

OPUS 2

INTERNATIONAL

Grenfell Tower Inquiry

Day 18

July 9, 2020

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1 Thursday, 9 July 2020
 2 (10.00 am)
 3 SIR MARTIN MOORE-BICK: Good morning, everyone. Welcome to
 4 today's hearing. Today we're going to continue hearing
 5 evidence from Mr Ashton of Exova.
 6 So would you like to ask Mr Ashton to join us,
 7 please.
 8 MR TERRENCE ASHTON (continued)
 9 THE WITNESS: Good morning.
 10 SIR MARTIN MOORE-BICK: Good morning, Mr Ashton. Are you
 11 happy to carry on?
 12 THE WITNESS: I am indeed, yes, thank you.
 13 SIR MARTIN MOORE-BICK: Good, thank you very much.
 14 Yes, Ms Grange.
 15 Questions from COUNSEL TO THE INQUIRY (continued)
 16 MS GRANGE: Thank you.
 17 Mr Ashton, I have a number of questions that I'm
 18 going to deal with at the beginning now which arise from
 19 matters covered yesterday, or potentially with some of
 20 your colleagues when they have been giving evidence, and
 21 then I'm going to turn to the topic I flagged yesterday,
 22 which is the September 2014 emails about the cladding.
 23 So we will do these corrections and questions first.
 24 First of all, a correction. Yesterday, while we
 25 were discussing the role of Artelia or Appleyards and

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1 the role they played on the project, and whether they
 2 performed roles other than that of QS, I referred to
 3 them mistakenly as performing the role of project
 4 administrator as well. That was at page 19 of the
 5 transcript {Day17/19}. In fact, I should have said that
 6 they were employer's agent, not project administrator.
 7 Does that make more sense?
 8 A. It does indeed, yes.
 9 Q. I apologise, that was my slip of the tongue.
 10 I asked you some questions yesterday, just on
 11 another topic, about inclusive design, and do you
 12 remember we looked at some of the early sections of
 13 Approved Document B, which provide that fire safety
 14 measures incorporated within a building will need to
 15 take account of the needs of all people including those
 16 with disabilities? Do you remember we looked at those
 17 provisions?
 18 A. I do indeed, I remember that.
 19 Q. Just on that topic, is it right that you were on the
 20 BSI, the British Standards Institute, committee which
 21 drafted part 8 of BS 5588-8:1999, which was headed:
 22 "Fire precautions in the design, construction and
 23 use of buildings - Part 8: Code of practice for means of
 24 escape for disabled people."
 25 Were you on that committee?

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1 A. I was on the code drafting committee responsible for
 2 several parts of BS 5588; in fact, I was the chairman
 3 for a number of years. But part 8 was dealt with by
 4 a subgroup of the same committee.
 5 Q. Was that FSH14?
 6 A. FSH14 was the overseeing committee, if I can call it
 7 that.
 8 Q. I see, yes.
 9 A. FSH14.1 was a subcommittee of that main committee.
 10 Q. I see. So you were involved in relation to that
 11 British Standard?
 12 A. Oh, yes.
 13 Q. Let's bring it up so we can just see it for a moment.
 14 It's {BSI00000018}. So it's:
 15 "Fire precautions in the design, construction and
 16 use of buildings - Part 8: Code of practice for means of
 17 escape for disabled people."
 18 My question really is: in the light of your work on
 19 that committee, should you not have had in mind
 20 considerations for designing means of escape for the
 21 disabled when you worked on the Grenfell
 22 fire strategies, given what was in Approved Document B
 23 at the time?
 24 A. Well, I think we went into it in some detail yesterday,
 25 but the Building Regulations, or at least the approved

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1 documents, do not require the same level of provision
 2 for disabled people in residential buildings as they do
 3 in commercial buildings.
 4 Q. Yes.
 5 A. Now, why they chose to do that, I don't know. In
 6 an ideal world, you would have a block of apartments or
 7 flats -- they're all called apartments nowadays -- where
 8 there were provisions for disabled people. I mean, they
 9 do make provision for what they call accessible flats,
 10 so there are people with disabilities in residential
 11 blocks. But, as I say, to go back to the core business,
 12 in an ideal world there would be a means of getting
 13 those disabled people out of that block. Normally it
 14 would be done by using the lifts.
 15 Q. Yes.
 16 A. But there would have to be a management regime attached
 17 to that to ensure that that would work. Now, that isn't
 18 always present in apartment buildings.
 19 Q. Yes.
 20 A. And that's presumably why, and I can't say for certain,
 21 the Government -- the responsible Government department
 22 didn't say that you had to make provision for disabled
 23 people to escape.
 24 Q. Were you aware, though, that there were changes in 2006
 25 to Approved Document B which brought in those inclusive

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1 design provisions that we looked at yesterday?
 2 A. Oh, yes, I'm aware that it is covered in Approved
 3 Document B as well as in the British Standard that
 4 you've got displayed at the moment.
 5 Q. Yes.
 6 A. But the fact remains that you do not have to make
 7 provision for means of escape for disabled people in
 8 residential buildings. I'm not saying that's right.
 9 Q. Yes.
 10 A. But that's what it is at the moment.
 11 Q. But is it right -- and I think this is what you said
 12 yesterday -- that, in the light of that, it simply
 13 wasn't considered in the context of the fire strategies
 14 for the Grenfell project?
 15 A. Correct.
 16 Q. Yes.
 17 Just moving on to another topic, yesterday, in
 18 response to questions about Ms Cooney's observations
 19 about the overall refurbishment plans -- and, do you
 20 remember, we looked at her email, whether they're making
 21 a "crap situation worse" in terms of fire safety --
 22 I asked you whether you had warned the TMO about this,
 23 and the answer you gave -- this is at {Day17/9:4-12} --
 24 you said:
 25 "I think when I had the first meeting with the TMO,

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1 which was essentially a design team meeting which they
 2 attended, I did make the point fairly forcefully that
 3 the proposals as drawn up by Studio E were not
 4 acceptable in terms of getting approval under the
 5 Building Regulations, and that therefore we needed to do
 6 some serious work to get to a situation where we could
 7 actually go forward to Kensington and Chelsea with a --
 8 confident that a scheme would be approved."
 9 That's what you said yesterday.
 10 A. Yes, I remember saying that, yes.
 11 Q. You couldn't give a precise date for that meeting, but
 12 you said it was the very first design team meeting that
 13 had the full design team there, including the TMO.
 14 Now, the first meeting that you attended with the
 15 TMO and the rest of the design team appears to be the
 16 project meeting number 8 held on 6 September 2012.
 17 I just want to pull up the minutes for that. This is
 18 {ART00006770}.
 19 So we looked at these notes yesterday. We can see
 20 that you were physically present at this meeting,
 21 because you're four lines up on the "present" list.
 22 A. Right.
 23 Q. Do you think that it was at this meeting that you made
 24 the comments that you referred to, these forceful
 25 comments?

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1 A. Possibly.
 2 Q. I see.
 3 A. I know I did say at one meeting that we had some hard
 4 work to do to get the scheme into an approvable
 5 situation --
 6 Q. Yes. Yes.
 7 A. -- or condition.
 8 Q. Because the point I want to put to you is there doesn't
 9 seem to be anything in the minutes or the notes from
 10 this meeting that record that. What we have on page 2
 11 {ART00006770/2}, if we can go to this -- and, again, we
 12 looked at this yesterday -- under "Fire", do you see
 13 that there?
 14 A. Yes.
 15 Q. We've got this note that:
 16 "Exova need to understand the existing situation and
 17 whether LFB do test the system twice a year, and what
 18 was behind the proposed upgrade works to the smoke
 19 exhaust/fire. The statutory position on the design
 20 needs to be established as it is not possible for
 21 Building Control to insist on enhancements."
 22 Then:
 23 "Draft fire strategy needs detail interrogation and
 24 a meeting was arranged with [Studio E] early next week
 25 to review."

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1 Do you see that there?
 2 A. I do, yes.
 3 Q. And the action for that is noted to be Studio E and
 4 Exova.
 5 So the question I want to put to you is whether you
 6 did actually say that in a meeting with the TMO present,
 7 because that seems to be being disputed.
 8 A. In my experience, minutes don't always reflect exactly
 9 what was said at meetings, but I do recall saying, to
 10 more than just an audience comprising Studio E, that
 11 there were approval risks based on the current
 12 proposals. I even referred to the need possibly to
 13 provide sprinklers to the non-residential portions, and
 14 so on.
 15 Now, if I haven't got the date of the meeting right
 16 or the precise meeting right, I apologise, but I did say
 17 that.
 18 Q. Okay. Yes.
 19 To what extent were you seeking to engage with the
 20 TMO on that issue and talking directly to the TMO about
 21 it as distinct from Studio E?
 22 A. I wasn't really thinking about the TMO specifically when
 23 I made those comments. I just made the comments to
 24 whoever was assembled at that meeting.
 25 Q. Yes.

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1 A. This was before we did the first design note.
 2 Q. Yes.
 3 A. So it was in advance of that. Now, that may give some
 4 idea as to actually when that meeting took place.
 5 Q. Yes.
 6 Would you agree that you were, day to day, dealing
 7 with Studio E as part of the design team and not the TMO
 8 in respect of the preparation of the fire safety
 9 strategies?
 10 A. Yes, that's correct.
 11 Q. Yes.
 12 So just moving on to another topic, this is in
 13 relation to the existing fire safety strategy, you said
 14 yesterday that you thought it was a misunderstanding
 15 between you and between Clare Barker and Cate Cooney on
 16 the other hand about who was actually going to finalise
 17 the draft existing fire strategy; you remember saying
 18 that?
 19 A. I do, yes.
 20 Q. Given that this work remained outstanding for such
 21 a long period of time, from August 2012 until the end of
 22 Exova's involvement in the Grenfell project, I want to
 23 put to you: can that really have been
 24 a misunderstanding? Why was that not picked up in that
 25 length of time?

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1 A. I don't know, to be honest. I mean, I assumed, as
 2 I said yesterday, that Clare was going to continue to
 3 deal with that until it was completed, but I did take
 4 from the recommendations of that draft report the issues
 5 that we needed to address with the refurbishment scheme.
 6 Q. Do you think it was that you simply forgot to come back
 7 and address that, or in fact did you actually think
 8 about it but consider finalising that draft report not
 9 to be a significant priority?
 10 A. In the greater scheme of things, finishing that report
 11 off wasn't the top priority. I mean, we've got three
 12 strands here: we've got the risk assessment, which is
 13 carried out or should be carried out periodically --
 14 Q. Yes.
 15 A. -- which will highlight things that have gone wrong or
 16 need to be put right; we've got work going on with the
 17 refurbishment, which was my main focus; and we have the
 18 existing fire safety strategy drawn up, which I took to
 19 be just a record of what was there, and I only took out
 20 of that draft the things that we needed to concentrate
 21 on going forward.
 22 Q. So can we take it from that answer that you were aware
 23 and conscious that it was a draft that hadn't been
 24 finalised, but just didn't think that that was
 25 a priority that needed to be come back to?

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1 A. If I'm honest, I didn't think it was that important,
 2 given that there were these other strands to the
 3 building.
 4 Q. Were you aware that the existing fire safety strategy
 5 was meant to be a baseline on which the refurbishment
 6 strategy built?
 7 A. No.
 8 Q. Did you ever, in the next four years after 2012,
 9 investigate what had happened to the draft existing
 10 fire strategy?
 11 A. No, I didn't.
 12 Q. Okay.
 13 So moving on to another topic, you said yesterday on
 14 a number of occasions that your time was stretched
 15 because you were handling often a large number of
 16 projects.
 17 Can you recall, to the best of your ability,
 18 approximately how many projects would you have been
 19 working on at any one time, say during 2012, when you
 20 were first working on the fire strategies?
 21 A. Well, it could be six to ten, I guess, but they would
 22 all be at different stages of development, and I don't
 23 think that I want to give the impression that there
 24 wasn't enough time to deal with this project, because
 25 there was.

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1 Q. Okay.
 2 A. I made enough time to do that.
 3 Q. Yes.
 4 Now, another point arises from Ms Cooney's evidence.
 5 She was asked about why she hadn't referred to
 6 diagram 52 of Approved Document B in relation to the
 7 fire main outlets being in the lobbies. So you know at
 8 Grenfell Tower, the riser --
 9 A. Indeed.
 10 Q. -- for the fire main outlets are in the lobbies, and she
 11 was asked a question:
 12 "Why did you not include any discussion or
 13 assessment within your draft existing fire strategy
 14 report about the impact on operation of firefighting of
 15 the fact that the main riser outlets were in the lobbies
 16 and not in the stair as required by diagram 52?"
 17 A. Right.
 18 Q. The answer she gave was:
 19 "The outlets being in the lobby -- and I'm fairly
 20 sure on this -- were a requirement of section 20 of the
 21 London Building Acts at the time. Terry is probably
 22 your man to clarify this for you."
 23 Is what she said.
 24 A. Right.
 25 Q. So I just want to ask you: in your view, is it correct

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1 that it was a requirement of section 20 of the London
 2 Building Acts that the fire main outlets should be in
 3 the lobbies as opposed to in the stair?
 4 A. That's totally correct.
 5 Q. Would you agree that the existing fire safety strategy
 6 should have addressed the impact on firefighting of not
 7 having the fire main outlet in the stair as required by
 8 the current design guidance?
 9 A. No, it comes back to what I said at some point
 10 yesterday, that this was an existing building and it
 11 would not be reasonable, just because a more recent code
 12 of practice suggested some other way of dealing with
 13 things, that we should modify the building in the way
 14 that you're suggesting.
 15 Q. And you don't think that that's something that could
 16 have been highlighted or should have been highlighted in
 17 the existing strategy, and then addressed and explain
 18 why that was nevertheless not a difficulty in this
 19 building?
 20 A. I don't think it should have been mentioned in her
 21 strategy, but I would like to say that this idea that
 22 the fire main outlet should be in the stair, there
 23 wasn't unanimity amongst this in the fire community, if
 24 I can use that word.
 25 Q. Yes.

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1 A. Because what it meant was, in operational terms, that if
 2 a fireman was fighting a fire in a flat, the door to the
 3 stair would be permanently open.
 4 Q. Right, yes.
 5 A. And a lot of people in the BSI, for example, didn't feel
 6 that that was a good idea.
 7 Q. Yes.
 8 A. So to change that, given that it would be
 9 an unreasonable thing to ask for in an existing
 10 situation, didn't make a lot of sense technically.
 11 Q. Yes, I see.
 12 SIR MARTIN MOORE-BICK: Well, I think the thrust of the
 13 question -- and it applies, I think, to other things as
 14 well -- is whether the fire safety strategy ought to
 15 identify changes in requirements since the date of
 16 construction of the building; in other words, to point
 17 out: "Well, it was supposed to be like this, but it's
 18 now supposed to be like that", and to highlight the
 19 distinction.
 20 A. Yeah, we could have put in a general narrative, and
 21 perhaps we should have done, saying, "This building was
 22 built in 1971 to a code of practice that was drawn up in
 23 1950", or wherever, "It must be recognised that the
 24 arrangements there don't meet current standards". And
 25 taking a lesson from that, I think if we came to do

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1 a similar development or partial redevelopment, we would
 2 put that in as an upfront statement.
 3 SIR MARTIN MOORE-BICK: Yes.
 4 MS GRANGE: Yes, thank you.
 5 Staying with Ms Cooney for a minute, can we go to
 6 {EX000000388}. This is an email we looked at yesterday
 7 from Ms Cooney to you on 10 September 2012, and she says
 8 in the very beginning:
 9 "As promised, my thoughts on the possible solution
 10 to Grenfell Tower: General fire line mark up attached to
 11 clarify ideas below."
 12 Then she has set out various ideas under different
 13 headings. We looked a lot yesterday at -- if we can
 14 scroll down to the end of this email, this is the one
 15 where she talks about, in the third from bottom
 16 paragraph, some fairly long protected entrance halls, we
 17 talked about that, and where she says in the next
 18 paragraph:
 19 "The existing ventilation system is questionable and
 20 the overall scheme theoretically makes the existing
 21 conditions worse ..."
 22 Et cetera.
 23 Just in terms of this email and how it came about,
 24 did Ms Cooney send you her thoughts on the possible
 25 solutions to Grenfell Tower because you asked her to do

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1 so?
 2 A. No, the opposite. I think she went further than
 3 I thought she would. But, I mean, all information is
 4 useful in pulling together a fire strategy for
 5 a building, so it wasn't unwelcome in that sense, but
 6 I didn't ask for it.
 7 Q. The follow-up question is: if she was sending you
 8 thoughts on the refurbishment fire strategy, did that
 9 not prompt you to think, "Well, I need her thoughts on
 10 how to finalise the existing fire safety strategy"?
 11 A. No, it didn't lead me to think that.
 12 Q. Did you ever ask Ms Cooney any questions about the draft
 13 existing fire safety strategy?
 14 A. No.
 15 Q. Did you ever discuss it with her at all?
 16 A. No, I didn't. I mean, I think that she enlarged on the
 17 concerns that she had about the three issues that we've
 18 talked about in this document.
 19 Q. Yes.
 20 A. So I had a summary of what her views were about the
 21 building in one page.
 22 Q. So does that explain why you didn't feel the need to
 23 discuss it with her?
 24 A. Yes, indeed.
 25 Q. Yes.

16

1 On another topic, I take it that you are familiar
 2 with Article 13 of the RRO 2005, which relates to the
 3 obligation on the responsible person to ensure that the
 4 premises are equipped with appropriate firefighting
 5 equipment, fire detectors and alarms?
 6 A. I am aware of that, yes.
 7 Q. I want to ask: what information did you seek from the
 8 responsible person -- ie records, past compliance
 9 notes -- in order to complete the outline fire safety
 10 strategy?
 11 A. Well, in -- generally speaking, fire appliances for use
 12 by the occupants are not provided in residential
 13 buildings, because you can't train residents of flats to
 14 tackle a fire, and indeed it might be dangerous for them
 15 to do so. So, broadly speaking, there are no fire
 16 extinguishers in apartment buildings.
 17 Q. I appreciate that, but there would be some equipment
 18 within the building which would be there for the purpose
 19 of firefighting, wouldn't there? The main, the dry
 20 rising main.
 21 A. Yeah, but those would be for use by the fire service.
 22 Now, in terms of the other parts of the building,
 23 I would have expected that there would be portable fire
 24 extinguishers for use by the occupants.
 25 Q. But my question is: did you seek any information at any

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1 stage from the responsible person in terms of records
 2 relevant to Article 13 of the RRO?
 3 A. No, because it wouldn't have had any impact on the
 4 fire strategy report that I was working on.
 5 Q. Did you ever have any communication with the responsible
 6 person?
 7 A. No.
 8 Q. Moving on, yesterday we discussed the email you received
 9 from Janice Wray, or you were forwarded an email from
 10 Janice Wray which, if you remember, had referred to the
 11 smoke control system not operating properly in
 12 a previous fire in the building in 2010; do you remember
 13 that?
 14 A. I do, yes.
 15 Q. I asked you why that hadn't caused you to update your
 16 fire strategy to note that there had been a previous
 17 fire.
 18 A. You mean the existing building fire strategy?
 19 Q. No, sorry, the refurbishment strategy.
 20 A. Well, I think you might ask the question: if there was
 21 a fire in 2010 and there was a criticism made about the
 22 smoke extract system, something would have been done
 23 about it by the responsible person then. Now, in terms
 24 of mentioning it in the fire strategy that I drew up,
 25 no, we made a clear statement in there that we were

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1 going to improve it.
 2 Q. I see.
 3 Were you aware, did anyone ever make you aware, that
 4 during the fire in 2010, the AOV system sent smoke from
 5 the 6th and then later the 9th floor to upper floor
 6 lobbies, to the 15th and 18th floor, during that fire?
 7 A. No. I had seen no documentation about that fire.
 8 Q. Did you ever ask --
 9 A. Other than the fact that there was an email which said
 10 that there was a fire.
 11 Q. Did you ever ask for any documentation relating to that
 12 fire?
 13 A. It wasn't really relevant to what I was doing.
 14 Q. Maybe I should have put to you that: well, it would
 15 certainly be relevant to the existing fire safety
 16 strategy, wouldn't it?
 17 A. Yes, but I wasn't dealing with the existing fire safety
 18 strategy.
 19 Q. I see.
 20 A. I mean, if you have a fire incident in a building like
 21 that and there are things that you mentioned like smoke
 22 spread from floor to floor via the automatic opening
 23 vents, then you would have expected the fire authority
 24 to have followed that up with the building owner or
 25 responsible person, but that doesn't seem to have taken

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1 place.
 2 Q. No, but that wasn't something that you thought to
 3 outline in your fire safety strategy, to make sure that
 4 it had been followed up, given there were residents in
 5 that building at the time and were going to be for
 6 several years before the system was refurbished?
 7 A. I didn't know that it had happened.
 8 Q. No. Well, you knew that there had been a fire in 2010.
 9 I think we established that yesterday.
 10 A. Yes.
 11 Q. You were sent that email. But is it right that you
 12 never requested any further details of what had happened
 13 in that fire or how serious --
 14 A. No, because it wasn't my responsibility to do that.
 15 That would have been a matter between the fire authority
 16 and the responsible person.
 17 Q. Had you known that, had you known that the
 18 malfunctioning of that system had been sending smoke
 19 from lower floors to upper floors, would that have
 20 rendered the stay-put strategy untenable and meant that
 21 mitigation ought to have been put in place in terms of
 22 evacuation?
 23 A. We couldn't have -- I don't -- well, in the first place,
 24 I didn't know about it; in the second place, I don't
 25 think you can alter a stay-put strategy just like that,

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1 because you need to do a number of things to make sure
 2 that that can function. For example, you would need to
 3 put in a fire alarm system to ensure that people would
 4 respond and make their escape.
 5 Q. I appreciate there might be steps that would follow from
 6 that if it was considered that actually the stay-put
 7 strategy wasn't tenable anymore, but wasn't it your
 8 responsibility to be flagging up that someone ought to
 9 be thinking about that?
 10 A. No, I don't believe it was. I believe that should have
 11 happened at the time, not two or three years later.
 12 Q. Okay.
 13 Just one final topic before we then pick up where we
 14 left off yesterday.
 15 We looked at a document, I just want to bring it up,
 16 {EX000000693}, which was an email of 18 September 2013.
 17 So if we scroll down within this document, I think it's
 18 on page 5 of this {EX000000693/5}.
 19 I showed this to you yesterday and I asked you
 20 whether the reference in blue and underlined meant that
 21 you were using a file -share link to send documents back
 22 to Studio E.
 23 It's been quite properly pointed out overnight that
 24 actually there is another version of this email. If we
 25 can look at that. That's {EX000000390}. If we look at

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1 the top of that, this is exactly the same email, it's
 2 another Exova reference, and I think I may have actually
 3 taken you to this later yesterday, but what we didn't
 4 pick up was that in the line attachments at the top, it
 5 looks like what you were sending back was actually three
 6 pdfs: "Grenfell GL.pdf", "Grenfell Mezz.pdf". Do you
 7 see that there?
 8 A. Yes, indeed.
 9 Q. So it does in fact appear that you were sending
 10 documents back attached to the email as pdfs rather than
 11 using a file -share link on that occasion.
 12 A. I wouldn't know how to use a file -share link even now.
 13 I mean, the standard way that I dealt with these was to
 14 print the drawings, annotate them, scan them and then
 15 send them back as pdfs.
 16 Q. Yes. Thank you.
 17 A. That might seem fairly simple, but it's fairly
 18 foolproof.
 19 Q. No, no, I understand, yes.
 20 Okay, so let's pick up, then, and we're moving
 21 forward in the chronology to September 2014, and I want
 22 to look at an exchange of emails which you had on that
 23 date concerning the external cladding at the tower.
 24 Can we go to {SEA00011705}. If we can start with
 25 the top email on this page, this is Mr Crawford of

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1 Studio E to you, copying in two Rydon personnel there,
 2 Simon Lawrence and Simon O'Connor. Do you see that
 3 there?
 4 A. Yes, indeed.
 5 Q. "Subject ... Grenfell Tower Cavity Fire Barriers."
 6 A. Yeah.
 7 Q. He says:
 8 "Hi Terry
 9 "I am working on the Grenfell Tower regeneration
 10 project from the Studio E end. The following RFI has
 11 come in relating to horizontal fire breaks within the
 12 cladding areas.
 13 "Can you comment on the RFI attached and whether you
 14 believe this interpretation in relation to stack effect
 15 is correct?
 16 "Regards
 17 "Neil."
 18 Do you see that there?
 19 A. Yes, indeed.
 20 Q. Is it right that RFI stands for request for information?
 21 A. It does.
 22 Q. That's how you understood it?
 23 A. Yeah.
 24 Q. So if we can go to that request for information, this
 25 appears at {HAR00003616}. If we blow up the top half of

