the ACM, but specifically in
 8 relation to the ACM, would the fact that, if it were the
 9 case, architects in the UK were routinely specifying ACM
 10 panels with a PE core, would that fact not weigh in your
 11 analysis of the steps that a reasonably competent
 12 architect ought to take when considering whether or not
 13 those panels complied?
 14 A. Yes, architects were specifying, and yes, I agree, yes.
 15 Q. Does the routine specification of such products in the
 16 industry, if that was the case, indicate, or would it
 17 indicate, a common industry practice?
 18 A. Well, ACM has been specified extensively. It is
 19 a commonly used material.
 20 Q. Yes.
 21 A. A commonly used -- it's not a material, ACM. That's why
 22 Dr Lane calls it ACP, which I agree with. It's
 23 aluminium, a core, and aluminium, as a composite. So
 24 it's not a material, but it's a very commonly used
 25 product. "Product" is the word.

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1 Q. Absolutely. I understand that.
 2 Just looking at the industry practice, if the
 3 industry practice was that ACP, as you would prefer to
 4 call it, was being commonly prescribed, would that fact
 5 bear on the standard by which a reasonably competent
 6 architect should be judged when an architect prescribes
 7 it?
 8 A. Yes.
 9 Q. And how much weight would you think that that should be
 10 given when judging an architect's performance?
 11 A. I think we're comfortable to specify products which are
 12 regularly used. One gains increasing comfort in that
 13 way. But there is still the obligation to check that
 14 that product meets the requirements of ADB2, and it's
 15 specific within that document as to what the performance
 16 should be.
 17 So I think a degree of comfort can be obtained or
 18 enjoyed by the architect, but, at the end of the day,
 19 they've got to be satisfied that the particular
 20 manufacturer and particular product is okay.
 21 Q. Thank you.
 22 Now, if we go back to {SEA00000169/69}, please, back
 23 to the NBS specification. On this page, and this is
 24 part of H92, rainscreen cladding, halfway down the page,
 25 under the rubric "Design/performance requirements", do

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1 you see it says:
 2 "CWCT 'Standard for systemised building envelopes'"
 3 Do you see that there?
 4 A. Yes.
 5 Q. You will have heard the evidence or seen the transcript
 6 of the evidence of Mr Rek --
 7 A. Yes.
 8 Q. -- an employee of Studio E at the time, and his evidence
 9 was that the CWCT standard is offered for inclusion into
 10 section H92 of an NBS specification, and then you
 11 changed the question mark to a green tick if you want to
 12 include reference to the specification. That's how you
 13 go about it. Just for our purposes and the transcript,
 14 that's at {Day12/37:20} onwards. That was the evidence
 15 he gave.
 16 Do you consider, in your opinion, that Studio E
 17 should have been familiar with the contents of the CWCT
 18 standard before it chose to specify that standard
 19 expressly within the body of H92 within the
 20 specification?
 21 A. Somebody in the firm needed to be comfortable that they
 22 understood that. I don't see how an architect can
 23 responsibly include qualifications or parts of
 24 a specification without understanding them.
 25 Q. Would you say that Studio E was under a professional

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1 obligation to make sure that the products that it was
 2 specifying, whether as the primary product or the
 3 similar or equal alternatives, fell within and satisfied
 4 the CWCT standard that the architect was specifying
 5 here?
 6 A. I think the bottom line is: does it satisfy ADB2? But
 7 I think that this is an important document. It's by
 8 the federation that lead the collective of
 9 subcontractors involved in this kind of work, and so
 10 I would have thought that it was good guidance to use,
 11 yes.
 12 Q. Now, Mr Sounes said in his oral evidence -- for your
 13 reference purposes, this is {Day7/164:18} of the
 14 transcript -- that he hadn't read this standard at the
 15 time of working on the refurbishment.
 16 In your opinion, did that failure or that
 17 non-happening fall below the standards of a reasonably
 18 competent architect?
 19 A. Well, if you would forgive me, I don't want to comment
 20 in that respect on Mr Sounes and his particular duties,
 21 because I'm not clear about that at this point in time.
 22 But the firm of Studio E I think should have had
 23 a technical competence amongst its team to understand
 24 this document, and somebody in that team should have
 25 certainly familiarised themselves with the general

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1 principles of it.
 2 Q. Well, okay. Taking Mr Sounes in particular, he hadn't
 3 read the standard, as he said, and if nobody else in his
 4 team had read the standard, would that mean that
 5 Mr Sounes had fallen below the standards of the
 6 reasonably competent architect team leader, leading
 7 a team of designers?
 8 A. Unfortunately, if he is the team leader, he should have
 9 made sure that the work was properly understood, yes.
 10 Q. As a firm, let me ask that question again: if nobody in
 11 Studio E had read the standard it was specifying in the
 12 NBS specification, would that failure fall below the
 13 standards of a reasonably competent architect?
 14 A. I think so, yes.
 15 Q. It would follow from that that it was not the action of
 16 a reasonably competent architect -- sorry, let me start
 17 that question again.
 18 Do you accept that Studio E fell below the standards
 19 of a reasonably competent architect in not ensuring that
 20 the products specified complied with the standards
 21 expressly referred to?
 22 A. This question is relating solely to the ACP?
 23 Q. To the ACP, yes, just in relation to that, and the CWCT
 24 standard stipulated.
 25 A. Well, for me, the bottom line is ensuring that the

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1 requirements set out in ADB2 are met by the product, and
 2 I think that that was a separate and a pretty clear
 3 affirmative.
 4 Q. Yes. But here we've got a specific reference to the
 5 CWCT standard for systemised building envelopes, and if
 6 that standard, as we shall see in a moment, contains
 7 guidance or illustration, advice, market information,
 8 industry information, technical information, about
 9 rainscreen cladding, then a reasonably competent
 10 architect stipulating the specific standard in its own
 11 specification should have read and understood that
 12 standard.
 13 A. I think so. I'll no doubt find which particular issue
 14 you're going to be questioning me further on, but yes --
 15 Q. Well, is the answer "yes", first of all, in general
 16 terms?
 17 A. Yes.
 18 Q. Let's look at the standard. It's {CWCT000046/11},
 19 please. I just want to go straight into it, and go to
 20 paragraph 6.3, in the second paragraph from the bottom.
 21 It says in italics, and this is under the heading
 22 "Fire resistance":
 23 "Aluminium envelope systems do not normally have
 24 significant resistance to fire. Most unmodified
 25 aluminium building envelopes will provide only 10 to

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1 20 minutes stability and integrity resistance and
 2 negligible insulation resistance.”
 3 Then if you go to paragraph 6.2, higher up the page,
 4 third paragraph down, it says:
 5 “The building envelope shall not be required to
 6 provide fire resistance unless a performance is stated
 7 by the Specifier.”
 8 Do you see that?
 9 A. Yes.
 10 Q. Then the fourth paragraph down:
 11 “The building envelope shall not be composed of
 12 materials which readily support combustion, add
 13 significantly to the fire load, and/or give off toxic
 14 fumes.”
 15 Are those things that I’ve shown you, those three
 16 things on that page, things that a reasonably competent
 17 architect briefed to design an overclad of a high-rise
 18 building should know?
 19 A. Well, I think they should know them, but I haven’t seen
 20 anything here that says that an ACP product should not
 21 be used. The comment is more general, I think.
 22 Q. I’m not asking you whether the CWCT guidance advised not
 23 using ACP or ACM products, I’m not suggesting that to
 24 you. All I’m asking you is whether those three items
 25 I have selected from this page are things that

1 a reasonably competent architect who is briefed to
 2 design an overclad of a high-rise building ought to
 3 know?
 4 A. Yes.
 5 Q. Do you think that that is especially the case in the
 6 case of an architect who actually chooses to stipulate
 7 the application of this very standard in his own
 8 specification?
 9 A. Yes, but if I take that fourth paragraph down:
 10 “The building envelope shall not be composed of
 11 materials which readily support combustion, add
 12 significantly to the fire load, and/or give off toxic
 13 fumes.”
 14 Well, if we look at the profession generally and all
 15 of the professions involved -- I’m talking about façade
 16 engineers, a range of others -- in modern buildings of
 17 this type, ACM/ACP has been extensively, widely used
 18 over a long period of time across a wide range of
 19 countries, and we could say that all of us should have
 20 been far more focused on this line here.
 21 So I do not want to suddenly turn on Studio E and
 22 say that the weight of that fourth paragraph should rest
 23 entirely on their shoulders. The industry was generally
 24 using those products.
 25 Q. Yes.

1 SIR MARTIN MOORE-BICK: While we’ve got this open, just help
 2 me: in your understanding -- and I’m only asking you for
 3 your understanding of this at the moment -- does ACP
 4 readily support combustion?
 5 A. I did -- well, at the time, I did not think --
 6 SIR MARTIN MOORE-BICK: Does it readily support combustion
 7 is my question?
 8 A. No.
 9 SIR MARTIN MOORE-BICK: Well, yes. All right. I think we
 10 might all know the answer to that, but I would just like
 11 to ...
 12 A. I think it’s difficult to get it to burn, but once it’s
 13 burning, it burns with ferocity.
 14 SIR MARTIN MOORE-BICK: Does it add significantly to the
 15 fire load?
 16 A. Once it’s burning, yes.
 17 SIR MARTIN MOORE-BICK: And the question which I think you
 18 would wish to answer: was that something which
 19 architects generally were aware of at the time?
 20 A. I don’t think we were.
 21 SIR MARTIN MOORE-BICK: All right. Yes, thank you.
 22 A. Actually, we weren’t, is the answer. We weren’t.
 23 There’s no “think”; we were not.
 24 SIR MARTIN MOORE-BICK: All right, thank you.
 25 MR MILLETT: These four paragraphs that I’ve shown you,

1 within this very specification which expressly forms
 2 part of the NBS specification, should they have acted as
 3 a prompt or an alarm bell to Studio E just to make sure
 4 that the building envelope that it was proceeding to
 5 design didn’t readily support combustion, didn’t add
 6 significantly to the fire load, and didn’t give off
 7 toxic fumes?
 8 A. We’re on the entire overcladding or focused just on
 9 the --
 10 Q. Let’s focus on the ACP. I appreciate the point about
 11 the building envelope as a whole, but just focusing on
 12 the ACP for the moment.
 13 A. I think an architect -- yes, that is correct, I think
 14 that should make us alert.
 15 Q. Yes, thank you.
 16 Do you agree that an architect specifying
 17 a specification for an overcladding façade which
 18 included reference to this standard, the CWCT standard
 19 for building envelopes, in 2013 should have been aware
 20 also of the subsequently published CWCT Technical
 21 Note 73 of March 2011? I say subsequently because this
 22 document is an earlier document.
 23 A. Yes, yes.
 24 Q. Could we look at that. That’s at {CWCT000019}, please.
 25 At page 1 on the left-hand side, under the heading

1 "Introduction", and this is the penultimate paragraph,
2 it says:
3 "Rainscreen walls are additionally required to limit
4 the spread of fire in the rainscreen cavity."

5 Do you think that information or that requirement,
6 or that statement of the requirement, I should say, in
7 addition to that set out in the standard we've just
8 looked at, ought to have caused the reasonably competent
9 architect to consider whether an FR-cored panel would be
10 required?

11 A. No, and the reason for that is that I don't think
12 that -- I may be going back on evidence I've just given,
13 in which case I apologise, but the difference between
14 fire retardant and cores was not as clearly understood
15 at the time as it should have been, and it hasn't been
16 since, actually. There's going to have to be a root and
17 branch review of all of this across the entire industry
18 and across all of the professions involved. I came
19 across the difference by accident.

20 So I suppose you could say that, faced with all
21 these documents and wading into them in the most immense
22 detail, maybe it should have become apparent. I learned
23 about it, the difference, by accident, independent
24 actually of this Inquiry, but by accident.

25 Q. Do you --

1 A. But the broader point, "Rainscreen walls are
2 additionally required to limit the spread of fire in the
3 rainscreen cavity", the principle of that we should all
4 know and understand fully.

5 Q. Thank you for that.

6 That then leads me to this: would this statement in
7 this document, Technical Note 73, coming from the CWCT,
8 have made the reasonably competent architect think that
9 they needed to look for products which were going into
10 the rainscreen walls to ensure that whatever was
11 available on the market resisted the spread of fire or
12 limited the spread of fire as much as possible, and
13 therefore actually go out actively and look for what was
14 available, namely FR products?

15 A. It's not an answer which is particularly helpful, but
16 it's a sort of yes and no answer. The problem is we
17 don't know what to look for. We're taking so much on
18 trust. We've got so much going into a building. It's
19 not particularly to do with limits of time, although
20 time is crushingly tight; it's to do with knowing what
21 to look for. I think it's fair to say that the
22 designing part of our industry -- I'm making that
23 separation from the manufacturing part, so I'll actually
24 include contractors in this as well -- none of us had
25 any idea that there were such dangerous components being

1 incorporated into a composite panel.

2 Q. Would the fact that this statement appears in
3 a technical guidance note such as this not have prompted
4 the reasonably competent architect at the very least to
5 spell out in the NBS specification that whatever product
6 was being used or chosen in the end, the rainscreen
7 walls were required to limit the spread of fire in the
8 rainscreen cavity, so that the contractor would know
9 that, whatever product was ultimately chosen, it would
10 comply at least with that?

11 A. I don't think so. I think that the architect would take
12 that and ensure that in his/her own work, they were not
13 breaching that. I think many of us would have blindly
14 stumbled into the same problem.

15 Q. Right.

16 To know what to look for, you would have to look at
17 the manufacturers' literature, wouldn't you, on
18 a case-by-case basis, before you put --

19 A. That's certainly a very good starting point.

20 Q. Well, before you put the material into your NBS
21 specification, you would do that.

22 A. Yes, it's the starting point.

23 Q. Yes. Sorry, just to repeat the question: before you
24 specified the particular products, whether it's for the
25 rainscreen or the insulation or any other element of the

1 exterior wall construction, you would look at the
2 manufacturers' literature to make sure as much as
3 possible that it complied with the CWCT guidance and
4 this technical note?

5 A. Yes, yes.

6 Q. And of course the approved documents.

7 A. Yes.

8 Q. Yes.

9 Now, you address the fire classification of the zinc
10 Proteus cladding panels and the three alternatives
11 included as alternatives in the NBS specification in
12 your report. Let's look at that. That's
13 {PHYR0000029/50}. You say at paragraph 4.3.27:

14 "Clause 11 in Studio E's full NBS H92 Employer's
15 Requirement Document of 30 January 2014 [which is what
16 we were looking at] ... included a provision for
17 tenderers to provide a cost comparison for alternative
18 cladding systems from the list exhibited below
19 (Reynobond/Alucobond/Zinc). I am critical of this
20 listing as it refers in one instance to a product name
21 (Reynobond), in a second to a manufacturer (Alucobond)
22 and in the third to a material. It seems that the
23 references are to ..."

24 Then you set them out:

25 "a) Alcoa Architectural Products/Reynobond ...

1 "b) Alucobond/Spectra ...
 2 "c) VM Zinc/Quartz Zinc ..."
 3 And you say what those are.
 4 Then if we go to paragraph 4.3.29 on page 53
 5 {PHYR0000029/53} of this document, this report, you have
 6 there -- and I'll just show this to you -- after the
 7 extract from the BBA certificate for the Reynobond, you
 8 say:
 9 "Assessment: At para 6.1 a standard (non-fire
 10 retardant) sample was certified as compliant with
 11 European Standard Class B as set out in ADB2
 12 Diagram 40."
 13 Then if we look at paragraph 4.3.30 at page 54
 14 {PHYR0000029/54}, you deal here with the Alucobond
 15 Spectra, and you say that that was tested to class D
 16 under EN 13501 but tested to class 0 in the UK.
 17 Just on that, as we can see, just pausing there,
 18 what does that tell us about the reliability of the
 19 stated equivalences between the Euro classes and the UK
 20 national classes?
 21 A. I think the Euro class is more specific in the way it
 22 measures performance than the British one.
 23 Q. How can something be class D Euro but class 0 UK, do you
 24 know?
 25 A. Well, class 0 -- "class 0", as it's commonly referred

1 to, but class 0 as well -- is a measure of a spread of
 2 flame across a surface, and the other classifications
 3 are a measure of the performance in terms of S and D
 4 being smoke emission and droplets, as the material
 5 changes form from solid to liquid, and it's a measure of
 6 the rate of formation of droplets and the rate of
 7 formation of smoke. Beyond that, we're into a science
 8 which I don't have the competence to deal with.
 9 Q. Very well.
 10 A. But that's the gist of the story.
 11 Q. Are you surprised to see a product, Alucobond Spectra,
 12 obtaining both an EU class D but at the same time a UK
 13 class 0, or English class 0?
 14 A. I certainly am now. It begs many, many questions about
 15 the way we've all been operating. At the time -- well,
 16 you will no doubt go on to ask me about that. So that's
 17 the answer.
 18 Q. Well, that's helpful.
 19 Can we go to paragraph 4.3.31, please, on page 55
 20 {PHYR0000029/55}, where we see the VMZinc. That says
 21 that that achieves a B, B-s1, d0, according to the
 22 European fire resistance standard, EN 13501.
 23 You say underneath that, at 4.3.31:
 24 "Assessment: This manufacturer's classification
 25 confirms compliance with European Standard Class B as

1 set out in ADB2 Diagram 40."
 2 Then at paragraph 4.3.32, you can see, just below
 3 that on the page, the KME Architectural Solutions
 4 Proteus HR, which has class 0 as classified by the
 5 Building Regulations, and it also says:
 6 "Any specified firebreaks would be installed by
 7 a Proteus approved contractor. A non-standard A2 System
 8 is also available."
 9 You say in your assessment that:
 10 "This manufacturer's classification confirms
 11 compliance with ADB2 Diagram 40 and with Class 0
 12 National Standard."
 13 Now, save for the Reynobond product, are these
 14 classifications I've shown you taken from material which
 15 were on the relevant product's websites when you --
 16 A. Yes, yes, I think that was the source, yes.
 17 Q. What steps, if any, did you take to ensure that the
 18 classifications were accurate as at the date of the
 19 NBS specification? So for present purposes, you can
 20 take November 2013 or January 2014.
 21 A. I don't know the answer to that, I'm afraid.
 22 Q. Well, did you take any steps to ensure that the
 23 classifications were accurate as at the date of the
 24 NBS specification?
 25 A. Yes, that particular piece of research was done from

1 somebody in my team. I assume that that would have been
 2 relevant at the time because that's the entire basis
 3 upon which we were working across the board, but
 4 I personally didn't check that.
 5 Q. Very good.
 6 Can we then look at your report at {PHYR0000029/35},
 7 please. I want to ask you about paragraph 4.2.44 of
 8 your report, and I'll read this to you in full because
 9 it's technical. You say:
 10 "Finally, I note that paragraph 12.7 of ADB2 refers
 11 to 'filler material' amongst the components and
 12 substances that must be of 'limited combustibility'
 13 where and when 'used in the external wall construction'.
 14 Poor drafting has this paragraph under the sub-heading
 15 'External surfaces' when it would clearly be better
 16 placed under the previous heading of 'External wall
 17 construction'. That point aside it is my view that the
 18 term 'filler material' in this sense relates to a
 19 product or material such as mineral wool, or PIR
 20 insulation - that is something consisting of the same
 21 material - or at least largely the same material -
 22 throughout its make-up. I do not think that the authors
 23 of ADB2 intended the term 'filler' or 'filler material'
 24 to mean any part of a composite material (e.g. aluminium
 25 composite panel) that is factory manufactured and

1 delivered to site as a finished product. Rather, it is
 2 something (either solid (e.g. polystyrene), granular
 3 (e.g. sand) or fluid (e.g. mastic)) that is put into,
 4 squeezed into, or poured into a host environment. It
 5 will be for the Inquiry to determine the meaning of
 6 'filler material' in the context of paragraph 12.7 of
 7 ADB2, but I can affirm with confidence that as an
 8 architect I would never have interpreted the
 9 polyethylene core of an ACP panel to be a 'filler
 10 material' in the sense of the term as used in ADB2.
 11 That is a material or component in its own right.
 12 Therefore, I would have looked, in terms of considering
 13 the BBA Test Certificate in relation to the performance
 14 of the Reynobond ACP panel, only at the rating given to
 15 the product as a whole. I would not have made any
 16 enquiry of the elements of the product."
 17 Now, in coming to that opinion, did you consider
 18 paragraph 13 of appendix A to ADB?
 19 A. Can you refresh my memory?
 20 Q. Yes, looking at you, I thought I probably ought to do
 21 that.
 22 A. I rather regret I wrote such long paragraphs, actually .
 23 Q. It was very helpful. But let's look at it,
 24 {CLG00000173/122}, please. If we look there, we can see
 25 paragraph 13.

1 Now, I would like to read this to you in full. It's
 2 slightly shorter than your paragraph:
 3 "The highest National product performance
 4 classification for lining materials is Class 0. This is
 5 achieved if a material or the surface of a composite
 6 product is either:
 7 "a. composed throughout of materials of limited
 8 combustibility; or
 9 "b. a Class 1 material which has a fire propagation
 10 index (I) of not more than 12 and sub-index (i1) of not
 11 more than 6.
 12 "Note: Class 0 is not a classification identified in
 13 any British Standard test."
 14 Now --
 15 A. Could --
 16 Q. Sorry.
 17 A. May I ask, could you just go back to the title of this
 18 whole section?
 19 Q. Yes. It is at either page 120 or page 121. Let's start
 20 with page 121 {CLG00000173/121}, to see if I'm right
 21 about that. Well, I am, at least to this extent: this
 22 is under "Internal linings".
 23 A. Yes..
 24 Q. Is that what you were after?
 25 A. Yes.

1 Q. What does that tell us?
 2 A. This is a good example of the kind of confusion that
 3 does exist within this document, ADB2, which I would
 4 suggest -- I don't suggest, I'm absolutely clear --
 5 should be user friendly, and it is not, when information
 6 which may be key is buried in the document under the
 7 wrong headings.
 8 Q. Now, what you have just told us, is that a view that you
 9 have come to during the course of your instruction for
 10 this Inquiry and writing your reports, or is that a view
 11 that you held in the period 2012 to 2016?
 12 A. I grew up with the London Building Acts and
 13 constructional byelaws, and it was a different world of
 14 greater precision.
 15 I have never been the greatest fan of the approved
 16 document arrangement, but having said that, my criticism
 17 is to the drafting of it as opposed to the principle of
 18 the guidance that it gives, and I don't think the
 19 drafting -- there are many, many examples where the
 20 drafting is not good.
 21 I did have a concern around the ADB documents
 22 before, but certainly my work for this Inquiry has --
 23 and I'm very sorry to say this -- taken me through this
 24 document in the greatest of detail, and I have been
 25 somewhere between disappointed and appalled at times by

1 some of the confusions.
 2 Q. Right. Let me refocus my question a bit more tightly.
 3 Is the view that you expressed about lack of clarity
 4 a specific view about the lack of clarity about this
 5 part, paragraph 13, of appendix 1 of ADB specifically?
 6 A. No, there are other parts of the document which --
 7 Q. Okay.
 8 Does what I've just shown you, paragraph 13, affect
 9 your view as expressed about filler in paragraph 4.2.44
 10 of your report that I read to you in full?
 11 A. No, I would not have looked at the filler -- I would not
 12 have sought evidence about the performance of the
 13 filler, the polyethylene within the ACP panel. I would
 14 have taken the test certification at bald face value.
 15 Q. The test certification for the rainscreen?
 16 A. Yes. Well, I'm thinking of the Reynobond in that
 17 respect.
 18 Q. Reynobond?
 19 A. Mm.
 20 Q. Yes, indeed. And the reason I'm asking you the question
 21 about your report and the passage I read you is because
 22 of the sentence in paragraph 13 that says:
 23 "This [which is class 0] is achieved if a material
 24 or the surface of a composite product is either:
 25 "a. composed throughout of materials of limited

1 combustibility; or
 2 "b. a Class 1 material ..."
 3 And I'm just asking you whether your view about the
 4 polyethylene core not being a filler is affected in any
 5 way by class 0 being achieved by a material being
 6 composed throughout of materials of limited
 7 combustibility, or the surface of a composite product
 8 being composed throughout of materials of limited
 9 combustibility, or is there no parallel at all?
 10 A. Now or then?
 11 Q. I'm asking for your understanding and your clarification
 12 of your opinion.
 13 A. Well, now it's clear to me that class 0 -- and I knew
 14 this at the time, but I hadn't considered it carefully
 15 enough, but it's clear to me that class 0 is the surface
 16 spread of flame. I always knew that, but I had not used
 17 that knowledge that I had as a basis for me
 18 interrogating the matter further. And it's very --
 19 I don't want to defend myself in this respect, but
 20 I would like to say: when we talk about the rainscreen
 21 cladding and a thin aluminium composite panel, it's easy
 22 to take that as the surface of the wall or the surface
 23 of the building. I didn't read that to be the
 24 aluminium -- I've got three parts: I've got the
 25 aluminium internal part, I've got the composite --

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1 I think that was 0.5 of a millimetre, but 1.5, maybe
 2 it's 2.5 millimetres of polyethylene, and I've got
 3 an aluminium outer face. I considered the whole of that
 4 to be the external surface of the wall. I didn't
 5 consider the outer face of the aluminium composite panel
 6 to be in its own right and separately the surface of the
 7 whole wall. I would not, therefore, have interrogated
 8 the core of it at all.
 9 Q. Therefore, that takes me to this question: what, in your
 10 opinion, is the purpose of the core of the panel? You
 11 have said it's not filler in the way of understanding
 12 12.7. Therefore what was it?
 13 A. I know exactly what it was there for. The problem with
 14 metal cladding systems is that they tend to -- we use
 15 the term "oilcan". The key with hanging a cladding
 16 system, whether it's glass or metal, is to get it to
 17 hang in a single plane. If that's done, reflections off
 18 it should be pretty regular. If you have panels which
 19 are not hung then you don't get that. But if you have
 20 individual panels which themselves are not stable, they
 21 can twist and produce an effect almost like an oilcan.
 22 That can be very, very visually distracting and
 23 unacceptable.
 24 So the role of the polyethylene is to produce
 25 stability to the aluminium panel to ensure that it lies

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1 or hangs in a perfectly straight plane. That's why it's
 2 there.
 3 Q. Thank you.
 4 A. Sorry if that answer was a little long.
 5 Q. No, that's -- can we then go back to the heading --
 6 SIR MARTIN MOORE-BICK: Sorry, before we go away from 13(a),
 7 and you have explained how you would have looked at
 8 an ACM panel, and the distinction between the panel as
 9 a whole and the surface of the panel being the
 10 aluminium.
 11 A. Yes.
 12 SIR MARTIN MOORE-BICK: It is surely a composite product,
 13 isn't it, the ACM panel?
 14 A. Yes.
 15 SIR MARTIN MOORE-BICK: And therefore you would perhaps ask
 16 yourself whether it is composed throughout of materials
 17 of limited combustibility?
 18 A. I think that I should have. I think all of us who have
 19 specified that without doing so can be criticised.
 20 I wouldn't want to focus undue criticism on Studio E in
 21 this respect; it's a universal problem, I think.
 22 SIR MARTIN MOORE-BICK: So would your view be that Studio E
 23 were at fault in not asking themselves that question, in
 24 common with a lot of other --
 25 A. Oh, yes, that would be the case, yes.

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1 SIR MARTIN MOORE-BICK: All right.
 2 A. But not in isolation.
 3 SIR MARTIN MOORE-BICK: No. Thank you.
 4 MR MILLETT: Mr Chairman, that's probably a convenient
 5 moment.
 6 SIR MARTIN MOORE-BICK: I interrupted your questions.
 7 MR MILLETT: Well, I had a question, you have sort of asked
 8 it, I am afraid, but there is one more question I could
 9 fit in, I think, in the minute before 1 o'clock.
 10 You were interested in the title to this part of
 11 appendix A, and that was linings. If we can go back
 12 a page to page 121 {CLG00000173/121}, and that says
 13 "Internal linings".
 14 What's the relevance of that to paragraph 13 and
 15 class 0 generally?
 16 A. Well, if it's internal linings, I wouldn't expect to be
 17 looking in here in relation to the external cladding.
 18 Very simple.
 19 Q. Why would class 0 be relevant to internal linings?
 20 A. Well, again, we've got problems of fire with partitions.
 21 We're sat amongst partitions here. It's of concern to
 22 know how the linings will perform. Yes.
 23 Q. Yes, thank you.
 24 A. Can I make one further comment on that? Or maybe you're
 25 going to take me to diagram 40 after the break.

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1 Q. We may well do.
 2 A. Okay, then I'll save it for then.
 3 Q. Yes, I am.
 4 A. I'll save it for then, then.
 5 MR MILLETT: All right.
 6 SIR MARTIN MOORE-BICK: Is that a good moment, Mr Millett?
 7 MR MILLETT: It is, Mr Chairman, thank you.
 8 SIR MARTIN MOORE-BICK: Well, Mr Hyett, it's time for us all
 9 to have some lunch. So we will break now and come back
 10 at 2 o'clock, please.
 11 THE WITNESS: Thank you.
 12 SIR MARTIN MOORE-BICK: Again, no talking to anyone about
 13 your evidence while you're away.
 14 THE WITNESS: I will not.
 15 SIR MARTIN MOORE-BICK: Thank you very much.
 16 (Pause)
 17 Thank you very much, 2 o'clock, please.
 18 MR MILLETT: Very good, thank you.
 19 (1.01 pm)
 20 (The short adjournment)
 21 (2.00 pm)
 22 SIR MARTIN MOORE-BICK: Right, Mr Hyett, ready to keep
 23 going?
 24 THE WITNESS: Yes. Actually, I think I had better just
 25 switch my phone off, if you will forgive me. Sorry.

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1 SIR MARTIN MOORE-BICK: That's all right. Better to switch
 2 it off now than be caught out.
 3 THE WITNESS: Yes, I'm fine, good to go.
 4 SIR MARTIN MOORE-BICK: Good, well done.
 5 Yes, Mr Millett.
 6 MR MILLETT: Yes, Mr Hyett, we were on the subject of the
 7 CWCT standard when we broke for lunch, and I'm afraid
 8 I'm going to dive back into that again.
 9 Can we go back to the standard, please, at
 10 {CWCT0000046/13}, please. Here it is, page 13. If you
 11 look, please, at paragraph 6.4.2.1, I just want to ask
 12 you some questions about class 0. It says here:
 13 "External surface spread of flame
 14 "The external surface of the envelope shall satisfy
 15 the requirements for Class 0 when tested in accordance
 16 with BS 476: Parts 6 and 7 (National class) or
 17 Class B-s3, d2 or better in accordance with
 18 BS EN 13501-1 (European class)."
 19 Do you see that?
 20 A. Yes.
 21 Q. Then underneath that, there is a reference to
 22 rainscreen, and underneath that still it says:
 23 "Class 0 is the highest product performance
 24 classification for lining materials ..."
 25 Then it sets out what we have looked at just before

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1 the lunch break at paragraph 13 of appendix A.
 2 Then it says at the very bottom, just above the next
 3 paragraph title:
 4 "Class 0 relates to the reaction to a flame. A more
 5 sophisticated approach would be to select materials
 6 based on their reaction to radiation."
 7 My question on that is: would that statement have
 8 warned a reasonably competent architect off reliance on
 9 class 0?
 10 A. Sorry, where was that bit about radiation?
 11 Q. It's in italics at the bottom, just above the title
 12 "Internal surface spread of flame". Do you see it?
 13 A. Oh, I see.
 14 Q. I'll read it to you again:
 15 "Class 0 relates to the reaction to a flame. A more
 16 sophisticated approach would be to select materials
 17 based on their reaction to radiation."
 18 A. Yes.
 19 Q. Would that statement have warned a reasonably competent
 20 architect off reliance on class 0?
 21 A. No, I don't think so. That isn't to say that it
 22 shouldn't have, but I don't think it would have at the
 23 time. I think we placed a lot of trust in the ADB, in
 24 the documentation there. We're not lawyers. We should
 25 be able to read and understand information in front of

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1 us, we should know when to go for help, but I don't
 2 think that would have alerted particularly.
 3 Q. Right.
 4 Look at paragraph 6.6.3 on page 16 {CWCT0000046/16}
 5 then, please, if we can. If we look at
 6 paragraph 6.6.3 --
 7 A. I beg your pardon, Mr Millett.
 8 Q. Sorry.
 9 A. Could we go back to that.
 10 Q. Yes, of course, page 13 {CWCT0000046/13}.
 11 A. It says, "A more sophisticated approach", but why would
 12 one want a more sophisticated approach? ADB refers to
 13 class 0.
 14 Q. Well, why would one want a more sophisticated approach?
 15 Perhaps one answer is that this standard, which was
 16 specifically stipulated in the NBS specification, tells
 17 you that a more sophisticated approach is at least
 18 available.
 19 A. Yes, I accept that.
 20 Q. Paragraph 6.6.3 on page 16 {CWCT0000046/16}, if we can
 21 just go back to that, if you look at that, it says
 22 "Composite components", can you see, and it says:
 23 "When one of the cladding elements is a composite of
 24 two or more materials (mechanically jointed, bonded or
 25 fused together) the elements as a whole, must

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1 demonstrate the appropriate fire performance. Similarly
2 it must be demonstrated that the composite will remain
3 reasonably whole and not become prematurely separated
4 from the building or framework.”