23

1 this document, we can see at the top, it is to
 2 Simon Lawrence of Rydon from Daniel Anketell-Jones of
 3 Harley. It's dated 17 September 2014, and then we see
 4 lower down the query:
 5 "Please may you confirm the required extent of the
 6 horizontal firebreaks within the cladding areas?"
 7 A. Right.
 8 Q. Can you see there, there is a suggested solution:
 9 "We believe that they will be required at every
 10 floor level on the vertical columns, but not in the area
 11 of cladding between windows. This is because there is
 12 no 'chimney' effect here, and therefore the cladding
 13 will not add to the spread of fire."
 14 Do you see that?
 15 A. (Witness nods).
 16 Q. So that's the RFI that you have been forwarded by
 17 Mr Crawford.
 18 A. Yeah.
 19 Q. Then if we can go to your reply, this is at
 20 {RYD00018154}. I want to start on page 2
 21 {RYD00018154/2} of this email string with your initial
 22 reply. So if we can look in the second half of that
 23 page, this is an email you sent back at 11.33 on
 24 18 September, and you reply:
 25 "Neil

24

1 "I've never seen details of what you're doing to the
2 external walls. Do you have any
3 cross sections/elevations?"
4 "Kind regards.
5 "Terry."
6 Do you see that there?
7 A. Yes, indeed.
8 Q. Now, is it right that, up until this point, you had
9 given no substantive consideration whatsoever to the
10 cladding or the impact of the cladding on external fire
11 spread?
12 A. Correct.
13 Q. Can you explain how it came about that, despite
14 preparing three issues of the fire strategy, you still
15 didn't have the details of what they were doing with the
16 external walls until this point?
17 A. Well, I think we went through this in some detail
18 yesterday. I mean, they never sent me anything asking
19 me to comment on it.
20 Q. When you got this request from Mr Crawford to look at
21 this RFI, did this not ring alarm bells for you, given
22 what you had written in your previous fire strategies
23 about the B4 requirement being satisfied by the
24 proposals?
25 A. It didn't ring alarm bells because I had never seen any

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1 details of what we were proposing, and that's what
2 I said in my response.
3 Q. Did you look back at what you had written in your
4 fire strategies? I mean, this is September 2014, so
5 it's nearly -- it's not quite a year, but from your
6 third issue, which was November 2013, it's quite a few
7 months.
8 A. No, I didn't refer back. I mean, I think it's worth
9 pointing out that, September 2014, my belief was that we
10 were not really a fully paid-up member of the design
11 team, because Rydon were appointed in March, and we were
12 never approached by Rydon to work for them.
13 Q. I see.
14 A. And we did talk yesterday about why it was that we saw
15 fit to respond to these emails, and we did it because we
16 normally do that if it's limited in extent.
17 Q. Yes. And I think --
18 A. Even though we consider ourselves not to be working on
19 the project.
20 Q. I think what we established is what we don't see in
21 these emails is you saying to Mr Crawford, "Well, why
22 are you asking me? We're not engaged anymore. If you
23 want our advice" --
24 A. Yeah, well, I did hint at that yesterday, I did say that
25 we would have been entitled to say, "We are no longer

26

1 employed on this project, why are you asking me those
2 questions?", but I didn't see fit to do that.
3 Q. Yes.
4 A. That wasn't entirely because we felt generous towards
5 them, but, you know, if you refuse to help people when
6 they ask you questions, it might be seen that you're not
7 being very professional.
8 Q. Yes.
9 Now, in fact, your reply, "I've never seen details
10 of what you're doing to the external walls", it may be
11 that you had not seen them, but as we established
12 yesterday, you had in fact been sent details.
13 A. Not direct.
14 Q. Well, there was the stage --
15 A. We were sent a link to the stage C report.
16 Q. Yes, and you had attended meetings in which cladding had
17 been discussed, including zinc rainscreen cladding.
18 A. No. No, I don't remember -- as I said earlier, I don't
19 remember cladding ever being discussed at meetings that
20 I attended.
21 Q. Now, Neil Crawford replies to you on 18 September, the
22 same day, at 12.18. Can we go to that. I've got
23 a different reference for that. Let's go to the
24 different reference. I think I'm going to follow my
25 notes here: {EX000000709}. This is Mr Crawford's

27

1 response at 12.18. He says:
2 "Hi Terry
3 "Please see attached our sections and the initial
4 drawings set we have from Harleys. The initial drawings
5 from Harleys are fairly limited but they attempt to
6 establish the basic approach."
7 Can you see there -- yes, the reason I have gone to
8 this email is that you can see there are various
9 attachments clearly that are sent with that email. Do
10 you see that?
11 A. I do, yes.
12 Q. One of those is a drawing called "1279 SEA (06) 120",
13 the first one. Do you see that?
14 A. Yes.
15 Q. Now, if we can look at what you say at paragraph 5.17 of
16 your witness statement, this is at {EX000001621/15}, in
17 that last sentence when you are dealing with this email,
18 you say:
19 "These were large scale drawings which showed zinc
20 outer cladding but did not specify the materials to be
21 used for insulation."
22 Do you see that?
23 A. Yes, I do.
24 Q. I just want to look at that drawing. If we can go to
25 it -- and we will need the native version -- this is

28

1 {EX000000710}. If we can, what I want to do is look at
 2 the labels on the left-hand side of those sections.
 3 Perhaps we can look at the top of the page, and zoom in.
 4 They're quite small, Mr Ashton, but -- that's better,
 5 thank you.
 6 So can you see that we get various labels here, and
 7 we can see that at the top there it says "H92 Zinc
 8 composite rainscreen panel and framing system to eills",
 9 can you read that?
 10 A. I can, yes.
 11 Q. If we keep going down, we should see one labelled
 12 H92/776.
 13 Yes, there, three labels up from the bottom, there's
 14 H92/776, "Thermal insulation". Do you see that?
 15 A. I do.
 16 Q. Did you understand when you got these drawings what
 17 these little labels in circles were referring to?
 18 A. Well, I assume that they were various components of the
 19 cladding system.
 20 Q. Yes. So, I mean, had you seen similar references, like
 21 H92, in other projects, or P10?
 22 A. No, no, it didn't mean anything to be honest.
 23 Q. So you didn't understand that that related to the
 24 employer's requirements in the NBS specification for the
 25 project?

29

1 A. No. No. And may I say, I didn't look at these drawings
 2 in any great detail; I just noted that the outer
 3 material seemed to be zinc, and that the insulation
 4 wasn't defined at that stage.
 5 Q. I see, so you noted that much.
 6 A. Oh, yes.
 7 Q. Why didn't you look at the drawings in any great detail?
 8 A. Because, as I said earlier, we were no longer part of
 9 the design team, we hadn't been employed by Rydon, and
 10 so I wasn't spending a lot of time on this.
 11 Q. Did you ever make that clear to Studio E?
 12 A. No.
 13 Q. No, you didn't ever say, "By the way, I'm not spending
 14 much time on this, you need to understand that"?
 15 A. No, I didn't make that clear to them, no. But, as
 16 an overall impression, we have a building which is going
 17 to be clad with zinc, with some aluminium elements, such
 18 as window flashings, and there was some insulation,
 19 which I would expect to see, but it wasn't specified as
 20 whatever it was, it was just insulation.
 21 Q. But you didn't think to ask for more details?
 22 A. No. I think it comes back to the fact that I wasn't
 23 employed by Rydon, and therefore I didn't feel that
 24 I was obliged to spend a lot of time on this.
 25 Q. Yes. Just to be clear -- I think I know what your

30

1 answer is going to be, but I want to just check with
 2 you -- did you ever see any employer's requirements or
 3 the NBS specification at any stage on the Grenfell
 4 project?
 5 A. No. I mean, that's an interesting question because
 6 employer's requirements are normally provided at the
 7 beginning of a development, not towards the end, because
 8 if you're drawing up a fire strategy for a building, you
 9 need to know what the employer's requirements are, and
 10 I never saw them on this job.
 11 Q. Did you ever ask to see the employer's requirements?
 12 A. No. And had I done so at the time that I produced the
 13 first report, they wouldn't have been available, it
 14 would appear.
 15 Q. Just to be clear, when you looked at these drawings sent
 16 to you, was this the first time that you had looked at
 17 Studio E's design and specification for the cladding
 18 system?
 19 A. Well, I was given to understand these were Harley
 20 drawings, not Studio E drawings.
 21 Q. I see, yes.
 22 A. And it was the first time, yes.
 23 Q. Can we then turn to your reply to the email you were
 24 sent then by Mr Crawford. {EX000000708}. It's on the
 25 same day, and if we can zoom in to the top box, and this

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1 is at 15.32. You say:
 2 "Neil
 3 "If the insulation in the cavities behind the
 4 rainscreen cladding is combustible you will need to
 5 provide cavity barrier as shown on your drawing (number
 6 1279 (06) 120) ..."
 7 That's the one we were just looking at.
 8 A. Indeed.
 9 Q. "... in order to prevent fire from spreading from one
 10 flat to the one above even if there isn't a continuous
 11 cavity from the top to the bottom of the building.
 12 "Kind regards
 13 "Terry."
 14 Do you see that?
 15 A. I do.
 16 Q. Now, I just want to take this response in stages.
 17 First of all, what do you mean by, "If the
 18 insulation in the cavities behind the rainscreen is
 19 combustible"?
 20 A. Well, as I said yesterday, there were systems around
 21 which employed combustible insulation, but which had
 22 been validated for use by test to BS 8414 and therefore
 23 satisfied BR 135. So -- and there must be a number of
 24 buildings in the country which still have combustible
 25 cladding which is endorsed in that way by test evidence.

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1 Q. You have said there, "If the insulation in the cavities
2 is combustible"; did you think to ask for the
3 specification for the insulation to check that point?
4 A. No. No, I didn't.
5 Q. Why not?
6 A. I wanted to deal with this in a light way because
7 I wasn't working on the project full-time.
8 Q. I see.
9 What was the reaction to fire performance
10 requirement for insulation in Approved Document B for
11 buildings over 18 metres at this time?
12 A. Well, if you were going the linear route, as Studio E
13 described it, which is a term I don't understand, you
14 would have to use materials of limited combustibility.
15 However, if you were using a tested system, you wouldn't
16 have to do that.
17 Q. So under paragraph 12.7 of the ADB, the insulation
18 should be of limited combustibility in a building
19 greater than 18 metres.
20 A. Yes.
21 Q. What did you understand the term "limited
22 combustibility" to mean at the time?
23 A. Well, it's a firm -- sorry, it's a term that's defined
24 in Approved Document B, and broadly speaking it's --
25 historically it was introduced so that plasterboard

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1 wasn't deemed to be a combustible material, bearing in
2 mind that plasterboard has a non-combustible core but is
3 faced both sides with paper or cardboard. So it was
4 an artificial definition produced by the DoE at the
5 time. Now --
6 Q. And --
7 A. Sorry, please go on.
8 SIR MARTIN MOORE-BICK: No, you finish your answer.
9 A. Well, I pretty well have. Yes, I have, thank you.
10 MS GRANGE: Is it right that that definition was by
11 reference to certain fire testing?
12 A. It included materials which had been tested to various
13 parts of the British Standard, yes, indeed.
14 Q. Yes.
15 Now, if you were aware that, under paragraph 12.7,
16 the insulation should be of limited combustibility, then
17 why were you asking whether the insulation was
18 combustible?
19 A. I wasn't asking; I was saying if it was combustible, you
20 would need to provide cavity barriers.
21 Q. Can you explain why you didn't immediately draw
22 Mr Crawford's attention to the fact that the insulation
23 must be of limited combustibility if following ADB
24 paragraph 12.7?
25 A. I didn't know which route they were taking.

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1 Q. Why didn't you ask?
2 A. Because, as I said earlier, I wasn't -- didn't feel
3 obliged to do a lot of work on this given that we were
4 not part of the design team.
5 Q. Would you agree, looking at this now, this email, that
6 it appears to suggest that combustible insulation is
7 permissible as long as there are cavity barriers?
8 A. It could be interpreted that way, yes, I agree.
9 Q. Is that how you meant the email to be read?
10 A. Yes, I think so. I mean, I didn't know what insulation
11 they were using. I didn't know whether they were going
12 compliance with ADB or whether they were going to use
13 a system which had been tested.
14 Q. But given you didn't know, it wasn't the correct advice
15 to give, was it, to say or to suggest that if the
16 insulation is combustible, it's permissible as long as
17 there are cavity barriers?
18 A. I could have worded it better, I concede that.
19 Q. Do you agree that, as at 18 September, you had not been
20 provided with any information suggesting that the
21 proposed cladding system that Studio E or Harley were
22 proposing to use had been tested to BS 8414 or otherwise
23 shown to meet the performance criteria in BR 135?
24 A. I hadn't been given any information at all about the
25 cladding, or the insulation for that matter.

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1 Q. Did it not occur to you at this point to advise Studio E
2 about the risks of using combustible insulation in
3 a cladding façade?
4 A. I didn't feel that that was my job at this stage of the
5 project.
6 Q. I mean, I just want you to think about the warning that
7 is in Approved Document B at 12.5 that the use of
8 combustible materials in the cladding system may present
9 a risk to health and safety. Did you not think, with
10 reference to that very clear warning, that you ought to
11 be giving that warning to the design team on this
12 project?
13 A. No, I think if -- I think it comes back to what I was
14 saying yesterday, which is that because of the very
15 onerous requirements of the thermal regulations,
16 designers are forced to use more thermally efficient
17 insulation, and at that time there were -- there was
18 a lot of work going on, making highly efficient
19 plastic-type materials compliant in order to minimise
20 the amount of insulation provided on the external walls
21 of buildings.
22 If you were restricted to using mineral wool, which
23 is effectively the only alternative, the thickness of
24 your external wall would be quite significant. That's
25 why there was a lot of work going on at seeing if other

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1 materials that had better thermal properties than
 2 mineral wool could be used, and they were having it
 3 tested on a regular basis.
 4 Q. Do you agree, looking at this now, that you ought to
 5 have ensured that the design team was fully and properly
 6 advised as to the risks of using combustible insulation
 7 in the system and the requirements or the guidance in
 8 Approved Document B, in particular at 12.5 and 12.7?
 9 A. No, I think that the designers should have been aware
 10 themselves of the need to comply with the
 11 Building Regulations and the guidance documents that
 12 they -- are published in support of those regulations.
 13 If this issue had come up at a time when I was
 14 a fully paid-up member of the design team, then all of
 15 these things would have been discussed in much more
 16 detail.
 17 Q. Yes.
 18 A. I'm being asked to comment on things when we have
 19 effectively left the design team, and only in little
 20 bites of information, not the full picture.
 21 Q. Did you appreciate at that time that that was quite
 22 a risky thing to be doing, to be advising piecemeal
 23 without full details on something as important as
 24 an external wall, given the effect it could have on
 25 compartmentation?

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1 A. Arguably it's a risky thing for the architect to do as
 2 well.
 3 Q. But I'm asking you whether you appreciated at the
 4 time --
 5 A. Asking me something -- a question which is not supported
 6 by a sufficient level of detail.
 7 Q. Just going back to the answer that you have given there,
 8 you have recognised that combustible insulation would
 9 permit the spread of flame upwards from one flat to
 10 another. Do you see that there?
 11 A. Yes. Yeah.
 12 Q. Can you explain why you have suggested that the need for
 13 cavity barriers depends on there being combustible
 14 insulation?
 15 A. I'm not quite sure that I'm saying that. Cavity
 16 barriers are required irrespective of the combustibility
 17 or otherwise of the insulation. The regulations are
 18 quite clear: you have to provide cavity barriers at the
 19 junction of all compartment walls and compartment floors
 20 with the external walls.
 21 Q. Yes, quite, but can you see, reading this now, where you
 22 said:
 23 "If the insulation in the cavities behind the
 24 rainscreen is combustible [if] you will need to provide
 25 cavity barrier as shown on your drawing ..."

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1 Do you see that? Can you see that it seems to make
 2 it contingent, the cavity barriers, on there being
 3 combustible insulation?
 4 A. If it's read that way, then it wasn't meant to read that
 5 way, and I concede that it could have been more clearly
 6 worded.
 7 Q. Yes.
 8 It's right, isn't it, that Approved Document B
 9 recommended that cavity barriers were provided around
 10 the windows and also at the head of the cladding system
 11 regardless of whether the insulation was combustible?
 12 A. That was the requirement or recommendation in the
 13 approved document, yes, I agree.
 14 Q. So even if the insulation was of limited combustibility,
 15 isn't it right that cavity barriers were still required
 16 to be provided if following that guidance?
 17 A. If you followed that guidance to the letter, yes, that's
 18 correct.
 19 Q. At this time, were you aware of paragraph 12.8 of
 20 Approved Document B, which required cavity barriers to
 21 be installed in accordance with section 9 of Approved
 22 Document B?
 23 A. Yes, I was aware of that.
 24 Q. And were you aware that to comply with section 9 and, in
 25 particular, diagram 33, cavity barriers are required

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1 around all openings in the external walls, ie around all
 2 window openings, at the head and top of the external
 3 wall and at the junction of compartment walls and
 4 floors?
 5 A. Yes. Yes, I was aware.
 6 Q. Those cavity barriers are all required, just to be
 7 clear, irrespective of the reaction to fire performance
 8 of the insulation; do you agree?
 9 A. I do agree.
 10 Q. Given that, why do you not recommend cavity barriers at
 11 the window openings or at the top of the external walls?
 12 A. That wasn't the question I was being asked, I don't
 13 think.
 14 Q. Can we just go back to the drawing that you looked at.
 15 You appear to have looked at it, because in the email
 16 you say "you will need to provide cavity barrier as
 17 shown on your drawing", so it does appear that you
 18 looked at this drawing at the time.
 19 A. Very briefly, yes.
 20 Q. Can we go back to that drawing, the native version,
 21 {EX000000710}. I want to zoom in on that top section
 22 again as much as we can.
 23 Now, the point I want to put to you is that the
 24 horizontal cavity barriers in this drawing are not
 25 placed around the window frames but only in between the

40

1 windows. So in this section, for example, there's
 2 nothing shown at cill level, is there? Can we see that
 3 at the bottom of the page? There is no cavity
 4 barrier --
 5 A. Maybe the drawing needs to go up a bit so I can see the
 6 bottom. There is a cavity barrier which is in the same
 7 horizontal plane as the floor.
 8 Q. Yes.
 9 A. Yeah.
 10 Q. But can you see the window frame above that? There is
 11 no cavity barrier, there is no label for a cavity
 12 barrier, at the cill of the window, at the bottom of the
 13 window.
 14 A. I can see that now, yes, but as I said to you earlier,
 15 I didn't look at this drawing in any great detail.
 16 Q. So when you were advising that they would need to
 17 provide the cavity barriers as shown in this drawing,
 18 were you just talking about the cavity barrier you can
 19 see and you didn't think about whether or not other
 20 cavity barriers ought to be there as well?
 21 A. No, that's right.
 22 Q. Again, can you explain why you advised in that way?
 23 A. I can't really add to what I said earlier, which is that
 24 I didn't give these drawings much attention, I just
 25 wanted to know in broad terms what they were doing.

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1 I wasn't asking for full constructional details in order
 2 for me to do hours and hours of work which I was not
 3 entitled to be paid for.
 4 Q. Were you aware of the importance of cavity barriers
 5 around the windows --
 6 A. Yes.
 7 Q. -- in terms of preventing fire spread from the
 8 compartment into the cavity and then into the system?
 9 A. Yes, we did have a little bit of a discussion about this
 10 yesterday. You definitely need cavity barriers at the
 11 junction of walls and compartment floors. There is some
 12 debate about the efficacy of cavity barriers around
 13 window openings where you have effectively got cavity
 14 barriers on all four sides.
 15 However, I concede that that is not what the
 16 approved document says.
 17 Q. No, diagram 33 is very clear, isn't it?
 18 A. Absolutely.
 19 Q. Why didn't you give detailed advice to Mr Crawford as to
 20 the required location of cavity barriers in accordance
 21 with the requirements of Approved Document B?
 22 A. I'm sorry if this is going to sound repetitive: we
 23 weren't really charged with helping them in this way.
 24 We weren't part -- we weren't employed by Rydon.
 25 Q. Does it follow that you didn't think it was part of your

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1 role, when you were responding to this email, to be
 2 stating that the drawings did not comply with Approved
 3 Document B because they didn't have cavity barriers at
 4 the window openings?
 5 A. No, I didn't see that to be my function at all.
 6 Q. And these drawings don't show cavity barriers at the top
 7 of the external wall either. If we zoom out, we see the
 8 top, on the right-hand side of this drawing -- we were
 9 looking at the left.
 10 A. Right.
 11 Q. And there is no cavity barrier at the top of the
 12 building; do you see that?
 13 A. There's not one that's labelled, but there's one,
 14 looking at it now which could be --
 15 Q. There's one at the top of that window, but I'm talking
 16 higher up. Shouldn't there have been one higher up at
 17 the very head of the cladding system?
 18 A. I can't answer that now. I mean, if I had been asked to
 19 look at these in detail some time earlier in the design
 20 procedure, then I would have gone over them with
 21 a fine-tooth comb.
 22 Q. Okay.
 23 Later that same day, so staying with
 24 18 September 2014, Neil Crawford sent you another email.
 25 Can we go to that at {SEA00011724}, and I want to look

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1 at the top of page 1.
 2 So just looking at that very first email at the top,
 3 so this is now at 4.07 in the afternoon, and then he
 4 says:
 5 "Terry
 6 "Is this interpretation correct (see below)?
 7 "Regards
 8 "Neil."
 9 Then if we can look at the email directly below,
 10 it's from Daniel Anketell-Jones to Mr Crawford, copying
 11 in Rydon and Kevin Lamb as well.
 12 A. Right.
 13 Q. "Subject ... Grenfell Tower Cavity Fire barriers."
 14 "Neil
 15 "Thank you for your response.
 16 "The insulation is class O... Therefore after
 17 reading the correspondence below; I believe that the
 18 fire barrier in these locations, will not be necessary.
 19 "Can you confirm that this is acceptable?"
 20 So this is a debate that's going on within the
 21 design team about whether --
 22 A. Right.
 23 Q. -- a further fire barrier is necessary, and he has said
 24 there the insulation is class O; do you see that there?
 25 A. Yes, I do.

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1 Q. Now, we can also see from the top email, when
 2 Neil Crawford emails you forwarding this on, he attaches
 3 a "Rainscreen cladding product datasheet aug14.pdf". Do
 4 you see that there?
 5 A. I see there is an attachment, yes.
 6 Q. I want to just go to that attachment. This is at
 7 {RYD00018155}. This is, if we zoom in to the top half
 8 of this, the Celotex RS5000. In the very top right-hand
 9 corner, there is actually a date, which I can't now see
 10 on the screen. Yes, "Issue 1, August 2014"; do you see
 11 that there?
 12 A. Yes, indeed.
 13 Q. So this is the Celotex RS5000 datasheet for a premium
 14 rainscreen cladding board, and it says there it is:
 15 "... our premium performance PIR solution for use in
 16 rainscreen cladding systems."
 17 I will come back and ask you some questions about
 18 this datasheet, but before I do, I want to follow
 19 through what happened with the emails before I ask you
 20 a number of questions.
 21 I want to go to your response to Mr Crawford's email
 22 where he asks for advice on Mr Anketell-Jones'
 23 interpretation. If we can go to that at {EXO00001430},
 24 this is 16.21, so a little bit later in the afternoon,
 25 you respond to Mr Crawford:

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1 "Neil
 2 "A material which has a Class 0 rating is not
 3 necessarily non-combustible although the reverse is
 4 invariably true. Some Class 0 products will burn when
 5 exposed to a fully developed fire. In any case, you
 6 need to prevent fire spread from [one] flat to the flat
 7 above as I stated in my earlier email. What isn't clear
 8 from the information to hand is whether or not there is
 9 a continuous cavity from top to bottom in any part of
 10 the cladding (apart from around the column casings)
 11 irrespective of the type of insulation?
 12 "Kind regards
 13 "Terry."
 14 A. Right.
 15 Q. Do you see that? Now, again, I want to ask you a number
 16 of questions about this exchange.
 17 First of all, do you recall reading the datasheet
 18 for the insulation which Mr Crawford had forwarded to
 19 you?
 20 A. No, I didn't open the attachment.
 21 Q. Do you know --
 22 A. Why would I? I mean, I didn't see the need to open the
 23 attachment.
 24 Q. Why not?
 25 A. Well, I was just dealing with an exchange of emails

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1 about whether a class 0 material is -- means you don't
 2 need to have cavity barriers.
 3 Q. Wouldn't it be important to open the attachment, look at
 4 the datasheet, so you can see exactly what type of
 5 insulation it is?
 6 A. This is down to communication. I think I assumed that
 7 if I needed to look at it, Neil would have said, "Please
 8 see the attached and the datasheet attached". He
 9 didn't. He just asked me a question about whether,
 10 you know, you needed cavity barriers because of the fire
 11 performance of the material.
 12 Q. Well, he has asked you about whether Mr Anketell-Jones'
 13 interpretation is correct. He says the insulation is
 14 class 0, and they have forwarded to you the datasheet so
 15 you have got the information on the insulation. Wasn't
 16 it patently clear that you needed to open that
 17 attachment and then respond?
 18 A. No, it wasn't clear to me that that was what I needed to
 19 do.
 20 Q. Were you familiar with the Celotex RS5000 product at
 21 this time? So this is September 2014. It was actually
 22 launched in August 2014, as per the datasheet. So it
 23 was only launched a month before, but were you aware of
 24 the Celotex RS5000 product?
 25 A. I was aware that there was a product called Celotex.