5 I'm interested in what you think about the
6 expression company "the elements as a whole". Do you
7 see?

8 A. Yes.

9 Q. In the second line there.

10 A. Yes.

11 Q. In your view, should that reference, if the reasonably
12 competent architect had read this document, have
13 prompted him or her to consult a fire engineer about the
14 fire load to be imposed and the fire resistance to be
15 required of the rainscreen panels as a whole element?

16 (Pause)

17 A. Well, in this case we had a specialist fire consultant
18 anyway, and so I think an architect could assume that
19 they would anyway be aware. Should the architect have
20 actually looked at that and started interrogating the
21 specialist fire consultant in their work? Again,
22 I think that is -- if I was to say yes, I would be going
23 way beyond what I think architects normally do. That
24 might be a criticism of us all, but I still feel that
25 the ADB2 document is one plank upon which we rest most

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1 of our thinking, and the second is, in this case, the
2 BBA certificate, and it's getting those two to marry up
3 which is the key piece of work that I would wish to see
4 done.

5 I accept, sitting here today, looking at all this,
6 that it begs the question as to how thorough we all were
7 in our work. Nevertheless, I think at the time these
8 sort of documents would not have been necessarily -- not
9 necessarily; would not have been interrogated in this
10 way.

11 Q. Nonetheless, does the expression "the elements as
12 a whole" here, set in its context, so that when one of
13 the cladding elements is a composite of two or more
14 materials, mechanically jointed, bonded or fused
15 together, that tells one as the putative reasonably
16 competent architect that the whole of the object, the
17 whole product as a whole, must demonstrate the
18 appropriate fire performance as opposed merely to the
19 surface?

20 A. I know exactly what you're saying and I agree.

21 Q. Thank you.

22 What about the cladding system as a whole? The
23 expression is "elements as a whole". Would one expect
24 one to examine the entirety of the cladding system and
25 ask the question: does it demonstrate the appropriate

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1 fire performance?

2 A. There's a big question as to what constitutes the
3 system. I could spend a lot of time, which you won't
4 want me to do, dealing with that. But I think that each
5 of the elements of the system as a whole, it would
6 follow they would all be considered in that way. Or
7 should be, I would say.

8 Q. We were talking and looking at class 0.

9 Do you know or were you aware at the time of any
10 confusion, at the time, 2012 to 2016, within the
11 architects' profession or the construction industry
12 generally about what national class 0 actually meant?

13 A. I don't know of any and I don't think there was.
14 I think we've all understood it simplistically to be the
15 surface spread of flame, and that it's a performance in
16 the context of the surface spread of flame that is
17 acceptable.

18 Q. Were you aware in general terms of manufacturers of
19 products making misleading claims or misleading
20 reference, perhaps, to class 0 in their product
21 literature?

22 A. I was taught during my part 3 to be suspicious of
23 manufacturers' claims, actually, sceptical, and I was
24 taught to check them carefully, and to make sure that
25 promises that documents are to come, promises that

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1 certificates will be sent, are bottomed out and
2 I actually get the documentation. So, to that extent,
3 I've always been suspicious.

4 But in terms of the reliability in terms of truth of
5 the information when I receive it, I would expect that
6 information to be reliable. And I think it's reasonable
7 to expect that the manufacturers take trouble to give
8 reliable information, and it's not unreasonable for the
9 architect to receive it in that way.

10 Q. I would like to put to you a document I put to Mr Hoban
11 of RBKC building control when he came to give evidence.
12 It's at {RBK00059351}. It's a document produced by the
13 BSI, from the British Standards group, entitled:

14 "Don't be a flaming liability .

15 "Memo to manufacturers.

16 "Does your product literature unwittingly imply that
17 your product is safe if exposed to fire?"

18 We think this document dates back to some time in
19 the late 1980s.

20 Have you ever seen this document or something like
21 it before?

22 A. Only when I was watching the evidence.

23 Q. So not before then?

24 A. No.

25 Q. Right.

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1 If you look at page 2 {RBK00059351/2}, and let's
 2 look at the column on the right-hand side, there is
 3 a heading, "Examples of misleading copy", and then in
 4 the second entry down:
 5 "Interlocking cladding
 6 "It's fireproof (grade 'O')."
 7 Do you see that? It goes on to explain what
 8 national class 0 means.
 9 Do you recall, whether you had seen this document or
 10 not, any concern within the architects' profession in
 11 your time in practice that manufacturers were putting
 12 out misleading statements in their manufacturing
 13 literature about class 0 and its effects?
 14 A. I'm not familiar with any. That isn't to say that
 15 people involved daily in specification work wouldn't be.
 16 I can't speak for everybody else, but I'm not aware.
 17 Would you mind, sir, if I take my jacket off? I'm
 18 a little hot.
 19 SIR MARTIN MOORE-BICK: No, do.
 20 MR MILLETT: Some of us in this room share that sense.
 21 SIR MARTIN MOORE-BICK: Is that better?
 22 A. Yes, that's better, thank you.
 23 MR MILLETT: Can I then ask you to go to {BRE00005554/2}.
 24 This is BR 135 second edition of 2003.
 25 You can see from the first page that it is entitled

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1 "Fire performance of external thermal insulation for
 2 walls of multi-storey buildings". There is a 2013 third
 3 edition as well, but this was the version at the time
 4 that Studio E first became involved in the project at
 5 least.
 6 If we go to page 18 {BRE00005554/18} in it, you can
 7 see that there is a heading "Fire barriers", and just
 8 above that there is a bullet point with a title saying
 9 "Combustible panels". Do you see that?
 10 A. Yes.
 11 Q. It says:
 12 "Typically vinyl or glass-reinforced plastics-based
 13 panels, these products should have good surface spread
 14 of flame characteristics to prevent rapid fire spread
 15 across the surface of the system. Once the panels
 16 become involved in the fire, they have the potential to
 17 generate falling debris and also provide a route for
 18 fire to propagate up the outside of the building."
 19 Was that principle something that you would expect
 20 a reasonably competent architect to have been aware of
 21 at the time of being involved in the Grenfell Tower
 22 project in the years 2012 to 2016?
 23 A. Yes.
 24 Q. Moving on, then, we know from the oral evidence of other
 25 witnesses to the Inquiry that, by July 2014, decisions

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1 had been made to seek planning approval to change the
 2 rainscreen panels from zinc to ACM, or, if you prefer,
 3 ACP. That's the background for the questions I'm going
 4 to ask you.
 5 Let's go to your report at {PHYR0000029/94}, 4.4.45
 6 on that page, and you say there:
 7 "As stated earlier, it is my opinion that Studio E
 8 had not developed their work as far as it should have
 9 been developed at the point of tendering the project.
 10 Against that background, a routine Design Review in line
 11 with RIBA recommended practice and compliance with
 12 ISO 9001 would have identified at the outset of the
 13 construction documentation stage of the work that due to
 14 the decision to fundamentally change the rainscreen
 15 cladding system a major investigation of the Reynobond
 16 system would be urgently required to test its compliance
 17 with the requirements of the Building Regulations, and
 18 the relevant guidance within the Approved Documents,
 19 most notably ADB2. Such a review appears either never
 20 to have been carried out, or if so, not to have been
 21 carried out properly. I am critical of both Studio E
 22 and Rydon in this respect."
 23 Now, is it your view that compliance of the products
 24 specified in the NBS specification had to be checked for
 25 compliance with Building Regulations prior to their

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1 specification? We looked at this earlier and I think
 2 you said they were.
 3 A. Yes.
 4 Q. So the answer is yes.
 5 Just tell us, why is that? It may sound like
 6 an obvious question, but is there an obvious answer?
 7 A. Yes, because all work should be compliant with the
 8 codes -- I use the word "codes", if that's acceptable --
 9 and any failure to make them compliant can well lead and
 10 usually will lead to re-design, and if it's major
 11 fundamental components of the building, that re-design
 12 work can be significant, so that's disruptive to process
 13 and all that surrounds that.
 14 In terms of going out to tender, the contractor is
 15 going to be entering into a contract where usually
 16 they're pretty well guaranteeing the price. Any changes
 17 to price are going to have to be -- any further payments
 18 are going to have to be fought for very, very hard, so
 19 the contractors are going to be reliant on that tender
 20 documentation to a large extent. That can often lead to
 21 questions during the tendering process.
 22 But it's fundamental to the whole process that the
 23 information can be relied upon by the contractor as
 24 a sound basis from which he will proceed after
 25 appointment.

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1 Q. If Studio E had conducted a compliance check of the
2 Reynobond Duragloss 5000 PE product when it was
3 specified in the NBS specification as an alternative
4 material, do you consider that a further, additional
5 compliance check needed to be made by Studio E and Rydon
6 before the ultimate selection by the design team of that
7 product?
8 A. As Studio E, I would be content that I had conducted
9 that review, but I would be expecting the contractor to
10 ask me to verify that I had done and maybe interrogate
11 me on what I'd found and how I'd found it.
12 Q. Yes.
13 Can we please turn to {SEA00000223}. This is
14 an email from Neil Crawford to John Hoban of
15 18 November 2014, and in it Mr Crawford was seeking
16 comments from building control in respect of the
17 compliance of the revised window openings with part K of
18 the Building Regulations.
19 One of the attachments to the email, as you can see,
20 was an MMA&A set. Do you see that? I would like to go
21 to that. That's {SEA00000225}. You can see here this
22 is one of the elevation drawings dated 4 November 2014,
23 if we look at the bottom right-hand corner, made by
24 Studio E. If you look at the top left-hand corner,
25 there is a materials key, if we can just focus in on

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1 that, top left.
2 Now, I'm not sure this expands much better than it
3 does and retains its legibility.
4 A. Well, I can read it.
5 Q. But if you can read it, that's very helpful.
6 Under the materials key it says that the existing
7 concrete spandrel and columns from levels 4 to 23 -- do
8 you see? -- would be covered in aluminium composite
9 material rainscreen panel; do you see that?
10 A. I can't see that, no, I cannot. I'm reading "Materials
11 key".
12 Q. Yes, under the materials key --
13 A. Which item?
14 Q. It's item 3?
15 A. Oh, "Aluminium composite material rainscreen panel"?
16 Q. Yes, that's right, and that actually is item 3, which
17 links to the 3 on the drawing, which we can pan out and
18 see.
19 There is also a reference there in the key, under
20 item 5, to "Aluminium cassette rainscreen"; do you see
21 that?
22 A. I don't have the key here.
23 Q. Oh, it's gone.
24 A. Oh, item 5 there, it's the same point.
25 Q. Yes.

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1 A. Aluminium rain -- oh, I see, yes.
2 Q. So here is a drawing being sent by Neil Crawford to
3 John Hoban at building control which identifies the
4 materials, at least at that date, November 2014, as
5 aluminium composite material rainscreen panel and
6 aluminium cassette rainscreen.
7 A. I can see where the 3 is on the drawing, I can't see
8 where the 5 is.
9 Q. I'm looking at the materials -- oh, I see what you mean,
10 on the drawing itself?
11 A. I can see a number 3 on the drawing, which suggests that
12 that component is equivalent to 3. I cannot see where
13 the 5 is.
14 Q. I'm not going to try and spend time on my feet trying to
15 pick that out.
16 A. Okay.
17 Q. My point is that we can see that from the materials key
18 the specific rainscreen product to be used wasn't
19 identified. My question is: should it have been?
20 A. What was this drawing being used for?
21 Q. It's being sent as part of a package of drawings to
22 building control in fact in order to answer a totally
23 separate question about window openings. Mr Crawford
24 was seeking building control's input, if you like, in
25 respect of compliance of the revised window openings

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1 with part K.
2 A. Okay. Could you help me, at what stage was this sent to
3 building control?
4 Q. 18 November 2014, so about seven or eight months after
5 Rydon had won the tender, about two weeks after the
6 final contract between Rydon and the TMO had been
7 signed.
8 A. Well, building control by then should certainly have
9 known what the products were. Whether it was necessary
10 to actually specify the precise product on this drawing,
11 I wouldn't go so far as to say that that was necessary.
12 There needs to be a generic description of the product
13 on this drawing, but somewhere in the documentation the
14 actual product should have been identified and that
15 should have been communicated to building control.
16 Q. Right.
17 Now, let's think about Harley's role for a moment,
18 if we can just turn to that.
19 Ray Bailey of Harley said in his evidence to
20 the Inquiry -- and this is at {Day32/34:11}, we don't
21 need to go to it but that's the reference -- that Harley
22 knew that the ACM was class 0, and then he said, "so we
23 didn't review them ... it was taken as read that they
24 were compliant". That was his evidence.
25 Do you consider that the reasonably competent

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1 architect would expect the specialist cladding
 2 subcontractor to check compliance of the particular
 3 ACM PE cladding panel ultimately selected?
 4 (Pause)
 5 A. The architect's job is to make sure the product
 6 specified is compliant. If an alternative is being
 7 proposed under the terms of this appointment, which is
 8 they were retained through novation, then they should
 9 seek evidence that the alternative is compliant.
 10 Q. And who would they seek evidence about that matter from?
 11 A. Well, routinely from the cladding subcontractor who is
 12 making -- well, quite whose initiative it was, I'm not
 13 sure whether that initiative came from Rydon or from the
 14 subcontractor or through a combination of their reviews.
 15 No doubt it would have been pursuing a combination of
 16 cost and possibly availability, reliable availability of
 17 the component, and also its reliability in performance.
 18 But between them they had made an alternative proposal,
 19 and the architect needed to receive that alternative and
 20 verify that it was compliant with the basis upon which
 21 the design had been carried out.
 22 Q. So is your answer that, in fact, the reasonably
 23 competent architect would not only have made the check
 24 himself, but also have expected the cladding
 25 subcontractor to have done so?

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1 A. Yes, I think the architect can expect that the
 2 subcontractor, who is -- they held themselves out as
 3 specialists with knowledge. I think the architect can
 4 expect that, but at the same time would have wanted to
 5 have verified it.
 6 Q. Now, can we then go to your report at {PHYR0000025/4},
 7 please, paragraph 15, towards the bottom of the page.
 8 In the third line down you say:
 9 "I am, however, critical of Exova who I believe
 10 should, as a specialist fire consultant, have drawn
 11 Studio E's attention to the need for very careful
 12 consideration in terms of the specification of
 13 a composite cladding system with a polyethylene core,
 14 particularly into a high rise residential building."
 15 Is it correct that when the decision was made to
 16 substitute zinc or the zinc product with the Reynobond
 17 PE 55 product, Exova wasn't engaged by Rydon as
 18 a subconsultant?
 19 A. That is correct. From my understanding of the evidence
 20 put before me, yes, that's correct.
 21 Q. Yes, you are absolutely right. I'm not actually asking
 22 you to comment on the evidence, I'm actually really just
 23 giving you the background.
 24 A. Yes, that was my understanding.
 25 Q. Assuming your understanding is correct, in the light of

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1 that, is it your opinion that Studio E should either
 2 have consulted Exova at this time to ascertain their
 3 view or to have advised Rydon to do so, in other words
 4 when the decision was made to substitute zinc out and
 5 put ACM in?
 6 A. Exova were retained by the TMO, that's a separate issue.
 7 The architect, I think, yes, should have checked it.
 8 They had access to Exova and they should have sought to
 9 check it with them.
 10 Q. In your opinion, should fabrication drawings specify or
 11 identify the core of an ACM panel on their face, on the
 12 face of the drawings?
 13 A. No, I would expect them to identify the product.
 14 Q. Right. I see.
 15 A. But not to explain its constituent parts.
 16 Q. Right.
 17 What sort of information should ordinarily be
 18 included in fabrication drawings about the panel type?
 19 You say identify the product; would you go further than
 20 that and explain what the product comprises or is
 21 composed of?
 22 A. No, because they're fabrication drawings, so they are
 23 there for the purposes of taking a product and then --
 24 so the recipient of that information will receive the
 25 product and carry out work on that product so that it is

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1 ready for supply to the site. That work will include,
 2 in this case, the folding, the shaping, the cutting, all
 3 of those things. So the information that should be on
 4 the drawing tells them what to do with the product, it
 5 doesn't tell them what the product's made of.
 6 Q. Right.
 7 Can we then go to your report at {PHYR0000029/66}.
 8 This is figure 4.49 of your report. You can see here
 9 that this is an extract from a Studio E drawing. Do you
 10 see?
 11 A. Yes, yes.
 12 Q. It's a proposed typical bay plan, section and elevation.
 13 If you look at, for example, the fourth item down on
 14 the right-hand side, do you see it says:
 15 "Composite zinc cladding to columns."
 16 Then there is a little bubble, "H92/120". Do you
 17 see that?
 18 A. Yes.
 19 Q. Again, by way of example, towards the bottom of the same
 20 column or same run of text, it says:
 21 "Thermal insulation + ventilated cavity H92/776."
 22 A. Yes.
 23 Q. It's the third item from the bottom of that, and then
 24 there is an arrow or a line with a ball at the end of it
 25 pointing into the thermal insulation.