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1 I've not actually investigated or not had cause to
 2 investigate it for any particular application.
 3 Q. How long had you been aware? Because we know there had
 4 been another product called FR5000, which in fact is the
 5 same product but they then marketed it differently. How
 6 long had you been aware of the Celotex insulation
 7 product?
 8 A. It's difficult to put a time on it.
 9 Q. Did you know what type of insulation it was?
 10 A. Well, I knew it was PIR foam, which is polyisocyanurate
 11 or polyurethane foam.
 12 Q. Did you know --
 13 A. It doesn't mean -- these foam products had been around
 14 for a long while. As I referred to yesterday, they were
 15 used in insulation to fast food factories and the like.
 16 Q. Did you know its reaction to fire performance?
 17 A. No, I didn't.
 18 Q. Were you aware that there might be an issue about how
 19 a PIR insulation would perform in an external cladding
 20 system?
 21 A. Yes. Yes, of course I was aware of that, but I wasn't
 22 aware they were using it here.
 23 Q. Now, in your first witness statement you said at
 24 paragraph 5.20 {EXO00001621/16} that you do not remember
 25 seeing the datasheet.

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1 A. That's right, because I didn't open the attachment.
 2 Q. So you just didn't open the attachment?
 3 A. No.
 4 Q. That's what I just wanted to clarify.
 5 A. Yeah.
 6 Q. So you didn't take any information away from that
 7 datasheet at all?
 8 A. No.
 9 Q. Can you explain to us, with reference to your email and
 10 discussion of class 0, how class 0 is relevant to
 11 insulation products in an external rainscreen system?
 12 A. It isn't really relevant. I mean, if you're looking at
 13 Approved Document B, what it says -- and I summarise
 14 it -- is that insulation must be of limited
 15 combustibility and the external wall finished outer
 16 surface must be class 0.
 17 Q. If it isn't really relevant, why didn't you respond
 18 saying exactly that, saying, "I'm sorry, class 0 is not
 19 relevant to an insulation product and whether it should
 20 be on an external wall"? It wouldn't be relevant
 21 whether you were following Approved Document B or the
 22 full fire test route, would it?
 23 A. I didn't know at that time what insulation they were
 24 using. In fact, I didn't know until after the fire had
 25 taken place. But they were saying, "If we've got

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1 a material that is class 0, we don't need cavity
 2 barriers", in effect, and I'm saying "Oh, yes, you do".
 3 Q. I see, so you just took it at face value that it was
 4 a material with class 0 and you responded to that narrow
 5 question?
 6 A. Yes, I dealt with it in a narrow way, for the reasons
 7 I've given earlier. At this stage of the development of
 8 the building, I was not really fully engaged. I was not
 9 really engaged at all.
 10 Q. Again, my question is the same as before: why didn't you
 11 immediately refer to paragraph 12.7 of ADB and explain
 12 that the insulation needed to be of limited
 13 combustibility if following that guidance?
 14 A. Well, I think I've already answered that question. We
 15 weren't --
 16 SIR MARTIN MOORE-BICK: Mr Ashton -- sorry, carry on.
 17 A. We weren't part of the design team. I mean, what are
 18 the obligations on somebody who has stopped working on
 19 a project to carry on as if nothing had happened?
 20 SIR MARTIN MOORE-BICK: Well, Mr Ashton, that rather feeds
 21 into what I wanted to ask you.
 22 A. Okay.
 23 SIR MARTIN MOORE-BICK: Which is this: if you had regarded
 24 yourself as still part of the design team, would you
 25 have responded in a different way?

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1 A. Yes, I would have probably spent more time looking at
 2 the drawings and literally looking at it in much more
 3 detail.
 4 SIR MARTIN MOORE-BICK: And the attachment, would you have
 5 opened the attachment?
 6 A. I might have done but, you know, I wasn't part of the
 7 design team and that was the way I felt my status was
 8 with regard to the project.
 9 SIR MARTIN MOORE-BICK: Yes, I understand that.
 10 If you're asked a question on an ad hoc basis, so
 11 you're not part of the design team but for commercial
 12 reasons you are willing to respond to questions, is
 13 there any reason why you shouldn't be expected to
 14 respond in a fully professional manner?
 15 A. No. No, there isn't a reason why we shouldn't do that.
 16 SIR MARTIN MOORE-BICK: So you would expect to do that?
 17 A. I would expect to do that, yes, that's fair comment.
 18 SIR MARTIN MOORE-BICK: Would there be any difference
 19 between responding in a professional manner to an ad hoc
 20 question and responding in a professional manner as part
 21 of the design team?
 22 A. Well, I think that's a difficult question to answer,
 23 because if you're not part of the design team, you're
 24 not really obligated to give them any answer at all,
 25 which is something I said yesterday, I think. With the

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1 wisdom of hindsight, maybe I should have said to
 2 Studio E, "Look, I'm no longer part of the design team,
 3 please stop sending me technical queries".
 4 SIR MARTIN MOORE-BICK: Well, I do understand that, and
 5 I can see the force of what you say, that you could have
 6 responded by saying, "It's not part of my responsibility
 7 to answer these questions". But once you do agree to
 8 answer the questions, I'm just wondering whether there
 9 is any real difference between one's professional
 10 obligations as a member of the design team and one's
 11 professional obligations in answering questions on
 12 an ad hoc basis.
 13 A. Probably not. Put in those terms, probably not.
 14 SIR MARTIN MOORE-BICK: Okay. Thank you very much.
 15 Yes, Ms Grange.
 16 MS GRANGE: Yes, just a couple of follow-up questions on
 17 that.
 18 Had you been part of the design team, would you have
 19 advised that the insulation needed to be of limited
 20 combustibility, do you think?
 21 A. Or tested, yes, indeed.
 22 Q. That's a very simple, easy thing for you to advise,
 23 isn't it? It didn't require detailed research.
 24 A. No.
 25 Q. You knew that, did you, at the time?

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1 A. Yes.
 2 Q. So it wasn't something that was going to take you a lot
 3 of extra time, was it, to go and research?
 4 A. Not necessarily research, just tell them that it needed
 5 to be of limited combustibility or justified by test
 6 data. That's a sentence which I could have added,
 7 I agree.
 8 Q. Is it right that at this time you're still recording
 9 your time and assuming you're going to be billing for
 10 the work? Is that correct?
 11 A. Not necessarily anticipating billing, but certainly
 12 recording my time, that's part of -- you know, you have
 13 to record what you spend your time on, on a timesheet.
 14 Everybody does that.
 15 Q. I think what Exova do -- we will look at this later --
 16 is they still have some headroom in their stage D/E fee,
 17 so it just gets added to that in the end, and you never
 18 reach the limit of that stage D/E fee. Was that your
 19 understanding?
 20 A. I think that's correct, yes.
 21 Q. Did you ever at any stage on the project give any
 22 consideration as to whether or not Celotex RS5000 was
 23 a suitable insulation product to be used on the tower?
 24 A. No, because I didn't know it was being used.
 25 Q. Did it occur to you to -- forget whether you opened the

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1 Celotex datasheet -- quickly look up the product,
 2 research it yourself, or even approach Celotex directly
 3 and find out what type of insulation it was?
 4 A. I'm sorry, as I just said, I didn't know they were using
 5 Celotex on the building.
 6 Q. Do you agree that if a product is of limited
 7 combustibility, it will typically be marketed as such?
 8 So take Rockwool, for example. Do you agree that
 9 normally they'll expressly say in the marketing
 10 material, "This is of limited combustibility"?
 11 A. Oh, yes, and I would expect them to say a bit more than
 12 that, "It's suitable for use in high-rise buildings",
 13 and so on, and what tests it had been tested under, and
 14 so on. It would be quite a fairly comprehensive
 15 description. Because if you try and market a material
 16 as being of limited combustibility, people wouldn't
 17 understand it.
 18 Q. Yes.
 19 In your second statement at paragraph 2.3
 20 {EX000001775/2} you say that had it been suggested that
 21 the insulation was Celotex, you would have raised doubts
 22 about that, and you said something similar yesterday in
 23 oral evidence {Day17/96:1}, you said:
 24 "If I had been told that they were using Celotex,
 25 I would have said that that is not acceptable without

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1 test evidence that it is suitable for use on that
 2 building."
 3 I'm suggesting to you now that effectively you were
 4 told that they were using Celotex; you were sent the
 5 datasheet.
 6 A. No. I mean, I think this is in the same sort of
 7 category as sending me a link to a stage C report but
 8 not asking me to look at it and comment on it.
 9 Q. Now, in your reply, just looking at it, you say:
 10 "A material which has a class 0 rating is not
 11 necessarily non-combustible ..."
 12 Can you help us -- I know you touched on this
 13 yesterday -- precisely what your understanding is of the
 14 meaning of class 0?
 15 A. I couldn't give you the precise definition in Approved
 16 Document B but, as I said earlier this morning, it was
 17 an artificial term composed by the DoE to ensure that
 18 plasterboard was not put at a commercial disadvantage
 19 because it had cardboard facings. That's the background
 20 to it. So it's a sort of artificial definition, if you
 21 like.
 22 I mean, I'm not aware of any materials of limited
 23 combustibility other than non-combustible materials.
 24 You know, mineral wool. It is probably the only
 25 material you can use with confidence in the sort of

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1 situation that we're talking about, unless you happen to
 2 have had your system tested and validated for use on
 3 high-rise buildings.
 4 Q. When you state there in the second line:
 5 "Some Class 0 products will burn when exposed to a
 6 fully developed fire."
 7 Which class 0 products were you meaning to refer to
 8 there?
 9 A. I couldn't be specific. I mean, some will. If they're
 10 mineral wool, they will have a class 0 rating but it
 11 won't burn.
 12 Q. You weren't aware at the time, were you, whether
 13 Celotex RS5000 was non-combustible or whether it was, in
 14 your words, a product which will burn when exposed to
 15 a fully developed fire?
 16 A. I think I knew that Celotex was isocyanurate foam, which
 17 is not a non-combustible material.
 18 Q. Just moving on within this email, there is a lot of
 19 detail in here, why do you ask whether there is
 20 a continuous cavity apart from around the column
 21 casings? Did you believe that such a cavity within the
 22 column casings would have been permissible?
 23 A. I was just asking whether there was one or not.
 24 Q. And you weren't curious to see the full details of the
 25 drawing so you could see more information about the

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1 cavities and whether they were continuous in certain
 2 locations?
 3 A. No.
 4 Q. Would you agree that you are not in a position to
 5 provide comprehensive advice without full details of the
 6 cladding system and the design and should not have
 7 sought to give that advice without having that?
 8 A. No, I was answering a fairly simple question and I felt
 9 able to answer that without being in full knowledge of
 10 what was going on. The specific question was: do we
 11 need to have cavity barriers if the material we're using
 12 is a class 0 rating? And the answer is you still do.
 13 Now, maybe I should have just stopped at that.
 14 Q. Did you not think there was an immediate need to correct
 15 Harley's interpretation that all they needed to be
 16 concerned about was whether or not it was class 0?
 17 A. I thought I did by this response.
 18 Q. You also say you need to prevent fire spread from one
 19 flat to the flat above. Where is that requirement taken
 20 from? What were you thinking of when you said that?
 21 A. Approved Document B.
 22 Q. And any particular part of it?
 23 A. Well, it's the provision of cavity barriers that's in
 24 B -- in section 13 of Approved Document B.
 25 Q. Yes.

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1 A. Where you need them.
 2 Q. Yes.
 3 A. I mean, it's very difficult to give a two or three-page
 4 answer to every -- what I regarded as fairly minor
 5 technical questions.
 6 Q. Did you ever think about approaching other experts in
 7 Exova to help you when advising on these topics?
 8 A. I didn't think I needed to.
 9 Q. I mean, this goes into my next question, which is: did
 10 you feel that you were appropriately qualified and had
 11 the right expertise to be advising on these issues?
 12 A. Do you mean the totality of the issues that they raised
 13 or just this particular one?
 14 Q. This particular string, so back to the RFI and then
 15 being asked about the insulation is class 0 and cavity
 16 barriers; did you feel that you were appropriately
 17 qualified to give the right advice about these
 18 questions?
 19 A. Yes, I did feel suitably qualified.
 20 Q. Going back to your answer earlier, you said, "If I had
 21 been asked the specific question: is it okay to use
 22 Celotex RS5000, then I might have answered in
 23 a different way".
 24 Were you qualified and experienced to advise on the
 25 use of Celotex RS5000? If you had been asked to advise

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1 on that specific product, would you have thought you
 2 were able to or would you have referred it to other
 3 experts within Exova?
 4 A. No, I think I would have been able to do it on my own.
 5 Q. Now, you're asking a question at the end. You're
 6 saying:
 7 "What isn't clear from the information to hand is
 8 whether or not there is a continuous cavity from top to
 9 bottom in any part of the cladding ... irrespective of
 10 the type of insulation?"
 11 Can you recall, we can't find any evidence of this,
 12 but did Mr Crawford or Mr Anketell-Jones ever get back
 13 to you regarding the extent of the external wall cavity
 14 as you requested?
 15 A. No, I don't think they came back at all.
 16 Q. And you didn't think to chase for a response?
 17 A. No, the last statement in there was intended to be
 18 helpful: are there continuous cavities?
 19 Q. And you didn't think that you needed to clarify the
 20 position you had posed in this email before letting this
 21 trail go cold?
 22 A. No.
 23 MS GRANGE: Mr Chairman, I think that's an appropriate
 24 moment, actually. There is a related topic coming, but
 25 I would rather do that --

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1 SIR MARTIN MOORE-BICK: It's probably best to break now,
 2 isn't it?
 3 MS GRANGE: Yes, it would be.
 4 SIR MARTIN MOORE-BICK: Mr Ashton, we will have another
 5 break now.
 6 THE WITNESS: Okay, thank you.
 7 SIR MARTIN MOORE-BICK: We will come back at 11.35, so if
 8 you would like to go with the usher, that would be good.
 9 Please remember not to talk to anyone about your
 10 evidence while you're out of the room. I have to keep
 11 telling you that just in case you forget.
 12 THE WITNESS: It's all right, I won't forget. Thank you.
 13 SIR MARTIN MOORE-BICK: I'm sure you won't. Thank you very
 14 much.
 15 (Pause)
 16 Right, 11.35, please.
 17 MS GRANGE: Thank you.
 18 (11.17 am)
 19 (A short break)
 20 (11.35 am)
 21 SIR MARTIN MOORE-BICK: All right, Mr Ashton, ready to carry
 22 on?
 23 THE WITNESS: I am, thank you.
 24 SIR MARTIN MOORE-BICK: Thank you very much.
 25 Yes, Ms Grange.

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1 MS GRANGE: Yes, just a couple of follow-up questions from
 2 this morning's evidence.
 3 At what point did you consider that your retainer as
 4 per the fee proposal had ended? You seemed to be saying
 5 you had entered a different stage and you weren't part
 6 of the design team and you didn't consider you were
 7 appointed anymore. At what point are you saying you
 8 thought that?
 9 A. I think when I became aware that Rydon had been
 10 appointed and they hadn't approached us to help them.
 11 Q. Isn't it quite common for fire engineers to stay client
 12 side, so to carry on advising your client, the TMO,
 13 despite the appointment of a design and build
 14 contractor? Doesn't that happen on some projects?
 15 A. That's exactly what is happening on a project that I'm
 16 currently working on, the client said, "I want you to
 17 carry on", notwithstanding the fact that there has been
 18 a contractor appointed to do the job. That being the
 19 case, I would have expected some sort of indication from
 20 the client that he wanted us to carry on.
 21 Q. But you didn't get any kind of indication that they
 22 didn't want you to --
 23 A. No, no.
 24 Q. -- carry on, did you?
 25 A. Obviously. That's the obvious inference --

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1 Q. And you --
 2 A. -- you can draw from not being said, don't, you know --
 3 Q. And you carried on --
 4 A. -- just carry on.
 5 Q. -- receiving requests for advice?
 6 A. Yes.
 7 Q. Can I just look at your fee proposal for a moment. We
 8 will come back to this later, EX000000474. I beg your
 9 pardon, sorry, that's not the fee proposal. Sorry,
 10 it's --
 11 SIR MARTIN MOORE-BICK: I'm sorry, before you go on, can
 12 I ask you to clarify. You just said to Ms Grange -- I'm
 13 looking at the transcript -- she put it to you you
 14 didn't get any kind of indication that they didn't,
 15 I think she meant want you to continue.
 16 A. Correct.
 17 SIR MARTIN MOORE-BICK: You said, "No, no, obviously, that's
 18 the obvious inference you can draw from not being", and
 19 then there was some overspeaking.
 20 A. Sorry, did I not make it clear?
 21 SIR MARTIN MOORE-BICK: Well, that's what I want you just to
 22 clarify.
 23 A. If there had been no communication at all from the
 24 client, then it would have been reasonable to assume
 25 that they were happy for me to advise on an as-and-when

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1 basis.
 2 SIR MARTIN MOORE-BICK: Okay, thank you. Yes.
 3 MS GRANGE: Sorry, I've got the reference now,
 4 {TMO10003885}, so this is the fee proposal that we
 5 looked at of 9 May where you set out your work for the
 6 TMO, and we know that that was accepted, and you were
 7 told to proceed on that basis.
 8 Can we just look at page 5 {TMO10003885/5} within
 9 that. There is a section there headed "Changes to
 10 client or invoice details", and it says there:
 11 "If, during the project, you inform us of changes to
 12 the client or invoicing information, we would be happy
 13 to make those changes. However, if there are changes to
 14 the client company ... we would need to carry out a
 15 credit check ..."
 16 Et cetera.
 17 A. Right.
 18 Q. You were never informed, were you, that there had been
 19 any change to the client at any stage?
 20 A. No, no.
 21 Q. So you understood your client throughout to be the TMO;
 22 is that correct?
 23 A. Yes.
 24 Q. Even when you were providing the ad hoc advice you were
 25 providing in 2014 and 2015?

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1 A. Yes, well, I think I assumed that KCTMO were still the
 2 client.
 3 Q. Yes. Once you knew that you were being asked for ad hoc
 4 advice, in, say, September 2014, that we were looking at
 5 this morning, did you think to go back to the TMO and
 6 raise your status, your contractual status, with them?
 7 A. No.
 8 Q. Just on another point, we looked at that drawing that
 9 you were sent. Can we go back to that. This is at
 10 {EX000000710}. This is the drawing you were sent by
 11 Mr Crawford, and I want to go again to the top left-hand
 12 section and zoom in on that.
 13 A. Right.
 14 Q. If you see the labels towards the bottom of that, there
 15 is a label with a little circle "H92/125", and it says
 16 "PPC aluminium composite rainscreen panel and framing
 17 system"; do you see that?
 18 A. I see that now, yes.
 19 Q. There is a line and a label and you can see it's
 20 referring to the outer panel of the rainscreen system,
 21 as distinct from the insulation that's sitting behind
 22 it. Do you see that?
 23 A. I do.
 24 Q. So it's referring there to a composite, aluminium
 25 composite, do you see that, "TBC"?

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1 A. I also see "TBC" after that, yes.
 2 Q. Yes. Yesterday you said in evidence -- I think this is
 3 around pages 76 and 77 {Day17/76} -- that you weren't
 4 familiar with composite metal panels. So when you
 5 looked at this drawing, did it occur to you that that
 6 was something you ought to clarify and check? If you
 7 weren't familiar with the aluminium composite, was that
 8 not a trigger to find out more about that?
 9 A. It might have been, but "TBC" means to be confirmed.
 10 Q. Yes.
 11 A. It might have been an alternative material, ultimately,
 12 but, as I said earlier, I didn't look at these drawings
 13 in a huge amount of detail.
 14 Q. So picking it back up in 2014, in the light of the
 15 advice we've just looked at that you gave, were you
 16 aware of the Building Control Alliance Technical
 17 Guidance Note 18: Use of Combustible Cladding Materials
 18 on Residential Buildings, issue 0, that had been
 19 published in June 2014? Were you aware of that
 20 publication?
 21 A. No, I wasn't.
 22 Q. Can we just bring that up so you can see it. It's at
 23 {CELO0003615}. This is the Building Control Alliance
 24 note.
 25 So do I take it you didn't read this at the time of

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1 working on the Grenfell project?
 2 A. No, I didn't.
 3 Q. Have you ever read this piece of guidance?
 4 A. No, I haven't.
 5 Q. So you're not aware of the warnings that are contained
 6 within it about the use of combustible materials on
 7 residential buildings and the different routes to
 8 compliance that it's recommending when dealing with
 9 that?
 10 A. No, but looking at it, it's sort of pretty similar
 11 guidance as to what is contained in other publications.
 12 I'm not quite sure why the BCA decided that they needed
 13 to reinforce that because, as I say, just looking at it,
 14 I can't really see anything in there that adds any
 15 information to what was already in the marketplace.
 16 Q. I see.
 17 So just looking at it in a bit more detail, under
 18 "Key Issues", if we can zoom in on the bottom of that
 19 page, it says there, in the third paragraph:
 20 "A Surface Spread of Flame Classification does not
 21 infer any resistance to combustibility, it is solely a
 22 measure of the spread of a flame across the surface."
 23 Then in the first bullet it says:
 24 "Thermosetting insulants (rigid polyurethane foam
 25 boards) do not meet the limited combustibility

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1 requirements of AD B2 Table A7 and so should not be
 2 accepted as meeting AD B2 paragraph 12.7. However, if
 3 they are included as part of a cladding system being
 4 tested to BR135 & BS8414, the complete assembly may
 5 ultimately prove to be acceptable."
 6 Do you see that?
 7 A. I do, yes. That's more or less what I was saying
 8 earlier, without referring to rigid polyurethane foam
 9 boards. I mean, any system can be justified by test to
 10 be suitable for use.
 11 Q. Did you have any understanding around this time of the
 12 limited conditions in which Celotex RS5000 could be used
 13 within an external cladding system?
 14 A. Not specifically, but I was aware that Celotex was not
 15 a non-combustible material.
 16 Q. I see.
 17 The datasheet can be found -- let's have a look at
 18 it again -- {RYD00018155}, if we can blow that up.
 19 I want to look in particular, actually, at page 3
 20 {RYD00018155/3} and the top of page 3. So it says
 21 there:
 22 "Celotex RS5000 is a premium performance solution
 23 and is the first PIR board to successfully meet the
 24 performance criteria set out in BR 135 for rainscreen
 25 cladding systems."

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1 Then it says there:
 2 "The system tested was as follows ..."
 3 And it explains what the system was. Can you see
 4 that it involved 12 millimetre fibre cement panels; do
 5 you see that?
 6 A. I do.
 7 Q. Were you aware at any time when you were working on the
 8 Grenfell project that if you're using Celotex RS5000, it
 9 would have to be within the parameters of this system
 10 that was tested?
 11 A. No, I think, as a general comment, if you have had
 12 a particular construction tested to BS 8414 and you then
 13 want to use -- vary that specification slightly, at the
 14 time you were able to go and get an assessment from the
 15 test house that conducted the test.
 16 Q. Yes, a desktop assessment.
 17 A. And say, "Look, this is slightly different, we're using
 18 a different facing material, we're not using fibre
 19 cement panels, we might be using" -- I don't know --
 20 "sheet steel, can you assess whether that will still
 21 perform in the same way as the tested system?"
 22 Q. Can I go back to the email you wrote to Mr Crawford,
 23 this is {EXO00001430}.
 24 Did you think at this time to ask Mr Crawford what
 25 type of rainscreen cladding panel was proposed at this

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1 time?
 2 A. No, I didn't.
 3 Q. Given it was clear from these email exchanges that there
 4 was some confusion within the design team, did you think
 5 that it might be helpful to suggest a meeting to discuss
 6 these issues?
 7 A. Yes, but equally I would -- if -- it could have come
 8 from the other side. If there was some doubt as to
 9 whether or not what they were doing was acceptable then
 10 it would be open to them to have called for a meeting.
 11 Q. Did you think about whether or not you ought to advise
 12 Mr Crawford that the fire strategy report that you had
 13 written in November 2013, a third issue, should be
 14 revised given that the B4 compliance was to be confirmed
 15 by an analysis in a future issue of this report?
 16 A. No, I didn't think to tell him at that point.
 17 Q. Can you explain why?
 18 A. No, I can't, really.
 19 Q. Now, in his oral evidence, Mr Crawford said a number of
 20 things about discussions that he had with you at this
 21 time, and I want to take you to some of what he said, so
 22 that you have the chance to respond to that.
 23 A. Okay.
 24 Q. You have addressed this in your second statement, but
 25 I want to ask you some more questions about what

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1 Mr Crawford said.
 2 Can we go to the transcript at {Day9/176:23}. This
 3 is right at the bottom, I just want to read this. So he
 4 says:
 5 "I think when I spoke with Exova, it must have been
 6 17 or 18 September ..."
 7 And he is talking about 2014 here.
 8 A. Right.
 9 Q. So the exact dates we were just talking about:
 10 "... to confirm what ... confirm the compliance of
 11 the Celotex insulation and the proposed cavity barrier
 12 strategy, my understanding from the conversation with
 13 Exova is the ... that what was being proposed was
 14 compliant. I'm not sure if I entirely understood on
 15 which method they were using or which basis they assumed
 16 it to be compliant. I think I probably assumed a linear
 17 route. But I think, having said that, Exova have
 18 a massive -- they've a massive wealth of knowledge in
 19 terms of similar projects and they may have ... may have
 20 had the confidence to say what they said based on
 21 desktop studies, previous projects, similar projects,
 22 similar build-ups."
 23 Do you see that there?
 24 A. I do, yes.
 25 Q. So he is saying that he spoke with you around 17 or

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1 18 September to confirm the compliance of the Celotex
 2 insulation.
 3 Now, I just want to ask you first: do you recall
 4 speaking with Mr Crawford on the telephone at the time
 5 that these email exchanges were being sent and
 6 exchanged?
 7 A. No, I don't recall any conversation with Neil Crawford.
 8 Q. So you didn't have any conversations with him around
 9 this time?
 10 A. No.
 11 Q. Or in the days thereafter?
 12 A. No. It's interesting he says "conversation with Exova";
 13 he doesn't name me as the person that he spoke to.
 14 Q. It's pretty clear from his evidence that he is talking
 15 about you, Mr Ashton.
 16 A. Well, I didn't have this conversation with him.
 17 Q. So did you ever confirm the compliance of the Celotex
 18 insulation in conversations with him at this time?
 19 A. No, definitely not.
 20 Q. Did you ever have a conversation with him in which you
 21 were talking about the Celotex RS5000 insulation?
 22 A. No.
 23 Q. Can we look at another extract from his oral evidence --
 24 SIR MARTIN MOORE-BICK: Sorry to interrupt, Ms Grange.
 25 If Mr Crawford is right, it would be quite

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1 an important conversation, wouldn't it?
 2 A. It would indeed, yes.
 3 SIR MARTIN MOORE-BICK: I'm just wondering: was it your
 4 practice to keep notes of a conversation of that kind,
 5 if it had taken place?
 6 A. No, I wouldn't have kept notes, but, given that it is
 7 an important subject, I would have expected him to
 8 confirm by email that I had agreed that these materials
 9 were acceptable. To rely on a telephone conversation or
 10 an alleged telephone conversation is not very reliable.
 11 SIR MARTIN MOORE-BICK: All right, thank you.
 12 Sorry, Ms Grange.
 13 MS GRANGE: Thank you, yes.
 14 Can we look at another extract from the transcript.
 15 This is {Day10/58:1} down to {Day10/59:1}. So the
 16 question is:
 17 "So just so I've got your evidence clear on this,
 18 it's the class 0 fire performance throughout the entire
 19 product which to you meant that it was safe to use on
 20 buildings above 18 metres as an insulation product?"
 21 Do you see that there?
 22 A. Yes, I do, yes.
 23 Q. The answer that Mr Crawford gives:
 24 "Answer: No, no, it's the entire presentation
 25 material. I then sought to check that interpretation

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1 with Exova, which I did, and which I understood from
 2 what was fairly emphatic confirmation from Exova that it
 3 was applicable and that it could be used.
 4 "Question: Let's look --
 5 "Answer: Their understanding of how it was and how
 6 it could be used may have been different from mine.
 7 They may have had -- they work on hundreds of buildings.
 8 They may have had knowledge of BR 135 testing,
 9 for example, that led them to believe that it was
 10 applicable in this particular build-up.
 11 "Question: But you don't know that, do you?
 12 "Answer: No, but what I know is from the
 13 conversations I had with Exova, they were emphatic --
 14 fairly emphatic about the fact that it was appropriate
 15 to use, and that's what they suggested to me. I mean,
 16 that was my understanding from the conversations I had
 17 with them. I asked them to put it in writing, they put
 18 it in writing, the contacts with the cavity barriers.
 19 On reflection, it is a tacit approval in writing, but
 20 from the conversations I had with them, I understood
 21 that it was appropriate to use."
 22 Now, in the light of that, did you at any stage on
 23 the project discuss with Mr Crawford whether the
 24 insulation was compliant and appropriate to use?
 25 A. No, I didn't.

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1 Q. Did you provide emphatic confirmation to him that it was
 2 appropriate for the project?
 3 A. No, I didn't. And it says in there that they -- that we
 4 wrote to them confirming this, and we did not.
 5 Q. Yes, I think it was clear from follow-up questions that
 6 Mr Crawford was talking about the emails we've just been
 7 discussing, and then there's some further emails in
 8 2015. He wasn't referring to any other written
 9 correspondence?
 10 A. Yes, but nothing in the emails that I exchanged with him
 11 could be described as emphatic about anything.
 12 Q. Yes. You don't recall ever putting in writing that the
 13 insulation categorically was appropriate to use?
 14 A. No, and I wouldn't have done that anyway.
 15 Q. Were you ever asked by Studio E about BS 8414 system
 16 testing or BR 135 classification?
 17 A. Not specifically, no.
 18 Q. I now want to ask you about whether you had any
 19 discussions around, again, 17/18 September 2014 with
 20 Mr Crawford about the ACM, the aluminium composite
 21 material panels. Can we look at what Mr Crawford said
 22 about this on {Day10/91:16}.
 23 A. Right.
 24 Q. To {Day10/92:11}.
 25 So the question is put:

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1 "Question: Why didn't you say to Mr Ashton,
 2 'I should just tell you that the bits where it says zinc
 3 aren't right anymore, it's aluminium composite'?
 4 "Answer: But I think I did. There was
 5 a follow-up -- I ... zinc CM and ACM in performance
 6 terms, as I understood it, were the same, and then -- so
 7 he worked on the assumption, I think, of the zinc CM,
 8 performance of which I think had been the same as the
 9 ACM. Then at the end of the conversation I think I did
 10 confirm with him that it was -- my understanding was
 11 that we were running with ACM.
 12 "Question: When was that conversation, please?
 13 "Answer: At the same time.
 14 "Question: At the same time as?
 15 "Answer: 17th/18th conversation.
 16 "Question: That you referred to on Thursday where
 17 you told us that he had said that the Celotex was
 18 compliant, the same conversation as that; is that what
 19 you are saying?
 20 "Answer: I think it was, yes, I think it was.
 21 "Question: Really?
 22 "Answer: I mean, maybe I've got conversations mixed
 23 up."
 24 Do you see all that?
 25 A. I do.

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1 Q. Again, I want to give you the chance to respond to this:
 2 did Mr Crawford confirm that aluminium composite
 3 material was to be used? You have pointed out on the
 4 drawing it was TBC, but did he ever confirm that to you
 5 on the telephone?
 6 A. No, he didn't.
 7 Q. Do you ever recall at any time discussing the use of
 8 aluminium composite material panels with Mr Crawford?
 9 A. Never. I mean, I think in my witness statement I said
 10 that I didn't know that ACM was being used until after
 11 I read about the fire in the press.
 12 Q. Did you ever specifically discuss the use of
 13 Reynobond 55 PE rainscreen panels with Mr Crawford?
 14 A. No, I didn't.
 15 Q. I just want to look at what Mr Crawford said later in
 16 the day, {Day10/94:1-22}. The question:
 17 "Question: Well, we're going to look at the rest of
 18 the email chain shortly, but just so I understand your
 19 answer, you're saying, are you, that you had a telephone
 20 conversation with Mr Ashton on 17 or 18 September in
 21 which he told you that Celotex RS5000 and Reynobond
 22 PE 55 aluminium composite material rainscreen --
 23 "Answer: ACM.
 24 "Question: -- ACM --
 25 "Answer: Yeah.

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1 "Question: -- were compliant; is that your
2 evidence? I don't want to put words in your mouth, I'm
3 trying to summarise what I think you've been telling me,
4 and if I'm wrong, please say.

5 "Answer: My understanding is that in discussing the
6 fire strategy -- the cavity barrier strategy in relation
7 to the wall build-up, he understood what the build-up
8 was, we had sent him the insulation detail -- the
9 insulation data sheet, and he understood what the cavity
10 barrier strategy was and he understood what the cladding
11 panel build-up was, and I asked him to confirm that in
12 writing.

13 "Question: And you say that he did confirm it in
14 writing, but only tacitly?

15 "Answer: He confirmed in writing that he thought
16 that it was appropriate, but on reflection it's more of
17 a tacit approval than an explicit one."

18 Did you ever confirm in conversations with
19 Mr Crawford that you understood what the wall build-up
20 was?

21 A. No, I didn't.

22 Q. Did you have a conversation about the suitability of the
23 cavity barrier strategy at any time?

24 A. No. No.

25 Q. Did you ever say to him that your advice was based on

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1 desktop studies or previous projects?

2 A. No.

3 Q. He goes on to say -- I think I can just summarise this
4 bit -- that his understanding of the route to compliance
5 on the cladding system was from conversations he had
6 with you around 18 September.

7 Again, do you recall any conversations about the
8 route to compliance for the cladding system?

9 A. No, I don't recall any discussion about that.

10 Q. Did you tell Mr Crawford around this time that you would
11 be completing the outline fire safety strategy?

12 A. No, I didn't.

13 Q. Mr Crawford said that he remembered you eluding to the
14 fact that he would have to complete the report or
15 something of that nature; do you recall ever having
16 a conversation about having to complete the outline fire
17 safety strategy?

18 A. No, I'm assuming we're talking about one telephone
19 conversation here, which I -- you know, didn't take
20 place as far as I was concerned.

21 Q. Yes.

22 A. Seems to exchange a lot of information in one telephone
23 conversation.

24 Q. Conversely, did you ever tell him that you were so sure
25 that what was being constructed was acceptable that

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1 there was no need for a further report?

2 A. Definitely not.

3 Q. Did you ever tell him that there was no risk of external
4 fire spread?

5 A. No.

6 Q. Okay.

7 Just sticking then with 2014 and moving on to
8 a slightly different topic, can we go to {SEA00012189}.
9 Now, these are some exchanges that you had in late 2014
10 with Mr Crawford about observations that RBKC
11 Building Control had made on the means of escape
12 arrangements for the refurbishment. If you look at the
13 top email there, Mr Crawford is saying that he has
14 received some mark-ups from Building Control on the
15 fire strategy. He is due to meet them on Monday and
16 wondered if you had any views on their comments.

17 A. Right.

18 Q. Then in the second and third lines, he says this:

19 "On the Academy project we had the situation where
20 Tony Pearson managed to argue some of their comments
21 away. If you had any observations particularly where
22 you think there comments may be excessive I would be
23 grateful to know as I can take these with me to the
24 meeting on Monday.

25 "Regards

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1 "Neil."

2 Do you see that?

3 A. Yes, I do.

4 Q. Was it your understanding that Tony Pearson had argued
5 some Building Control comments away on the KALC project,
6 the Academy and Leisure Centre project?

7 A. No, I think I took Neil Crawford's word for it that
8 Tony Pearson had managed to do that. I didn't discuss
9 it with Tony Pearson because the academy building was
10 Tony Pearson's job.

11 Q. Did you know what topics he had managed to argue away?

12 A. No.

13 Q. Do you know the detail of what they were talking about?

14 A. No. I think my inference from this was, "Tony Pearson
15 has managed to persuade Building Control to accept
16 a number of modifications, do you think you could do the
17 same?"

18 Q. Yes.

19 A. That's how I read it.

20 Q. Yes, and what was your reaction to that? Did you think
21 that --

22 A. Well, I didn't know what he wanted relaxations of, at
23 the time of reading that.

24 Q. Did you think that it might be part of your role on the
25 Grenfell project at this time to argue Building Control

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1 comments away, to go into debate with them?
 2 A. Very definitely . I mean, we had quite lengthy
 3 discussions with Kensington and Chelsea
 4 Building Control.
 5 Q. Do you agree, though, that best practice would have been
 6 to engage in an open and transparent way with
 7 Building Control and not seek to get around issues that
 8 they're raising?
 9 A. I'm not actually sure what Tony Pearson managed to argue
 10 away. I mean, our objective is not to go the -- take
 11 the line of least resistance on projects; it's to
 12 provide a safe building. Now, without seeing the
 13 context of what Tony Pearson and Kensington and Chelsea
 14 discussed, I couldn't comment further. It may have been
 15 totally unrelated to the sort of questions that we had.
 16 Q. Okay.
 17 So we're now going to go forward in the chronology
 18 and look at some emails that were exchanged in
 19 March 2015 between you and the design team on the
 20 project.
 21 A. Right.
 22 Q. Before we get to those, by March 2015 had you heard or
 23 read about a fire which had occurred in the
 24 Lacrosse Building in Melbourne, Australia, in which a
 25 rainscreen façade incorporating ACM panels had rapidly

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1 spread up the entire external façade to the top of
 2 a 21-storey building?
 3 A. No, I wasn't aware of that specific job or building.
 4 Q. It was a fire that occurred in Melbourne.
 5 A. Yeah. I mean, fires do occur, but I don't follow them
 6 all.
 7 Q. No.
 8 Do you remember ever hearing or reading about that
 9 specific fire, the Lacrosse fire in Melbourne?
 10 A. No, I don't.
 11 Q. It's not one you are aware of even to this day?
 12 A. No.
 13 Q. No.
 14 A. No.
 15 Q. Turning to the advice which was sought from you on
 16 3 March 2015 from Neil Crawford again, {EXO00001315}.
 17 If we can blow up that top email. So he says:
 18 "Hi Terry
 19 "Just a quick question relating to Grenfell Tower.
 20 As part of the re-clad we are we have (sic) added fire
 21 breaks around the apartments as per the email below.
 22 Can you comment on the level of protection (90+30) as to
 23 whether this is suitable. My only query might be that
 24 we have different levels of party wall at the lower
 25 levels - see attached fire plan with some 60 some 120

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1 walls.
 2 "Regards
 3 "Neil."
 4 Do you see that?
 5 A. I do, yes.
 6 Q. Do you remember receiving this email?
 7 A. Yes, I think I do, yes.
 8 Q. Did you ever respond to this email?
 9 A. I'm not sure.
 10 Q. We can't find a response to this email.
 11 A. No, it's possible that this was one that I identified in
 12 my first witness statement as one that I obviously
 13 received because it was on our system, but I may not
 14 have seen it, and had I seen it, I would have responded.
 15 I mean --
 16 Q. I see, yes.
 17 A. -- looking at the project as a whole, I'm pretty sure
 18 that I answered every single query that was put to me.
 19 Whether it was the right way to do it or not is another
 20 issue. But I don't remember responding to this, and, as
 21 I understand it, I didn't.
 22 Q. No.
 23 A. Which must indicate to me that I hadn't read it.
 24 Q. Okay. Yes, you talked about your witness statement. If
 25 we just look at that, paragraph 5.25 of your first

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1 witness statement, {EXO00001621/17}, if we can go to
 2 this.
 3 A. Right.
 4 Q. You say there, this is in reference to this email:
 5 "I do not have any recollection of seeing this email
 6 or the attached 'Specification Note', or of sending any
 7 reply to it. I understand that in reviewing Exova's
 8 documents no response to this email has been found. It
 9 is very possible that I did not reply to it and if that
 10 is the case then I probably did not see this email."
 11 So that remains your evidence; is that right?
 12 A. Yeah, that's in its essence what I just said, yeah.
 13 Q. Did you have any kind of system or procedure within the
 14 office for checking or picking up on any requests that
 15 hadn't been answered, or would you just leave it to the
 16 person sending the email to send another one saying "You
 17 haven't responded"?
 18 A. No, there isn't a system for checking on whether all
 19 emails received have been answered, but from time to
 20 time, if I or one of my colleagues fails to respond to
 21 an email, we generally get a reminder, "May I please
 22 have a response to my email dated so-and-so, which is
 23 attached", and I didn't get that in this case.
 24 Q. If we can go and look down on this page at
 25 paragraph 5.27(B) of your statement --

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1 A. Yeah.
 2 Q. -- you say -- let's pick it up at 5.27:
 3 "I would not have needed to look at the details of
 4 the attachments to provide this answer. Having now
 5 reviewed the email and the attachments I note that, at
 6 the back of the pack, there is reference to
 7 'Glazing-P1-Panels' in the Specification Note ... which
 8 provides some information on the panels and describes
 9 the cladding as aluminium composite panels."
 10 Then you say at (B):
 11 "In relation to that email and its attachments,
 12 I note
 13 "(B) The Specification Note mentions that the
 14 cladding would be a 'Reynobond Rainscreen Cassette'.
 15 Reynobond is a brand name and there are various types of
 16 Reynobond product, some which include insulation of
 17 limited combustibility and others which do not. The
 18 information provided in the Specification Note does not
 19 indicate which type of Reynobond system it was intended
 20 to use."
 21 Do you see that there?
 22 A. I do, yes.
 23 Q. I just wanted to ask you some questions there about what
 24 you say about the Reynobond product.
 25 What do you mean when you say here that there are

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1 some Reynobond products -- it's the third line there of
 2 (B) -- "some of which include insulation of limited
 3 combustibility and others which do not"? What do you
 4 mean by that?
 5 A. I think -- I'm not particularly familiar with Reynobond,
 6 but I think I must have looked at some technical
 7 datasheet for them subsequently. Bear in mind that this
 8 particular email was tabled at a meeting with our legal
 9 advisers and, as I've explained already, I hadn't seen
 10 it before and therefore didn't reply to it.
 11 Q. Yes.
 12 A. But I can't say hand on heart now that Reynobond is
 13 a product which could be used in any circumstances
 14 without a test.
 15 Q. No. The phrase you have used there about the product,
 16 "some of which include insulation of limited
 17 combustibility", do you mean include it within the panel
 18 itself?
 19 A. Yes, indeed, yeah.
 20 Q. I see. Inside the composite panel?
 21 A. Yes, we have a sandwich of I think it's aluminium with
 22 a filling of one particular material or another. But,
 23 I mean, this is only my understanding; I'm not saying
 24 categorically here that that is the case.
 25 Q. Yes. I just wanted to check whether you're mixing up

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1 the Reynobond ACM there with the insulation, but
 2 I think, is it right, what you are saying is that
 3 sometimes inside the panel you have insulation material
 4 of limited combustibility?
 5 A. Yes.
 6 Q. Yes, I understand now, thank you.
 7 A. Indeed.
 8 Q. You also say in your witness statement at (C) below that
 9 that had you seen these specification notes giving the
 10 specification details of the cladding, so had you looked
 11 at the attachments to this email, you would have drawn
 12 Studio E's attention to the fact that the use of
 13 styrofoam in the glazing panels would not have been
 14 acceptable to Building Control because styrofoam is
 15 combustible. Do you see that there?
 16 A. Yes, indeed.
 17 Q. Can you explain the basis on which you would have given
 18 that advice?
 19 A. Had I become aware of the totality of this specification
 20 then I would have told them it wasn't acceptable.
 21 Styrofoam was obviously a combustible material, in which
 22 case, you know, there are no arguments about its fire
 23 performance. As I've said in (B), it's possible that
 24 Reynobond has different fillers which may be acceptable.
 25 Q. Yes. I'm trying to concentrate for the moment on the

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1 glazing P1 panels as having a 25-millimetre styrofoam
 2 core.
 3 Do you agree that the reason you would have given
 4 that advice to say, well, it just can't be used, is
 5 because of 12.7 of Approved Document B that provides
 6 that any insulation product, filler material, et cetera,
 7 used in the external wall construction should be of
 8 limited combustibility?
 9 A. Yes, I do agree with that, yeah.
 10 Q. You would have said the styrofoam panels were classified
 11 as an insulation product?
 12 A. Yes, indeed.
 13 Q. Yes.
 14 Had you been asked -- I appreciate your position is
 15 you weren't ever asked to advise on it -- whether
 16 Reynobond aluminium composite material with a PE core
 17 used with Celotex RS5000 insulation was compliant, what
 18 would you have said in terms of compliance with the
 19 Building Regulations?
 20 A. Well, I would have said, "On the face of it, it doesn't
 21 comply, but I will make some enquiries as to the fire
 22 properties of what is proposed".
 23 Q. Let's break that down and think about the aluminium
 24 composite material panel on the exterior for a moment.
 25 A. Okay.

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1 Q. Can you be more specific as to on what basis you have
2 said it wouldn't comply?
3 A. Sorry, you want me to deal with it component by
4 component?
5 Q. I'm now asking you --
6 A. I didn't know enough about Reynobond to say one way or
7 the other.
8 Q. I see.
9 Do you know whether you would have been looking at
10 paragraph 12.6 of Approved Document B and diagram 40, or
11 would you have been thinking more about 12.7 and the
12 requirement for limited combustibility?
13 A. Well, I would have been looking at the fire properties
14 of the material in their totality .
15 Q. I see.
16 A. Because, as I said yesterday, class 0 materials --
17 Approved Document B does allow the external covering of
18 buildings to be a class 0 fire performance. That
19 doesn't tell the whole story. And with a material like
20 this, you would have to look at it a bit more carefully
21 to see whether or not in fact it was a suitable
22 material.
23 Q. Yes. I see.
24 A. And for that, I might rely on our testing colleagues in
25 Warrington.

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1 Q. Okay.
2 Now, we know that on 27 March 2015, Mr Crawford then
3 sends an email to Mr John Hoban, copying you in. Let's
4 look at that. This is at {EXO00001434}. And I want to
5 pick this up on page 4 {EXO00001434/4}, in the second
6 email down on page 4, from Neil Crawford to you. So
7 there we see at 10.53 Mr Crawford states:
8 "There has been a lot of conversation on site about
9 the cavity fire barrier requirements to be fitted
10 between the existing concrete external wall panels and
11 the new external rain screen aluminium cassettes.
12 "Can you please see the proposal by the cladding
13 contractor below and confirm if this is acceptable to
14 you."
15 Do you see that?
16 A. Yes, I do.
17 Q. So that's from Mr Crawford to Mr Hoban, copying you in,
18 and also copying in Paul Hanson of RBKC
19 Building Control. Do you see that?
20 A. Yes, I do.
21 Q. Can we just note while we're looking at this that it
22 says:
23 "There has been a lot of conversation on site
24 about ..."
25 And then in the second line it says:

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1 "... to be fitted between the existing concrete
2 external wall panels and the new external rain screen
3 aluminium cassettes."
4 Do you see that?
5 A. Yeah, I do.
6 Q. So you would have been aware, looking at that email,
7 that at that stage, at least, they were using rainscreen
8 aluminium cassettes; do you see that?
9 Then the proposal is from Ricky Kay at Siderise
10 below that. If we can look at that email below.
11 Ricky Kay states:
12 "Apologies for the delay ...
13 "Please find below extract from the Approved
14 Document B of the Building Regulations."
15 Then if we can go on to the next page
16 {EXO00001434/5}, he says:
17 "Here you can see that it clearly states that
18 30 minutes fire integrity and 15 minutes insulation is
19 all that is required from a cavity fire barrier. This
20 is reference to rainscreen cladding applications where
21 the cavity barrier is deemed to be on the outside of the
22 building. Our RH25-90/30 will offer 90 minutes fire
23 integrity and 30 minutes fire insulation, therefore
24 exceeds minimum requirements."
25 He says:

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1 "120 minute fire rating is generally the industry
2 standard for curtain wall to concrete slab edge
3 firestopping where the firestop is located on the inside
4 of a building and is considered to be a continuation of
5 the floor slab."
6 Then he says:
7 "Please get in touch if you need anything else ..."
8 Do you see that?
9 A. Yes, indeed.
10 Q. Looking at those emails, was this the first interaction
11 that you had had with RBKC Building Control about the
12 cladding system, or the first time you have been looped
13 in to an email about the cladding which also involves
14 RBKC Building Control?
15 A. I believe it was. You know, I can't say with certainty
16 that I had never seen anything else, but I do remember
17 seeing this, I think.
18 Q. Did the reference to rainscreen aluminium cassettes in
19 Mr Crawford's email to you which we just looked at raise
20 any concerns with you?
21 A. It didn't register, if I'm honest. I don't understand
22 the term aluminium cassettes. I mean, when I looked
23 briefly at the original details that Neil Crawford sent
24 me, there were aluminium elements in that, and that
25 didn't cause alarm because aluminium is used for things

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1 like louvres and what have you. But to this day,
 2 I don't understand the term "cassettes".
 3 Q. Okay. Did it register with you, when you received these
 4 emails, that they weren't proposing to use zinc panels
 5 anymore, but aluminium panels?
 6 A. No, it didn't register with me that that was the case.
 7 Q. So it follows, does it, that it didn't signal to you
 8 that you needed to consider giving some detailed advice
 9 with regard to requirement B4 at this stage?
 10 A. No, I think the main focus here was the cavity barriers
 11 again.
 12 Q. Now, we can see that you're then copied in to an email
 13 of 30 March 2015 from Mr Hoban. Let's look at that.
 14 This is {EX000000715/2}. So if we look at this email,
 15 this is from Mr Hoban, 30 March, to a number of
 16 people -- Siderise, Harley, Rydon -- and then you're
 17 there on the list as well.
 18 A. Right.
 19 Q. So it's actually sent to you, this email.
 20 A. Yes, yes.
 21 Q. At that stage, what John Hoban does is set out his
 22 interpretation of diagram 33, and he says that it's his
 23 interpretation that the detail between compartment
 24 floors was not a cavity barrier but a firestop which
 25 needed to be of 120 minutes standard. Do you see that?