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1 A. Yes.
 2 Q. Now, those numbers in the bubbles, H92/776 for example,
 3 those are references to the NBS specification, aren't
 4 they?
 5 A. Correct.
 6 Q. So you are supposed to take the drawings and read them
 7 next to the NBS specification; yes?
 8 A. Yes.
 9 Q. When you look up the references in the NBS
 10 specification, those would then link to or show you the
 11 products actually specified, wouldn't they?
 12 A. Yes.
 13 Q. So if you were interested in H92/120, "Composite zinc
 14 cladding to columns", you would look across to the
 15 NBS specification and you would see the Proteus HR zinc
 16 panel with a honeycomb core, wouldn't you?
 17 A. Yes.
 18 Q. Is it usual in the industry for architects to annotate
 19 drawings with references to the NBS specification in the
 20 way that this does?
 21 A. I think it's common, yes.
 22 Q. Is it good practice, in drawings such as these, namely
 23 general arrangement drawings, to do that?
 24 A. I think it's perfectly acceptable practice, as long as
 25 at the end of the journey the information is clear and

1 available. I prefer, myself, to see as much information
 2 as possible on the drawing itself in the form of notes,
 3 but having said that, there's a huge amount of
 4 information to go on a job like this and I quite accept
 5 this method here.
 6 What is very important is that the information is
 7 given at the right time. There's a hierarchy of
 8 information. One doesn't want the same note or notes,
 9 whether they are on the drawing or referring to
 10 something else, you don't want the notes repeated time
 11 and time again on every detail.
 12 So you start with general arrangement plans and
 13 section and possibly elevation, you move on to greater
 14 detail. I would expect it to be said once, if possible,
 15 but very few times, in the right place.
 16 The simple reason for that is that, if not, changes
 17 require multiple changes right through all the drawings.
 18 Again, that's easier today with computer programmes, but
 19 it's still difficult, and that's the kind of thing that
 20 can open up fissures for mistakes.
 21 Q. If at some point during the construction process, or at
 22 a point after the main contractor has been appointed,
 23 the architect is told or agrees that there should be
 24 a change to the rainscreen panel to a different product,
 25 would you expect the architect to change the drawings so

1 as to reflect the up-to-date choice of product?
 2 A. Well, it's certainly the case that, as the project moves
 3 on, certain types of information, in this case the
 4 subcontractor's information, can tend to take
 5 precedence. But having said that, I would not wish to
 6 see general arrangement drawings, which this is
 7 effectively a general arrangement drawing, carrying
 8 redundant information, particularly if they're both in
 9 currency.
 10 If there has been an express statement, "No longer
 11 look at our drawings X, Y and Z, these take precedence",
 12 then maybe they don't have to be amended. But if the
 13 drawings are still in currency, they should be amended
 14 to be consistent.
 15 Q. Thank you.
 16 I'm now going to turn to some questions about the
 17 BBA certificate for the Reynobond PE 55 products, and
 18 this is certificate 08/4510 dated 14 January 2008.
 19 Before I turn to the actual document -- well, let's
 20 have it up anyway. It's {BBA00000047}, just to have it
 21 up on the screen so everybody outside this room knows
 22 what we're discussing together. This is the
 23 BBA certificate, and I think this is the BBA certificate
 24 you are critiquing and referring to in your reports.
 25 A. That's correct.

1 Q. Yes. We will come back to it, but let's go to your
 2 report, first of all, {PHYR0000029/95}, please, and
 3 I want to look at paragraph 4.4.48. You say there in
 4 the first sentence:
 5 "However, as stated in Section 3 above I believe
 6 that because page 1 of the BBA certificate [and you
 7 referred to it] ... for 'Reynobond Architectural Wall
 8 Cladding Panels' stated that the panels 'may be regarded
 9 as having a Class 0 surface in England' they
 10 appeared to have met the guidance given under ADB2
 11 Diagram 40. I also consider this to be a satisfactory
 12 basis upon which Studio E could, in principle, have
 13 accepted the product to which this 'Certificate of
 14 Confirmation' related, that is: 'Reynobond Architecture
 15 Wall Cladding Panels, aluminium/polyethylene composite
 16 panels used to provide a decorative/protective façade
 17 over the external walls of buildings' (see top of page 1
 18 of certificate)."
 19 Then if we go on to page 97 {PHYR0000029/97}, two
 20 pages on from this, you see paragraph 4.4.55, and there
 21 you say:
 22 "As I have stated above, I believe that because
 23 page 1 of the BBA Certificate [you give the reference]
 24 ... for 'Reynobond Architecture Wall Cladding Panels'
 25 stated that the panels 'may be regarded as having a

1 Class O surface in England ... (see section 6)' it was
 2 reasonable for an architect to conclude, on that basis
 3 alone, that the product met the guidance given under
 4 ADB2 Diagram 40. I say this because the statement was
 5 not qualified in any way. I accept that there is, as
 6 included in my quotation, an advice 'see section 6' but
 7 I do not think it right to unduly criticise an architect
 8 who simply took the Class O endorsement on page 1 of the
 9 BBA Certificate at face value and proceeded to specify
 10 the product on the basis that it met the guidance in
 11 ADB2 Diagram 40 without further reference to
 12 'section 6'."

13 Now, you have set out your view there in two places
 14 and I have read them to you in full .

15 Can I just ask you whether it's right to summarise
 16 your view that a reasonably competent architect at the
 17 time could properly have specified Reynobond PE 55
 18 Duragloss smoke silver, which is what ended up on the
 19 building, by consideration only of page 1 of the
 20 BBA certificate ?

21 A. With the qualification at the time, yes.

22 Q. So they could just take page 1 at face value and proceed
 23 to specify without any further investigatory work at all
 24 about whether the panel actually complied?

25 A. I don't want to cast -- make any comment -- I'll

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1 rephrase that. Many architects would study the whole
 2 document, there's no doubt about that. I asked myself
 3 here: would it be fair to criticise Studio E unduly for
 4 not doing that, or to criticise them for not doing that?

5 The front page of the certificate is clear. It
 6 states that they may be regarded as having a class O
 7 surface in England, full stop. It doesn't advise to
 8 study further detail within -- it doesn't qualify that
 9 statement in any way, that's what I'm trying to say.
 10 There is no qualification on it. So I think that
 11 an architect could take that at face value.

12 I would ask, please, to be allowed to say that we
 13 have to take all this in the context of the time as
 14 well. At the time, this material was being used
 15 regularly for many building types, tall buildings,
 16 commercial buildings, hotels, hospitals, it was
 17 regularly in currency. An architect is moving as
 18 swiftly as possible through the work, because there's
 19 great pressures. Why would they feel a need to go
 20 beyond a statement that says -- from the BBA as well,
 21 not from the manufacturer, but from the BBA -- "This may
 22 be regarded as ..." So I think that could be taken at
 23 face value.

24 Q. Well, you have raised a rhetorical question there as
 25 part of that answer, and I will see if I can answer it

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1 with you, with your assistance .

2 First I'm going to ask you, having told us what you
 3 think about the BBA certificate , to consider what you
 4 say in the context of the PIR insulation .

5 Let's look at that. {PHYR0000029/48}, please. This
 6 is in the context of the insulation , of course, and this
 7 is paragraph 4.3.17(b), and you say:

8 "In my view, two things are clear ...

9 "(b) An architect should study manufacturer's
 10 literature carefully to ensure as far as reasonably
 11 possible that the claims made meet standards stipulated
 12 in Approved Document guidance."

13 Before I come to the questions I have about that ,
 14 can I ask you to go to your supplemental report at
 15 {PHYS0000003}, please.

16 A. Could I just please make a comment about that? That
 17 says "manufacturer's literature ", which is a different
 18 thing to a BBA certificate .

19 Q. That may be your answer to the question that I'm going
 20 to ask you shortly, but let's just tiptoe up to it a bit
 21 more slowly, if we can.

22 If we go to your supplemental report at
 23 {PHYS0000003/23}, you say there at paragraphs -- well,
 24 it's a box, actually, and you're commenting on
 25 paragraph 4.3.17 to 4.3.18 of Studio E's appendix to

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1 their opening statement. You say there:

2 "It is indeed an architect's duty to interrogate
 3 manufacturer's literature to ensure, as far as
 4 reasonably possible, that the product(s) to which that
 5 literature speaks would be compliant with the Building
 6 Regulations in its proposed application. In particular
 7 it is important to check as far as possible that
 8 literature , performance and test certificates are
 9 consistent and appropriately accurate in their
 10 description. That is a routine part of the job of
 11 an architect as was made absolutely clear to me during
 12 my RIBA Part 3 training ."

13 Now, again, these comments are made in the context
 14 of the specification of PIR insulation .

15 Do you say that there is a difference between the
 16 degree of care to be exercised by the reasonably
 17 competent architect when looking at a BBA certificate
 18 for a product and when looking at a manufacturer's
 19 statement in its literature ?

20 A. Well, I think they're different kinds of information.
 21 The manufacturer's information will give a whole host
 22 of -- I'll repeat the word "information", but down to
 23 durability , cleaning, many, many different things, and
 24 an architect would need to understand the
 25 characteristics of the product in that sense.

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1 The certificate is a much more precise document and
 2 it's dealing with, in this case, the performance of the
 3 product in relation to fire, and so it's a much more
 4 focused document.
 5 Q. Well, with respect, Mr Hyett, the certificate, the
 6 BBA certificate particularly, isn't only dealing with
 7 fire, it's dealing with other things as well, isn't it?
 8 A. Yes, yes.
 9 Q. Including other aspects of compliance with the Building
 10 Regulations.
 11 A. Yes.
 12 Q. So can I ask the question again: is it your opinion that
 13 there is a difference between the degree of care to be
 14 exercised by the reasonably competent architect when
 15 looking at a BBA certificate for a product on the one
 16 hand, and when looking at manufacturer's literature for
 17 a product on the other?
 18 A. I think the architect needs to extract from the
 19 certificate the information that he or she needs to be
 20 comfortable with that product in use in relation, in
 21 this instance, to the codes.
 22 Q. Yes, I understand that. That's not quite an answer to
 23 my question. My question is really -- I'll put it
 24 perhaps more bluntly -- why would a reasonably competent
 25 architect be interested to read the whole of the

1 manufacturer's literature, but only be interested in
 2 reading the first page of a BBA certificate?
 3 A. I may need to step back from the words that I've used in
 4 the report. I don't think it would be fair of me to say
 5 that an architect should read the whole of the
 6 manufacturer's literature. When you get manufacturer's
 7 literature, you have got to tease apart that part of the
 8 literature which is important and that which is, for
 9 want of a better term, marketing-type literature that is
 10 trying to persuade an architect, and you've got to tease
 11 the issues apart and the detail out of it.
 12 But to say that an architect would have to read,
 13 with great care, the whole of the literature produced by
 14 a manufacturer, I think that was a step too far. If
 15 that's what I said then I need to withdraw from that.
 16 Q. Well, that assumes that the person who's reading the
 17 document, whether it's a BBA certificate or the
 18 manufacturer's literature, knows what they're looking
 19 for in order to tease it out.
 20 Assuming that they were seeking to tease out
 21 information about fire performance, that's what the
 22 architect wanted to know, why do you say, if you do say
 23 this, that the reasonably competent architect would only
 24 be interested in looking at page 1 of the
 25 BBA certificate to tease out information about fire, but

1 look at the whole of, or perhaps more of, the
 2 manufacturer's literature to tease out the same
 3 information?
 4 A. If that's the impression I've given, then it's the wrong
 5 impression. What I am absolutely clear about is that
 6 the architect needs to establish, in the context of this
 7 product and fire, that it carries the correct
 8 certification. That needs to be established somehow and
 9 somewhere and somewhere reliable. The somewhere
 10 reliable is going to be the -- the somewhere, the
 11 absolute fallback in terms of reliability is going to be
 12 the BBA certificate, and that's where I would go for the
 13 most efficient verification.
 14 Q. All right.
 15 Just taking it in stages, first of all, in terms of
 16 products, you don't say, do you, that the degree of care
 17 to be exercised by the architect should be any the less
 18 when examining the suitability of cladding panels on the
 19 one hand as opposed to insulation on the other?
 20 A. No, that is correct.
 21 Q. Would you also accept that the relevant product
 22 literature coming from the manufacturer might often
 23 include the BBA certificate?
 24 A. Yes.
 25 Q. Therefore, can one not simply put the BBA certificate

1 into the same category of manufacturer's data which
 2 a competent architect would want to read and study
 3 thoroughly in order to understand the performance and
 4 functionality and indeed compliance of the product?
 5 A. Possibly, but I'm afraid I'm pretty resistant on this in
 6 my own mind. If the architect is satisfied off that
 7 page 1 of that certificate that the information he needs
 8 to be confident is there, then I -- it's not a witch
 9 hunt. The architect shouldn't be searching through the
 10 document to find irregularities in it. The architect
 11 should be able to find pretty efficiently and quickly
 12 a clear statement, and that statement I believe was on
 13 page 1 of the certificate.
 14 Q. We will come to page 1 of the certificate in a moment,
 15 because it says a little bit more than perhaps you have
 16 been letting on.
 17 But before we do that, let me just see if we can
 18 look at something else you say in your report.
 19 We previously looked at paragraph 4.4.45 of your
 20 report which is at -- we will look at it again --
 21 {PHYR0000029/94}. We looked at this before. You said
 22 there:
 23 "... due to the decision to fundamentally change the
 24 rainscreen cladding system a major investigation of the
 25 Reynobond system would be urgently required to test its

1 compliance with the requirements of the Building
 2 Regulations, and the relevant guidance within the
 3 Approved Documents, most notably ADB2.”
 4 Do you see that?
 5 Would it be legitimate for that major investigation
 6 to encompass only a review of the first page of the
 7 BBA certificate , or would the major investigation
 8 actually extend to turning a few pages on in it as well?
 9 A. I am afraid I’m comfortable to stay with the remark
 10 I made earlier. Ideally , an architect should go
 11 further . Many would. I don’t know whether most would,
 12 but many would. The minimum is that they have to
 13 satisfy themselves, and I think that that page 1 on this
 14 particular point is clear .
 15 Q. All right . We will come to it . I note the answer,
 16 which is that page 1 is the answer.
 17 But let’s look at ADB again, {CLG00000224/119},
 18 please. This is within ADB, and it’s a note to
 19 appendix A, note 2, and it’s on the right-hand column at
 20 the top of the right-hand side of the page. It says --
 21 and I should just point out, of course, as I’m sure
 22 you’re familiar , appendix A is about performance of
 23 materials, products and structures, and under note 2 it
 24 says:
 25 ”Any test evidence used to substantiate the fire

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1 resistance rating of a construction should be carefully
 2 checked to ensure that it demonstrates compliance that
 3 is adequate and applicable to the intended use. Small
 4 differences in detail (such as fixing method, joints ,
 5 dimensions and the introduction of insulation materials
 6 etc.) may significantly affect the rating.”
 7 Do you agree that this note applies to architects as
 8 well as other construction professionals?
 9 A. Yes, yes.
 10 Q. Do you agree that it should be taken to reflect the
 11 standard by which all professions should operate when
 12 considering the fire resistance rating of a construction
 13 or reviewing test evidence?
 14 A. Well, an architect is using ADB2 and should use all
 15 those parts relevant to the issue. Along the way
 16 I think there would have been cause to look at
 17 appendix A. This is clearly stated in appendix A. On
 18 that basis, I think it follows, yes.
 19 Q. Yes, thank you.
 20 Let’s go back, then, to paragraph 4.4.55 of your
 21 report at {PHYR0000029/97}, just to go back and see what
 22 you say there. You say there, six lines down:
 23 ”I accept that there is , as included in my
 24 quotation, an advice ‘see section 6’ ...”
 25 So you have noted that . But then you go on to say,

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1 as we have read before, that you don’t think it right to
 2 unduly criticise an architect who simply took the
 3 class 0 endorsement on page 1 of the BBA certificate at
 4 face value and proceeded to specify .
 5 Now, let’s look at the BBA certificate ,
 6 {BBA00000047}.
 7 A. May I just make one comment there?
 8 Q. Yes, of course.
 9 A. I did say ”unduly criticise ”.
 10 Q. Yes.
 11 A. By that -- I probably should qualify it -- I mean
 12 I wouldn’t go overboard criticising them, but
 13 nevertheless I think the criticism by implication is
 14 there.
 15 Q. Yes. I see. Oh, I see, okay. So you would criticise ,
 16 but just not overboard?
 17 A. If ”overboard” is an acceptable term, yes.
 18 Q. Yes, it’s always acceptable.
 19 Let’s look at the certificate then, and building on
 20 that answer you have just given me, we can look at the
 21 first page. It’s {BBA00000047}. Looking at the first
 22 page, ”Key factors assessed”, we can see it says:
 23 ”Behaviour in relation to fire — in relation to the
 24 Building Regulations for reaction to fire , the panels
 25 may be regarded as having a Class 0 surface in England

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1 and Wales, and a ‘low risk’ material in Scotland (see
 2 section 6).”
 3 Would you accept that a reasonably competent
 4 architect reading this document, picking up this
 5 document and reading it, would understand that those who
 6 wrote the BBA certificate were directing their readers
 7 to, as it says, see section 6?
 8 A. I’m very critical of the drafting of this document.
 9 ”See section 6” follows the reference to Scotland.
 10 Again, I’m not a lawyer, you will apply legal expertise
 11 to what these documents mean, but from my point of view,
 12 ”see section 6” is almost a throwaway remark after
 13 Scotland. It doesn’t say it’s essential that you see
 14 section 6 in order to understand the first phrase within
 15 this particular heading, ”Behaviour in relation to
 16 fire ”.
 17 Q. Well --
 18 A. For me it says -- I beg your pardon.
 19 Q. I’m so sorry, I didn’t mean to interrupt you, Mr Hyett.
 20 Go on, please.
 21 A. For me it says:
 22 ”... in relation to the Building Regulations for
 23 reaction to fire , the panels may be regarded as having
 24 a Class 0 surface [it should be ‘surface spread of
 25 flame’] in England and Wales ...”