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1 So in the substance of his email he says, two lines
 2 down:
 3 "I would advise you that it is my interpretation of
 4 diagram 33 of Approved Document B is that the detail
 5 between compartment floors and external cladding is not
 6 a cavity barrier, therefore it must be fire stopped to
 7 at least the standard of the existing compartment floor
 8 [120 minutes]."
 9 Do you see that there?
 10 A. Yes, indeed.
 11 Q. You're then sent an email from Neil Crawford at 12.05 on
 12 31 March, if we go to the bottom of page 1
 13 {EX000000715/1} of this string. If we look at the
 14 bottom of the page, at 12.05, 31 March, Neil Crawford
 15 says to you:
 16 "Hi Terry
 17 "Can you comment on the history of this item- please
 18 see correspondence below as it is not clear to me why
 19 this item is causing such a difference in
 20 interpretation- can't see anything that seems to
 21 reference it in the fire strategy.
 22 "Regards.
 23 "Neil."
 24 Do you see that there?
 25 A. Yes, indeed.

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1 Q. Then I'll ask you some questions about this, but let's
 2 look at your response first.
 3 In response, at the top of page 1, you say later
 4 that day:
 5 "Neil
 6 "This isn't something that would necessarily form
 7 part of a fire safety strategy for a building.
 8 Therefore, it would not have been dealt with in the fire
 9 safety strategy for this buildings. I agree with
 10 Ben Kay. I believe that a cavity barrier is all that is
 11 required in this application. Even if we were to agree
 12 with RBKC, it is difficult to see how a fire-stop would
 13 stay in place in the event of a fire where external
 14 flaming occurred as this would cause the zinc cladding
 15 to fail.
 16 "Kind regards
 17 "Terry."
 18 Do you see that there?
 19 A. Yes, indeed.
 20 Q. Again, I just want to take this email in stages.
 21 First of all, why was this not something that would
 22 necessarily form part of a fire safety strategy for
 23 a building?
 24 A. Well, I think that's not correct as written. I'm not
 25 quite sure why I wrote that. The provision of cavity

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1 barriers would normally be part of a fire safety
 2 strategy under B3; it would just say that internal voids
 3 will be provided with fire cavity barriers and so on.
 4 I think the main thrust of this was to do with
 5 whether or not there needed to be a firestop or a cavity
 6 barrier at the junction between the cladding and the
 7 structural floors. In that sense, I agreed with Mr Kay
 8 that quite clearly it was a cavity barrier and not
 9 a firestop.
 10 Q. Yes.
 11 So you knew that cavity barriers arose in the
 12 context of functional requirements B3 and B4; you knew
 13 that?
 14 A. Absolutely.
 15 Q. And you knew that your fire strategy reports for the
 16 project had purported to address both of those
 17 requirements, hadn't they?
 18 A. Hadn't?
 19 Q. Had. They had dealt with B3 and B4.
 20 A. Oh, yes, but not in great detail, I have to say that.
 21 Q. Isn't advice on cavity barriers something that
 22 a fire strategy consultant would need to address when
 23 considering the fire strategy for a building that was to
 24 be overclad?
 25 A. Arguably, yes, it would be. I think it was

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1 an unfortunate form of words in the sense that you
2 wouldn't be discussing in the body of a fire strategy
3 whether or not there was a difference between a firestop
4 and a cavity barrier. That's what I meant.

5 Q. Yes.

6 Do you think in that first statement, which you have
7 just said was not strictly correct, that what you were
8 really trying to do here was justify your failure to
9 deal with it in the fire strategy reports that you
10 prepared prior to this?

11 A. No. As I said just now, the central question here was:
12 do we need a firestop or a cavity barrier where the
13 floor is -- at the junction of the floor and the
14 external wall? And that sort of argument would not be
15 part of a fire strategy. I certainly wouldn't have
16 said, "Well, this wouldn't form part of a fire safety
17 strategy" because I had forgotten to deal with it in the
18 report. That wasn't my intention at all.

19 Q. Can we just look at what you said in your witness
20 statement about this. This is at paragraph 5.29(F)
21 {EX000001621/19}. So you say there:

22 "I replied that '[t]his isn't something that would
23 necessarily form part of a fire safety strategy'.
24 Looking at this comment now, it reads a little oddly.
25 I think that my comment was probably a narrow one, ie

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1 that a detailed commentary on whether Approved
2 Document B required cavity barriers or fire stops in
3 this location was not something which would normally be
4 included in a fire safety strategy. In a broader sense,
5 commenting on the need for cavity barriers within a
6 cladding system (or elsewhere) certainly might form part
7 of a fire safety strategy. I agreed, however, that 'a
8 cavity barrier is all that is required in this
9 application'."

10 And then you say how your email continued.

11 A. Yes, I think that's putting in slightly different
12 wording what I've just said to you: that it was -- you
13 wouldn't have an argument in a fire strategy report
14 about whether something was either a cavity barrier or
15 a firestop. You would actually have made it quite clear
16 what was needed, where.

17 Q. When would commentary on whether ADB required cavity
18 barriers or firestops be included as part of a fire
19 safety strategy?

20 A. Never.

21 Q. Never?

22 A. That's what I'm suggesting. By the time you have
23 written the fire strategy, you will have advised the
24 design team that, "You need cavity barriers here because
25 it's only closing a cavity", or, "You need firestops

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1 because this junction needs to have the same standard of
2 fire resistance as the floor for which it, you know,
3 forms a junction with the wall with".

4 Q. I see. But I think you have accepted here and I think
5 you accepted earlier that you have said, in a broader
6 sense, commenting on the need for cavity barriers within
7 a cladding system or elsewhere certainly might form part
8 of a fire safety strategy. You accept that.

9 A. I do, I do accept that, yes.

10 Q. And that's not something that you ever did in a fire
11 safety strategy for Grenfell Tower, did you?

12 A. On this particular occasion, I didn't, no.

13 Q. Do you accept, thinking back to the fee proposal
14 document, which talks about compartmentation
15 requirements, that it might be thought to be included in
16 the work that you had committed to provide on the
17 Grenfell project?

18 A. Yes, it could have been. But it would have been
19 a general statement to the effect that you need to
20 provide cavity barriers in ... within cavities.

21 Q. Yes.

22 A. So to restrict the spread of unseen -- sorry, the unseen
23 spread of smoke and fire.

24 Q. Can you help us a little bit more as to precisely why
25 you thought the cavity barrier was all that was required

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1 rather than a firestop?

2 A. Because of its location in the building envelope.

3 Q. Yes.

4 A. I mean, I believe that John Hoban was wrong in his
5 interpretation. And I think you're probably going to
6 ask me later on anyway, but firestopping is designed to
7 stay in place for the duration of the fire. It's
8 an extension of the structural slab, or an extension of
9 the vertical compartment wall. Cavity barriers are only
10 there to prevent unseen spread of smoke and flames. So
11 they're not structural elements; they are elements to
12 contain fire and smoke.

13 Q. At this time, did you know what type of cavity barrier
14 was proposed, ie whether it was going to be full fill or
15 open state cavity barrier?

16 A. No.

17 Q. Was that not something that you thought about clarifying
18 with the team?

19 A. Well, that would have been part of the consideration of
20 the complete details of the cladding, which we never
21 did.

22 Q. Did you have any opinion on the ability of an open state
23 cavity barrier to achieve 30 minutes' integrity and
24 15 minutes' insulation?

25 A. Well, they're used quite a lot. I mean, what you have

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1 is you have an intumescent seal which still allows the
 2 passage of water which has penetrated the outer layer to
 3 drain down and be got rid of at the bottom, and then
 4 when there is a fire spread in that cavity, the material
 5 intumesces and forms a complete barrier. And it's the
 6 only practical way to do it.
 7 Q. But here it's forming a barrier against a metal panel
 8 that may warp or deform. Is that something you ever
 9 thought about?
 10 A. Well, that's -- well, that's -- we cover that later and
 11 I'm sure you're going to ask me about it.
 12 Q. Yes.
 13 Now, you refer to zinc cladding in the email that we
 14 just looked at.
 15 A. Yes.
 16 Q. What made you think it was zinc at that stage?
 17 A. I thought from start to finish that they were using
 18 zinc.
 19 Q. I think we have just established that you had received
 20 an email of 27 March where it's stated to be aluminium,
 21 but you just hadn't picked that up from the email; is
 22 that right?
 23 A. If you're referring to the email we've just discussed
 24 where they were talking about aluminium cassettes,
 25 I didn't recognise as cassette as a complete cladding

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1 system.
 2 Q. I see. Yes, let's go back to it {EX000000715/1} at the
 3 top. So that's where you say "would cause the zinc
 4 cladding to fail".
 5 Did you ever appreciate at any time during your
 6 involvement with the project that the cladding had been
 7 changed from a zinc to an aluminium composite panel?
 8 A. No, and I would have thought that somebody should have
 9 corrected me if that wasn't the case.
 10 Q. Yes. Do you recall Mr Crawford ever emailing you or
 11 calling you after this to tell you that the cladding was
 12 aluminium and not zinc.
 13 A. No, I mean, we discussed this earlier when we were
 14 discussing his evidence. He never rang me.
 15 Q. Yes. You refer in that email to Ben Kay in the second
 16 line. I think you mean Ricky Kay of Siderise; is that
 17 right?
 18 A. Oh, yes, it was -- yes, sorry about that. Yes, Mr Kay
 19 I said, I think.
 20 Q. Yes.
 21 A. Ben in the email.
 22 Q. Now, as you have anticipated, I do want to focus on the
 23 last lines of that.
 24 A. Right.
 25 Q. By saying that the zinc cladding would fail, did you

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1 mean that the zinc cladding panels would burn, melt and
 2 fall off the building and that that's why a firestop
 3 would not stay in place in the event of a fire?
 4 A. No. Zinc cladding, as an entity, would not burn. Metal
 5 cladding wouldn't necessarily burn. I think the point
 6 I was trying to make here was that if you get a severe
 7 fire in one compartment or apartment which causes the
 8 windows to break, if the windows are in some way
 9 connected to the cladding, there would be local failure
 10 of the cladding, ie it will fall off the building.
 11 Q. I see.
 12 A. And it might fall off to the extent that fire coming out
 13 of the window would bypass the cavity barrier at the
 14 window head. And I think probably you're going to ask
 15 me about Tony Pearson's -- because Tony Pearson put it
 16 rather than better than I did, I think.
 17 Q. Yes. I will ask you about that.
 18 Just picking up on that, that's a rather specific
 19 concern, flaming coming out of the window and localised
 20 failure. It doesn't seem to bear much relation to what
 21 you say here, which is "where external flaming occurred
 22 ... this would cause the zinc cladding to fail". It
 23 seems to be a more general point you're making. Could
 24 it have been a more general point?
 25 A. No, no, based on experience of fires over a large number

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1 of years, if you do get failure of glazing, if it's not
 2 in a masonry wall, it will take a bit of whatever it's
 3 attached to with it when it falls out. That's
 4 inevitable.
 5 Q. I see.
 6 If the cladding were to fail, as you have suggested
 7 here, wouldn't it follow that the external façade would
 8 have failed to resist the spread of fire over the walls
 9 in breach of the Building Regulations?
 10 A. No, I think "fail" in this context means structurally.
 11 It means bits of it would fall off the building. It
 12 doesn't mean that they would catch fire. And zinc, if
 13 it's pure zinc, you wouldn't expect fire to spread up it
 14 because it's non-combustible.
 15 Q. I see. This maybe goes back to the fact that you
 16 weren't aware at this time of composite products,
 17 whether zinc composite or aluminium composite products,
 18 that might have --
 19 A. No.
 20 Q. -- polymeric --
 21 A. No, I wasn't aware of that.
 22 Q. -- in the middle?
 23 A. No.
 24 Q. Does that not perhaps suggest that you weren't the best
 25 person to be advising on these issues at the time and

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1 there might have been more appropriate experts within
 2 Exova that would have known, for example, about the
 3 development in the use of composite panels?
 4 A. As I wasn't aware that those products existed at that
 5 time, I'm not sure that I can answer that in any other
 6 way than saying, no, I don't believe there was the
 7 expertise.
 8 We don't routinely call on our testing colleagues to
 9 give judgements on what's proposed on a material --
 10 sorry, on a building, unless we were unsure. But at no
 11 stage in this development was I aware that they were
 12 using a composite material, so there was no need for me
 13 to consult our testing colleagues.
 14 Q. Would you agree that the failure of the cladding in the
 15 event of a fire in the way you have described in this
 16 email would be a major fire safety issue for the
 17 project?
 18 A. No. No. When I say it would fail, it wouldn't cause
 19 the cladding on the building as a whole to fall off.
 20 I mean, I don't want to go back years and years and
 21 years, but there was a serious fire in the West End of
 22 London where great big sheets of glass were released and
 23 flew along the street. That's the sort of thing I'm
 24 talking about. Bits of the -- or pieces of the cladding
 25 falling, not the whole thing failing.

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1 Q. I see. But you said to us yesterday that you were
 2 aware, for example, of the big tower fires in Dubai.
 3 A. Yeah.
 4 Q. Weren't those really quite stark examples of external
 5 fire spread through external rainscreen panels?
 6 A. But they weren't zinc, as far as I know.
 7 Q. I see.
 8 Were you aware at this time that the existing
 9 fire strategy report that had been drafted by Ms Cooney
 10 had justified the stay-put or defend-in-place strategy
 11 remaining by reference to an assumed high degree of
 12 compartmentation?
 13 A. I think that's a given for any apartment building.
 14 Stay put is because it's highly compartmented.
 15 Q. Did the knowledge that you had here that fire could
 16 spread, even if we go with your narrow, you know, fire
 17 spreading from the compartment and out and localised
 18 spread, did that knowledge that fire could spread that
 19 way give you concern about its impact on
 20 compartmentation and your knowledge that a stay-put
 21 strategy applied?
 22 A. No, I mean, if I had assumed, and I think I did, that
 23 the cladding and the insulation would comply with the
 24 recommendations of Approved Document B, then that would
 25 not have caused me any concern about external fire

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1 spread.
 2 Q. Did the knowledge that you had about this fire spread
 3 give you any concern, given the difficulties posed by
 4 the interior of Grenfell Tower, namely the ventilation
 5 issues you knew about at the time and a narrow single
 6 stair? Did that give you any concern?
 7 A. No, my expectation of the internal compartmentation was
 8 that it was okay or it should have been following the
 9 completion of the works.
 10 In terms of smoke control, my assumption again was
 11 that the design of the smoke control would prevent
 12 fire spread -- sorry, smoke spread into the stair.
 13 That's the functional requirement for a smoke extract
 14 system in that location.
 15 Now, if you lose compartmentation -- and I'm not
 16 telling you anything you don't already know -- if you
 17 lose compartmentation for one reason or another, then
 18 a stay-put strategy is a risky one.
 19 Q. Yes, but I'm not talking about the completion of the
 20 works, Mr Ashton. I appreciate you knew that the smoke
 21 control system would be refurbished. I'm talking about
 22 Grenfell Tower as it existed at that point, and you knew
 23 that the smoke control system had real problems.
 24 A. Yes, but I didn't know that there were any defects in
 25 compartmentation, and I'm not sure there were.

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1 Q. I see.
 2 Do we take it from the fact that Mr Pearson becomes
 3 involved that you did have some concern about advising
 4 on this or some concerns about the ramifications of
 5 this?
 6 A. No, no, absolutely not.
 7 Q. Can you help us as to how Mr Pearson becomes involved in
 8 this?
 9 A. I think he must have been copied in on the email, and he
 10 offered his opinion as well.
 11 Q. Yes.
 12 A. I don't believe I asked him to agree with what I was
 13 saying, but I may have done.
 14 Q. Yes.
 15 A. We were in the same room together frequently.
 16 Q. Yes.
 17 Did you appreciate at the time that one conclusion
 18 to be drawn from your observations about failure of the
 19 cladding in the event of fire was that the proposed
 20 refurbishment works would have an adverse effect on the
 21 building in relation to external fire spread?
 22 A. No, I didn't conclude that at all. If they had put
 23 a compliant cladding on that building, then there
 24 wouldn't have been a problem, in my view.
 25 Q. I see. So it follows that you didn't appreciate that

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1 the comment you had made in your fire safety reports
 2 that the proposed changes will have no adverse effect on
 3 the building in relation to external fire spread
 4 required immediate retraction because it couldn't be
 5 justified?
 6 A. No, I said it would be confirmed by an analysis in the
 7 future, to deal with the information that I hadn't been
 8 provided with.
 9 Q. I'm going to put it to you that what you should have
 10 done is that you should have retracted that comment in
 11 the fire safety reports and advised Studio E that they
 12 needed full and proper advice about the fire safety
 13 risks posed by the overcladding once you started
 14 advising in these kind of terms about zinc cladding
 15 failing, et cetera?
 16 A. Nothing that I had seen that I commented on gave me any
 17 cause for concern, because I didn't know they were using
 18 unsuitable materials. As far as I was concerned, they
 19 were using zinc cladding, which I took to be
 20 non-combustible, and I think that's a reasonable
 21 assumption. I didn't know about the insulation, but
 22 I assumed that at some point they would tell me what it
 23 was, but they never did.
 24 Q. So you didn't think about engaging, for example, with
 25 RBKC Building Control in order to discuss with them

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1 whether the external wall was compliant with the
 2 functional requirements of the Building Regulations?
 3 A. That's not something we would do routinely. We wouldn't
 4 ring up the Building Control department and say, "Oh, is
 5 what we're proposing for this okay?" It would be more
 6 direct than that. We would sit down with them with the
 7 details of what was proposed and go through them.
 8 Q. Yes.
 9 Did you consider that the statement you had made in
 10 the fire strategy reports, the three issues, that the
 11 proposed changes would have no adverse effect on the
 12 building in relation to external fire spread, could
 13 still be justified?
 14 A. It depends at what time you look at this. If you had
 15 asked me if that remark or that statement was valid post
 16 the fire, I'd say no, it wasn't.
 17 Q. No, I'm asking you --
 18 A. At the time I wrote it, we didn't know that they were
 19 doing.
 20 Q. I'm asking you at the time you wrote this email here,
 21 now, in March 2015. Do you think when you were writing
 22 it or did you consider whether the statement you had
 23 made previously could still be justified?
 24 A. No, I didn't link the two, because I didn't smell a rat.
 25 I mean, we're talking about zinc cladding and whether or

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1 not there needed to be cavity barriers or firestops at
 2 the junction between the external walls and the floors.
 3 Q. Yes.
 4 A. It was that narrow.
 5 Q. Did it occur to you at this time that there might be
 6 a need to identify more clearly the performance
 7 requirements for the external wall construction in the
 8 locations where these cavity barriers were required?
 9 A. I think I've already said that, in evidence earlier,
 10 with the wisdom of hindsight, it might have been helpful
 11 to quote what the regulation required, in effect, in the
 12 strategy. But we didn't do it.
 13 Q. Yes.
 14 A. We assumed, I think, a degree of knowledge on the part
 15 of the reader.
 16 Q. Yes.
 17 Can we have a quick look at a passage in ADB. If we
 18 go to {CLG00000224/86}, paragraph 9.15 there in the
 19 bottom half of that page in the left-hand column, it
 20 states there that:
 21 "Cavity barriers should also be fixed so that their
 22 performance is unlikely to be made ineffective by ...
 23 "c. failure in a fire of their fixings ... and
 24 "d. failure in a fire of any material or
 25 construction which they abut."

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1 Do you see that?
 2 A. I do, yes.
 3 Q. Then it gives an example about a suspended ceiling over
 4 the top of a fire resisting wall.
 5 Did you ever think about that guidance and have
 6 regard to that when you were giving this advice about
 7 cavity barriers?
 8 A. No, I think the reality is that if what I said had
 9 occurred, you would get -- the cavity barrier would not
 10 have been an effective barrier against fire and smoke.
 11 With sort of collapse of the external covering of the
 12 building adjacent to that, it would almost become
 13 redundant, and I think that's pretty much in line with
 14 what Tony Pearson said in his response, which was only
 15 to me, as it happens.
 16 Q. Given what you have said about the risk of flaming
 17 exiting a compartment and spreading into the cladding,
 18 did you ever consider advising Studio E or Rydon of the
 19 need for cavity barriers around windows to prevent
 20 a breach of the compartment into the external cladding?
 21 A. Not specifically, but I have said earlier today that
 22 there is some debate as to whether or not cavity
 23 barriers around window openings are strictly necessary
 24 where you have got cavity barriers at the junction of
 25 the compartment walls and floors. It is a matter that

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1 could be debated. I accept that the approved document
 2 says they should be provided, but I'm saying that
 3 it's -- it is a matter for debate.
 4 Q. If you had advised on that issue, would you have been
 5 advising that they were required around the windows?
 6 A. If I had been looking at the details in totality, then
 7 yes, I would have said this is what is required.
 8 Q. You talk about a debate in the industry. Were you aware
 9 that there was a debate in the industry at this time as
 10 to the correct interpretation of diagram 33, in
 11 particular whether in a rainscreen cladding system there
 12 should be a cavity barrier or whether there should have
 13 been a firestop which was the same fire resistance as
 14 the compartment lines as the cladding passed over?
 15 A. No, I wasn't aware of that.
 16 Q. Ms Beryl Menzies, the Inquiry's Building Control expert,
 17 indicated that if she had been the Building Control
 18 officer at Grenfell, she would have required
 19 a 120-minute firestop at compartment lines to extend
 20 right through the compartmentation out into the
 21 rainscreen system.
 22 A. So she supported John Hoban, in effect.
 23 Q. That's what she said, yes.
 24 A. Well, that's, you know, an interpretation again, I would
 25 suggest.

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1 Q. Did you ever think about whether the substantive
 2 requirements of B3 and B4 together might mean that
 3 compartmentation should be maintained and that this
 4 meant dividing the rainscreen cavity with a 120-minute
 5 firestop in the way that John Hoban and Ms Menzies
 6 indicated?
 7 A. No, because they, to my mind, go further than what the
 8 approved document says. If you look at where cavity
 9 barriers need to be provided, it's behind rainscreen
 10 cladding.
 11 Q. Yes.
 12 A. It doesn't say you must have firestops behind rainscreen
 13 cladding.
 14 Q. Yes.
 15 Now, moving on to that email from Dr Tony Pearson
 16 that we just talked about. Just two minutes after you
 17 sent your email to Mr Crawford on 31 March 2015, you
 18 received an email from Dr Pearson on this same point.
 19 A. Yes.
 20 Q. Can we go to that, {EX000001347}. This is just
 21 an internal email, if you like, between you and
 22 Mr Pearson that he sends to you. He says:
 23 "We note that the barrier against fire spread
 24 between floors is provided through the connection of the
 25 structural floors to the existing external walls. The

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1 existing external walls are expected to provide
 2 sufficient fire resistance to prevent fire from entering
 3 the cavities at or near floor or ceiling level.
 4 "We would not rule out that fire could enter the
 5 cavity if there is flaming through the windows.
 6 However, if significant flames are ejected from the
 7 windows, this would lead to failure of the cladding
 8 system, with the external surface falling away and
 9 exposing the cavity, eliminating the potential for
 10 unseen fire spread. A standard cavity barrier should be
 11 sufficient to prevent fire spread between floors while
 12 there remains a cavity.
 13 "In view of the above, we do not feel that there
 14 should be a need for a 2-hour rated fire break in the
 15 cavities along the lines of the compartment floors or
 16 walls."
 17 Do you see that?
 18 A. I do, yes, and I said earlier that I thought he
 19 expressed it better than I did.
 20 Q. Yes. You say --
 21 A. He is saying the same thing, isn't he, effectively?
 22 Q. Let's just explore this. So you say, first of all, in
 23 your witness statement at paragraph 5.32
 24 {EX000001621/20} that you don't recall receiving the
 25 emails from Dr Pearson at the time.