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1 That's it.

2 Q. Would you accept that an architect picking this document

3 up for the first time and reading down the page would

4 come to "Key factors assessed" and would see, first of

5 all:

6 "Practicability of installation — the panels are

7 suitable for installation by cladding contractors

8 providing they have gone undergone suitable training

9 (see section 4).

10 "Strength and stability — the panels can be

11 incorporated in a cladding system designed to resist the

12 wind loads normally encountered in the UK (see

13 section 5)."

14 Then he might pause there and think to himself, "Hm,

15 well, if I want to know about practicability of

16 installation I need to go to section 4, and if I want to

17 know about strength and stability I need to go to

18 section 5". Isn't that how a reasonably competent

19 architect might read the certificate thus far?

20 A. I sit here today and I'm persuaded by your argument.

21 Q. Therefore, when it comes to behaviour in relation to

22 fire, a reasonably competent architect would need to

23 look at section 6 to understand in more detail why it

24 was that the panels may be regarded as having a class 0

25 surface in England and Wales?

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1 A. I am persuaded.

2 Q. To be clear, my job isn't to try to persuade you; I just

3 want to try and elicit your view.

4 A. I didn't mean it in that sense, Mr Millett, if I may.

5 What I meant was that you have taken me through

6 a logical argument, I have listened to it, and I think

7 that my argument doesn't stand.

8 Q. Right.

9 Now, building on that a little bit more, where it

10 says "the panels" in "Behaviour in relation to fire" --

11 in fact, it says it all the way throughout, so it

12 doesn't matter where you see it -- when it says the

13 panels have a class 0 surface, even on that page 1, it

14 doesn't refer to the core of the panel, nor the core's

15 behaviour in a fire, does it?

16 A. No.

17 Q. And the wording "may be regarded as having", what does

18 that suggest to you? Or what would it suggest to you as

19 the putative reasonably competent architect coming to

20 this document?

21 A. Well, it's a strange use of words. I would have thought

22 that at the time. But I take it to mean that the panels

23 have a class 0 spread of flame.

24 Q. If it was a strange use of words that you would have

25 thought at the time, would that not have impelled you to

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1 see section 6 to see why it was that the authors of this

2 document were telling you that the panels may be

3 regarded as having --

4 A. Well, "may be regarded" is a funny phraseology for

5 a certificate that's supposed to be absolute. But

6 I think maybe I'm slightly more sensitive to words than

7 some architects.

8 I don't think I can add any more to this. I have

9 conceded -- "concede" is the wrong word. I think,

10 having heard the argument you have put to me, I need to

11 adjust my report in that respect.

12 Q. How would you adjust it?

13 A. I think probably -- well, not probably. Yes,

14 a reasonably competent architect should not take page 1

15 on its own.

16 Q. Very good.

17 Before we go to section 6, which I do want to show

18 you, I just want to ask you something about page 3,

19 assuming that, as I think you have now accepted with me,

20 the reasonably competent architect would look at the

21 whole document.

22 If we go to figure 1 on page 3 {BBA00000047/3}, it

23 tells us that the panels were available in cassette and

24 riveted versions; yes?

25 A. Yes.

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1 Q. It then goes on to describe the product in broad terms,

2 and you can see that under the description, both at the

3 beginning and on this page.

4 Looking at figure 1, and paragraph 1.1, we will

5 start with 1.1, it says:

6 "The Reynobond Architecture Wall Cladding Panels

7 comprise two 0.5 mm thick aluminium alloy sheets ...

8 bonded to either side of a core of low-density

9 polyethylene (LDPE). The panels are available either

10 plain edged (riveted system) or flanged (cassette

11 system) to suit architectural requirements (see

12 Figure 1)."

13 Then the eye is directed to figure 1, and there it

14 is at the bottom.

15 Would the reasonably competent architect reading

16 this page think that both systems, rivet and cassette,

17 were covered by the certificate?

18 A. Yes, I'm sure they would.

19 Q. Yes.

20 A. I did.

21 Q. Yes.

22 Can we look -- I'm sorry to drop in and out of these

23 documents -- at ADB again, {CLG00000224/122}, please,

24 paragraph 16 of appendix A. At paragraph 16 at the

25 bottom of the left-hand column, it says:

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1 "Results of tests on proprietary materials are
2 frequently given in literature available from
3 manufacturers and trade associations .
4 "Any reference used to substantiate the surface
5 spread of flame rating of a material or product should
6 be carefully checked to ensure that it is suitable ,
7 adequate and applicable to the construction to be used.
8 Small differences in detail , such as thickness ,
9 substrate, colour, form, fixings , adhesive etc, may
10 significantly affect the rating ."
11 Does that tell us that the reasonably competent
12 architect would need to read the whole of the
13 certificate , including the part about the fixings that
14 I've shown you in figure 1, in order to understand any
15 limitations or restrictions about what the product might
16 be subject to?
17 A. Oh gosh. Well, this paragraph is giving detailed
18 advice, very, very detailed advice. I don't think
19 an architect would interrogate a BBA certificate in that
20 kind of way. The certificate , I think, is clear in its
21 description -- in relation to fire we're talking
22 about -- of the product as being compliant with ADB2,
23 diagram 40. There we are.
24 Q. Well, I may come back to that, but do you accept that
25 differences in colour, as warned by paragraph 16, is

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1 something that a reasonably competent architect should
2 be alive to when being told what the results are on
3 proprietary materials?
4 A. I doubt if most architects are aware of that. It is
5 a matter of fact , if you put your hands on the bonnet of
6 a car that's black in colour in the sun, it will burn
7 your hands, and white will be a very different
8 temperature, most of us have a sense of that, but
9 I don't think that architects would necessarily
10 automatically conclude that the colour is going to
11 impact on the test results .
12 Q. When it says, "Any reference used to substantiate the
13 surface spread of flame rating of a material or product
14 should be carefully checked", who would do the checking,
15 in your opinion? Or who should do the checking as
16 contemplated by this guidance, in your opinion?
17 A. Well, at first read it has to be the person using ADB2,
18 and in this case it's going to be the architect , but
19 anybody else who's involved in the process, managing the
20 team, Rydon take over to manage the team, I suppose it
21 could extend wider than that. But, yes, the person
22 reading and applying ADB2.
23 Q. How would, for present purposes, the architect --
24 A. ADB2.
25 Q. -- using or reading and applying ADB2 go about carefully

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1 checking the reference used to substantiate the surface
2 spread of flame rating of a material or product so as to
3 ensure it's suitable , adequate and applicable to the
4 construction to be used? How would they go about that?
5 A. Well, they certainly -- the use of the word
6 "encyclopedia" for ADB2 or the approved documents was
7 a reasonable description of them. We don't at the
8 beginning of every job read the entire document; we
9 thread our way through ADB2, in this case, based on the
10 work we are doing, and a particular reference may take
11 us to a definition , and the definition might take us to
12 an appendix, and the appendix might refer to another
13 appendix. Nobody describes this better than
14 Dame Judith.
15 So on the way through, one might, I suppose, pick it
16 up, but I don't think colour would have necessarily come
17 to the mind as being that important to an architect
18 looking at the BBA certificate .
19 Q. No, colour was an example I picked, but there is also
20 thickness, substrate, forms, fixings , adhesives,
21 et cetera. There are a variety , of things of which
22 colour is one.
23 My question really is : how would the architect go
24 about a careful check of the reference used to
25 substantiate the surface spread of flame to make sure

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1 that it's suitable , adequate and applicable to the
2 construction to be used?
3 A. Well, moving from what I said a few minutes ago,
4 I suppose it has to be the BBA certificate . I don't
5 know where else one would go for that, and I would
6 assume that within the BBA certificate there is
7 sufficient information to satisfy .
8 Q. Right. So that's another reason why the reasonably
9 prudent architect would look beyond the mere claim of
10 class 0 in order to look at section 6, which I think you
11 have agreed he should do?
12 A. Yes.
13 Q. Yes.
14 Now, let's go to the BBA certificate again,
15 {BBBA00000047/5}. Here we have section 6, which is what
16 we are directed to look at, "Behaviour in relation to
17 fire ", and we can see at section 6.4, let's start with
18 that:
19 "These performances ..."
20 I'm so sorry, let me just back up a little bit. I'm
21 assuming you're familiar with section 6?
22 A. This here?
23 Q. Of this certificate ?
24 A. I certainly am.
25 Q. Yes, exactly , so I don't need to read out sections 6.1,

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1 6.2 and 6.3 to you --
 2 A. No, no.
 3 Q. -- in order to ask this question. It says at 6.4:
 4 "These performances may not be achieved by other
 5 colours of the product and the designations of
 6 a particular colour should be confirmed by:
 7 "England and Wales - Test or assessment in
 8 accordance with Approved Document B, Appendix A,
 9 Clause 1."
 10 Now, if the reasonably prudent architect had read
 11 this section, they would have concluded that the panels
 12 used at Grenfell Tower were not covered by the
 13 BBA certificate because they were not the same colour or
 14 finish. They weren't the same as the gold-coloured
 15 Duragloss finish used in the Euro test, or the metallic
 16 grey PVDF finish when tested under the UK standard.
 17 A. Correct.
 18 Q. So what should the reasonably prudent architect have
 19 done in noting that the colour to be selected and used
 20 at Grenfell was not the same as that tested?
 21 A. Well, the obvious recourse there is to the manufacturer,
 22 and some form of letter that would give comfort, or
 23 alternatively -- well, the first question would be,
 24 "Have you tested the colour I'm using?" Then the
 25 follow-on from that, if they haven't tested the colour

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1 being used, would be advice as to what they have to say
 2 about that, and they might say, "Actually, it's" --
 3 I won't speculate as to what they might say.
 4 Q. Right.
 5 Can we go back, then, to page 3 of this document
 6 {BBA00000047/3}, and look at paragraph 1.1. We looked
 7 at it before briefly, but I didn't focus on what I now
 8 want to focus on.
 9 It says in the last sentence of that paragraph:
 10 "The products [which certainly means the panels] are
 11 also available in a fire-retardant grade (FR)."
 12 Would a reasonably competent architect consider,
 13 having seen that, using an FR grade panel, and seeing
 14 that it was available, consider whether it should be
 15 used?
 16 A. Well, it must follow, from my earlier comment that
 17 page 1 may not do, that on reading through, this sort of
 18 point would come up.
 19 Q. Yes.
 20 A. If I got as far as reading this -- and I'm not saying
 21 I wouldn't have, by the way -- and I saw this, I would
 22 immediately want to know what the difference was between
 23 fire retardant and non-fire retardant and why on earth
 24 you would ever use one that didn't have the fire
 25 retardant in it.

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1 Q. You see, I'm going to suggest to you that it would be
 2 unreasonably incompetent, if that's the right
 3 expression, for an architect not to read beyond page 1,
 4 not least because if he read beyond page 1 he would
 5 discover that, in fact, this product was available in an
 6 FR version.
 7 A. Yes. If I may, I'll leave it after this, but it's
 8 an issue of harshness. How harshly am I going to
 9 criticise Studio E? I didn't feel it was appropriate to
 10 be so harsh as to say one couldn't proceed without
 11 reading the whole document. I've made concessions on
 12 that basis because I accept the argument.
 13 Having now got to this, I think yes, you would want
 14 to know what was the difference between fire retardant
 15 and not fire retardant, and I can't imagine why one
 16 wouldn't want to have fire retardant. As soon as you
 17 got here, you would be opening up a can of worms,
 18 really.
 19 Q. Yes.
 20 A. And at this point, Mr Millett, I think one would be back
 21 to the specialist fire consultant. I mean, as far as
 22 I'm concerned as an architect, this is information that
 23 I want advice on.
 24 Q. Yes.
 25 You say it's an issue of harshness; I think all

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1 I need to know is whether or not it is your opinion
 2 that, in not reading beyond the first page, and looking
 3 at, for example, paragraph 1 and section 6 as directed,
 4 the architect would be falling below the standards of
 5 reasonable competence.
 6 A. Well, I've accepted that.
 7 Q. Yes, okay, fair enough. If the answer to my question is
 8 yes, then I needn't press you further on that.
 9 Can I then look at section 6 again and just ask you,
 10 bearing in mind what's on the page in front of us -- I'm
 11 so sorry, I'm going to ask to go back to page 3
 12 {BBA00000047/3} again and just bear in mind the diagram,
 13 figure 1, which shows the two different fixing systems,
 14 and just focus on that for the moment.
 15 You see it says, "Figure 1. Reynobond Architecture
 16 panels and typical fixing systems", and we see on the
 17 left-hand side the riveted system with the aluminium
 18 rivets going in externally, and on the right-hand side
 19 the Reynobond panel, which is a cassette system. Do you
 20 see?
 21 A. It's the hook-on.
 22 Q. The hook-on, exactly.
 23 A. Yes, yes.
 24 Q. We know that the hook-on or the cassette system was what
 25 was ultimately chosen for the Grenfell Tower project,

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1 and indeed your very beautiful model demonstrates
 2 exactly how that system works.
 3 Given that that is what is described as the systems
 4 for the products, can we then look at section 6 on
 5 page 5 {BBA00000047/5} again. You can see under
 6 section 6.1:
 7 "A standard sample of the product, with a grey/green
 8 Duragloss 5000 coating, when tested for reaction to
 9 fire, achieved a classification of B-s2, d0 in
 10 accordance with EN 13501-1:2002. A fire retardant
 11 sample of the product, with a gold-coloured Duragloss
 12 finish, when tested for reaction to fire, achieved
 13 a classification B-s1, d0 in accordance with
 14 EN 13501:2002."
 15 Underneath that it says under section 6.2:
 16 "A fire retardant sample of the product, with
 17 a metallic grey PVDF finish, when tested in accordance
 18 with BS 476-6:1989, achieved a fire propagation index
 19 (I) of 0 and, when tested in accordance with BS
 20 476-7:1997, achieved a Class 1 surface spread of flame."
 21 Then it says:
 22 "As a consequence of sections 6.1 and 6.2, the
 23 products may be regarded as having a Class 0 surface in
 24 relation to the Approved Document B of The Building
 25 Regulations ..."