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1 Isn't it likely that you forwarded Mr Crawford's
 2 email of 31 March to him and asked for his view on how
 3 to answer Mr Crawford's query?
 4 A. I think that's the most likely scenario and I think that
 5 he responded to me too late; in other words, after I had
 6 responded to Mr Crawford.
 7 Q. Yes.
 8 Now, Dr Pearson has said in his witness statement
 9 that the likely reason he became involved in commenting
 10 was that all emails containing technical information had
 11 to be approved by at least two people. He says that at
 12 paragraph 4.5 of his witness statement.
 13 Now, we have covered this already, but would you
 14 agree -- I think you agreed yesterday -- that that was
 15 normally the practice with technical advice, even
 16 an email, that it would be approved by two people?
 17 A. Yes, that was standard practice.
 18 Q. Now, by responding to Mr Crawford's query at 13.32
 19 before you have received Dr Pearson's email at 13.34, do
 20 you agree that, in this instance, you didn't follow that
 21 practice?
 22 A. Yes, I didn't follow that practice, but I was fairly
 23 confident in what I was saying to Mr Crawford and, as it
 24 turned out, Tony Pearson was saying pretty much the same
 25 thing.

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1 Q. Did you read Dr Pearson's email at the time?
 2 A. Subsequently, yes, I did, yes.
 3 Q. When you say subsequently, when would that have been?
 4 A. Well, I think I -- when I was having a meeting with my
 5 legal advisers.
 6 Q. I see.
 7 A. Our legal advisers, sorry.
 8 Q. Do you have a recollection of reading it at around the
 9 time you sent your email or shortly thereafter?
 10 A. I think I may have done, but I can't honestly say one
 11 way or the other.
 12 Q. Now --
 13 A. It didn't give me any cause for alarm, because it
 14 essentially says what I said in my email.
 15 Q. I want to put it to you that, actually, what Dr Pearson
 16 has done is draw more explicit attention to the risks
 17 posed by fire to the cladding by explaining in
 18 particular that if significant flames are ejected from
 19 the windows, this would lead to failure of the cladding
 20 system, with the external surface falling away and
 21 exposing the cavity. Do you see that?
 22 A. Yes, I see that, and I did say earlier I thought his
 23 response was better than mine, but --
 24 Q. Do you agree it's more explicit about the risks that are
 25 posed?

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1 A. No, I think it's not the risks; I think what he is
 2 saying is what would happen in the same way that I was.
 3 If you get fire coming out of a window, it will lead
 4 to -- it could lead to failure of the cladding system
 5 surrounding that window opening.
 6 Q. Did it alarm you that flaming through the windows might
 7 lead to failure of the cladding system?
 8 A. No, I'm suggesting that would happen anyway.
 9 Q. Would you agree that if you were reading Dr Pearson's
 10 email at the time that you should have appreciated that
 11 his comments had significant implications for the
 12 fire safety of the refurbishment works?
 13 A. No, no, I think I've answered that question in
 14 a different way earlier. Nothing that I had seen to
 15 that point gave me any cause to think that there would
 16 be external -- extensive external fire spread.
 17 Q. Would you agree that that had significant implications
 18 for compliance with the requirements of the
 19 Building Regulations and particularly the B4.(1)
 20 requirement?
 21 A. No. No. As I say, I was not concerned at what was
 22 being proposed at that time, as I understood it. The
 23 question was -- and I take you back to that -- the
 24 question was: do we need cavity barriers or do we need
 25 firestops in this location? And that's all it was

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1 about, really. And I sought to justify why cavity
 2 barriers would be adequate.
 3 Q. Yes, I think what I'm suggesting to you is that although
 4 it began with that narrow question, in answering that
 5 question, something far more serious was exposed by the
 6 answers that you're both giving.
 7 A. Sorry, this is -- this happened -- I won't say it
 8 happens every day, that would be an exaggeration, but on
 9 numerous fires, windows do fail, and if they're in
 10 a lightweight construction, they will cause part of that
 11 lightweight construction surrounding them to fail. That
 12 doesn't imply something far worse, which is the whole of
 13 the façade on fire, which is what happened at Grenfell.
 14 Q. Did it occur to you that Dr Pearson's comments here had
 15 significant implications for the correctness of the
 16 statement in the fire safety reports that the works
 17 would have no adverse effect on the building in relation
 18 to external fire spread?
 19 A. No, it didn't.
 20 Q. Again, I'm going to ask you -- and I know what your
 21 answer will be, but I'm going to nevertheless ask it --
 22 can you explain why you didn't seek to update your
 23 fire strategy report at this stage?
 24 A. Because I hadn't got sufficient details from the
 25 architects to enable me to do that.

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1 Q. I see. So was it still in your mind that you might need
 2 to do that when you got those details?
 3 A. Yes, absolutely.
 4 Q. I see.
 5 (Pause)
 6 Can you explain why you didn't raise with Studio E
 7 at any stage that there was the potential for
 8 flame spread within the cladding system because the
 9 cavity barriers would not be effective once the panels
 10 started to heat up and melt?
 11 A. No. Well, to say that to a designer would imply that
 12 that always happens, and it doesn't always happen.
 13 Q. Just looking at Dr Pearson's view, it appears to be that
 14 fire could enter the cavity if there is flaming through
 15 the windows, that cladding will then fail, and therefore
 16 there is no unseen fire spread, and no need for
 17 a two-hour firebreak.
 18 Would you agree, looking at that now, that it
 19 potentially overlooks the point that the cladding
 20 materials, including for example the insulation, can
 21 still burn and spread flame between flats even once the
 22 panels have fallen off?
 23 A. I think -- I don't think that he envisaged combustible
 24 materials being used on the face of this building.
 25 I would differ with him in one respect. If the fire

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1 comes out and hits the external surface of the cladding,
 2 it could be that that fails first before it gets into
 3 the cavity.
 4 The other route, which I'm sure you all know about,
 5 is if the fire gets into the cavity behind the cladding.
 6 But that's not examined in this analysis of his.
 7 Q. No. That's exactly the point, that it also overlooks
 8 that before the cavity actually falls off, there could
 9 be some unseen fire spread behind the panels.
 10 A. There could be.
 11 Q. Yes.
 12 A. You can't say that fire will never do what it's
 13 predicted to.
 14 Q. But doesn't that potentially present problems for the
 15 fire service if they are attempting to put out a fire
 16 and you have got unseen fire spread behind the panels?
 17 A. Yeah, that's why we have cavity barriers. One thing
 18 that, as I -- I think I've said this several times over
 19 the last few days, that that's why we have to be careful
 20 with buildings where they can't fight a fire externally.
 21 Q. Did you discuss this further with Dr Pearson at the time
 22 or with anybody else within Exova?
 23 A. No, I didn't, no.
 24 Q. Do you remember what you did with Dr Pearson's email?
 25 Did it just stay in your inbox?

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1 A. Just stayed in my inbox, yes.
 2 Q. Yes.
 3 A. I mean, just to add to that, I mean, if he had said
 4 something totally different to what I had said, then
 5 I would have had a discussion with him and I might have
 6 gone back to Studio E and said, "Oh, my colleague
 7 doesn't agree with me, this is what we jointly think".
 8 But reading what Tony has written here, it's saying, as
 9 I said, slightly better than I would have done, but more
 10 or less saying the same thing: that you will get
 11 localised failure of the cladding.
 12 Q. Wasn't Dr Pearson's written advice intended to alert
 13 Studio E, Harley, Rydon and Building Control that there
 14 was a need to review the fire safety of the whole
 15 cladding system due to the risk that fire could enter
 16 the cavity if there was flaming through the windows?
 17 A. Well, this was an internal email from him to me. It
 18 wasn't addressed to anybody else.
 19 Q. Yes, but, I mean, we will ask Dr Pearson about this, but
 20 did you not think about whether what he was doing was
 21 giving you some thoughts which actually were important
 22 to send on to Studio E, Harley, Rydon and
 23 Building Control so that they were fully aware of the
 24 risks?
 25 A. I'm not sure that he said anything extra that needed to

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1 be conveyed to Studio E, et cetera. He is saying the
 2 same thing as me, essentially. He's saying more what --
 3 using more words, but what he is saying is that you will
 4 get some local failure of the cladding, which could lead
 5 to the fire bypassing the cavity barrier.
 6 Q. Yes.
 7 Now, if we go back to the email of 31 March 2015 at
 8 {SEA00013044}, and if we look at the top of that page,
 9 at that email that he sent to you where he has asked you
 10 to comment on the history of this item, we can see in
 11 the attachments that he sends a drawing, "1279 SEA (06)
 12 110 - Typical Bay". Do you see that there?
 13 A. Yes, I see the reference, yeah.
 14 Q. Do you recall looking at that drawing at the time?
 15 A. No, I don't believe I did.
 16 Q. Can we just have a look at it. So it's {SEA00002499}
 17 and we will need the native version.
 18 What I want to look at is that section on the top
 19 right, that "Proposed Section - Typical Bay", if we
 20 could zoom in as much as possible on that.
 21 A. Right.
 22 Q. Now, this again indicates that there were cavity
 23 barriers at the head of the window only. Can you see
 24 that there?
 25 A. I can, yes.

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1 Q. At the head of the window we see it says:
 2 "Ensure horizontal and vertical cavity barriers meet
 3 tightly."
 4 Under P10/435.
 5 There is nothing there at the cill of the window.
 6 A. Right.
 7 Q. Does it follow, then, from the fact that you didn't look
 8 at the drawing, that that was not something that you
 9 noticed at the time or checked at the time?
 10 A. No, that's right.
 11 Q. No.
 12 Now, finally -- I'm just on my last couple of
 13 questions on this topic and then we can break for lunch,
 14 if that's okay.
 15 Can you recall whether in March/April 2015 you had
 16 any telephone conversations with Mr Crawford about the
 17 cavity barrier strategy, ie calls not emails?
 18 A. No, I don't believe I had any.
 19 Q. Did Mr Crawford ever raise with you any concern that it
 20 was not possible to construct the rainscreen cladding in
 21 accordance with the ADB guidance, in particular
 22 section 9 of ADB and paragraph 12.8?
 23 A. No, I would have remembered a conversation like that.
 24 Q. Did he talk to you about the practical application of
 25 cavity barriers and whether it was possible to have them

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1 immediately around the windows, or whether they should
 2 be further away but in line with the compartment walls?
 3 A. No.
 4 Q. Did he ever talk to you about the practical application
 5 of diagram 33 of ADB within section 9?
 6 A. No, he didn't.
 7 MS GRANGE: Okay, thank you.
 8 Mr Chairman, that would be a good moment for
 9 a break.
 10 SIR MARTIN MOORE-BICK: Yes, all right, thank you very much.
 11 We're going to have another break now, Mr Ashton,
 12 time for some lunch, so we will resume at 2 o'clock,
 13 please, and no talking about your evidence.
 14 THE WITNESS: Okay, thank you.
 15 SIR MARTIN MOORE-BICK: Thank you very much. Would you like
 16 to go with the usher.
 17 (Pause)
 18 MS GRANGE: Thank you.
 19 SIR MARTIN MOORE-BICK: Good, thank you very much. Up to
 20 speed?
 21 MS GRANGE: Yes, I think we're going to be fine. It
 22 slightly depends on whether we are inundated in the
 23 lunch break.
 24 SIR MARTIN MOORE-BICK: Of course, yes.
 25 MS GRANGE: But with any luck, we have covered a lot of

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1 questions overnight.
 2 SIR MARTIN MOORE-BICK: Very good.
 3 2 o'clock, please.
 4 MS GRANGE: Thank you.
 5 (1.00 pm)
 6 (The short adjournment)
 7 (2.00 pm)
 8 SIR MARTIN MOORE-BICK: All right, Mr Ashton?
 9 THE WITNESS: Yes, thank you.
 10 SIR MARTIN MOORE-BICK: Very good, thank you very much.
 11 Yes, Ms Grange.
 12 MS GRANGE: Yes, thank you.
 13 I just want to pick up on a few matters arising from
 14 this morning's evidence before moving on with my
 15 remaining topics.
 16 I want to start by discussing zinc.
 17 A. Zinc?
 18 Q. Zinc panels.
 19 A. Right.
 20 Q. You said a number of times that you assumed the panels
 21 were zinc and therefore made certain assumptions about
 22 the fire behaviour of those panels.
 23 Were you aware at the time that there were zinc
 24 composite polymer panels on the market?
 25 A. No, I wasn't.

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1 Q. Indeed, in the NBS specification for this project, one
 2 of the alternatives that was put forward was a zinc
 3 polymeric composite panel.
 4 A. Right.
 5 Q. Again, was that something you were aware of on this
 6 project?
 7 A. No, I -- I never saw the NBS specification. Is that
 8 part of the employer's requirements?
 9 Q. It is.
 10 A. No, well, I never saw those. I mean, as I said in my
 11 evidence this morning, it's important that the design
 12 team see the employer's requirements very early on in
 13 the design process. That didn't seem to happen, or at
 14 least didn't happen in my case.
 15 Q. Was that ever something you raised with Studio E or your
 16 client, the TMO, and said exactly that: "It's important
 17 that I see the employer's requirements, please can I see
 18 them because this is an important document"?
 19 A. No, I say that -- I'm thinking more in terms of new
 20 commercial developments. There may not have been any as
 21 far as I was aware for this building.
 22 Q. You thought there might not have been any employer's
 23 requirements?
 24 A. No, not necessarily.
 25 Q. For the refurbishment project? I mean, it was a big

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1 refurbishment.
 2 A. Yeah.
 3 Q. Wouldn't you have expected there to be employer's
 4 requirements?
 5 A. Can I put it another way: I don't see the employer's
 6 requirements on every project that I work on.
 7 Q. I see.
 8 A. But I normally see some.
 9 Q. Back to the point I'm putting to you: if you had known
 10 that there were zinc composite panels on the market,
 11 might you have been a bit more questioning about whether
 12 the use of zinc panels was appropriate?
 13 A. Yes, I would have done, yes.
 14 Q. If that was right as well, you couldn't simply have
 15 assumed from the fact it was zinc as opposed to
 16 aluminium that that meant the panels were inert and
 17 wouldn't behave --
 18 A. No, no, I think aluminium is an inert material anyway,
 19 so it's the same as zinc, but ... so, you know, if
 20 somebody said, "We're going to clad the building in zinc
 21 or aluminium", that wouldn't have raised any particular
 22 concerns.
 23 Q. Would you accept, and we looked at it this morning, that
 24 there was an email where you were told it was
 25 an aluminium rainscreen cassette system? Would you

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1 accept that a reasonably competent fire engineer would
 2 have noticed that the contractor was telling him that
 3 the cladding had changed?
 4 A. No, I said earlier, I think, this morning that I didn't
 5 read aluminium cassette as being the totality of the
 6 cladding on the building. When I looked at the drawings
 7 that they did send me, there were aluminium elements in
 8 that, but the principal cladding was zinc, as far as
 9 I could tell.
 10 Q. I see.
 11 Would you accept that a reasonably competent fire
 12 engineer would have investigated for himself or enquired
 13 if necessary of the contractor what a cassette was if
 14 you didn't know?
 15 A. No, it just didn't strike me as being a significant
 16 element of the construction.
 17 Q. And yet you said candidly you didn't actually know what
 18 the cassettes meant?
 19 A. No, no. No. But, as I say, the central question was
 20 not to do with the cladding but more to do with cavity
 21 barriers and firestops and the performance, and all that
 22 sort of thing.
 23 Q. Yes.
 24 A. It wasn't specifically to do with the construction of
 25 the external walls.

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1 Q. Just one further proposition on this: would you accept
 2 that a reasonably competent fire engineer would have
 3 advised that, now that there was further detail about
 4 the external wall materials and the design, he should
 5 complete the outstanding work under the fire safety
 6 strategies and do the proposed future analysis on B4?
 7 A. I think it would be reasonable to assume that I would
 8 have asked them for details so that we could discuss the
 9 details.
 10 Q. I see. Reasonable for them to assume that that's what
 11 you were going to do?
 12 A. No, no, reasonable -- I mean, I could have asked them
 13 what it -- you know, "Can we have more details of the
 14 cladding?" Although these should have been, you know,
 15 made available much earlier in the design process.
 16 Q. Okay. I want to put it to you again: do you accept that
 17 a reasonably competent fire engineer would have advised
 18 that, now that there was further detail about the
 19 external wall materials and the design, he should
 20 complete the outstanding work under the outline fire
 21 safety strategies and do the promised future analysis
 22 under B4?
 23 A. I don't think it's -- yeah, I think that's a reasonable
 24 assumption.
 25 SIR MARTIN MOORE-BICK: Well, in that case, I think you

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1 could help me by telling me why you didn't do that.
 2 A. Because I was more focused on the specific question in
 3 the email, which wasn't actually to do with the external
 4 wall construction, it was to do with components of it.
 5 MS GRANGE: I now want to ask you a little bit about
 6 knowledge of US developments.
 7 At the time that you were advising Studio E about,
 8 for example, cavity barriers in the cladding and other
 9 issues in September 2014 and March 2015, were you aware
 10 that in June 2014 the Fire Protection Research
 11 Foundation, based in Massachusetts, USA, had published
 12 a report on fire hazards of exterior wall assemblies
 13 containing combustible components?
 14 A. No, I wasn't aware of that publication.
 15 Q. So you haven't ever read it or --
 16 A. No.
 17 Q. -- digested its contents? In which case, I'll move on.
 18 I now want to ask you some questions about Celotex
 19 and desktop study work that was done in relation to the
 20 Celotex RS5000.
 21 I want to look at Mr Rek's witness statement. This
 22 is at [SEA00014278/34]. So Mr Rek, just to put this in
 23 context, was one of the witnesses for Studio E that we
 24 have heard evidence from already, and he was involved,
 25 for example, in putting together the NBS specification.

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1 That's one of the things he had involvement in.
 2 A. Okay.
 3 Q. He says this at the end of his witness statement:
 4 "After I left [Studio E LLP] I was involved in the
 5 design of a high-rise building where Celotex FR5000 was
 6 also specified. On that project Exova had produced a
 7 desktop study comparing the rainscreen façade cladding
 8 with Celotex's tested sample and they had concluded that
 9 it complied with BR135."
 10 Do you see that there?
 11 A. I do, yes.
 12 Q. Did you know at the time you were advising on the
 13 Grenfell project anything about this desktop study work
 14 in relation to -- there it's the FR5000 Celotex product?
 15 A. No. I mean, had I looked into the thing in more detail,
 16 I might have asked whether there had been a desktop
 17 study. I was aware that desktop studies were being
 18 carried out by one of my -- one of the other departments
 19 in our organisation, which is what I was saying,
 20 you know, in terms of following the opposite to the
 21 linear route, you could actually get an assessment or
 22 a fire test as a way of satisfying the regulation.
 23 Q. But you weren't aware of this specific desktop study
 24 work?
 25 A. No, I weren't, no.

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1 Q. So you can't help us as to the building involved, how
 2 tall it was, the detail of it?
 3 A. Yeah. I guess by high-rise he probably meant over
 4 18 metres.
 5 Q. But you can't help us any more --
 6 A. No, I can't.
 7 Q. -- as to the background to all of that?
 8 A. No.
 9 Q. Were you aware, when you were working on the Grenfell
 10 project, that in February and March 2015 there had been
 11 direct contact between Celotex and Exova personnel about
 12 Celotex products, including RS5000? Were you aware of
 13 that?
 14 A. No, I wasn't aware of that.
 15 Q. Can we look at an example. This is {CEL00003541}. This
 16 is an email between Celotex -- if we can zoom in on the
 17 top one to start with, this is Debbie Berger at Celotex
 18 and someone called Frans Paap at Exova, and it's in the
 19 context of exchanges about the RS5000 product.
 20 Did you know or have any contact with Frans Paap of
 21 Exova?
 22 A. I knew Frans Paap, yes. I didn't have any exchanges
 23 with him on Celotex.
 24 Q. Were you aware that he was having exchanges with
 25 Celotex --

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1 A. No.
 2 Q. -- at this time?
 3 If we could also look at {CEL00003547}, this is
 4 an appointment for a meeting between Celotex and Exova
 5 on 16 February 2015. It appears to be a meeting:
 6 "Subject: RS5000 Field of Application.
 7 "Location: Celotex, Bretton House Board Room."
 8 Do you see that?
 9 A. Yes.
 10 Q. "Hi Andrew and Frans
 11 "Thank you so much for agreeing to see us so
 12 quickly. I will organise a lunch for when you arrive."
 13 That's from Debbie Berger.
 14 Were you aware of that meeting or meetings?
 15 A. No, I mean, we weren't sort of aware of what was going
 16 on in the testing and assessment department on a routine
 17 basis.
 18 Q. Just one final email to look at. This is {CEL00003589}.
 19 If we look at the top again, this is Debbie Berger,
 20 18 March 2015, to Frans Paap, and she is enclosing
 21 a copy of her 32-page test report for BS 8414 part 2
 22 using Celotex RS5000, and sending examples of "4
 23 build-ups which we commonly see presented to us at
 24 design stage". Do you see those?
 25 Again, was that something that was being discussed

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1 within Exova at the time, something you were aware of,
 2 these different build-ups for RS5000 that were being
 3 considered?
 4 A. No, but if I had become aware that Celotex was being --
 5 if I had been aware of the totality of the external
 6 walls and that Celotex was being used, I would have
 7 carried out some investigations. They would have
 8 included enquiring of our testing department whether
 9 they had any information on the performance of Celotex
 10 and in what given sort of configurations.
 11 Q. Yes.
 12 A. This would be part of the process of determining whether
 13 or not they had a certificated approval to assist them.
 14 Q. It would appear from the documents we have that these
 15 common build-ups form the subject of a draft desktop
 16 study carried out by Exova dated 7 May 2015.
 17 A. Right.
 18 Q. I assume from your answers so far that you didn't have
 19 any involvement or knowledge of that?
 20 A. No. I wouldn't expect to.
 21 Q. But if you had been enquiring within your firm about the
 22 use of RS5000, you might have found out about this --
 23 A. Oh, yes. Yes, I would.
 24 Q. Now, just on the subject of updating your fire strategy
 25 work, I now want to turn to an email that you received

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1 on 21 December 2015, so later in the project again. Can
 2 we go to that. This is at {MAX00006084/6}. If we zoom
 3 in to the top of that.
 4 So this is from Andy Bridges of RJ Electrics, who is
 5 one of the subcontractors on the project --
 6 A. Okay.
 7 Q. -- to you and Tony Pearson, copying in some others at
 8 JS Wright; Steve Blake, that's Rydon; Matt Smith,
 9 Max Fordham; David Hughes, Rydon. Do you see that
 10 there?
 11 A. Right.
 12 Q. He's emailing you about installing smoke detection to
 13 operate the AOV system in the community rooms.
 14 A. Right.
 15 Q. That's the estates office and the concierge office, were
 16 removed in favour of two additional flats at the
 17 mezzanine level.
 18 If we look at the second sentence of the first
 19 paragraph, he says:
 20 "Hello Terry,
 21 "We are the electrical contractors on this project.
 22 I'm not sure if you've been made aware but there have
 23 been some fairly major changes to the lower levels since
 24 you issued your last Fire Strategy document, Iss 03."
 25 Then he gives -- we don't need to trouble ourselves

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1 about the detail of this -- an explanation of what the
 2 changes are. Then if we look down at his questions, he
 3 raises three questions:
 4 "How is the omission of the concierge going to
 5 affect your current document and thinking?"
 6 I think in the version of this document what we're
 7 seeing is answers that you then gave to those questions;
 8 is that right?
 9 A. Probably, yes.
 10 Q. So in that first question:
 11 "How is the omission of the concierge going to
 12 affect your current document and thinking?"
 13 It would appear that you have then typed into this
 14 document:
 15 "The omission of the concierge doesn't materially
 16 affect the fire strategy."
 17 Do you see that?
 18 A. I do.
 19 Q. Do you remember doing this? Do you remember --
 20 A. I remember it, yes, I remember it coming from
 21 an electrical subcontractor.
 22 Q. Yes. Now, given that you're being updated on
 23 developments since the third issue of your
 24 fire strategy, and he is saying that these are fairly
 25 major changes to the lower levels, didn't that put you

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1 on notice that the fire strategy for the tower was out
 2 of date and no longer reflective of the design, and
 3 should you have not at least advised Rydon or Studio E
 4 or the TMO of the need for an updated report?
 5 A. He described them as major changes. They don't seem to
 6 be major to me. Or didn't at the time, I should say.
 7 Q. I see.
 8 Can we look at another exchange. This is with
 9 Ms Williams on 19 October 2015. This is {ART00004926}.
 10 So here, what we're seeing in this is a series of
 11 exchanges that you have with Ms Williams entitled
 12 "Fire Strategy", and you're providing advice on,
 13 I think, fire strategy drawings at this point; is that
 14 right? It would appear to be a pdf fire strategy
 15 drawing.
 16 A. Well, I'm assuming there was a plan, yes.
 17 Q. For example, the top email:
 18 "Terry
 19 "This plan shows that we had assumed an AOV within
 20 the lobby of the boxing club, ie where it is accessible
 21 at walkway level (top right drawing).
 22 "Would this suffice? I don't know how you would be
 23 able to reach to manually reset one at the top of the
 24 stairs here.
 25 "Thanks for your help."