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1 So that's where we see the "may be regarded" and
 2 that's the explanation for it, which is why we need to
 3 look at this to go there to see it.
 4 Just a number of questions which follow from that.
 5 When the reasonably competent architect reads
 6 sections 6.1 and 6.2, would they notice that in fact the
 7 standard sample, the PE, had not been tested in
 8 accordance with the UK test standards, BS 476-6 or
 9 476-7?
 10 A. Well, I came to look at all this in detail in preparing
 11 my report, and I read this part of this report many,
 12 many, many times, and it revealed more and more to me in
 13 terms of inconsistencies, et cetera, the more often
 14 I read it. So would an architect on a first read spot
 15 that? I don't know, I doubt it.
 16 I would also wish to say that, with 6.3, it says:
 17 "As a consequence of sections 6.1 and 6.2, the
 18 products may be regarded as having a Class 0 ..."
 19 This is bad drafting. It doesn't say "the products
 20 listed above", which is the green Duragloss, it talks
 21 about the products, and when it started on page 1, we
 22 were talking about rivet and cassette.
 23 Q. Well, that's my next question.
 24 A. Ah, sorry.
 25 Q. Exactly. "The products may be regarded as having

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1 a class 0 surface", is this right, because according to
 2 a reasonably prudent architect's reading of it, both
 3 versions were tested, standard and FR, under the Euro
 4 testing and achieved the equivalent of a class 0, namely
 5 class B --
 6 A. Yes.
 7 Q. -- and a fire retardant sample achieved a class 0 in the
 8 strict sense in the UK test?
 9 A. Yes.
 10 Q. Right.
 11 Can I then ask you about how a reasonably prudent
 12 architect would understand that as applicable --
 13 A. Yes, may I make one further point on that? When tests
 14 are carried out, the testing station should be very
 15 specific as to what they had tested, and they will often
 16 record detail, and in here we have the colour. But if
 17 a manufacturer offers products with 14 different
 18 colours, it's unlikely that they would have tests
 19 carried out for every single colour, so it may be that
 20 the manufacturer would advise: well, this was the one
 21 that was tested, and leave it at that.
 22 If it's important, very, very important to note that
 23 different colours will perform in a very different way,
 24 then that should be made abundantly clear. I'm sure
 25 you're going to examine whether it was clear enough.

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1 I don't think that this certificate is particularly
 2 clear.
 3 Q. Would it be obvious to the reasonably prudent architect
 4 on reading section 6, for the first time or the tenth
 5 time, to ask the question: well, do these tests apply
 6 both to the riveted system and to the cassette system or
 7 only one of them?
 8 A. I don't think I would ask that question. It says "the
 9 products". I wouldn't have reason to ... there could be
 10 two separate certificates, one for rivets and one for
 11 cassette. There isn't. There's one certificate. Why
 12 would I start asking a question like that? I would have
 13 taken it that it applied to both.
 14 MR MILLETT: Thank you very much.
 15 Mr Chairman, is that a convenient moment?
 16 SIR MARTIN MOORE-BICK: Yes, I think it is, thank you very
 17 much.
 18 We will have a short break now, Mr Hyett. Back at
 19 3.30, please, and the usual injunction: no talking while
 20 you're out of the room, or not about your evidence
 21 anyway.
 22 THE WITNESS: I shall not.
 23 SIR MARTIN MOORE-BICK: Thank you very much.
 24 (Pause)
 25 Thank you. 3.30.

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1 (3.15 pm)
 2 (A short break)
 3 (3.30 pm)
 4 THE WITNESS: Thank you.
 5 SIR MARTIN MOORE-BICK: All right, Mr Hyett? Now, if you
 6 are too warm at any stage, you feel free to take your
 7 jacket off.
 8 THE WITNESS: I think it was not me, actually, I think it
 9 was the air conditioning, certainly in this part of the
 10 room, wasn't working quite as it had before.
 11 SIR MARTIN MOORE-BICK: Oh, right. Well, we do have our
 12 battles with that. There it is.
 13 THE WITNESS: Thank you for your consideration.
 14 SIR MARTIN MOORE-BICK: Right, Mr Millett.
 15 MR MILLETT: Yes.
 16 Mr Hyett, I want to go back to a question about
 17 cassettes, if I can, first, please.
 18 Now, you have done a model which you showed us in
 19 detail yesterday, and it very helpfully illustrates the
 20 form and shape of the Reynobond PE 55 ACM, or ACP, if
 21 you prefer, panels fabricated from flat panels into
 22 cassettes, and although we can go back on the video and
 23 look at it, you took great pains to try to show to us
 24 the tray at the bottom and the return --
 25 A. Yes.

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1 Q. -- do you remember, of I think you said something like
 2 20 centimetres.
 3 A. Not centimetres, millimetres.
 4 Q. Millimetres, sorry, my fault.
 5 A. With limited success, because I couldn't quite get
 6 Dominic to hold it against the turquoise where it would
 7 have shown up, so it was not quite as clear on the
 8 camera as I would have liked.
 9 Q. No, I recall that. But it raises some important
 10 questions, I think.
 11 Is it right that, in order to achieve the cassette
 12 shape, the ACM panels had to be scored right through one
 13 surface of the aluminium and almost entirely through the
 14 PE core, creating a line of exposed PE?
 15 A. That's my understanding. I gained that understanding
 16 fairly late. I can't remember where I got it from. But
 17 the insides of the panels in their corners I believe are
 18 scored, and I believe that scoring is straight through
 19 the aluminium into the core.
 20 Q. I wonder whether we might be able to trace down where
 21 you got it from. This may be wrong, but let's see if we
 22 can have a go.
 23 I will let you take your jacket off again.
 24 A. Excuse me, I'm sorry about that.
 25 Q. No, that's quite all right.

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1 A. Right.
 2 Q. Can we go to {MET00019915/2}, please. This is the
 3 manufacturer's instructions for fabrication, and it's a
 4 "Fabrication guideline, Step by step to a perfect
 5 cladding", put out by Alcoa. Do you see that?
 6 A. Yes.
 7 Q. Is this the document you think you might have got this
 8 from?
 9 A. No, I was trying to think as you were flashing this up,
 10 I think that I was told, and I don't think it was
 11 because of my examination of any panels on site. It
 12 might be that one of my colleagues told me. It might be
 13 that it came from Dr Lane. But it was certainly during
 14 the course of this investigation. I'm afraid I can't be
 15 more specific than that.
 16 Q. Right, okay.
 17 A. I was certainly told, Mr Millett. I didn't read it,
 18 I was told. Where the person who told me got it from,
 19 I do not know.
 20 Q. Right.
 21 The question is: in your opinion, should
 22 a reasonably competent architect have been aware of the
 23 fact that the panel was going to be taken and, when
 24 fabricated into a cassette, would be scored such that
 25 the PE became exposed?

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1 A. No, I don't think so, no.
 2 Q. Would you expect a reasonably competent architect to
 3 read the manufacturer's fabrication instructions, or
 4 would that be a matter for others?
 5 A. No, I don't think so.
 6 Q. Who would that be a matter for, do you think?
 7 A. The subcontractor.
 8 Q. Right, I see, okay.
 9 Can I ask you a question about Lakanal House.
 10 I know you are aware of the Lakanal House fire and the
 11 recommendations that followed it; yes?
 12 A. Yes.
 13 Q. Do you remember what the effect of the fire and the
 14 Inquest and the subsequent Coroner's recommendations was
 15 on the architects' profession generally? Or was there
 16 an effect?
 17 A. Well, at the time, I don't recall. I was actually not
 18 even in the country, I think, at the time. Can you
 19 remind me which year it was?
 20 Q. Yes, 2009. The fire was in 2009.
 21 A. No, I would have been in this country. I certainly
 22 remember it happening, and I certainly remember seeing
 23 it actually on television, but I don't know what the
 24 effect was.
 25 Q. Right.

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1 Just in general terms, would you say that the
 2 Lakanal House fire put the architects' profession on
 3 notice that cladding fires were a feature or cladding
 4 could be combustible?
 5 A. I think that's too broad a description, if I may say so.
 6 Those architects involved with cladding would certainly
 7 or should certainly take notice of it, be put on notice,
 8 but many architects have nothing to do with cladding,
 9 they're involved in a completely different kind of work.
 10 Q. Can we look at your report at {PHYR0000027/9}, please.
 11 Can we look at 2.2.18 of your report here, and you say
 12 there -- and this is in the light of your conclusion the
 13 paragraph 2.2.17 that:
 14 "... overall the UK construction industry had indeed
 15 been 'sleep-walking' for some prolonged period towards
 16 serious problems in terms of its performance and
 17 conduct."
 18 A. Yes, yes.
 19 Q. Then you say:
 20 "Further evidence in support of my comments exists
 21 in the general failure of the industry to respond to
 22 lessons from other recent fires both in the UK and
 23 abroad, including a series of very serious fires in
 24 residential buildings and some very serious façade
 25 fires. More recent UK examples include the Summerland

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1 Fire (1973, 50 killed /80 seriously injured); Bradford
 2 City Stadium Fire (1985, 56 killed); and most recently
 3 The Lakanal House Fire (2009, 6 killed /20 injured) and
 4 Garnock Court (1999, 1 death). Overseas façade fires
 5 include the Neo-Soho project in Jakarta; the Address
 6 Downtown Hotel (2016, 14 injured) and the Torch
 7 Residential Building both in Dubai, as well as fires in
 8 Roubaix (France), Chechnya (Russia) and Monte Carlo and
 9 Las Vegas, the latter two both involving hotels."
 10 You set out a list there.
 11 Would you expect a reasonably competent architect to
 12 be aware of those fires, come 2013/2014?
 13 A. No, and I was only aware because when I started this
 14 work I asked for a list to be prepared for me. So I was
 15 aware of some of them but not all of them. For example,
 16 I didn't know about the Monte Carlo or the Las Vegas
 17 ones.
 18 Q. Which are examples of those you did know about?
 19 A. I knew all about the Dubai one because I sat under the
 20 building the morning after the fire when it was still
 21 smouldering, and I was there with the forensics people,
 22 it might have been two days after, I can't be quite
 23 precise, but the engineers who were being brought in to
 24 investigate. So I was, you know, immediately aware of
 25 that one. I was there by chance.

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1 I knew about the Lakanal one, I knew about the
 2 Summerland one, I knew about the Bradford stadium fire.
 3 I would, wouldn't I, because I deal with sports
 4 extensively.
 5 Q. Can I then turn to the topic of insulation. I want to
 6 ask you some questions about the compliance of and
 7 selection of the insulation products installed within
 8 the cavity created by the overcladding system.
 9 Would you expect a reasonably competent architect to
 10 be aware of the fire performance properties of PIR or
 11 phenolic insulation products?
 12 A. Fire properties suggests a detailed knowledge of the way
 13 they will perform. Not necessarily. Are they
 14 non-compliant with ADB2, limited -- yes. Do they give
 15 off lots of toxic fumes? Yes. But it's a general
 16 awareness of the characteristics as opposed to detailed.
 17 Q. I see.
 18 In that last answer you say:
 19 "Are they non-compliant with ADB, limited -- yes.
 20 Do they give off lots of toxic fumes? Yes."
 21 Does the "yes" in each case tell us that the
 22 reasonably competent architect would know that PIR and
 23 phenolic insulation products weren't compliant with
 24 ADB2?
 25 A. Yes.

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1 Q. And that they gave off lots of toxic fumes, as you put
 2 it?
 3 A. I don't know about the toxic fumes. They should
 4 certainly know that -- I mean, we've got an awareness of
 5 filler materials with carcinogenic qualities. I think
 6 most of us appreciate that the fumes can be extremely
 7 dangerous. But of course any smoke, any fumes -- most
 8 people who are seriously injured or die in fire die as
 9 a result of the fumes. We all know that.
 10 Q. Am I right in thinking that you considered only the
 11 linear route to compliance with the Building
 12 Regulations, what's been called the linear route, so by
 13 applying the guidance specifically contained in
 14 paragraphs 12.6 to 12.9 of ADB, when coming to your view
 15 as to the suitability of the use of PIR and phenolic
 16 insulation within the external cavity created by the --
 17 A. For the purposes of this report, yes.
 18 Q. Is that because, as I think you have confirmed in your
 19 supplemental report at paragraph 2.7.2 -- well, let's
 20 look at that, {PHYS0000002/60}. You say at
 21 paragraph 2.7.2 ...
 22 A. Correct, yes.
 23 Q. You say:
 24 "As I have already made clear, from the evidence
 25 which I have seen there is no indication that any of the

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1 alternative avenues to compliance were either explored
 2 or pursued by Studio E or the design team.”
 3 Is that the basis on which you criticise Studio E?
 4 A. Yes.
 5 Q. Now, let’s just work on a little bit further.
 6 Can you go to your report at {PHYR0000029/27},
 7 please. Let’s look together at paragraph 4.2.18 there
 8 at the top of the page. You say:
 9 “Celotex ‘5000’ is a polyisocyanurate product known
 10 as PIR. (I note that the prefix FR as well as RS are
 11 used in connection with the Celotex 5000 product. These
 12 both refer to the same product as I understand the
 13 distinction was purely for marketing purposes and in
 14 those circumstances I have used RS (rainscreen) and FR
 15 (flat roof) interchangeably throughout this report). It
 16 did not meet any of the definitions for materials of
 17 limited combustibility as set out in Table A7 of ADB2.
 18 Studio E should not have specified an insulation product
 19 that did not carry proper certification as evidence of
 20 its suitability in meeting the guidelines of ADB2 and
 21 the requirements of the Building Regulations.”
 22 Now, if we go on, you also tell us about Kingspan
 23 Kooltherm K15, and if we go to page 29 of this same
 24 report {PHYR0000029/29}, two pages on, we can see what
 25 you say there. At paragraph 4.2.25, you say in the

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1 second sentence:
 2 “The PIR range of products (including Celotex RS5000
 3 and Kingspan Kooltherm K15 which is a phenolic
 4 insulation) did not achieve that compliance.”
 5 Then just going back a little bit further in the
 6 report to page 93 {PHYR0000029/93}, at paragraph 4.4.41
 7 there you say:
 8 “Studio E’s continued confidence in the Celotex
 9 RS5000 product, and the use of PIR insulation within the
 10 cladding system, represents an ongoing major failure on
 11 their part to understand both the requirements of the
 12 Building Regulations and the guidance given within ADB2
 13 with respect to insulation in external walls. That
 14 failure of understanding appears to have extended to
 15 both Harley (Mr D Anketell-Jones) and, surprisingly,
 16 Exova (Mr Ashton).”
 17 Do you see that?
 18 A. Yes.
 19 Q. Now, we then also go back, I think, to the CWCT
 20 standard, and bear with me, Mr Hyett, there is
 21 a question coming, but I just want to show that to you
 22 as well. CWCT standard, please, at {CWCT0000046/15}.
 23 It says under paragraph 6.6.1, under the heading
 24 “Materials” and the subheading “Materials in rainscreen
 25 cavities”:

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1 “The cavity behind a rainscreen and in front of the
 2 air barrier should not include materials which can
 3 significantly promote flame spread within the unseen
 4 cavity. In general this zone may contain a timber,
 5 aluminium or other metal vertical framework and
 6 insulation of appropriate resistance to combustion.”
 7 Do you see that? “Insulation of appropriate
 8 resistance to combustion”. Then it says in italics :
 9 “The use of any combustible material for the
 10 supporting framework and insulation within the cavity
 11 may need to be considered as the building height
 12 increases.”
 13 Then underneath that “Insulation materials”:
 14 “Insulation in walls of buildings with a storey more
 15 than 18m above ground level should be of limited
 16 combustibility.”
 17 Now, I’ve shown you all of that. Collecting all
 18 that together, I have some questions for you as follows.
 19 First, would you agree that, since Celotex FR5000
 20 and RS5000 were not materials of limited combustibility,
 21 Studio E’s specification of Celotex FR5000 insulation,
 22 and the later selection and installation of RS5000, was
 23 contrary to the express requirement of the CWCT standard
 24 as incorporated into the NBS specification?
 25 A. Yes.

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1 Q. Do you agree, next, that combustible materials could be
 2 incorporated into a rainscreen system in accordance with
 3 Approved Document B if the total wall construction
 4 underwent a specific full -scale BS 8414 complete system
 5 test, and the results of that test met the BR 135
 6 performance criteria?
 7 A. Well, there’s the qualification : “and the results met”,
 8 yes. So yes.
 9 Q. Yes. There may be an alternative approach, might there
 10 not, which is adopting the fire engineering approach set
 11 out in BCA Technical Guidance Note 18, either a desktop
 12 study --
 13 A. Yes.
 14 Q. -- or holistic fire engineering solution.
 15 A. Yes.
 16 Q. But if none of those three alternatives -- 8414 test,
 17 desktop study, holistic fire engineering solution -- was
 18 adopted as the route to compliance, then the use of PIR
 19 or phenolic insulations was prohibited, essentially?
 20 A. Yes, by ADB2. The other route options inevitably
 21 involve complex procedures where I as an architect would
 22 want the help of a façades engineer, a specialist with
 23 expertise as appropriate, or particularly specialist
 24 fire consultants. I wouldn’t feel comfortable to go
 25 anywhere beyond ADB2 guidance without such help.

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1 Q. No. And given that, as it seems, Studio E and indeed
 2 everybody else appears only to have adopted or
 3 considered they were adopting the linear route --
 4 A. Yes.
 5 Q. -- are you of the view that Studio E therefore had to
 6 satisfy themselves that FR5000, RS5000 and the Kingspan
 7 Kooltherm K15 were materials of limited combustibility?
 8 A. Well, they were specifying them, so yes.
 9 Q. And from a prudent architect's point of view, would the
 10 prudent architect, if asking someone like Exova or
 11 Harley or Rydon, have expected them to have done the
 12 same?
 13 A. Yes.
 14 Q. Do you agree that, in the absence of any consideration
 15 of any of the other alternative routes to compliance
 16 that we have listed, those three, quite simply PIR
 17 insulation and phenolic insulation should simply not
 18 have been considered at all by the design team or
 19 specified by Studio E?
 20 A. Certainly. I mean, many architects working in this kind
 21 of field would know anyway, but if they were new to it
 22 and they were going to start working here, then they
 23 should have found out on the way through, yes.
 24 Q. Now, can I ask you to look at your report,
 25 {PHYR0000029/91}, please. You say at

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1 paragraph 4.4.35 -- and this is after paragraph 4.4.34,
 2 and I had better read that to you. This is an extract
 3 from or a quotation from an email run in September 2014
 4 between Neil Crawford of Studio E and Terry Ashton of
 5 Exova. In 4.4.34 you note the answer given by Mr Ashton
 6 to Mr Crawford's question, and he says:
 7 "If the insulation in the cavities behind the
 8 rainscreen cladding is combustible you will need to
 9 provide cavity barrier as shown on your drawing ..."
 10 You have put in bold the first part of that sentence
 11 there, as we can see.
 12 Then at paragraph 4.4.35 you say:
 13 "I cannot understand how a fire specialist could be
 14 asking if the insulation is combustible when he should
 15 well know that under paragraph 12.7 of ADB2 it should be
 16 of 'limited combustibility'."
 17 Should Mr Crawford as, let it be assumed, the
 18 reasonably competent architect not also have realised
 19 that he should only be using insulation of limited
 20 combustibility?
 21 A. Yes.
 22 Q. If we go to page 122 of this same report
 23 {PHYR0000029/122}, you say at paragraph 4.4.111(d), and
 24 this is in the context of a different point, but it's
 25 the same email chain itself:

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1 "Mr Ashton's reply is astonishing, coming from an
 2 alleged expert in fire safety within construction. By
 3 stating 'If the insulation ... is combustible' he
 4 appears to be condoning an outright breach of ADB2
 5 guidance under paragraph 12.7."
 6 Now, just looking at that, do you agree that if
 7 another route to compliance with the Building
 8 Regulations had been adopted, in other words one other
 9 than the linear route to compliance under
 10 paragraphs 12.6 to 12.9, then incorporation of
 11 an insulation which was combustible may not have been
 12 a breach of the Building Regulations?
 13 A. Yes.
 14 Q. So is it possible, then, for cladding systems as a whole
 15 to satisfy the B4 requirement by other routes even
 16 though they included combustible products?
 17 A. I believe that's correct.
 18 Q. Now, if Mr Ashton didn't know, let's assume as a fact at
 19 the moment he didn't know what route to compliance had
 20 been adopted, do you take the view that his response
 21 might have been reasonable?
 22 A. No.
 23 Q. No. Looking at Mr Crawford, though, if --
 24 A. May I explain very briefly why?
 25 Q. Yes.

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1 A. Anybody giving advice like this should understand the
 2 context in which the advice is being given. They should
 3 get the information in front of them. He should have
 4 already known that the building was over 18 metres high.
 5 If he didn't, he should have got the information in
 6 front of him. If he had forgotten, he should have
 7 reminded himself. Unqualified advice is just not
 8 acceptable. This is very, very serious territory here.
 9 He should have established the facts and then given the
 10 advice. Having established the facts, I think he should
 11 have been astonished.
 12 Q. That's Mr Ashton.
 13 Turning then to Mr Crawford, if the facts are that
 14 Mr Crawford knew that none of the three alternative
 15 routes to compliance was being considered, let alone
 16 pursued, would it have been reasonable for Mr Crawford
 17 to have relied on Mr Ashton's statement here as
 18 providing any kind of comfort to him that he could go
 19 ahead and use combustible insulation?
 20 A. Well, he did know the route was being pursued, and he
 21 shouldn't have accepted such advice. He should have
 22 raised questions.
 23 Q. When you say "shouldn't have", are you saying that his
 24 accepting the advice and not raising questions fell
 25 below the standard of the reasonably competent

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1 architect?
 2 A. Yes, yes, yes.
 3 Q. Would that not be all the more unreasonable for
 4 Mr Crawford to continue in the way he did in
 5 circumstances where what he was being told, rightly or
 6 wrongly, was that Mr Ashton didn't know what the
 7 build-up of the external wall comprised?
 8 A. Well, it's evident he didn't know what the build-up
 9 comprised, and so as the -- I'm forgetting whether --
 10 this comes after the novation, doesn't it, this sequence
 11 of --
 12 Q. It does, it's September 2014.
 13 A. Nevertheless, to all intents and purposes, as the lead
 14 consultant, or co-ordinating consultant anyway, he
 15 should have insisted that the source of advice was
 16 properly informed and that they all got to grips with
 17 this.
 18 I can't understand -- I have heard the evidence on
 19 this a number of times. I have read the evidence and
 20 heard it again the other day. I cannot understand how
 21 an issue like this could have remained unresolved over
 22 such an extended period of time, and this goes to the
 23 heart of it, I think. An architect should grasp
 24 a nettle like this very, very firmly, and gather the
 25 people around the screen or the table and thrash it out.

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1 Q. At the time of Celotex's launch of RS5000 in
 2 August 2014, it didn't replace, it seems, the FR5000
 3 product; Celotex seemed to continue to market both
 4 products as different products for different
 5 applications.
 6 Do you remember that the Celotex datasheet actually
 7 claimed that, unlike the FR5000 product, RS5000 had
 8 passed a BS 8414 test and therefore achieved compliance
 9 with the Building Regulations?
 10 A. I do recall that.
 11 Q. Yes, I put the point rather generally.
 12 In that circumstance, do you agree that Studio E
 13 ought to have investigated the compliance of RS5000,
 14 given that it was replacing FR5000, which is what they'd
 15 originally specified in the NBS specification?
 16 A. Forgive me, I don't remember quite what evidence came to
 17 them, how they came to know that there had been
 18 a replacement, but if a product is being replaced, they
 19 should satisfy themselves that the replacement meets the
 20 requirements that would allow it to be used.
 21 Q. So do I take it from that answer that you would expect
 22 a reasonably competent architect to investigate the
 23 change?
 24 A. If I'm told anything's changing, I want to know what
 25 it's being changed to.

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1 Q. Would a reasonably competent architect expect the
 2 reasonably competent specialist cladding subcontractor
 3 also to investigate the compliance of the new insulation
 4 product?
 5 A. Well, this subcontractor claimed from the outset to be
 6 specialists, "We'll deal with all the issues, worries
 7 away". They cannot be specialists and then not deal
 8 with this sort of issue.
 9 Q. Now, can we go to {PHYS000003/22}, please.
 10 A. Sorry, on that last point, there is a balance here.
 11 Q. Yes.
 12 A. Architects and other consultants rightfully rely on the
 13 good advice from competent suppliers and subcontractors.
 14 I don't want to give the opinion that nobody can be
 15 trusted. We rely, and we not only properly rely, but we
 16 receive extremely good advice from very, very
 17 responsible companies. So to suggest that such advice
 18 never comes would be wrong, but an architect should
 19 always be circumspect and satisfy themselves that they
 20 can reasonably rely on what they're being told. But
 21 certainly we get very good advice from very good
 22 suppliers and contractors.
 23 Q. But you are not saying, are you, in that answer that
 24 Studio E would be able to perform their obligations to
 25 Rydon or to their client, the TMO, simply by relying on

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1 Harley, with whom they had no relationship, to make the
 2 check?
 3 A. No, absolutely not.
 4 Q. No.
 5 Can we then go to {PHYS000003/22}, please, which
 6 I think is now on the screen in front of us. I would
 7 like to look at paragraph 4.2.27 with you. You say in
 8 the third paragraph there:
 9 "With respect to the third paragraph of Studio E's
 10 submission, I confirm that I understood at the time of
 11 writing my report that Max Fordham had indeed first
 12 proposed the product Celotex FR5000. It was Studio E's
 13 responsibility to consider such a recommendation and to
 14 check its compliance with the guidance in ADB2 and
 15 ultimately with the Building Regulations. In this
 16 respect it was Studio E, not Max Fordham, who
 17 incorporated the Celotex product into the main
 18 construction information (drawings and specification)
 19 which formed the principal documentation (Employer's
 20 Requirements) upon which the Design and Build tender was
 21 procured."
 22 Do you agree that Studio E couldn't expect to fulfil
 23 that responsibility by simply adopting Max Fordham's
 24 proposal without any further investigation?
 25 A. They should have either already known or they should

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1 have investigated .

2 Q. Is that because it was Studio E's responsibility as the

3 architect , as the lead designer, and indeed the lead

4 consultant, before novation, to consider and confirm the

5 suitability of that material?

6 A. That is correct. I know the answer should be concise:

7 that is correct. I think it's reasonable to be pretty

8 disappointed that a recommendation has been made for

9 Celotex by a consultant, and that's a very fine firm,

10 Max Fordham. But nevertheless, I think, disappointment

11 or otherwise, they had a duty to check it . They were

12 drawing up the specification .

13 Q. When I say suitability in that last question, I'm

14 including compliance with the Building Regulations and

15 Approved Document B.

16 A. That's what I was focusing on.

17 Q. Yes, thank you.

18 In your view, would consideration of suitability

19 include assessing not only compliance with part B,

20 "Fire safety ", but also part L of the

21 Building Regulations, "Conservation of fuel and power"?

22 A. I think there it's much more reasonable for the

23 architect to rely on a firm like Max Fordham, because

24 we're now into specialist territory of calculating the

25 performance of a material or a combination of materials.

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1 That's their stock-in-trade. So I think the area there

2 is to ensure that the proper questioning of the other

3 consultant, Max Fordham, takes place, to satisfy myself

4 as an architect , if I put it into first person, that the

5 insulation is not only going to do the job that they've

6 said it will do, but that the target figures that

7 they've suggested are the right target figures, yes.

8 But I think an architect would rely much more

9 heavily on a specialist services consultant to perform

10 those calculations , to make those recommendations.

11 Q. Would you expect that to include consideration of all of

12 the component elements of the cladding system, so the

13 panels, the insulation , the cavity barriers, fixing

14 rails , et cetera, and look at the entire system?

15 A. In terms of the insulation? In terms of the

16 performance?

17 Q. In terms of the performance of the entire system.

18 A. Well, now we're down into conversations, I think, about

19 the bracketry and the rest of it . Yes, I mean, the

20 whole thing needs to be looked at in the round.

21 Q. And that would include also, beyond the round, in a way,

22 the design strategy within the constraints of the

23 client 's requirements, planning requirements and

24 technical issues like buildability ?

25 A. I don't think that I'd necessarily expect the services

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1 consultant to be thinking about buildability with the

2 same level of awareness that I, as an architect , would

3 be doing or expecting my team to do.

4 Q. No, and I meant the question from the architect 's point

5 of view. The architect would have to consider not only

6 all of the component elements of the cladding system,

7 but also the design strategy within the constraints of

8 the client 's requirements, planning issues, and

9 technical issues such as buildability ?

10 A. That's their job.

11 Q. Yes. Therefore, would you agree with me that it's the

12 architect 's responsibility to satisfy itself , or himself

13 or herself, that the materials are capable of meeting

14 the target U-values and complying with part L, but also

15 to make sure that the materials also comply with the

16 requirements of part B?

17 A. Yes.

18 Q. And the architect would have to make a holistic

19 assessment of the proposal in the light of all these

20 perhaps competing guidance considerations.

21 A. Again, I say that's their job, yes.

22 Q. Can we go to your report, please, at {PHYR0000029/29},

23 please. Let's look at paragraph 4.2.26 together. That

24 says:

25 "As services engineers Max Fordham should have known

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1 the importance, in principle , of compliance with

2 Building Regulations and should have been sufficiently

3 familiar with both the Building Regulations and the

4 Approved Documents with respect to all aspects of their

5 particular discipline . In those circumstances they

6 ought not to have proposed a PIR product in this

7 situation . I think that Max Fordham can therefore be

8 criticised for proposing a material that was clearly

9 non-compliant with the guidance in ADB2 and which did

10 not meet the requirements of the Building Regulations."

11 Now, on that paragraph, can I just ask you: in

12 proposing the Celotex FR5000 product, would you expect

13 the reasonably competent architect to understand that

14 the M&E engineer, in this case Max Fordham, had made its

15 proposal on the basis of the thermal performance

16 aspirations and thickness requirements which Studio E

17 had set?

18 A. As opposed to complying with the fire aspects? Is that

19 what you're asking?

20 Q. Well, I'm asking you whether you would understand the

21 reasonably competent architect to have understood that

22 the M&E engineer, in this case Max Fordham, had put

23 forward its proposal for thermal performance aspirations

24 and thickness requirements based on what the architect

25 itself had said.

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1 A. Well, I think that the U-value target was something that
2 emerged through discussion between the parties, which is
3 a perfectly normal thing. Having established the target
4 U-value, yes, I would expect Max Fordhams to have
5 proposed a way of complying with that U-value.

6 Q. Yes. Okay.
7 Does that then raise this question: would
8 a reasonably competent architect expect that the M&E
9 engineer had given consideration to the fire performance
10 properties of that product?

11 (Pause)

12 A. Services engineers are very familiar with the
13 Building Regulations and the approved documents, but not
14 in as wide a sense as architects. The origins of the
15 Building Regulations are in the early part of the
16 19th century public health legislation. Public health
17 is drainage and water and safety in that respect.
18 That's a platform from which all subsequent
19 Building Regulations have come. Service engineers deal
20 with drainage and water, they're very concerned about
21 these sorts of things, so they know the importance of
22 regulations, and they would be familiar with the entire
23 suite of documents, although I accept their focus may be
24 on particular parts.

25 But I think that a good firm of service engineers

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1 who were getting increasingly involved in insulating
2 buildings, whether new or overcladding, to meet shifting
3 and improving standards, they should familiarise
4 themselves with the broader range of issues that their
5 proposals need to be considered under, and by that I'm
6 saying, yes, they should familiarise themselves with the
7 basic principles of fire.

8 Q. Yes, maybe they should, Mr Hyett. That wasn't quite
9 an answer to my question.

10 My question was: would a reasonably competent
11 architect in the position of Studio E expect a services
12 engineer in the position of Max Fordham to have given
13 consideration to the fire performance properties of
14 FR5000?

15 A. Well, they were the first people who specified it,
16 I believe, and as an architect, if they'd have -- not
17 specified it, they were the people that recommended the
18 product. If they had recommended it to me, I would
19 expect that recommendation to be based on a reasonably
20 careful assessment of the product, and I would not
21 expect them to be recommending a product which fails at
22 the first post, because it isn't going to get past
23 part B.

24 Q. Let me try it slightly differently.

25 Although I can see that you might expect

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1 a reasonably competent architect to expect that the
2 services engineer would have examined very carefully the
3 thermal performance of FR5000 and whether it complied
4 and worked for that purpose, why would you consider, if
5 you do consider, that Studio E was reasonably entitled
6 to rely on the services engineer to make sure that
7 FR5000 complied with part B of the Building Regulations?

8 A. With part B?

9 Q. Part B, fire performance.

10 A. Because they're working in this territory extensively,
11 and I would have thought their experience would have
12 informed their recommendations.

13 Having said that, I'm clear that the final
14 responsibility for this, the screening of this, that
15 responsibility lies with the architect.

16 Q. Yes. So does that lead us to this conclusion: even
17 though Studio E might reasonably have thought that
18 Max Fordham might have satisfied itself as to the
19 compliance of FR5000 with ADB, nonetheless it remained
20 Studio E's obligation to make that check independently
21 for itself?