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1 Again, my question is a general question. When you
 2 have got this kind of email exchange, and it's entitled
 3 "changes to floor layout", didn't that prompt you to at
 4 least think about whether or not you ought to be telling
 5 someone that the fire strategy that you had done for the
 6 building needed to be revisited?
 7 A. Well, the first question related to an AOV which I knew
 8 was required in the lobby between the boxing club and
 9 the stairs, so that to me didn't make any -- have any
 10 impact.
 11 Q. I see. But it didn't occur to you that there would need
 12 to be a finalised fire strategy for the building that
 13 would, for example, form part of the health and safety
 14 file as part of compliance with the CDM Regulations?
 15 A. It didn't occur to me at that point, no.
 16 Q. No. And also an updated fire strategy to deal with
 17 regulation 38 information that would be passed on to the
 18 responsible person, so there is a link between what's
 19 been done under the Building Regulations and then the
 20 responsible person's obligations under the RRO, that
 21 didn't occur to you either?
 22 A. No, it didn't, no.
 23 Q. No.
 24 I also briefly want to turn to some clerk of works
 25 reports review meeting minutes. If we go to

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1 {ART00006688}, this is from a meeting on
 2 12 January 2016. These are COW, we haven't looked at
 3 any of these yet, but they're clerk of works reports
 4 review meeting minutes, and then it says there has been
 5 a meeting at the Rydon site office, and you can see the
 6 attendees.
 7 Now, you're not present at this meeting, just to be
 8 clear, but if we look on at page 5 {ART00006688/5} of
 9 this document, and if we blow that up, three lines from
 10 the bottom, it says there:
 11 "Fire strategy needs to be updated as per on site
 12 discussions."
 13 Then there are initials there, DH, which we think
 14 are David Hughes of Rydon.
 15 My question for you is: did David Hughes or anyone
 16 else from Rydon, or indeed anyone else involved in the
 17 project, contact you in or around this time, so
 18 January 2016, to ask for the fire strategy to be
 19 updated?
 20 A. No.
 21 Q. Now --
 22 A. Before we leave that, I'm not exactly sure, looking at
 23 the list of items here, why we would need to update the
 24 fire strategy to --
 25 Q. I see.

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1 A. -- deal with what are snagging defects .
 2 Q. Yes. Well, I mean, we can explore that in due course
 3 with the Rydon witness.
 4 A. Okay.
 5 Q. I was just interested to know whether or not you had
 6 ever had any contact --
 7 A. Absolutely no contact, no.
 8 Q. -- after this .

9 Yesterday I put to you that there appeared to be
 10 around 90 emails either sent by you or cc'd between
 11 April 2014 when Rydon come on board and March 2016.

12 Now, there appears to be a dispute about this, and
 13 your solicitors have emailed overnight and said their
 14 calculation is it's closer to 40 emails. There has not
 15 been time to double check that, so what I'm going to do
 16 is just withdraw that question, but put it to you in
 17 a different way.

18 In light of what we have been looking at today -- so
 19 the advice you gave in September 2014, the advice you
 20 gave in the spring of 2015, these ongoing queries in
 21 late 2015 -- the substantive point is: doesn't this show
 22 that you were still regarded as involved in the project,
 23 even if you are saying you didn't regard yourself as
 24 a full part of the design team?

25 A. I think that some members of the design team did assume

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1 that we were still on board, so to speak.
 2 Q. Again, the follow-up question is: did you ever disabuse
 3 them of that perception --

4 A. No.

5 Q. -- at any stage?

6 A. No.

7 Q. Sprinklers, briefly. I just want some brief questions
 8 about sprinklers.

9 I think it's right, isn't it, that your
 10 understanding of the existing smoke control system
 11 serving the common lobbies pre the refurbishment was
 12 that it was not compliant with current guidance and it
 13 needed to be refurbished and/or modified. You said that
 14 in your design note that we looked at.

15 A. Yes, yeah.

16 Q. You also said in that initial design note that as the
 17 stairs serving residential accommodation should not
 18 serve other, non-residential accommodation, it may be
 19 necessary to provide sprinkler or water mist systems to
 20 the boxing club or office suite. That was something
 21 that was said in your design note.

22 Now, given the problems you had identified,
 23 including the single stair, the width of that stair, and
 24 the ventilation deficiency, did you consider or ever
 25 consider whether sprinklers would be appropriate

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1 throughout the building?

2 A. I can answer that in two ways. If you ask me: should
 3 existing high-rise blocks of flats be sprinklered
 4 retrospectively, my answer to that would be yes. That's
 5 not always possible and it's not backed up by any
 6 statutory requirement.

7 With regard to this development, I mentioned
 8 sprinklers in the context of the non-residential uses as
 9 identifying that it might be -- or I think the word
 10 I used was "may" -- may be needed to satisfy
 11 Building Control.

12 Q. Yes.

13 Did you ever advise anyone that it might be a good
 14 idea to consider sprinklers throughout the building?

15 A. No, I didn't.

16 Q. Can we go to paragraph 4.10 of your first witness
 17 statement. This is {EX000001621/10}. You say:

18 "Following the design note, I recall having a
 19 discussion with Studio E about some of the issues that
 20 had been raised in Ms Cooney's 10 September 2012 email
 21 ... including the possibility of sprinklers. This was
 22 also a point that had been covered in email exchanges
 23 with Studio E following the design note."

24 Do you see that there?

25 A. Yes, I do.

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1 Q. Can you recall who you had that discussion with at
 2 Studio E about sprinklers?

3 A. Well, it was either Bruce Sounes or Adrian Jess. One of
 4 the two people. The specific problem was travel
 5 distances in one apartment, which exceeded the
 6 recommended 9 metres, and my view was that we had to
 7 offer something by way of mitigation for that particular
 8 extended travel distance, and that could have been by
 9 using sprinklers --

10 Q. Yes.

11 A. -- or it could have been done by putting in an enhanced
 12 fire detection system, which meant a detector in every
 13 room.

14 Now, I have to say that, of the two, to deal with
 15 that particular problem, the detection system would be
 16 better because it would have detected the fire sooner
 17 than a sprinkler would.

18 Q. Yes.

19 A. You have to bear in mind that a sprinkler would only
 20 operate when there was a very high temperature in the
 21 room in which the fire is started. So for the occupants
 22 of that flat, the fire detection system was the better
 23 option.

24 Q. I see. So do you think that what you have just been
 25 explaining was the subject of your discussion with

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1 Studio E at the time about sprinklers to that specific
 2 flat?
 3 A. No, I think that if you read on in what I said later in
 4 that paragraph, it was: what do we need to do to
 5 provide, you know, an extra factor of fire safety, and
 6 what -- which particular way of doing that will be
 7 accessible to -- sorry, acceptable to Building Control.
 8 Q. Yes.
 9 A. Because they could conceivably have said, "Well, we
 10 think you should put sprinklers in", in which case the
 11 client would have had to face putting in a sprinkler
 12 installation in one small apartment.
 13 Q. Yes.
 14 A. So it was a number of -- well, two options, to provide
 15 compensation for a slightly increased travel distance,
 16 and common practice was that you put in an enhanced
 17 fire detection system for the reasons that I've already
 18 just given.
 19 Q. Yes.
 20 Were you aware of Ms Cooney's comment "no sprinklers
 21 wanted" in her email of 17 August 2012 to Andrew Martyn?
 22 That was the email we looked at before where she said
 23 "we're making a crap condition worse", that kind of very
 24 frank exchange she had with Mr Martyn?
 25 A. Yes, I was aware of that, yes. I don't know who told

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1 her or --
 2 Q. You were aware she had said "no sprinklers wanted"?
 3 A. Yes. I don't know whether it was the client or Studio E
 4 who told her that.
 5 Q. Yeah, that was my next question.
 6 A. Well --
 7 Q. Did you ever ask her who had told her no sprinklers
 8 wanted and where that had come from?
 9 A. Well, I assumed it had come from the client's side. If
 10 I had come from the client as distinct from Studio E, it
 11 would have carried more weight, if you like, but I think
 12 that the general philosophy was that they didn't want
 13 sprinklers.
 14 Q. No.
 15 A. And there are obvious benefits in putting in sprinklers,
 16 but if the client says, "I don't want to put a partial
 17 sprinkler system into this building", then -- and it's
 18 not required by the regulations, then it wouldn't
 19 happen.
 20 Q. No. Yes.
 21 Now, presumably at the time of the Grenfell project,
 22 you were aware that sprinklers were mandatory in
 23 new-builds over 30 metres?
 24 A. Absolutely.
 25 Q. Yes.

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1 Do you accept that Grenfell Tower was and could be
 2 properly described as a complex building over 30 metres?
 3 A. Not complex, no. No.
 4 Q. Why would you --
 5 A. It was a block of flats with a little bit of
 6 non-residential accommodation in the lower levels.
 7 Q. Complex in the sense it's an old building, single stair,
 8 fairly narrow stair, smoke ventilation system, natural
 9 system no longer working. Wouldn't that all make it
 10 quite complex from a fire safety perspective?
 11 A. Not complex. I would say it wasn't up to modern-day
 12 standards, and you have to then make a value judgement
 13 as to how you do that. But the vehicle for doing that
 14 is the Regulatory Reform Order. If a risk assessment is
 15 carried out in an existing block of flats -- it needn't
 16 be Grenfell, it could be somewhere else -- and we think
 17 that you ought to provide sprinklers in this building,
 18 then that would be the way in which it would be
 19 sprinklered.
 20 Q. I see, so --
 21 A. Unless you are backed by legislation, as in the case of
 22 Scotland or parts of Scotland, where an Act of
 23 Parliament was put through forcing owners of existing
 24 high-rise residential buildings to put sprinklers in
 25 retrospectively.

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1 Q. So I think I understand from what you're saying there,
 2 and you have said it in relation to other topics, that
 3 that's really a separate question for the fire risk
 4 assessment and under the RRO.
 5 What I want to put to you is actually when you are
 6 doing a fire safety strategy, that's also your concern
 7 and your consideration, and that there isn't this hard
 8 division between what you're doing for a fire strategy
 9 and the fire risk assessment process. Actually, to some
 10 extent there is an overlap and you're looking
 11 potentially forward at what's going to happen at the
 12 next fire risk assessment, and also be asking: is it
 13 compliant with the RRO?
 14 A. The absence of sprinklers is not evidence of
 15 non-compliance with the RRO. I don't automatically
 16 think, in dealing with buildings like this, as first
 17 principle, why don't we suggest that the client put
 18 sprinklers in.
 19 With the wisdom of hindsight and following this
 20 fire, that might be our stance now, but at the time
 21 there was no reason to think that putting in sprinklers
 22 throughout the building would be a reasonable way to go
 23 about things.
 24 Q. What I'm putting to you is a more general point than
 25 just sprinklers, but sprinklers are an example, about

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1 this potential overlap in some sense with the fire risk
 2 assessment process feeding into the fire strategy and
 3 vice versa, you're feeding into that process. So,
 4 again, it's not a hermetically sealed two bubbles; to
 5 some extent, you both have to be having regard to what
 6 the other has done. Does that not make sense?
 7 A. Well, no, I think I didn't get sight of the fire risk
 8 assessment for this building because that was really,
 9 I guess, to inform my colleagues in Warrington who were
 10 doing the existing fire strategy.
 11 Q. And that wasn't a document that you ever thought it
 12 would be important for you to see, the current fire risk
 13 assessment?
 14 A. No, because I think if they had said in the latest risk
 15 assessment, "We consider this building should be
 16 provided with a sprinkler system" then Cate would have
 17 passed that information on to me.
 18 Q. One final question on this topic: with the benefit of
 19 hindsight, do you think you should have strongly advised
 20 that sprinklers should have been installed throughout
 21 the building?
 22 A. No. You know, you say that, but I had no reason to
 23 expect when I was dealing with this building that there
 24 was going to be such a catastrophic fire.
 25 Q. Yes, okay.

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1 Now, I have a few other questions on miscellaneous
 2 topics before we're just going to come and look overall
 3 at the work that Exova did and look back at it at the
 4 end.
 5 I want to ask you some questions about the
 6 evacuation of residents.
 7 Given that you say you never visited Grenfell Tower,
 8 what consideration did you give to the residents who
 9 were living in the building?
 10 A. In what sense?
 11 Q. In terms of evacuation strategies.
 12 A. Well, I think I've said in earlier sessions of this that
 13 there is no evacuation strategy for blocks of
 14 residential flats; it's a stay-put strategy.
 15 Q. Yes. I mean, we have gone over the disabled and we've
 16 looked at ADB and those changes. Did you at any point
 17 consider any other particularly vulnerable groups --
 18 elderly, young children -- and how the fire strategy
 19 might affect them? Was there any consideration about
 20 the specific community within this building?
 21 A. No. I think in answer to an earlier question you gave
 22 me, the only time I would look at an occupant profile of
 23 a building is if it were -- I hate to use the
 24 expression -- an old persons' home, where it would be
 25 completely reasonable to put in sprinklers. But if you

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1 have any other mix of occupancy -- young people, old
 2 people, people with disabilities -- it wouldn't cause me
 3 to do anything.
 4 Q. Yes.
 5 A. Given that if there is a fire, they don't need to
 6 evacuate, unless they happen to be in the flat in which
 7 a fire starts.
 8 Q. Yes.
 9 Dr Barker suggested in her evidence that the
 10 assumption was that residents could self-evacuate. Was
 11 that also your assumption when you were working on the
 12 project?
 13 A. That's never explicitly stated in any of the codified
 14 guidance, but yeah, I mean, obviously a corollary to
 15 that is that the occupants of the fire affected
 16 apartment would be expected to self-evacuate.
 17 Q. Yes. So did you ever turn your mind to the fact that
 18 some residents might not be able to self-evacuate
 19 without assistance?
 20 A. No. That would be true for any apartment block.
 21 Q. The existing building fire strategy report makes two
 22 statements about evacuation. It says first that
 23 evacuation of flats beyond the dwelling of fire origin
 24 would be carried out under the control of the attending
 25 fire service if necessary.

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1 A. Right.
 2 Q. It also states, due to an assumed high degree of
 3 compartmentation and therefore low probability of
 4 fire spread beyond the dwelling of fire origin,
 5 simultaneous evacuation of the building is unlikely to
 6 be considered.
 7 A. Yeah.
 8 Q. Now, the existing building fire strategy uses the word
 9 "assumed", these are assumed. What investigations did
 10 you make to confirm what the degree of compartmentation
 11 would be after the refurbishment?
 12 A. I'm sorry, could you repeat that?
 13 Q. Yes. What investigations did you make --
 14 A. The second part, anyway.
 15 Q. -- to confirm what the degree of compartmentation would
 16 be after the refurbishment, given that those were the
 17 evacuation assumptions?
 18 A. I didn't make any assumptions, and it wasn't part of our
 19 agreed scope of works to visit the building after the
 20 works to see that a satisfactory degree of
 21 compartmentation had been provided.
 22 Q. Yes.
 23 A. Had it been asked for, that would have been in our
 24 fee proposal.
 25 Q. Yes.

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1 Now, we discussed today the Celotex RS5000 and we
2 were discussing it a moment ago, and you said you didn't
3 know about the fire performance of that product, but
4 that you were aware that it was not a non-combustible
5 material.

6 Were you aware that there had been a number of fires
7 worldwide involving both aluminium composite material
8 and foam insulation?

9 A. I was aware that there were fires in the Middle East
10 involving certainly ACM.

11 Q. But not necessarily that they had involved foam
12 insulation?

13 A. No.

14 Q. No.

15 A. I think it's -- it might be relevant, it may not, but in
16 the fires in the Middle East, the buildings are
17 sprinklered and the evacuation strategy for them was
18 simultaneous evacuation, so nobody lost their lives in
19 the fires that I was aware of.

20 Q. Yes.

21 A. Although there was significant property damage, as you
22 would imagine.

23 Q. Another question: were you aware of anything to do with
24 the process involved in forming Celotex RS5000, the
25 manufacturing process? Did you have any knowledge of

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1 that?

2 A. No, no, but I know what polyurethane foam is. I mean,
3 it's exfoliated plastic.

4 Q. Did you know --

5 A. In sort of layman's terms.

6 Q. Did you know anything about the blowing agent that was
7 used for the foam?

8 A. No.

9 Q. Or the flammability of any such blowing --

10 A. No, but I was aware from work done by the GLC, it goes
11 back that far, that the composition of a lot of these
12 materials was such that, if they were involved in
13 a fire, they would give rise to toxic fumes and dense
14 smoke, which would hamper mainly firefighting
15 operations.

16 Q. Yes.

17 Just a few questions on the smoke ventilation
18 system.

19 Can we look at an email to Matt Smith that you sent,
20 Matt Smith of Max Fordham. This is at {EXO00000659}.

21 A. Yes.

22 Q. I want to look at the bottom of page 1. This is
23 an email you sent on 3 October 2013 from you to
24 Matt Smith, Max Fordham, copying in Bruce Sounes and
25 others, including at Max Fordham. You say there:

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1 "Matt

2 "We're trying not to have to provide mechanical
3 smoke extract to lobbies you've queried.

4 "Kind regards

5 "Terry."

6 Do you see that there?

7 A. Yes, yeah.

8 Q. But you have said in evidence that you understood that
9 a mechanical system would be installed to rectify the
10 inadequacy of the existing system; is that correct?

11 A. That is correct, but I think here I might be referring
12 to other areas of the building which it was not possible
13 for the main extract system to serve, ie the --

14 Q. Ah, okay.

15 A. -- non-residential uses on the lowest levels.

16 Q. I see.

17 A. All of which were required to have some form of smoke
18 control.

19 Q. That makes sense.

20 Do you agree that a mechanical smoke extract system
21 was necessary to rectify the problems with the main
22 existing system?

23 A. Absolutely.

24 Q. Yes.

25 I want to look at another email, this time to

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1 Duncan Campbell. This is at {MAX00023204/2}. So this
2 is you, and I think it's to Duncan Campbell. Is that of
3 Max Fordham?

4 A. Yes, it would have been.

5 Q. Yes.

6 A. Yeah.

7 Q. And you state:

8 "Duncan

9 "I appreciate that you are making an existing
10 (unsatisfactory) system more reliable. However, given
11 RBKC's comments when we met them, they are likely to
12 require that we demonstrate in some way that this system
13 is as good as (or better than) a compliant natural
14 ventilation system. I don't believe that the enhanced
15 system would equate to a depressurisation system meeting
16 the recommendations of BS 12101-6 and I believe we
17 should resist a requirement for this. As a starting
18 point, is it possible to state how many air changes/hour
19 will be achieved on the fire affected floor?"

20 Do you see that there?

21 A. I do, yes.

22 Q. What do you mean by a compliant natural ventilation
23 system in that fourth line?

24 A. Well, a compliant natural ventilation system was not --
25 we didn't have enough space to put one in. I mean,

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1 a compliant natural ventilation system would be
 2 a 3-square-metre chimney located in the central
 3 lift lobby. Now, that was not really practicable.
 4 Q. Yes.
 5 A. With automatic opening vents into it, and a vent at the
 6 top. That could not be accommodated in the floor plate.
 7 So we were forced to go to some form of natural
 8 ventilation -- sorry, some form of mechanical
 9 ventilation.
 10 Q. Mechanical.
 11 A. Yeah.
 12 Q. Can you explain why you're saying in this email that you
 13 believe you should resist a requirement for
 14 a depressurisation system meeting the recommendations of
 15 that British Standard there?
 16 A. Possibly because a brand new depressurisation system
 17 meeting the recommendations of this British Standard
 18 might be difficult to achieve in this building.
 19 Q. Can you give any more detail as to why that would be
 20 difficult to achieve?
 21 A. It could probably be again for spatial reasons.
 22 Q. Yes.
 23 A. I think it's useful to point out that there are
 24 commercial systems on the market which require ducts of
 25 very small cross-sectional area which do work and would

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1 have been suitable here, and I think that's actually
 2 what we ended up with, although it was after my
 3 involvement in this particular part of the design.
 4 Q. Well, we will be exploring this more in Module 3.
 5 A. Okay.
 6 Q. Can I just go to another exchange. This is an exchange
 7 you had with Claire Williams. This is at
 8 {EX000000618/3}.
 9 She says at the bottom of that page, if we can look
 10 at this -- you are cc'd into an email to Matt Smith.
 11 She says:
 12 "Matt
 13 "On site we talked about finding out the original
 14 installation information - ie from building regulations,
 15 as this would evidence the intended design strategy and
 16 any measurements.
 17 "Do you have any access to building regulations
 18 information, or have you done this already?"
 19 I think she is trying to establish what the existing
 20 system was capable of?
 21 A. Yes.
 22 Q. Is that right?
 23 A. Yes, that's correct.
 24 Q. Then if we can go one up, they say:
 25 "We'll look into this. We hold historical

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1 regulatory documents in our library ... There will also
 2 be the issue of which regulations applied at the
 3 time ..."
 4 Then there is all that.
 5 I think that the general question for you here is:
 6 why was the design strategy and measurements of the
 7 existing system still uncertain at the time of this
 8 email exchange in 2014? Can you help us?
 9 A. Why were they uncertain?
 10 Q. Yes, why are they still struggling to understand the
 11 existing system at that time?
 12 A. When I heard what it was, I was struggling to understand
 13 what it was, because there were quite clearly defined
 14 methods for dealing with smoke extract from common areas
 15 of residential buildings, and they were documented in
 16 both the LCC -- sorry, London County Council code of
 17 practice and the subsequent GLC code of practice.
 18 Q. Yes.
 19 A. What was put in there seemed to me to be somewhat
 20 experimental, and I think I've referred to it as such
 21 somewhere in the correspondence.
 22 Q. Yes.
 23 Would you agree that the performance of that
 24 existing system should have been determined from the
 25 outset to inform the design strategy for the new system?

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1 A. No, not really. I think, as I said quite often, there
 2 was an intention to put in a mechanical system because
 3 of the difficulties in getting small area natural vents
 4 to work in a building of this height.
 5 Q. Yes.
 6 Now, just finally on this topic I want to go to
 7 another email, {EX000000344}.
 8 A. Right.
 9 Q. If we can blow this up, this is 6 January 2015, so this
 10 is Matt Smith, Max Fordham, to you -- you are the
 11 recipient of this email -- copying in Max Fordham and
 12 Artelia:
 13 "Subject: Grenfell Tower - Smoke Extract System.
 14 "Afternoon Terry
 15 "Can you look over and provide comment on the smoke
 16 extract proposal put forward by PSB on behalf of
 17 JS Wright? It looks acceptable and I believe the
 18 principle of it has been verbally accepted by Building
 19 Control, but it may be wise to get your view as it falls
 20 slightly outside our area of expertise.
 21 "It's fundamentally different to what we specified
 22 in that it is now a pressure differential system rather
 23 than simple smoke clearance. Details can be found
 24 below. If you have any questions then please give me a
 25 call."

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1 Do you see that there?

2 A. I do, yes.

3 Q. Do you recall receiving that request for advice on that?

4 A. Yes, I do recall receiving it.

5 Q. Can you recall making any comments on it?

6 A. I said something, I believe, to the effect that PSB are
7 specialists in this area.

8 Q. Yes.

9 A. Similar to PSB, another specialist smoke extract company
10 does do bespoke systems for this application, and when
11 we're dealing with that, we say, well, they have their
12 own design backed up by CFD, and so the job of getting
13 it approved is generally handed over to them.

14 Q. I see, yes.

15 A. So as long as PSB were able to satisfy RBKC that it
16 would work, then that was fine.

17 Q. Yes.

18 A. I mean, I wouldn't seek to argue what they were doing
19 was inadequate because they're the experts in their own
20 system.

21 Q. I see. So does it follow that you didn't get involved
22 in the design process when the change was made to go to
23 a pressure differential system?

24 A. No, I didn't. Just to give you another example, where
25 we're dealing with a commercial building with

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1 firefighting shafts and the building design consultant
2 opts to go for a commercial system, all that we say in
3 our documentation is, "This will be provided by X", and
4 we have no further involvement in that because they're
5 the experts at doing that.

6 Q. Yes.

7 Were you ever given an explanation on the project as
8 to why the system that was finally proposed was not the
9 same as that which had been specified by Max Fordham?

10 A. No, I wasn't.

11 Q. Do you know why the design intention for the system was
12 still unclear at the time of this email exchange in
13 2015?

14 A. At the time when, sorry?

15 Q. Why was the design intention for the system still
16 unclear at the time of this email exchange in 2015?

17 A. All I can say was it probably hadn't been firmly
18 established that what was being proposed was workable.

19 Q. Yes.

20 Now, fire doors, just a few quick questions on that.

21 A. Right.

22 Q. Is there any reason why the fire safety strategy reports
23 which you produced didn't refer to the location and
24 performance of all the fire doors in the building?

25 A. No. It was quite deliberate. We were only dealing with

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1 doors to new openings.

2 Q. I see. So it wasn't part of your work to look at the
3 doors that were already existing in the tower and check
4 that they were compliant with -- well, either compliant
5 with modern requirements and then explain why they
6 didn't have to be, or check whether they complied with
7 the requirements which would have been applicable at the
8 time?

9 A. No, I would expect that to be -- what's the word? --
10 highlighted as a result of a fire risk assessment if the
11 doors were inadequate. I mean, I know a number of cases
12 with local authority housing where one of the
13 recommendations of a fire risk assessment is that the
14 doors are either replaced or modified to make them
15 compliant.

16 Q. Yes. But, as we know, you never got a copy of the fire
17 risk assessment, so you wouldn't have known whether any
18 of those doors had been highlighted.

19 A. No, no.

20 Q. No.

21 Is there a reason why no investigation was made by
22 Exova into the performance of the existing flat entrance
23 doors, stair doors or lift shaft doors anywhere in the
24 building to see if it complied with relevant fire safety
25 requirements?

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1 A. Erm --

2 Q. That's a different way of putting the same question,
3 I think.

4 A. It is, really. We wouldn't have looked at the remainder
5 of the building because that wasn't part of the scope of
6 works.

7 Q. What about the fire doors that were proposed in the
8 refurbishment? Was it any part of your role to check
9 the compliance with fire safety regulations and
10 Building Regulations of the new fire doors that were
11 proposed as part of the refurbishment?

12 A. No, we had no inspection function as part of our scope
13 of works. I think the reason for that is a fairly
14 obvious one: that we would expect that that work would
15 be done by Building Control anyway.

16 Q. Yes.

17 So just moving to another topic -- and we're getting
18 towards the end of my questions, although we're going to
19 have to pause when I finish and just sweep up anything
20 else.

21 A. Okay.

22 Q. What I'm going to try to do is finish my questions first
23 and then we break, if that's okay.

24 So I want to take stock and look back at the work of
25 Exova, and compare the work which you proposed in the

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1 fee proposal and the work that was carried out.
 2 It's right, isn't it, that the third version of the
 3 outline fire safety strategy was, in the end, the only
 4 version of that report that was ever produced?
 5 A. Yes, that's right.
 6 Q. Do you agree that that third version represented the
 7 culmination of Exova's work up to and including RIBA
 8 stages D and E?
 9 A. Yes.
 10 Q. Now, as we discussed earlier, your fee proposal
 11 envisaged that a detailed fire strategy would be
 12 prepared for RIBA stage D and E, which would be written
 13 in line with the requirements of the
 14 Building Regulations.
 15 Did you think that the third issue of the outline
 16 fire safety strategy satisfied that part of the
 17 fee proposal?
 18 A. No, it didn't, because it didn't deal with a number of
 19 issues, in particular the B4 issue that we have been
 20 discussing for the last few days.
 21 Q. Did you ever look back at the fee proposal and see that
 22 what was promised in the detailed fire strategy was
 23 a determination of any external fire spread issues that
 24 there may be and recommendations of compartmentation and
 25 fire protection standards? Did you ever look back and

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1 consider whether that work had been completed?
 2 A. No, but I was -- I was aware that we hadn't completed
 3 the task.
 4 Q. Can you explain why we see so little change between the
 5 three iterations of your fire strategy report, in terms
 6 of the level of detail that was provided?
 7 A. Yeah, I think that's because it really only picked up
 8 internal changes as a result of Studio E redesigning
 9 parts of the lower four floors.
 10 Q. Is it right that nothing commensurate with RIBA stage F,
 11 or indeed any stage thereafter, was ever produced by
 12 Exova?
 13 A. I think that's fair comment, and that is particularly
 14 because we weren't novated to Rydon.
 15 Q. Do you accept that each time you were copied in to
 16 an email about the external wall design in 2014 and
 17 2015, it represented a missed opportunity to give
 18 comprehensive guidance on the Building Regulations and
 19 statutory guidance document ADB and what they required?
 20 A. I think it could be interpreted that way, but, as I've
 21 said on many occasions over the last few days, the
 22 general gist of the enquiries that we got were details
 23 rather than, "This is a system that we're thinking of
 24 using, what do you think?"
 25 Q. Would you accept that these were missed opportunities

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1 for any CDM-related issues to be addressed as part of
 2 a design risk assessment process?
 3 A. We had no involvement with the CFD co-ordinator.
 4 I think probably --
 5 Q. Sorry, when you say CFD co-ordinator, do you mean CDM
 6 co-ordinator?
 7 A. Sorry, did I -- sorry, Freudian slip. CDM co-ordinator.
 8 Had we been employed by Rydon, it's likely that we would
 9 have had to provide some information and co-operate with
 10 the CDM co-ordinator, because the critical role they
 11 perform is mainly when the building is -- when the
 12 building is being built, although there are some aspects
 13 of the design that they need to consider as well,
 14 particularly those architectural issues that could
 15 create problems for end users of the building.
 16 Q. I would suggest there were very important aspects of the
 17 design process that have to be considered.
 18 A. Is the building safe to use, yes, exactly.
 19 Q. Did you know during your time on the project who the CDM
 20 co-ordinator was?
 21 A. No.
 22 Q. So you didn't know that, up until 2015, that was Artelia
 23 or Appleyards?
 24 A. No, I didn't.
 25 Q. Did it ever occur to you, or did you ever think about,

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1 that your client, the TMO, would need a more detailed
 2 and up-to-date fire strategy when considering
 3 Building Control approval?
 4 A. I think I thought it might be necessary, but
 5 Building Control didn't ask for a more detailed
 6 fire strategy; they appeared to have approved the
 7 concepts without that information. We never had any
 8 instruction from the client to update it.
 9 Q. But were you ever worried or concerned that
 10 Building Control might read your iterations of the
 11 fire strategy and see that no issues had been identified
 12 and take comfort from that?
 13 A. No, I would assume that they were a competent
 14 Building Control authority and if they weren't happy,
 15 they would have said so. And that is my experience of
 16 dealing with Kensington and Chelsea Building Control, by
 17 and large; they really do want to know what's going on.
 18 Q. Exactly. Building Control needed to have an analysis of
 19 the B4 performance requirements and how the external
 20 wall satisfied those requirements, didn't they?
 21 A. They did.
 22 Q. In your proposed scope of works for RIBA stage F, you
 23 said that there would be an updated revision of the fire
 24 safety strategy documentation to reflect any agreed
 25 changes to the strategy following any related design

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1 development and consultation with the approvals body.
 2 Do you want to look at that again?
 3 A. No, that's a standard thing that we would do if
 4 necessary.
 5 Q. Can you explain what happened to that updated revision
 6 to reflect any agreed changes following any related
 7 design development and consultation with the approvals
 8 body?
 9 A. I wasn't aware it was necessary. As I said earlier, we
 10 didn't get anything back from Kensington and Chelsea
 11 which required us to change the fundamentals of our
 12 fire strategy.
 13 Q. So you didn't think about the fact that your
 14 fee proposal stated that Exova would be providing
 15 an updated revision of the fire strategy, that was
 16 accepted by the TMO, that was what you had proposed you
 17 would do?
 18 A. I think, as I said earlier, the wording in our
 19 fee proposals is a standard wording, and it covers all
 20 areas of what might happen, or might reasonably cover
 21 all eventualities. If at stage F it's necessary to
 22 update a report to reflect changes either in the design
 23 as brought about by the contractor or any other reason,
 24 then we would expect to have to update the report.
 25 Q. There is no evidence of you meeting with RBKC

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1 Building Control after September 2013. Do you agree
 2 that such meetings would have been useful to discuss
 3 your fire strategy and necessary revisions to it as the
 4 project progressed and before the full plans application
 5 in August 2014?
 6 A. We generally find that either the project manager or the
 7 lead consultant asks for meetings with Building Control
 8 if he or she deems it necessary. It doesn't come from
 9 Building Control. They don't say, "We need to meet you,
 10 say, once every two months to discuss things". It's
 11 generally we ask them or we -- I say "we", I mean the
 12 design team.
 13 Q. I think we saw before that you in fact initiated
 14 yourself the first meeting with Building Control. You
 15 organised it and --
 16 A. Yeah, that's because I knew how to get hold of them
 17 easily.
 18 Q. I see. But that wasn't something that it occurred to
 19 you to do thereafter on the project?
 20 A. No, no, I assumed that from there on the lead consultant
 21 would arrange these things, because when they go and see
 22 Building Control, they don't just talk about fire, they
 23 talk about all the other parts of the
 24 Building Regulations.
 25 Q. Did you think at the time that it was odd -- this is

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1 while you were still involved in the project -- that
 2 a compliance check of the design for the external wall
 3 had not been carried out?
 4 A. Design -- sorry?
 5 Q. A compliance check of the design for the external wall.
 6 Did it occur to you that it was odd that no compliance
 7 check had been carried out?
 8 A. Yes, I think it was very odd that I had no contact with
 9 Studio E to discuss it.
 10 Q. And did you ever think about contacting your client, the
 11 TMO, and just saying that: "It's really odd that we
 12 haven't done this, you should know that"?
 13 A. No, I wouldn't do that, I don't think. I mean, that's
 14 not the normal way of how a building design team works.
 15 If somebody goes to the project manager and says, "We're
 16 not getting sufficient input from Warrington on
 17 a particular subject", I would be slightly upset that
 18 they hadn't come to me and said, "Look, we need some
 19 information from you regarding X, Y or Z" rather than
 20 going straight to the project manager or client.
 21 Q. Would you accept that it fell below the standards of
 22 a reasonably competent fire engineer not to advise the
 23 TMO, your client, that there was a need for a compliance
 24 check of the design to be done?
 25 A. No.

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1 Q. Okay.
 2 Now, we know that the outline fire safety strategy
 3 issue 3 was expressly incorporated into the design and
 4 build contract between the TMO and Rydon?
 5 A. Right.
 6 Q. It formed part of the contract documentation.
 7 Did you know, prior to that, that it was going to be
 8 incorporated into the design and build contract?
 9 A. No, I didn't.
 10 Q. So it follows that you didn't know that it would be
 11 relied on and used by the main contractor?
 12 A. Well, no, when I say I didn't know, I mean, it would
 13 normally be information given to a contractor prior to
 14 him tendering for the job.
 15 Q. Were you aware at the time that issue 3 of the outline
 16 fire safety strategy was eventually submitted to RBKC
 17 Building Control by Studio E on 29 September 2014 as
 18 part of the full plans application for Building Control
 19 approval? Did you come to know about that at the time?
 20 A. No, I wasn't aware of that, but I would imagine that
 21 that would be standard practice for our fire strategy
 22 report to be part of the full plans application.
 23 Q. And you were completely comfortable with that, were you,
 24 that that was likely to happen, that that issue 3 was --
 25 A. Well, they had to have something to look at. I mean, if

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1 the full plans application had been made without any
 2 statement about the fire strategy, then it could have
 3 been rejected under the Building Regulations, in my
 4 view.
 5 Q. Yes. But was it common, in your experience, for
 6 a fire strategy to go in as part of a full plans
 7 application which didn't deal with, for example, the B4
 8 requirement when there was to be an overcladding?
 9 A. No.
 10 Q. That wasn't --
 11 A. I think in that sense it would have been nice if the
 12 final edition of the fire strategy did contain details
 13 of compliance with B4, but it didn't because it hadn't
 14 been considered.
 15 Q. Yes.
 16 Can we look at paragraph 3.21 of your witness
 17 statement. This is {EX000001621/6}. I just want to
 18 read what you say here:
 19 "By the time of Stage F, a contractor has generally
 20 been appointed to carry out the project. For large
 21 projects this is often on a 'design and build' basis,
 22 meaning that the contractor takes on responsibility for
 23 the design of the works (including completing any
 24 unfinished design work) as well as the construction of
 25 the works. What often occurs is that the contractor who

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1 has been appointed to carry out the project will carry
 2 out a 'value engineering' exercise, meaning they look
 3 for ways to reduce the cost of the project (for instance
 4 through changing materials or approach) while still
 5 meeting the client's objectives. Such changes may or
 6 may not impact on the fire strategy."
 7 Then you say it's not a given that you will remain
 8 involved in the project at this stage.
 9 I just want to ask you about that value engineering
 10 process you refer to there. Did you ever hear about
 11 whether there had been a value engineering process on
 12 this project?
 13 A. No, but I say it's very common --
 14 Q. Yes.
 15 A. -- for the successful tenderer to do that, to see if
 16 there are ways in which the design can be
 17 accomplished --
 18 Q. So you didn't ever try -- sorry.
 19 A. -- at a reduced cost.
 20 Q. Yes. So you didn't ever try and find out if such
 21 a value engineering exercise had taken place and whether
 22 changes had been made which would affect the
 23 fire strategy?
 24 A. No, I didn't.
 25 Q. Do you agree, looking at it now, that the questions that

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1 were being asked of you by Studio E in both
 2 September 2014 and March 2015 about the cladding flowed
 3 directly from the lack of any analysis about B3 and B4
 4 in your outline fire strategy reports?
 5 A. No, I think it's a reflection of the fact that they
 6 didn't tell us what they wanted to do and sit down and
 7 discuss it.
 8 Q. Would you agree that the queries raised by Studio E were
 9 basic questions about performance requirements in fire
 10 which should have been addressed by Exova in the
 11 fire strategy reports?
 12 A. Ideally they should have been, but weren't, for the
 13 reasons I've already given.
 14 Q. Would you agree that, in light of your knowledge that
 15 the refurbishment works included overcladding with
 16 panels which would potentially fail in the event of
 17 a fire with external flaming from the compartment, you
 18 should have produced a further and final outline fire
 19 safety report which took account of up-to-date
 20 information about the overcladding?
 21 A. I think that you are placing too much importance on
 22 local failure of a cladding because of fire coming out
 23 of a window. That's not the same question at all.
 24 Q. Well, that's the explanation you have given for those
 25 emails?

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1 A. Yeah.
 2 Q. You don't think that that should have meant that you
 3 should have been producing a further and final version
 4 of your fire strategy report?
 5 A. I think I've said on a number of occasions that it would
 6 have been nice if we had done a full and final
 7 fire safety strategy, but for reasons I have already
 8 explained, that didn't happen.
 9 Q. Do you accept that you should have advised the TMO as
 10 your client, and indeed Studio E, that there were
 11 serious issues which needed to be addressed concerning
 12 fire safety of the cladding given its likelihood that it
 13 might fail in the event of a fire with external flaming?
 14 A. No, I didn't see the need to say that to them because
 15 I had no way of knowing that it might fail in the way
 16 that you are describing. I mean, that could happen with
 17 any building.
 18 Q. I just want to look, then, at the overall time spent on
 19 the project and just ask you a few questions about that.
 20 We have had disclosed to the Inquiry a spreadsheet
 21 which shows the time spent on the project by Exova. If
 22 we can go to the native version, {EX000001353}. I want
 23 to look at the timesheets at the second tab at the
 24 bottom.
 25 Have you seen this document before?

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1 A. No, I don't think so.
 2 Q. Now, the Inquiry's expert, Dr Lane, has considered it,
 3 and it appears to show that 53 hours are assigned to the
 4 primary refurbishment project -- that excludes work on
 5 the existing fire strategy -- between September 2012 and
 6 April 2015.

7 Now, we know that there must have been some other
 8 time spent before that, before September 2012, because
 9 we can see Exova personnel, for example, attending
 10 design team meetings before that. Subject to that,
 11 I just want to ask you about that time allocation.

12 Some 51 hours are associated with your work on the
 13 refurbishment; does that sound about right, 51 hours?

14 A. On the refurbishment?

15 Q. Yes. About 51 hours in total.

16 A. I didn't have any part in the work to do with the --
 17 sorry, I'll start again.

18 Clearly we've underspent by a significant amount of
 19 money. Now, that is a reflection of the lack of
 20 discussion on some of the key structural elements of the
 21 building, including the cladding.

22 Q. Yes.

23 A. So that figure of £3,853 would have been considerably
 24 more if we had had a series of meetings with Studio E to
 25 discuss that.

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1 Q. Yes. We will just come to the figures in a moment.
 2 Thinking about just the time at the moment, the
 3 spreadsheet has split the time allocation between the
 4 stage C work and the stage D/E work. It appears to
 5 indicate less than -- well, around four working days, if
 6 you do a seven-hour day, on stage C, and just less than
 7 one week for stage D and E work. Does that sound about
 8 right to you?

9 A. Stage C, yes, probably. I'm surprised at stage D/E.

10 Q. Yes?

11 A. I would have expected there to be more time.

12 Q. I think, as you have anticipated, the cost of the time
 13 spent at stage C was indeed the full amount. Exova
 14 invoiced and were paid the full amount of £3,300. But
 15 for stage D and E, the time spent and invoiced is
 16 £3,874, which is less than the £5,300 stated in the
 17 fee proposal.

18 A. Yes.

19 Q. I think you have just explained it, but I just want to
 20 give you another chance: can you explain why Exova
 21 didn't invoice for the full amount shown in the fee
 22 proposal, didn't do the full work that was indicated
 23 would be done?

24 A. Generally, unless we have a fixed fee for each stage, as
 25 distinct from an estimate, we would only charge for the

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1 work actually carried out.

2 Q. Would you agree that less than one week's work on the
 3 stage D/E process for a project of this complexity was
 4 unacceptable?

5 A. I think you need to understand what we did at stage C --
 6 or are you saying D and E?

7 Q. I'm saying D/E, because you put those together in your
 8 fee proposal.

9 A. It is much less than I think -- I thought that I spent.

10 Q. Yes.

11 Mr Ashton, just the last couple of questions from me
 12 and then we will pause and break, if that's okay, to
 13 pick up anything else.

14 Looking back at this and in the light of the last
 15 few days of evidence, can you tell us: would you have
 16 done anything differently now if you had the chance to
 17 do it again?

18 A. Yes, I think I would have asked more questions of the
 19 design team.

20 Q. Yes.

21 A. Instead of expecting them to come to me all the time,
 22 I may -- should have said, maybe, "What's happening with
 23 so-and-so? What about this?" And there wasn't a great
 24 element of me ringing them up and saying, "What's
 25 happening?" It was me waiting for them to send the

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1 information to deal with.

2 MS GRANGE: Okay, thank you.

3 Mr Chairman, can we take a break?

4 SIR MARTIN MOORE-BICK: Yes. Shall we say 3.30? Will that
 5 give you enough time?

6 MS GRANGE: Yes, it should. Can I just look behind me and
 7 see?

8 SIR MARTIN MOORE-BICK: Yes.

9 (Pause)

10 MS GRANGE: 3.30 should be fine.

11 SIR MARTIN MOORE-BICK: We are going to have a break now,
 12 Mr Ashton. Ms Grange thinks she has reached the end of
 13 her questions, but sometimes, when they review it,
 14 counsel find that there are things they ought to have
 15 picked up which they haven't.

16 THE WITNESS: Okay.

17 SIR MARTIN MOORE-BICK: So we will break now and resume at
 18 3.30, if you would, please.

19 THE WITNESS: Okay, yes, thank you.

20 SIR MARTIN MOORE-BICK: If you would like to go with the
 21 usher, then, thank you.

22 (Pause)

23 Good, 3.30, please.

24 MS GRANGE: Thank you.

25 (3.12 pm)

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1 (A short break)

2 (3.30 pm)

3 (Proceedings delayed)

4 (3.40 pm)

5 SIR MARTIN MOORE-BICK: Mr Ashton, I'm sorry we kept you
6 waiting longer than I indicated. It turned out there
7 were more things to be done than I thought. But anyway,
8 we are ready to continue now.

9 THE WITNESS: Okay.

10 MS GRANGE: I just have a few short questions for you,
11 Mr Ashton.

12 At the time the Grenfell Tower project was taken on
13 by Exova, had Exova done many social housing residential
14 projects?

15 A. Yes, we had. I couldn't tell you how many, but yes,
16 certainly.

17 Q. Had you yourself done any social housing residential
18 projects?

19 A. Yes, I have.

20 Q. Is it less likely that Exova would have accepted
21 an invitation to work on this project if it had not
22 already been involved in the KALC project, the
23 Kensington Academy and Leisure Centre project, in your
24 view?

25 A. No, I don't think we would have been reluctant to take

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1 the job on regardless of whether we were working on the
2 KALC project.

3 Q. I see.

4 Would you accept that less detailed care was taken
5 over the Grenfell Tower strategies than for the KALC
6 strategies?

7 A. I'm not sure I would use the words "less care". I would
8 say that obviously because the KALC project was
9 a new-build, it necessitated much more detailed
10 involvement.

11 Q. I see. So is that the distinction you would draw, the
12 new-build versus refurbishment, as to why there appears
13 to be less detailed work in terms of the fire strategies
14 for Grenfell Tower as compared with the KALC fire
15 strategies?

16 A. Yes, yes.

17 Q. Did you or, to your knowledge, anybody else at Exova
18 ever ask to see the health and safety file or the
19 fire safety manual for the building?

20 A. No, I don't believe we did. If we had been, it would
21 have been the people dealing with the existing
22 fire strategy.

23 Q. I see. So that was not something that ever occurred to
24 you to ask?

25 A. No.

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1 Q. And you're not aware whether Ms Cooney and Ms Barker
2 ever requested that information?

3 A. I've no idea one way or the other. I have to say --
4 it's probably gratuitous, but I'll say it anyway -- my
5 experience is that these documents are not easily
6 obtainable for a building of that age.

7 Q. I see. So you wouldn't expect to find an up-to-date CDM
8 health and safety file for Grenfell Tower?

9 A. No, not really.

10 Q. And that's based on, what, your experience of other
11 projects?

12 A. Experience, yes. I mean, if you go to a shopping centre
13 that's been built ten years, finding the original
14 fire strategy for that is not easy. I mean, this is why
15 the DoE or their predecessor or their successor decided
16 to put in regulation 38, to ensure that the as-built
17 information is actually sent to the end user of the
18 building and is maintained.

19 Q. Yes.

20 A. So anybody doing a risk assessment would want to satisfy
21 him or herself that they'd still got that information.

22 Q. In your experience, was regulation 38 complied with in
23 practice, as a generality, on projects?

24 A. I can't say I've any experience of that.

25 Q. Okay.

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1 Just finally a few questions about the evacuation of
2 residents. It was put to you today whether you ever
3 turned your mind to the fact that some residents might
4 not be able to self-evacuate without assistance, and
5 your evidence was that you didn't consider that.

6 Were you aware that there were at least 22 people
7 with disabilities living in Grenfell Tower above the
8 tenth floor?

9 A. No, I wasn't aware of that.

10 Q. Given you weren't aware of that, would you expect to
11 have been told that information during the time that you
12 were working on the fire strategies for the project?

13 A. No, not normally. We don't normally get that sort of
14 information. As I say, unless there is a specific
15 client profile, such as they're all people with
16 disability or impaired sight, we would expect there to
17 be a cross-section of society living in these buildings.

18 Q. Had you been told that information, would you have done
19 anything differently from that which you did do?

20 A. No.

21 Q. If you wouldn't have expected to have been told, whose
22 job do you think it was to make the necessary provision
23 for such residents in terms of their evacuation?

24 A. The building management.

25 Q. Do you mean the responsible person under the --

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1	A. Well, the responsible person or the building management.	1	INDEX	
2	Q. -- RRO?	2		PAGE
3	A. They may well have been one and the same person.	3	MR TERRENCE ASHTON (continued)1
4	MS GRANGE: I see, okay.	4		
5	Mr Chairman, those are all of the questions that we	5	Questions from COUNSEL TO THE INQUIRY1
6	are going to ask.	6	(continued)	
7	SIR MARTIN MOORE-BICK: Right, very good, thank you very	7		
8	much.	8		
9	Well, Mr Ashton, that is the end of the questioning.	9		
10	I am sorry we have asked you to come for quite such	10		
11	a long time, but it's been very helpful. We are very	11		
12	grateful to you for coming to give your evidence, and	12		
13	now you're free to go. Thank you very much.	13		
14	THE WITNESS: Thank you very much.	14		
15	(The witness withdrew)	15		
16	SIR MARTIN MOORE-BICK: Thank you, Ms Grange. Is that it	16		
17	for the day?	17		
18	MS GRANGE: That's it, thank you, we will have another	18		
19	witness on Monday.	19		
20	SIR MARTIN MOORE-BICK: Right. Thank you all very much.	20		
21	That's all for today. We're going to rise now, and we	21		
22	shall resume on Monday morning at 10 o'clock, when we're	22		
23	going to hear --	23		
24	MS GRANGE: From Dr Tony Pearson.	24		
25	SIR MARTIN MOORE-BICK: -- from Dr Pearson.	25		

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1	Thank you very much.	188
2	(3.45 pm)	
3	(The hearing adjourned until 10 am on Monday, 13 July 2020)	
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