22 A. I would have expected my team to make that check, and if
23 I found out that this had happened, I would have been on
24 the phone to them and I would have expressed my extreme
25 displeasure.

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1 Q. Yes.

2 A. I hope that's -- is that clear?

3 Q. That was clear, yes, thank you.

4 Would it therefore be unreasonable for Studio E to
5 have assumed, without any checking, that the M&E
6 manager, Max Fordham in this case, had considered the
7 suitability of FR5000 so far as its performance in fire
8 and compliance with part B was concerned?

9 A. Sorry, can you deliver that one again?

10 Q. Yes.

11 Do you think it would have been unreasonable, in
12 other words fell below the standards of the reasonable
13 architect, for Studio E simply to have proceeded on the
14 assumption that the M&E engineer had considered the
15 suitability of FR5000 from a fire performance
16 perspective?

17 A. Yes, the architect has a responsibility for what he is
18 specifying, and this isn't locked away in some highly
19 discrete part, for example, of the structural engineer's
20 calculations or anything like this, this is the broad
21 specification issue.

22 Having said that, my displeasure is based on the
23 fact that I don't want curveballs sent at me when I'm
24 trying to get a specification together, so I expect
25 people to be pretty responsible about what they're

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1 doing.
 2 But nevertheless, it would be wrong to rely on the
 3 services engineer in that way.
 4 Q. If the services engineer was making his recommendation
 5 on the basis of thermal performance, do you accept that
 6 it would be unreasonable for Studio E to assume that the
 7 M&E engineer had also considered the compliance of
 8 FR5000 with part B of the Building Regulations, fire
 9 performance?
 10 A. I'm taking that as almost the same question again.
 11 Q. It is, really, the same question again.
 12 A. I would give, I think, the same answer as before.
 13 Q. Yes, good.
 14 Now, I just want to show you what Mr Sounes said in
 15 his oral evidence, and this is at {Day12/181:12} please.
 16 We can start there. There is a bit of a run-up.
 17 Ms Grange asks Mr Sounes this question:
 18 "Question: During your time on the Grenfell
 19 project, can you explain why you thought Celotex FR5000
 20 was suitable to be used within the overcladding system?
 21 "Answer: Why did I think it was?
 22 "Question: Yes.
 23 "Answer: Erm ... it had been put forward by
 24 Max Fordham, who I knew had -- who I understood had
 25 undertaken this sort of project several times, or many

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1 times, and I guess I made an assumption that they had
 2 used this before in similar circumstances. So it was
 3 based rather on inferring its acceptability from
 4 previous experience by Max Fordham."
 5 Do you, Mr Hyett, sitting there, agree that that was
 6 not a reasonable basis upon which Mr Sounes, as the
 7 architect, could have relied on Max Fordham's
 8 identification of FR5000 as representing any proper
 9 consideration or advice about its compliance with part B
 10 of the Building Regulations?
 11 A. It is not.
 12 Q. It is not.
 13 Just focusing away from fire and looking at thermal
 14 performance for a moment, do you consider that a figure
 15 of 0.15 watts per square metre K U-value target adopted
 16 by Studio E was achievable at all through the use of
 17 insulation materials compliant with the
 18 Building Regulations?
 19 A. The indicative design demonstrates it is. Well, sorry,
 20 achievable in the context of this building.
 21 Q. Yes.
 22 A. I've got to say that.
 23 Q. Yes.
 24 A. And yes.
 25 Q. I see. So your answer is achievable, but only if you

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1 build it out in the way you have identified in the
 2 indicative --
 3 A. Well, also I'd need to see the circumstances of any
 4 particular building. There may be reasons why there is
 5 not enough space to have that thickness of insulation.
 6 But on this building, as demonstrated by the indicative
 7 approach, it could have been made to work.
 8 Q. The 0.15 figure wasn't a mandatory requirement under the
 9 Building Regulations.
 10 A. No, it's not.
 11 Q. If it was thought that this target U-value wasn't
 12 achievable through use of mineral wool, for example,
 13 could the U-value target have been relaxed --
 14 A. Yes.
 15 Q. -- by Studio E? Was the decision to place the new
 16 thermal insulation on the outside of the building
 17 an appropriate one, given the U-value?
 18 A. If I just use the broad heading of "save the planet",
 19 any insulation on the outside of the building is going
 20 to do a good job because what it effectively does is
 21 turns the entire concrete structure of the building into
 22 a great heat or cool sink. So the insulation on the
 23 outside of the building is going to enable that
 24 structure to stay cooler in the summer, therefore less
 25 air conditioning to get temperatures down, and warmer in

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1 the winter. So it was the right place to put it from
 2 that point of view.
 3 There are other reasons why it was right as well.
 4 The level of disruption within those apartments by going
 5 into them and insulating all of those walls from the
 6 inside would have been extreme. So there's many reasons
 7 why it was a good decision.
 8 Q. Now, moving on, the stage C report done by Studio E was
 9 completed, I think, in October 2012, wasn't it?
 10 A. Right.
 11 Q. Yes. Is it --
 12 A. I don't remember the dates, I'm afraid, but I rely on
 13 you.
 14 Q. Take it from me that it was.
 15 Is it right that the stage C report set out the
 16 preliminary design decisions and materials to be
 17 incorporated within the refurbishment?
 18 A. Yes, I've seen that report and it's a very thorough
 19 document.
 20 Q. The design then developed significantly in the period
 21 following the stage C report after October 2012.
 22 A. Yes.
 23 Q. Indeed, in the end, the materials ultimately installed
 24 as part of the rainscreen cladding façade at
 25 Grenfell Tower were not the ones specified in the

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1 stage C report of October 2012, were they?
 2 A. Some of them were not.
 3 Q. When I say materials, I mean the rainscreen and the
 4 insulation at the very least.
 5 A. Correct, yes.
 6 Q. Yes.
 7 Let's look at your report, please, at PHYR --
 8 A. I beg your pardon, the rainscreen now, the insulation --
 9 yes, you're correct. No, because it was designated with
 10 a different code, but I believe it was the same product.
 11 Q. We will come to --
 12 A. Okay.
 13 Q. -- tease that distinction apart shortly, probably
 14 tomorrow now, but shortly anyway in your examination.
 15 Can we look at your report at {PHYR0000029/28},
 16 please, and we can look at paragraph 4.2.21 there. It's
 17 a long paragraph, so let's pick it up six lines down, if
 18 we can. You say there:
 19 "I am however aware that Exova were sent a link to
 20 the Studio E Stage C report [and you give the reference
 21 there] on 31 October 2012 and that this Stage C report
 22 contained details about the specification of FR5000.
 23 Those details were contained on page 12 of the
 24 Max Fordham Stage C report, which was included within
 25 the Studio E Stage C report from page 70. By virtue of

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1 Exova having received the Studio E Stage C report, it is
 2 therefore clear that Exova had indeed received
 3 confirmation of the proposed use of FR5000 from
 4 31 October 2012 regardless of whether they then later
 5 received the Studio E Stage D report."
 6 Do you see that?
 7 A. Yes.
 8 Q. Then you go on to say:
 9 "On this basis I am of the opinion that Exova should
 10 have realised that the design team were intending to
 11 incorporate an insulation material within the external
 12 wall that was not compliant with the guidance in 12.7 of
 13 ADB, and in such circumstances, should have advised that
 14 the product was non-compliant and should not be
 15 specified."
 16 Now, just as a reminder, at this time Exova had been
 17 engaged by the TMO as the consultant fire safety
 18 engineer, and Exova had produced revision 1 or issue 1
 19 of its outline fire safety strategy the same day,
 20 in fact, 31 October 2012. But that document I don't
 21 think was part of the stage C report. What was its
 22 design note of 12 September 2012, which was in there.
 23 Now, it is obviously correct that the stage C report
 24 is 186 pages long and the Celotex FR5000 product is
 25 referred to in four lines in a table on pages 82 and 83.

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1 We can look at those. Let's just pick that up, if we
 2 can, {SEA00006429/82}. That's where we see the
 3 reference within the stage C report, do you see that?
 4 It's on the right-hand in the two boxes, "Spandrel Wall
 5 Panel (Green)", three entries down, do you see that?
 6 A. Yes.
 7 Q. "Insulation (New, Celotex FR5000)", and then again,
 8 "Column (Pink)", "Insulation (New, Celotex FR5000)". So
 9 that's where it appears.
 10 Now, you have said in your report and we have
 11 discussed elsewhere that an architect shouldn't be
 12 criticised for reading only one page of the
 13 BBA certificate.
 14 What do you say to the view that your opinions in
 15 respect of Studio E reading the whole of the
 16 BBA certificate and your criticism of Exova failing to
 17 comment on the proposed use of Celotex FR5000 are
 18 difficult to reconcile?
 19 Now you have accepted, I think, that the architect
 20 should have read the whole of the BBA certificate, there
 21 is no inconsistency. Exova should have read the FR5000
 22 reference here as well, shouldn't they?
 23 A. Yes.
 24 Q. Yes.
 25 A. I still think there's shades of grey in all this, but

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1 yes.
 2 Q. If we go on to {EX000001575}, please, this is an email
 3 chain from October 2012, and in the second email down,
 4 if you look, this is Adrian Jess' email, he is Studio E,
 5 and it goes to various people, but it goes to Artelia,
 6 then Appleyards, and it also goes to the TMO, and it's
 7 copied to Exova. Do you see that? It says:
 8 "Please find attached the studio e ftp location for
 9 the Stage C report."
 10 There it is set out. Do you see that?
 11 A. Yes.
 12 Q. Then we can see some action points that are set out by
 13 Mr Jess for Artelia.
 14 Mr Jess hasn't asked Exova to consider the proposed
 15 materials and to comment on them. Do you think that
 16 Mr Jess or somebody else ought to have considered the
 17 proposals and made a comment on them at that stage?
 18 A. Do I think Mr Jess should have?
 19 Q. Well, Studio E generally, then, if not Mr Jess
 20 personally.
 21 A. Sorry, do I think they should have considered what?
 22 Q. Do you think that Studio E should have asked Exova to
 23 consider the proposals and comment on them at that
 24 stage?
 25 A. In the stage C report, yes.

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1 Q. Was it unreasonable of Studio E not to alert Exova to
2 the materials to be used in the cladding?

3 A. Well, the report is the report, and I don't think
4 I would expect Studio E to have summarised the report or
5 the principal headings that they particularly want Exova
6 to look at.

7 Having said that, I do think it's very important
8 with other consultants and particularly with the
9 Building Regulations people that when information is
10 sent, when links are sent to things, when documents are
11 sent, the purpose of that is made clear, and I think it
12 would have been incumbent on the architect to say, "Here
13 is the stage D report, please look at it carefully",
14 full stop.

15 Having made that comment, I wouldn't expect
16 necessarily the fire specialist to read every paragraph
17 and every subsection because some of those will have
18 nothing whatsoever to do with fire. But they are
19 experienced people, they know what they should be
20 looking for. It's escape, principles of escape,
21 arrangements there, the overcladding is another key
22 issue, and I think they should have known where in that
23 report to go and, having got there, they should find the
24 diagram that you just showed me previously and the table
25 and they should be zeroing in on that pretty quickly of

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1 their own accord.

2 Q. Was it incumbent on Studio E to have pointed out to
3 Exova what it is they should be looking at and asking
4 for their --

5 A. No, I don't think so.

6 Q. Go to your report, please, at {PHYR0000030/27}. Let's
7 look together at paragraph 5.2.18(f), and you say there:

8 "Surprisingly, it seems that the intention to use
9 Celotex FR5000 was not brought to the attention of
10 Building Control either by way of discussion during
11 meetings or by way of documentation submission.
12 Alternatively, Building Control, despite being made
13 aware of the proposed use of PIR insulation, did not
14 raise objection."

15 Now, I think if we go back to page 69 of this report
16 {PHYR0000030/69}, at paragraph 5.4.47, at the bottom of
17 the figure 5.55 under the materials key, and that
18 materials key we looked at earlier on, you say:

19 "An issue of this significance should certainly have
20 been brought clearly to the attention of Building
21 Control through dedicated and discrete correspondence
22 and documentation."

23 Taking those two paragraphs together,
24 paragraph 5.2.18(f) and paragraph 5.4.47, on these
25 separate pages, would this view apply similarly to the

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1 use of Celotex FR5000 or RS5000?

2 A. Sorry, I need some help here. That sentence, "An issue
3 of this significance should certainly have been brought
4 to the attention", which issue is that?

5 Q. That is the issue about ACM, the proposed change from
6 zinc to aluminium, and that is the basic context of this
7 point, if you look above that, paragraph 5.4.47.

8 A. Right.

9 Q. The point I want to put to you is that given that that
10 issue of significance should have been brought to the
11 attention of building control, my question is: does that
12 view apply also to the use of Celotex FR5000 or RS5000,
13 or indeed the change from one to the other?

14 A. Well, yes. The Building Regulations application, at
15 whatever point the information came through -- I've
16 heard others talking about tracked systems of
17 application, a lot of information is flowing over a long
18 time, but the information about the insulation needed to
19 get to the building regs people at some point, and if
20 there was a change to that specification, I think it
21 should have -- well, I'm hesitating slightly. I think
22 it should have been brought to their attention, but if
23 the architect was confident that the change didn't make
24 any change in its status in terms of compliance, then
25 maybe he or she could confidently proceed.

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1 But essentially, if a product has been described as
2 part of a building regs application and that product is
3 going to change, then I think that it's incumbent on the
4 architect to advise building control accordingly.

5 Q. Right.

6 A. Sorry, that was a bit of a long answer.

7 Q. No, that's all right.

8 Do you think it was incumbent on Studio E to have
9 drawn Exova's explicit attention to the proposed use of
10 Celotex FR5000?

11 A. Well, yes, but in that sense it was there in the report,
12 in the stage C and D report.

13 Q. Do you think it was incumbent upon Studio E to draw
14 Exova's attention to the change from FR5000 to RS5000 in
15 the summer of 2014?

16 A. Well, firstly, it's clearly there in the report anyway
17 to start with. Yes, if -- well, if the product is
18 changing and Exova have given advice based on one piece
19 of information, if the information upon which their
20 advice was given has changed, then they should be told.

21 Q. You say it's clearly there in the report, but there is
22 no report which ever identifies the fact that FR5000 is
23 not being used and RS5000 is being used instead.

24 A. Right, yes.

25 Q. But there was a change, and my question is: was it

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1 incumbent on Studio E to go to Exova and ask them to 1
 2 confirm to them whether the change was appropriate and 2
 3 whether RS5000 could be used in this rainscreen system? 3
 4 A. Yes, I think that follows, yes. 4
 5 Q. Do you think it was critical for the reasonably 5
 6 competent architect to send the stage D report to the 6
 7 specialist fire safety consultant? 7
 8 A. Certainly. I mean, they were never released, as 8
 9 I understand it. TMO remained the consultant, even 9
 10 though they didn't get novated, and that raises a whole 10
 11 host of questions which you may ask me tomorrow, but 11
 12 I'll leave that there. 12
 13 Q. Just on that, when you say "TMO remained the 13
 14 consultant", I think you mean Exova remained the 14
 15 consultant of the TMO. 15
 16 A. It's been a long day. That is what I meant, yes. 16
 17 MR MILLETT: It has, and when you say you will leave that 17
 18 there, I think I will also leave that there. 18
 19 Mr Chairman, is that a convenient moment? 19
 20 SIR MARTIN MOORE-BICK: It certainly is, yes. 20
 21 Well, it has been quite a long day, Mr Hyett, but we 21
 22 will stop there, and we will ask you, if you would, to 22
 23 come back tomorrow, please, for some more questions, 23
 24 start at 10 o'clock. 24
 25 THE WITNESS: 10 o'clock. 25

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 MR PAUL HYETT (continued)1
 Questions from COUNSEL TO THE INQUIRY1
 (continued)

1 SIR MARTIN MOORE-BICK: In the meantime, it may be a relief
 2 to be told you're not supposed to talk about your
 3 evidence to anyone else over the break.
 4 THE WITNESS: I'm aware of that. It will be a very quiet
 5 supper.
 6 SIR MARTIN MOORE-BICK: Well, you can talk about anything
 7 else.
 8 THE WITNESS: Oh yes.
 9 SIR MARTIN MOORE-BICK: All right. Thank you very much.
 10 Would you like to go with the usher, please.
 11 THE WITNESS: Thank you.
 12 (Pause)
 13 SIR MARTIN MOORE-BICK: All right, thank you very much.
 14 10 o'clock tomorrow, then, please.
 15 (4.31 pm)
 16 (The hearing adjourned until 10 am
 17 on Wednesday, 4 November 2020)

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